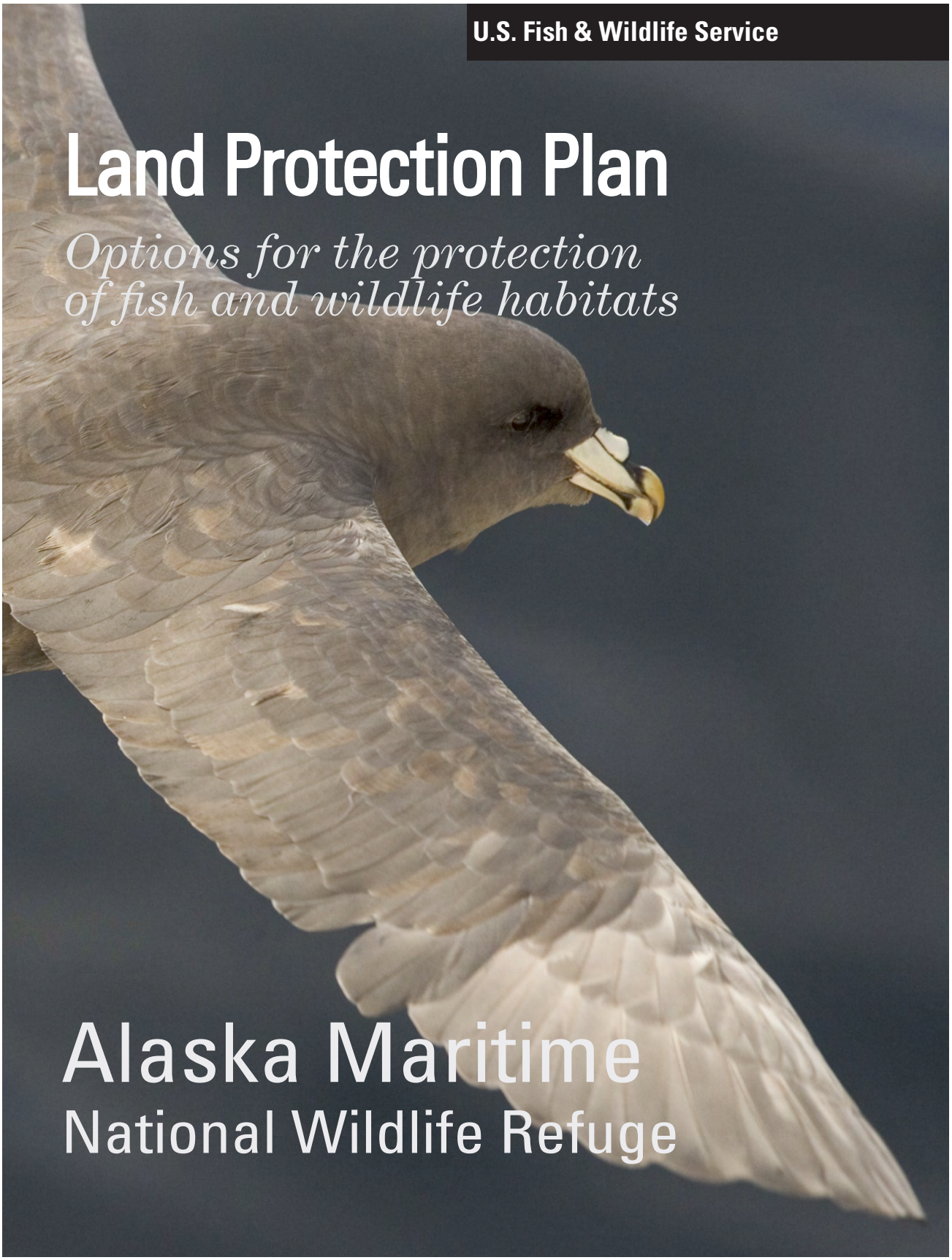
U.S. Fish & Wildlife Service

Land Protection Plan

Options for the protection of fish and wildlife habitats



Alaska Maritime National Wildlife Refuge

The 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 Improvement Act of 1997

The Purpose

The major purposes of the Alaska Maritime National Wildlife Refuge include:

> *"...(i) to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to 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 the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses for by local residents;*
>
> *(iv) 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."*

Alaska National Interest Lands Conservation Act of 1980

Executive Summary

What is the Alaska Maritime Land Protection Plan? Private landowners own or have selected over 1.6 million acres of land within the exterior boundaries of the Alaska Maritime National Wildlife Refuge. The LPP identifies which privately-owned lands contain the highest quality wildlife habitats. It also lists options, ranging from informal cooperative agreements, to land exchanges, to selling lands or easements, that some landowners may wish to pursue. The LPP serves primarily to foster communication between the refuge and interested landowners and to help us identify priority areas with high resource value. It provides a framework for working with interested landowners to protect key resources.

Why do we prepare LPPs? U.S. Fish and Wildlife Service policy requires that we prepare an LPP for each refuge before we can obtain Land and Water Conservation Funds. The LWCF is the primary source of funding for buying easements or inholdings in Alaska refuges. As discussed below, the LPP process is simply proactive planning.

The LPP is a planning tool. The LPP is a proactive planning tool that helps us evaluate opportunities when they arise. For instance, if several landowners approach us with offers to sell lands, the priorities identified in the LPP help us to make wise use of very limited funds. The LPP provides guidance, but does not require any action by the landowner or the Service. Rather it is one of the management tools that helps guide land conservation efforts.

The LPP provides choices. The LPP provides options that may, in the right situation, benefit both the landowner and the Service. For instance, a Native corporation may propose a land exchange to obtain additional land around a village site or to trade wetlands for developable land. Another may be interested in selling easements or distant holdings to generate capital. Before pursuing any course of action, both parties must agree that it is in their best interest to proceed.

Our priorities are based on biological values. We use a computer model to analyze priorities based on biology. Criteria which rank wildlife habitats and their ability to contribute to the refuge mission help us prioritize each parcel of land.

Public and state involvement is part of the process. We hold public meetings to discuss the LPP process with local landowners and other interested parties. State agencies review and comment on the LPP prior to publication and distribution.

Land Protection Plan
for
Alaska Maritime National Wildlife Refuge
Homer, Alaska

U.S. Department of the Interior
Fish and Wildlife Service
Region 7
Anchorage, Alaska

August 2011

Black-legged kittiwakes, Steve Hillebrand

If you have questions or comments about the Alaska Maritime Land Protection Plan, please contact us at one of the following locations.

Refuge Manager
Alaska Maritime National Wildlife Refuge
95 Sterling Highway, Suite 1
Homer, Alaska 99603-7472
(907) 235-6546

U.S. Fish and Wildlife Service
Division of Conservation, Planning & Policy
1011 E. Tudor Road
Anchorage, Alaska 99503
(907) 786-3357

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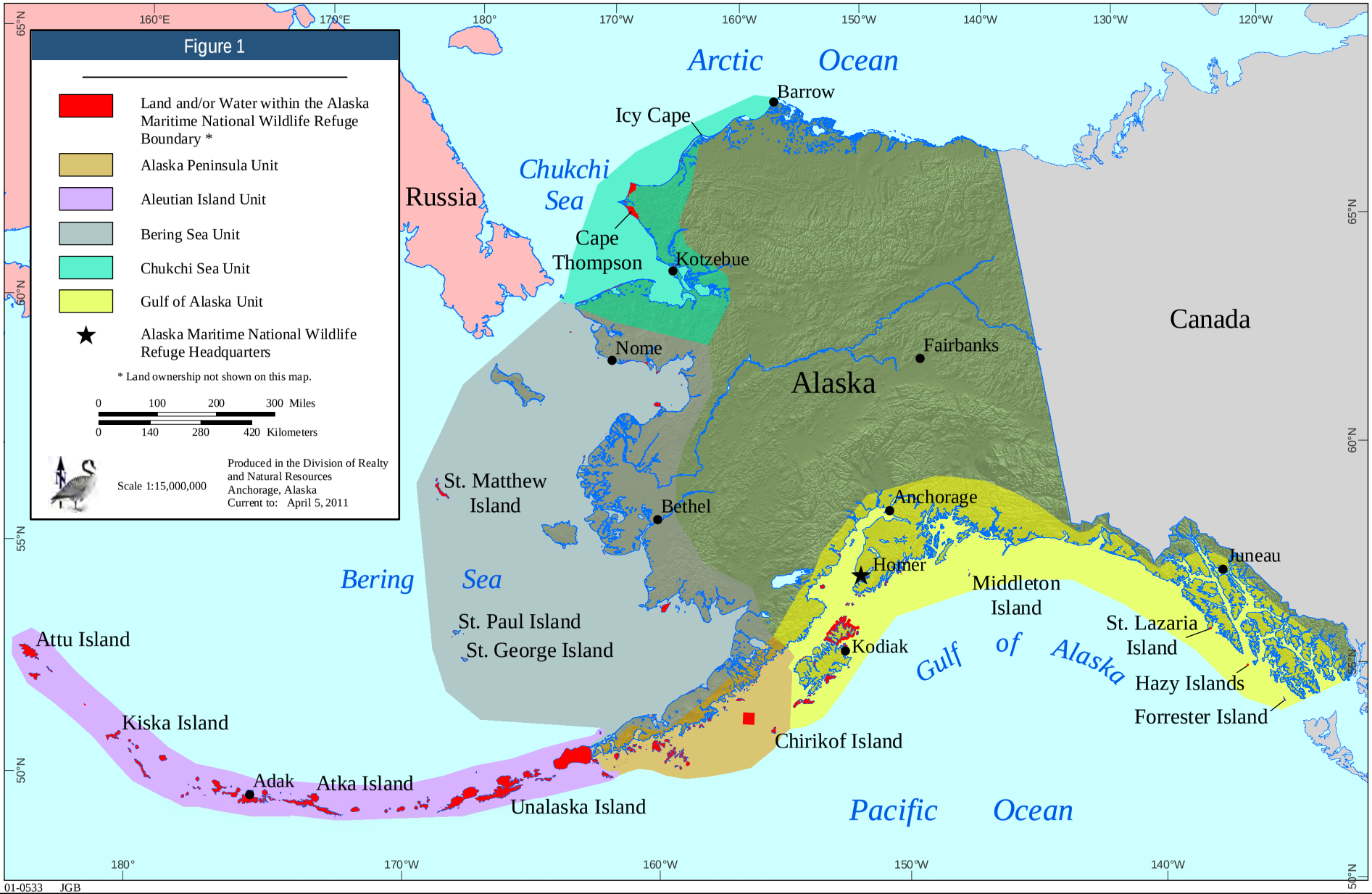

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1. Introduction

The U.S. Fish and Wildlife Service manages the Alaska Maritime National Wildlife Refuge as a unit of the National Wildlife Refuge System. The Service is charged with conserving the fish, wildlife and habitats of these refuges for the benefit of present and future generations. However, this task is complicated by the fact that the Service does not own or have management authority over all of the land within the refuge boundaries. Of the 6 million acres of land and water within the Alaska Maritime boundary, private landowners have title or claims to nearly 1.6 million acres* (Table 1).

Established by Congress, the refuge boundaries do not change when lands are conveyed into private ownership. Rather, private lands are inholdings within the refuge boundary.

Private landowners own or have claims to about 1.6 million acres (about 27%) of land within the Alaska Maritime Refuge boundaries.

Refuge management may be complicated when refuge lands are interspersed with private lands.

Table 1. Land status overview for the Alaska Maritime Refuge as of April 2011

Current Status	*Acres* [1]
Native Corporation [2] (conveyed)	1,101,965
Native Corporation[2] (selected)	148,703
State of Alaska[2] (conveyed/selected)	284,178
Native Allotments (conveyed/selected) [2]	18,041
Other Patents (conveyed/selected) [2,3]	4,992
Other Federal Withdrawals	33,059
Conflicting/Overlapping Claims	*(6,942)*
Total Claims	1,583,996
Total Refuge-Managed Land[4]	4,424,340
Fresh-water Water Bodies[5]	10,365

[1] *Acreage figures are GIS-calculated approximations and are subject to change. Land status acreage figures in Alaska will not be finalized until conflicting/overlapping claims are adjudicated by the Bureau of Land Management, and all inholdings are surveyed.*

[2] *Includes conflicting claims: parcels claimed by two or more entities*

[3] *Other patents include ownership categories such as headquarter sites, soldier's additional homesteads, trade and manufacturing sites, and mission sites.*

[4] *Excludes unreserved tidelands, unreserved submerged lands, and unreserved marine waters within the external boundary. Interior water bodies (regardless of ownership) and federally reserved submerged lands (671,722 acres) are included.*

[5] *Approximate GIS-calculated acreage of lakes greater than 50 acres and major rivers, regardless of ownership. The navigability status for most waterbodies within the refuge boundary has not yet been resolved.*

*Acreages are Geographic Information System (GIS) approximations and may differ from the official number published in the USFWS "Annual Report of Lands Under Control of the U.S. Fish & Wildlife Service" as of September 30, 2009.

The Land Protection Plan, or LPP, is the only report that focuses on the private lands within the refuge boundaries. It explores where the private lands are, the potential effects of private lands on refuge resources, and identifies those privately-owned lands we consider to have the highest value for wildlife. In other words, it prioritizes the private lands in terms of their value to wildlife.

The Land Protection Plan focuses on the private lands inside the boundaries of the refuge.

Refuge lands are managed to conserve fish, wildlife, and their habitats in their natural diversity. However, fish and wildlife range freely between refuge and private lands and depend on the health of the entire ecosystem. Just as management actions on Service lands can affect private landowners, actions on private lands may affect our ability to conserve wildlife. This is especially true on islands where domestic animals or introduced rats or foxes have the potential to decimate native species. It is important for us to work with landowners to improve management of the Alaska Maritime Refuge. Our success depends on developing partnerships with private landowners, particularly in areas with high fish and wildlife habitat values.

A Land Protection Plan does not obligate the Service or the landowner to take any action.

The LPP process provides an opportunity to discuss key refuge issues and ways we can work with private landowners to protect fish and wildlife resources. This document lists options that some landowners may wish to pursue. The options range from informal cooperative agreements, to land exchanges, to selling easements or fee title. The options also include taking no action, whatsoever. The choice is the individual landowners to make.

Refuge Landscape

Displaying refuge lands on a map presents challenges: the refuge spans more than 3,000 miles and includes thousands of islands. The enclosed compact disk contains maps of each unit of the refuge in an electronic format (pdf).

The Alaska Maritime Refuge stretches from Forrester Island in Southeast Alaska to the tip of the Aleutian chain and almost to Barrow on the Arctic Ocean. The refuge includes approximately 6 million acres of islands, islets, headlands, rocks, reefs, spires, and submerged lands. If superimposed on a map of the lower 48 states, the refuge would stretch from coast to coast and nearly from Mexico to Canada. The vast extent of the refuge and the small size of many of the islands makes it difficult to produce a meaningful map of the refuge land status that would fit in this document. For this reason, refuge maps are included in electronic (pdf) format on the enclosed compact disk.

Not surprisingly, there are huge differences in climate, species, and habitats from one end of the refuge to the other. For management purposes the refuge is divided into five regional management units (Figure 1). Generally, this document will address each unit separately.

Alaska Peninsula Unit. This unit extends nearly 400 miles and includes almost 1,600 islands, islets, and rocks, and nearly 265,000 acres of submerged land on the south side of the Alaska Peninsula. The islands range in size from 0.02 acres to 110,000 acres and are generally rugged, mountainous, and often surrounded by rocky reefs and outcrops. The unit experiences a moderate maritime climate with high winds and frequent precipitation. The continental shelf is relatively broad and the North Pacific serves as a heat sink that tends to moderate temperatures. Several physical processes enhance regional nutrient supply and primary productivity,

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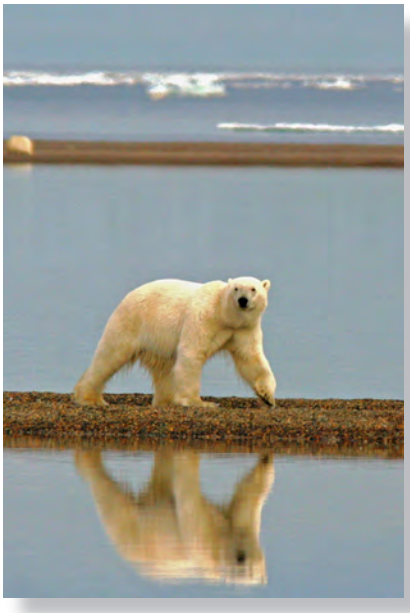
The sea is the common thread that binds the five units of the refuge. The lands themselves vary widely from unit to unit. Dense temperate rainforests in the southeast give way to low, barrier islands in the northwest. Each region has its own climate, topography and assemblage of species.



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including coastal upwelling and recirculation around the Alaska Gyre, a large counterclockwise flow of currents.

Aleutian Island Unit. This unit extends about 1,100 miles from Amak Island (north side of the Alaska Peninsula) to Attu Island at the western tip of the Aleutian chain. More than 15,300 islands, islets, and rocks, ranging in size from over one million acres (Unimak Island) to rocks of less than six square feet make up this unit. Part of the Pacific Ring of Fire, the Aleutian Chain is an arc of more than 20 active volcanoes that are frequently rocked by earthquake activity. Some of the islands are mountainous, glaciated, and bordered by steep cliff faces. Others are relatively low, wave-cut platforms, fringed by low sea cliffs. The islands form a boundary between the Bering Sea to the north and the deeper North Pacific Ocean to the south. The shelf is narrow and drops precipitously on the Pacific side, to depths greater than 25,000 feet in some areas, such as the Aleutian Trench. Both water bodies affect the climate and weather and offer habitat and migrational pathways for birds, fish, and mammals.

Bering Sea Unit. This unit extends over 750 miles from Fairway Rock near the village of Wales to Isanotski Islands at the tip of the Alaska Peninsula. The unit includes more than 300 islands, islets, rocks, and capes, ranging in size from small sand spits of less than 3,300 square feet to 77,400-acre St. Matthew Island. Islands in this unit range from low-lying sand spits, barrier islands, and beaches to rolling hills and volcanic cones. This unit also includes several headlands or capes on the mainland. The largest of these are Bluff (10,445 acres) and Cape Darby (8,320 acres). The Bering Sea is relatively shallow and has one of the largest continental shelves and the two largest submarine canyons in the world. The climate is influenced by arctic and continental land masses in the winter and maritime air masses during the summer. To a greater or lesser extent, the Bering Sea is covered with sea ice in winter. The ice can extend as much as 500 miles seaward. However, during recent decades, the Bering Sea has been warming and the amount of sea ice declining. Climate models project the Bering Sea to experience the largest decreases in atmospheric pressure in the northern hemisphere, with an associated increase in storm activity and coastal erosion (Karl et al. 2009, eds).

Chukchi Sea Unit. This unit extends nearly from Barrow to just north of Cape Prince of Wales in the Bering Strait (more than 360 miles) and includes more mainland and barrier island acreage than the other units. The largest mainland areas, Cape Lisburne (105,200 acres) and Cape Thompson (139,600 acres) are characterized by high rocky sea cliffs. Both the northern and southern ends of the unit are dominated by several large lagoons and low-lying barrier islands. Like the Bering Sea, the Chukchi Sea is relatively shallow with an extensive continental shelf. The unit lies mostly north of the Arctic Circle and has a sub-arctic climate with annual formation of sea ice and frequent storms. Although there is considerable annual variation, climate records indicate that rising temperatures are reducing the thickness and extent of sea ice. This trend is expected to continue. A longer ice-free season, combined with more frequent storms will likely accelerate coastal erosion in vulnerable areas.

The Gulf of Alaska Unit includes about 2,500 rocks, islets, and islands.

Gulf of Alaska Unit. This unit extends over 1,000 miles from Forrester Island in Southeast Alaska to Tugidak Island south of Kodiak Island. Features in this unit range from rocks measuring about 180 square feet to an island of more than 75,000 acres (Sitkalidak Island) to about 395,500 acres of submerged lands off Afognak Island and Women's Bay. Islands in Southeast Alaska are primarily mountainous and heavily forested. Dense stands of Sitka spruce give way to mixed Sitka spruce/western hemlock forests on the wetter islands to the east. Other islands, primarily in the western part of the unit, are covered with maritime tundra. The climate is moderate (particularly in the southeastern islands), characterized by mild winters, cool summers, and abundant precipitation. The continental shelf is broad, but drops off steeply into the North Pacific Ocean. The primary ocean current is the wide, slow-moving Alaska Current that flows northward off the shelf of the eastern gulf. Some areas of the gulf have among the largest tides in the world, second only to the Bay of Fundy in Atlantic Canada.

The Alaska Maritime Land Protection Plan uses a different approach from other refuge LPPs.

A Unique Refuge – A Different Approach

The unique landscape of the Alaska Maritime Refuge required a different approach for setting land conservation priorities. For previous land protection plans in Alaska, we developed priorities by using a GIS (geographic information system) model that overlays species distribution and relative density data with land status information. The model focuses on migratory birds, endangered species, certain marine mammals and anadromous fish, and species listed in ANILCA. For each of these data layers (usually 20-28 total), high density areas are given high numerical scores and low density areas are given low scores. Using the computer model to overlay all these individual layers, each private parcel receives a numeric score that reflects the number of species found there and the relative density of each. The higher the score, the higher the conservation priority.

Some seabird species nest in proportionally higher numbers on private lands than do other species. These "under-represented" species are the focus of this LPP.

This approach was unsuitable for the far-flung islands of the Alaska Maritime Refuge. Unlike other refuges, the Alaska Maritime Refuge includes thousands of discontiguous islands, islets, sand spits and capes. The species that use them differ substantially from one region to the next and relative density data are limited because of the remoteness, isolation, and sheer number of islands in the refuge.

Seabirds, however, occur throughout the refuge and their conservation is one of its major purposes. Most seabirds are colonial nesters that congregate at nest sites during the summer and are at sea the remainder of the year. About 80% of the seabirds in Alaska nest on islands within the refuge boundary.

Fortunately, a large seabird dataset is available for the entire refuge. The North Pacific Seabird Colony database (USFWS 2006) stores current and historical data on breeding population sizes, species composition, and location of seabird colonies in Alaska and the Russian Far East. Population data have been obtained by counting or estimating breeding bird numbers using standardized techniques (USFWS 1999). These data were collected over many years and by many different observers and must be interpreted with caution. However, they are the best available data on a refuge-wide scale.

The priority list includes all the private lands that support colonies of at least one under-represented seabird species.

Analysis of the seabird database revealed that some species use private lands more than other species do. While nearly the entire population of certain species nest on lands managed for conservation purposes, a large percentage of other species nest on private lands or in areas of mixed federal and private ownerships. The latter will collectively be referred to as "under-represented" species in this document. They nest in proportionally higher numbers on lands outside of Alaska's conservation estate.

The priority list for the Alaska Maritime Refuge includes all private lands supporting colonies of one or more of these species. The more species, and the larger the colonies, the higher the priority. Any privately-owned lands supporting colonies of greater than 10,000 birds are considered high priorities. All of these large colonies supported at least one "under-represented" species.

In this LPP, the term "under-represented species" refers to seabird species that nest disproportionately on private lands, rather than refuge lands.

The following chapters describe the private lands on the refuge and the important resources that use them. Chapter 6 describes the prioritization process in more detail and lists our priorities for each unit of the refuge. However, it should be noted that the priority list is just one tool to help guide our land protection efforts. Whenever a landowner offers to exchange or sell lands or easements, each proposal is evaluated individually. The priority list is based on biological values, but other factors may be equally important. If the proposal could help simplify refuge management, consolidate ownerships, or eliminate or reduce threats to refuge resources, we would give it serious consideration, even if it meant acquiring lands low on our priority list. Some of the factors that influence our decisions are discussed in more detail in Chapter 6.

Scope of this LPP

This LPP prioritizes all private lands within the exterior refuge boundaries, except for lands that are both: (1) administered by another refuge and (2) were evaluated in the LPP for that refuge.

Many lands within the Alaska Maritime Refuge will always be owned and managed by Native corporations, the State of Alaska, or private individuals. The LPP provides a framework for working with interested landowners to conserve key resources.

Steve Ebbert

Dutch Harbor

In the 1980s and 1990s, the administrative control of certain lands was transferred from the Alaska Maritime Refuge to other refuges. The intent was to increase management efficiency. The official boundaries did not change; only the administrative control was transferred.

In the 1980s and 1990s, administration of certain areas of the Alaska Maritime Refuge was transferred to other refuge headquarters. This action was intended to increase management efficiency by transferring the administration of certain lands to an adjacent refuge, if the lands were similar in geography and habitat to that refuge. These areas are briefly described below.

Seal Cape (Alaska Peninsula Unit). In 1989, the administration of Seal Cape was transferred to the staff of the Alaska Peninsula Refuge. The Alaska Peninsula LPP prioritized the private lands on Seal Cape.

Hagemeister Island (Bering Sea Unit). In the early 1990s, the Togiak Refuge assumed administration of Hagemeister Island in southwestern Alaska. The Togiak LPP set priorities for the private lands on Hagemeister Island.

Unimak Island (Aleutian Islands Unit). In 1982, the Izembek Refuge assumed administration of Unimak Island at the beginning of the Aleutian chain of islands. The Izembek LPP included priorities for Unimak Island.

Islands near Kodiak Island (Gulf of Alaska Unit). In the late 1980s, the Kodiak Refuge assumed administration of numerous islands off Kodiak Island. The Kodiak LPP did not include these islands, so they are included in this LPP.

The LPP addresses the following questions:

- *Where are the private lands?*
- *What resources are we trying to protect?*
- *What methods do we have for resource protection?*
- *What are our resource protection priorities for the refuge?*
- *What land protection measures do we recommend?*
- *How will the LPP affect landowners and others?*

Tufted puffin, Steve Hildebrand

2. Land Status

The Alaska Native Claims Settlement Act of 1971 (ANCSA) was the major factor shaping land ownership patterns within the refuge. This Act authorized the formation of village and regional Native corporations, and established procedures enabling these organizations to select and gain title to large blocks of federal land.

Nine years later, Congress passed the Alaska National Interest Lands Conservation Act (ANILCA). Among other things, this Act created the present-day Alaska Maritime National Wildlife Refuge by adding about 1.9 million acres of additional lands to 11 existing refuges—effectively combining most of Alaska's seabird habitat into a single refuge. Refuge boundaries were drawn with little regard to existing land ownership patterns. Consequently, the boundaries incorporated many lands that were owned or claimed by individuals, Native corporations, or the State of Alaska.

The Alaska Maritime National Wildlife Refuge was established in 1980 by ANILCA by adding land to 11 existing refuges.

The exterior boundaries of the refuge encompass approximately 6 million acres, including almost 672,000 acres of federally-reserved submerged lands. More than 4.4 million acres of land are unencumbered by other claims and are administered by the refuge. A total of eight Regional and 53 village Native corporations currently own or have selected about 1.24 million acres. In addition, numerous privately-owned small parcels, including Native allotments, mission sites, homesteads, trade and manufacturing sites, and other private patents, are scattered across the refuge.

About 1.24 million acres are owned or selected by Native corporations.

The remaining sections of this chapter will summarize the history and current land ownership patterns on the refuge. A broad overview of the Alaska Maritime land status is followed by land status summaries for each unit of the refuge.

History

The story of the Alaska Maritime National Wildlife Refuge really began in the late 1800s with a fish culturist named Livingston Stone. At that time, Atlantic salmon stocks were already depleted, but commercial fishing on the Pacific Coast was in its infancy. Impressed by the abundance of Alaska's salmon stocks, Stone lobbied for the creation of a "national salmon park" to ensure that these species would not go the way of the Atlantic salmon.

Stone's vision became reality in 1892 when President Benjamin Harrison used the Forest Reserve Act of 1891 to create the Afognak Forest and Fish Culture Reservation. Portions of the lands and waters that made up this reservation are now part of the National Wildlife Refuge System. More than 395,000 acres of submerged lands and several islands (including Sea Lion Rocks and Sea Otter Island) became part of the Alaska Maritime Refuge.

At the turn of the 20th century, a new conservation ethic was

The Alaska Maritime Refuge includes 11 historical refuges, parts of the former Afognak Forest and Fish Culture Reservation, and about 1.9 million acres of additional land. Most of the historic refuges were originally designated 'reservations' and managed by the Department of Agriculture. They were transferred to the Department of Interior in 1939 and were renamed 'national wildlife refuges' the following year.

Table 2. Historic Refuges

Refuge	Total Acres
Bering Sea	81,340
Bogoslof	175
Pribilof Islands	171.2
St. Lazaria	65
Tuxedni	5,683
Chamisso Island	455
Forrester Island	2,800
Hazy Islands	32
Aleutian Islands	2,720,225
Simeonof Island	24,046
Semidi Islands	251,930

The provisions of ANCSA authorized Native corporations to select land in what would later become the Alaska Maritime Refuge.

growing in the nation. The fashion craze for feathered hats during the 1800s had driven some thriving bird rookeries to the brink of collapse. Much attention focused on Pelican Island, Florida, where once thriving rookeries were in danger of being wiped out. The movement to protect Pelican Island met a champion in President Theodore Roosevelt who used his powers to create the first federal bird refuge in 1903.

This first refuge was soon followed by several more. In 1909, President Roosevelt established five new Alaska reservations (Bering Sea, Bogoslof, Pribilof Islands, St. Lazaria, and Tuxedni) as breeding grounds for native birds. Over the next 65 years, a series of subsequent reservations and refuges were created to protect breeding birds. A few of these had additional purposes. Among these, the Aleutian Islands Reservation was created not only to protect native birds, but also for the "propagation of reindeer and furbearers and the encouragement and development of fisheries". The Semidi Islands Reservation was created for "native birds, game and fur animals" and the Simeonof National Wildlife Refuge was created as a preserve for "sea otters and other wildlife".

Eleven of these historic refuges (dating from 1909 to 1975; Table 2 and Figure 2) as well as portions of the Afognak Forest and Fish Culture Reservation would become part of the Alaska Maritime Refuge in 1980. Prior to its creation, however, Congress passed the landmark piece of legislation which would affect landownership patterns in the refuge and throughout Alaska.

The discovery of oil at Prudhoe Bay provided the necessary impetus to finally resolve land ownership disputes. Native Alaskans had long argued that aboriginal title had never been extinguished and that land could not be conveyed to the State of Alaska, private individuals, or oil companies, until Native claims were settled. The passage of the Alaska Native Claims Settlement Act of 1971 resolved Native land claims in Alaska and shaped land ownership patterns throughout the state. Among its provisions, ANCSA provided a cash settlement of nearly 1 billion dollars and authorized the conveyance of over 40 million acres of land to Native corporations, including 12 regional corporations and over 200 village corporations. Under ANCSA, certain lands within the present day Alaska Maritime Refuge were selected and conveyed to Native village and regional corporations.

In addition to settling Native land claims, ANCSA also addressed conservation interests by directing the Secretary of Interior to withdraw up to 80 million acres of Alaska public lands suitable for Conservation System Units (CSU), such as refuges or parks (ANCSA §17(d)(2)(A)). All other unreserved public lands in Alaska were temporarily withdrawn under §17(d)(1) while Congress considered their suitability for addition to a park, refuge, or other CSU.

The result was that most of the public lands in Alaska were temporarily withdrawn from all forms of appropriation under the public land laws. This action was intended to protect the resource value of Alaska's public lands until Congress could enact legislation that would permanently protect the most suitable lands.

As the debate in Congress raged over these lands, the Secretary of Interior feared that the withdrawals would expire before legislation

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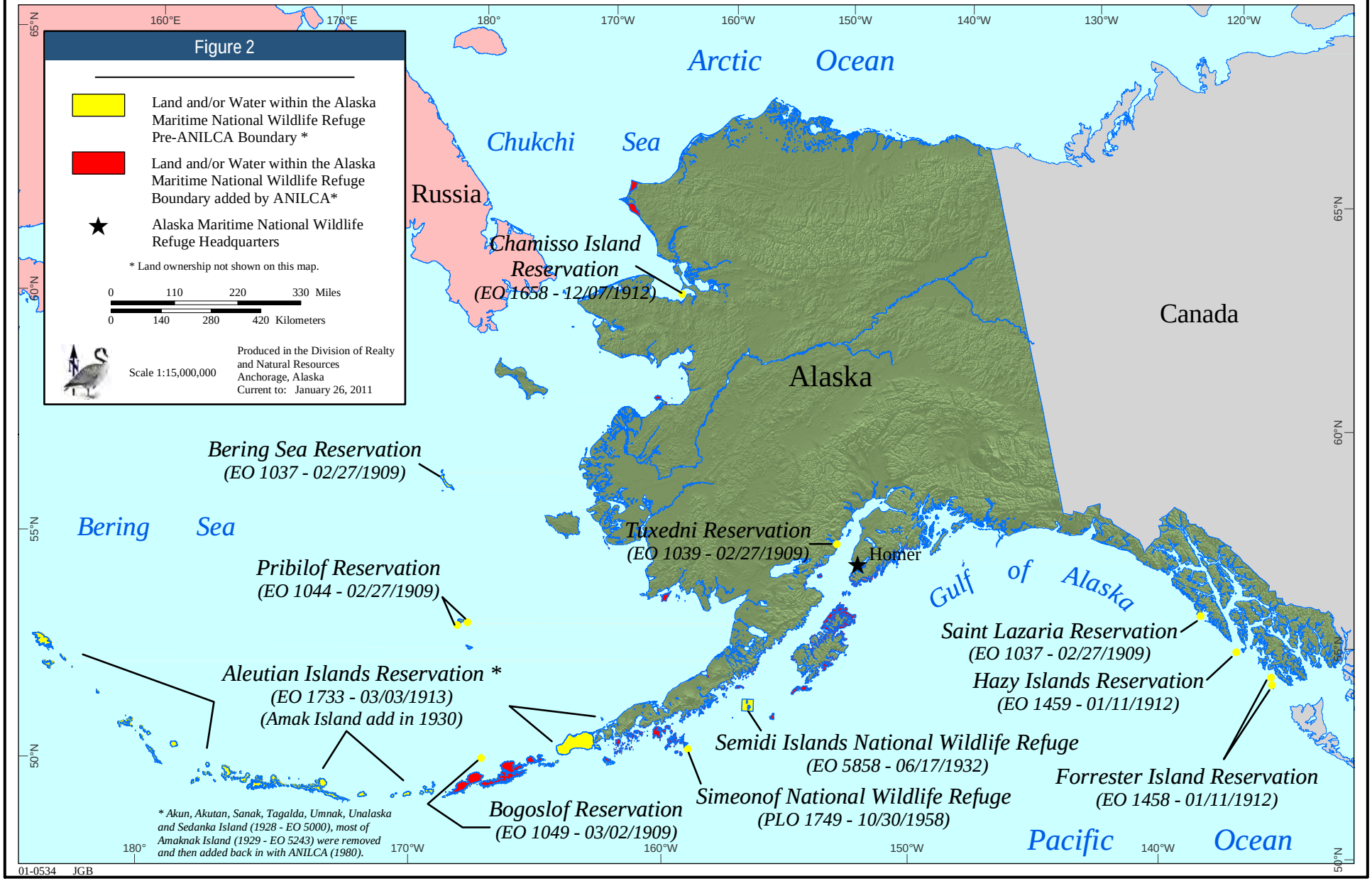
Withdrawal History of the Alaska Maritime National Wildlife Refuge

Alaska Maritime National Wildlife Refuge

Alaska



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could be passed. In response, the Secretary invoked new emergency withdrawal powers under the Federal Land Policy Management Act of 1976 (FLPMA) to withdraw 110 million acres, including lands that would become the Alaska Maritime Refuge, for an additional 3-year period beginning on November 16, 1978 (PLO 5653). Less than two years later, the Secretary again used the authority provided by FLPMA to establish new refuges, including the Alaska Marine Resources National Wildlife Refuge (PLO 5710). The refuge consisted of 11 units (Cape Lisburne, Cape Thompson, Cape York, Kotzebue Creek Unit of Cape York, Topkok Head, Bluff, Cape Darby, Cape Denbigh, Cape Stephens, Cape Kuyuyukak, and Seal Bay) and included previously unprotected areas of what would later become the Alaska Maritime Refuge.

Finally, in December 1980, Congress enacted the Alaska National Interest Lands Conservation Act (PL 96-487). Among other things, ANILCA rescinded PLO 5710 and established the Alaska Maritime National Wildlife Refuge by combining 11 existing refuges with 1.9 million acres of additional lands.

Provisions of ANILCA mandated that all legal and administrative actions pertaining to the 11 original refuges would remain in force and effect only to the extent that they are consistent with ANILCA and ANCSA (ANILCA §305). In the event of inconsistencies, the provisions of ANILCA would always prevail.

To facilitate management of these far-flung lands, ANILCA designated five distinct geographic refuge units: the Chukchi Sea, the Bering Sea, the Aleutian Islands, the Alaska Peninsula, and the Gulf of Alaska units.

There are nine occupied villages within refuge boundaries and an additional 44 villages within five miles.

The refuge boundaries did not specifically exclude village sites. As a result, nine populated villages are located within the refuge boundaries and an additional 44 occupied villages are located within five miles. As discussed in the next section, much of the land around these village had been available for selection and eventual conveyance to village corporations created under the Alaska Native Claims Settlement Act of 1971 (ANCSA).

Fifty-three village corporations own more than a million acres of land inside the refuge boundary.

Village Native Corporation Land

The ANCSA legally settled Native aboriginal claims, while accommodating state and conservation interests. Much of the land in the Alaska Maritime Refuge was available for conveyance to village Native corporations.

Currently, more than a million acres have been conveyed to 53 village corporations and approximately 80,000 acres have been selected, but not yet conveyed (Table 3). However, the latter figure includes about 5,000 acres of conflicting selections. Conflicting selections occur whenever a single parcel of land is selected by more than one village or entity. In this case, the majority are in conflict with selections made by the State of Alaska.

Village corporations were conveyed lands under the authority of ANCSA §12(a) and §12(b).

Sections 12(a) and 12(b) of ANCSA set rules for the village corporation selection process. The general land entitlement framework required that a 25-township area surrounding each Native village be made available for land selection and conveyance to the respective village corporation. This land entitlement is commonly referred to as the "12(a) entitlement". The acreage of

the entitlement ranged from 69,120 to 161,280 acres depending on the number of shareholders enrolled in the village corporation. In addition, each regional corporation was given the discretion to allocate additional acreage to village corporations. This allocated acreage is known as the "12(b) entitlement". Most regional corporations chose to divide the 12(b) allocation based on village corporation enrollment.

Insufficient available land prevented 11 villages from meeting their entitlements. ANCSA 11(a)(3) authorized these villages to select land in designated "deficiency areas".

A total of 11 of the Native villages within the Alaska Maritime Refuge (10 in the Aleutian Islands Unit and 1 in the Bering Sea Unit) were unable to select sufficient lands adjacent to the village site to complete their 12(a) entitlement. This occurred for one of two reasons:

(1) some villages are located within or adjacent to refuges created prior to ANCSA, including the Aleutian Islands and Pribilof Reservations. ANCSA conveyance rules limited village conveyances within these "old refuges" to 69,120 acres, regardless of their entitlement acreage.

Refuge land status will continue to change as selected lands are conveyed or relinquished.

(2) Some village sites are in locations where there was simply not enough land available to fulfill the 12(a) entitlement (e.g. on small islands surrounded by ocean).

The Secretary of Interior developed a special process to help these underselected villages fulfill their ANCSA land entitlements. Villages that had been unable to fulfill their entitlement were given an opportunity to select their remaining entitlement from other public lands in designated "deficiency areas", authorized by Section 11(a)(3) of ANCSA. The result is that some village corporations now own land for which they have no cultural ties – far from the village site. Others failed to file a timely application and remained underselected until after the passage of the Alaska Land Transfer Acceleration Act in 2004. Among other things, this act streamlined the process by which underselected villages could fulfill their remaining entitlements.

The scale of the refuge makes it impossible to display land status details on maps that would fit inside this document. The accompanying compact disk contains land status maps in electronic (pdf) format.

The land status within the Alaska Maritime Refuge will continue to change as selected lands are conveyed, relinquished, or rejected. Land status may also change because of negotiated or legislated land exchanges. Pending land exchanges are addressed by unit later in this chapter. The accompanying compact disk (CD) contains maps in pdf format of the current land status of the refuge.

Regional Native Corporation Lands

Eight regional corporations own or have selected about 126,000 acres in the refuge.

Regional corporations hold title to nearly 57,000 acres of land and have selected an additional 69,215 acres within the Alaska Maritime Refuge. However, there are more than 1,500 acres that are selected by more than one party ("conflicting selections").

Regional corporations have been conveyed land under several ANCSA provisions, including Sections 12(c) and 14(h).

Land selections and conveyances to regional corporations were authorized under the provisions of Sections 12 and 14(h) of ANCSA. Under ANCSA §14(h)(1), regional corporations could select significant cemetery sites and places with historic value. A total of about 3,962 acres of cemetery/historic sites have been conveyed to four regional corporations, including 3,895 acres to the Aleut Corporation, 61 acres to the Bering Straits Corporation, 5 acres to the Calista Corporation, and 0.3 acres to the Koniag Corporation. There are an additional 28,082 acres of 14(h)(1) selections in the

Table 3. Surface land status of the Alaska Maritime Refuge as of April 2011

Category of Lands	*Landowner*	*Acres Conveyed*[1]	*Acres Selected*	*Total Acres*[2]	*Conflicting Land Claims*[3]
Federal - Refuge	U.S. Fish & Wildlife	NA	NA	4,424,340[4]	
Other Federal Government	Department of Defense	NA	NA	10,523	
	Department of Transportation (FAA)	NA	NA	519	
	Department of Homeland Security (US Coast Guard)	NA	NA	21,974	
	Other (44LD513 Road, NMFS)	NA	NA	43	
	Total Other Federal	**33,059**	NA	**33,059**	**1,337**
State Government	State of Alaska	**276,037**	**8,141**	**284,178**	**5,668**
Native Allotments	Many	**17,346**	**695**	**18,041**	**619**
Regional Native Corporation	The Aleut Corporation	12,855	6,268	19,123	24
	Koniag, Inc.	12	26,852	26,864	141
	Bering Straits	61	734	795	732
	Cook Inlet Region, Inc.	329	669	998	627
	Calista Corp.	5	0	5	
	NANA	2,136	0	2,136	
	Arctic Slope	39,805	34,691	74,496	
	Chugach	1,707	0	1,707	
	Total Regional Corp.	**56,910**	**69,215**	**126,125**	**1,524**
Other Private	Many	**4,989**	**3**	**4,992**	**3**
Village Native Corporation	Afognak Joint Venture	158	0	158	
	Afognak Native Corp.	28,968	0	28,968	
	Akhiok-Kaguyak Inc.	3,255	3,532	6,787	58
	Akutan Corp.	88,209	15,842	104,051	
	Atxam Corp.	74,804	0	74,804	
	Bay View Inc.	<1	<1	1	
	Becharof Corp	32	0	32	
	Belkofski Corp.	25,902	1,634	27,535	10
	Brevig Mission	94	0	94	
	Chaluka Corp.	76,850	249	77,099	10
	Choggiung Limited	554	0	554	
	Deering Ipnatchiak	1	0	1	
	Far West Inc.	770	200	970	
	Golovin Native Corp	8,053		8,053	
	Inalik Native Corp. (Diomede)	5,650	0	5,650	

Category of Lands (Continued)	*Landowner*	*Acres Conveyed*[1]	*Acres Selected*	*Total Acres*[2]	*Conflicting Land Claims*[3]
	Isanotski Corp.	52,601	0	52,601	
	King Cove Corp.	6,615	2,092	8,707	
	King Island Native Corp.	2,610	0	2,610	
	Kikkiktagruk Inupiat Corp.	1,475	0	1,475	
	Kivalina Sinuakmeut Corp	196	0	196	
	Kuitsurak Inc.	104	0	104	
	Koyuk Native Corp.	19	0	19	
	Leisnoi Inc.	1,797	623	2,421	8
	Meshik Inc. (Alaska Peninsula Corp.)	630	0	630	
	Nanwalek (English Bay)	56	1	57	
	Natives of Kodiak	189	0	189	
	Nelson Lagoon Corp.	1,449	0	1,449	
	Nu-Nachk Pit (merged with Koniag)	8,078	0	8,078	
	Oceanside Corp.	2,056	2,033	4,089	
	Old Harbor Native Corp.	74,100	0	74,100	
	Ounalashka Corp.	128,568	12,272	140,840	211
	Ouzinkie Native Corp.	9,779	201	9,980	194
	Point Lay Village (Cully Corp)	3,199	0	3,199	
	Port Graham Corp.	3,674	12	3,686	
	Saguyak Inc.	1,933	42	1,975	
	Sanak Corp.	29,455	0	29,455	
	Seldovia Native Assoc.	91	0	91	
	Shaktoolik Native Corp.	2,883	0	2,883	
	Shishmaref Native Corp.	11,836	0	11,836	
	Shumagin Corp.	45,891	7,920	53,811	10
	Sitnasuak Native Corp.	244	0	244	
	Solomon Native Corp.	205	0	205	
	Stebbins Native Corp.	27,602	0	27,602	
	St. George Tanaq Corp.	88,768	14,153	102,922	
	St. Michael Native Corp.	133	0	133	
	Tanadgusix Corp. (TDX)	107,143	6,065	113,208	
	Teller Native Corp.	3	0	3	
	Tikigaq Corp. (Point Hope)	37,783	0	37,783	
	Togiak Natives, Limited	2	0	2	

Category of Lands (Continued)	*Landowner*	*Acres Conveyed*[1]	*Acres Selected*	*Total Acres*[2]	*Conflicting Land Claims*[3]
	Unalakleet Native Corp.	636	0	636	
	Unga Corp.	77,544	0	77,544	
	Wales Native Corp	1,730	2,937	4,667	
	White Mountain Native Corp.	676	9,680	10,356	718
	Total Village Corporation	**1,045,055**	**79,488**	**1,124,542**	**4,677**
	Subtotals (Conveyed/ Selected)	**1,433,397**	**157,542**	**1,590,938**	
	Conflicting Claims - Total Acres Claimed by Two or More Entities			**6,942**	
	Total Conveyed/Selected/Withdrawn			**1,583,996**	

[1] *Includes patented and Interim Conveyed (IC) lands. Only land claims within the refuge boundary are reported. Many corporations have additional claims outside the refuge.*

[2] *All acreages are GIS-calculated approximations and may differ from official acreage figures reported elsewhere. All figures include conflicting and overlapping selections. Unless noted, acreage figures exclude the submerged beds of meanderable water bodies (rivers of 198 feet or more in width and lakes of 50 acres or more. Unless specifically reserved to the United States, ownership of submerged lands depends on navigability status of a water body for purposes of title and is yet to be determined for most water bodies in the refuge.*

[3] *Conflicting land claims include: (1) parcels claimed by more than one village or entity; and (2)parcels claimed twice by a single village corporation—to fulfill both a 12(a) and a 12(b) entitlement. If claimed by more than one entity, the total acres in conflict are listed for both entities. In adjudicating conflicting land claims, the priority is: (1) Native allotment, (2) village corporation, (3) regional corporation, and (4) State of Alaska.*

[4] *Includes 671,716 acres of federally-reserved submerged lands.*

The Alaska Land Transfer Acceleration Act resolved many of the issues that had complicated and delayed completion of the ANCSA land transfer process.

Status of ANCSA Land Conveyances. The ANCSA passed into law in 1971, but completing ANCSA land conveyances proved to be difficult. Conflicting land claims, overselections, underselections, and surveying complications caused lengthy delays in the land transfer process. By 2004, an estimated 13.5 million acres were yet to be conveyed to Native corporations, the State of Alaska, and Native allottees. In December of that year, the President signed into law P.L. 108-452, the Alaska Land Transfer Acceleration Act. The goal was to complete the remaining ANCSA land conveyances by the 50th anniversary of Alaska statehood. The act streamlined the conveyance process, increased funding and set deadlines to achieve this goal. Although the BLM has not yet finalized land conveyances, it has made tremendous progress towards that goal.

Land status in the Alaska Maritime Refuge will continue to change as selected lands are conveyed, relinquished, or rejected. Some corporations have selected more lands than their entitlement; these overselections will eventually be relinquished.

refuge. Of these, the Koniag Corporation has selected 26,852 acres; the Bering Straits Regional Corporation has selected 268 acres and the remainder is selected by the Aleut Corporation.

Section 14(h)(8) of ANCSA also authorized land conveyances to regional corporations. Under this provision, 8,959 acres within the refuge boundaries have been conveyed to the Aleut Corporation and 11 acres have been conveyed to Koniag, Inc. A total of 5,771 acres are selected by the Aleut Corporation (5,306 acres) and the Bering Straits Regional Corporation (465 acres).

Section 12(c) of ANCSA authorized the conveyance of 16 million acres of land to six of the 12 regional corporations. Each of these corporations was in a large region that had a relatively small population. Because ANCSA land allocations were largely population driven, the provisions of 12(c) were intended to correct the inequity that these six corporations would otherwise have experienced. Within the Alaska Maritime Refuge a total of 43,811 acres have been conveyed to four corporations under authority of Section 12(c). The Arctic Slope Regional Corporation has received the largest conveyance under this provision (39,805 acres). The Cook Inlet Region, Inc. (CIRI) has been conveyed 329 acres, the NANA Regional Corporation owns 2,136 acres, and the Chugach Regional Corporation has 1,707 acres. In addition, there are about 35,000 acres of 12(c) selections in the refuge, including lands selected by CIRI (669 acres) and Arctic Slope Regional Corporation (34,690 acres).

The Aleut Corporation owns nearly 47,500 acres of "in-lieu" subsurface lands on Unalaska, Unga, and Umnak Islands.

In general, ANCSA conveyance rules granted regional corporations the subsurface rights to surface lands conveyed to village corporations [Section 14(f)]. The basic idea was to give villages control of the surface lands necessary to supply their subsistence and economic needs and to give the regional corporations the right to extract valuable minerals from the subsurface estate. The rules differed however, if those lands were located within refuge boundaries (i.e., refuges that were established prior to the passage of ANCSA in 1971). When village corporations received title to land within these pre-ANCSA refuges, conveyance rules specified that the subsurface was not to be conveyed to the regional corporation, but would remain under the control of the Service. In compensation, the regional corporation could select an equivalent acreage of "in lieu" subsurface from designated areas that were not part of the refuge system in 1971. In partial compensation for village conveyances in former refuge areas, the Aleut Corporation has been conveyed about 47,435 acres of "in lieu" subsurface estate on Unalaska, Umnak, and Unga islands. An additional 5,305 acres of "in lieu" subsurface selections on Unga Island have not yet been conveyed.

A total of 17,346 acres have been conveyed as Native allotments.

Native Allotments

Certain Vietnam veterans or their heirs could apply for an allotment (160 acres or less) under the provisions of the Vietnam Veterans Allotment Act of 1998 as amended (Public Laws 105-276 and 106-554).

Until its repeal in 1971, the Native Allotment Act of 1906 authorized Alaskan Natives to claim up to 160 acres of land. In addition, a 1998 amendment to ANCSA (Section 432 of P.L. 105-276 [43 U.S.C. 1629g]) authorized qualified Alaskan Native Vietnam veterans to apply for an allotment if they had not previously done so. The 1998 law addressed the concern that military service may have prevented some Native veterans from applying for an allotment under the

1906 Act. The application period for these new allotments closed on January 31, 2002.

Within the Alaska Maritime Refuge, Native allottees have been deeded 17,346 acres. The total includes one 47-acre parcel deeded to a Native Vietnam veteran under the 1998 amendment. Another 695 acres have been selected, including one Vietnam veteran allotment claim.

Other Private Patents

There are a number of other small private patents within the boundaries of the refuge. These include patents issued to individuals or entities under several different statutes. Congress extended the nation's principal land laws to Alaska in 1884. Many of these laws were designed to encourage private settlement and improvement of public lands.

The Homestead Act of 1862 (12 Stat. 392) accelerated the settling of the west by granting up to 160 acres of public land to adult heads of family for a minimal filing fee and five years of continuous residence on the land. The original act was liberalized several times before its repeal in 1976. The passage of the Federal Land Policy and Management Act repealed the Homestead Act in the lower 48 states, but granted a 10-year extension on claims in Alaska.

Other private patents were issued for homesteads, trade and manufacturing sites, mission sites, townsites, mineral patents, and headquarters sites.

Within the Alaska Maritime Refuge, eight patents for homesteads, totaling 333 acres, were issued under the original Homestead Act of 1862; 17 patents (1,084 acres) were issued for homestead settlements under later acts. A total of 26 patents (330 acres) were originally issued as Soldiers Additional Homesteads. Soldiers Additional Homestead entries were open to certain war veterans who had received a homestead of less than 160 acres. These veterans were allowed to claim enough public land to make up the difference between the acreage of their homestead and 160 acres. Veterans could credit their military time toward the residency requirements for the homestead. The earliest of these patents were issued in 1905, but most were issued between 1912 and 1932.

In addition to homestead entries, 53 acres (33 parcels) were patented as homesites. Homesites were limited to 5 acres or less and were to be used solely for residential purposes. The majority of these are in or near Sand Point on Popof Island.

Between 1904 and 1986, 21 patents (totaling 363 acres) were issued for Trade and Manufacturing sites. The Trade and Manufacturing Act of 1898 allowed a cash entry for up to 80 acres of land to be used as a place of business.

Between 1965 and 1972, four patents totaling about four acres, were issued for Headquarters sites under the Headquarters Site Act of 1927. Headquarters sites could be up to five acres in size and were to be used for a productive industry such as commercial fishing, trapping, hunting camps, prospecting or mining.

From 1914 to 1942, a total of 15 patents (approximately 1,094 acres total) were issued to the Russian Greek Orthodox Church (13 patents totaling 60 acres), Women's American Baptist Home Mission Society (one patent for 476 acres), and the American Home Mission Society (one patent for 558 acres). These patents were grants of

public land for church missionary stations or cemetery sites.

A total of 22 quitclaim deeds (QCD), totaling 663 acres, have been issued within the refuge boundaries. A quitclaim deed is a document by which a person or government (the "grantor") disclaims any interest the grantor may have in a piece of real property and passes that claim to another person (the grantee). In contrast to deeds normally used for real estate (warranty deeds or grant deeds), a quitclaim deed neither warrants nor professes that the grantor's claim is valid. Quitclaim deeds are sometimes used for transfers between family members, gifts, placing personal property into a business entity, to eliminate clouds on title, in cases of tax deed sales where property is auctioned off to pay outstanding tax debt or in other special or unusual circumstances.

About 650 acres of surplus federal properties were deeded into private ownership during the mid 1900s.

Between 1948 and 1968, the General Services Administration granted 14 quitclaim deeds (totaling 648 acres) for surplus federal properties on Amaknak, Popof, Hog, Middleton, Unalaska, and Unimak Islands. The bulk of these lands were deeded to seafood processors or cold storage companies. Between 1966 and 1988, the Bureau of Indian Affairs granted six quitclaim deeds for a total of 13 acres of former school reserves on Akutan, Atka, Little Diomede, Sarichef, Spruce, and Umnak islands.

Other private land conveyances within the refuge include townsite patents issued to Nikolski (41 acres), Unalaska (149 acres), Ouzinkie (480 acres) and Larsen Bay (4 acres) in 1974; five mineral patents (lode) issued between 1910 and 1913; and one mineral patent (placer) issued in 1895, all on Unga Island in the Alaska Peninsula Unit.

Other Federal Lands

Pre-ANILCA federal withdrawals that are now within the boundaries of a refuge created or expanded by ANILCA are protected by law. Section 1310(a) of ANILCA states that reasonable access to, and operation and maintenance of, existing air and water navigation aids, communications sites and related facilities shall be permitted in accordance with the laws and regulations applicable to the refuge, as appropriate.

Much of Middleton Island is owned by the Chugach Alaska Regional Corporation. However, the Service retains coastal easements for wildlife habitat protection and management.

The island also houses a former DEW (Defense Early Warning Radar) site, now under private ownership, and an FAA withdrawal totaling about 533 acres (VOR or VHF Omnidirectional Range navigation system: 348 acres; air navigation site: 177 acres; NexRad weather radar: 8 acres).

Other federal agencies control over 33,000 acres of land within the refuge.

It was necessary for ANILCA to specifically protect the uses of these federal withdrawals because it also designated these lands as refuge lands. The holding agency has primary jurisdiction to use the withdrawal for the purposes specified in the withdrawal order, but the withdrawn lands also became a part of the refuge in 1980 (ANILCA §305). The reserved lands are to be administered in accordance with applicable refuge law, subject to the right of the holding agency to use and administer the site for the purposes specified in the withdrawal document.

Prior to a 2004 land exchange, the largest military withdrawal in the refuge (more than 50,000 acres) was the former Navy base on Adak Island.

If a federal agency no longer needs the withdrawn lands, they must go through a formal revocation process. The holding agency must comply with contaminant cleanup and environmental restoration requirements that meet Service standards before the lands can be relinquished. After satisfactory compliance, the Service notifies the Bureau of Land Management to proceed with the revocation of the Public Land Order for the Secretary of Interior. The Service then assumes primary jurisdiction of the lands as part of the Alaska Maritime National Wildlife Refuge.

Within the Alaska Maritime boundaries, other federal agencies control about 33,060 acres of land. Of these, nearly 22,000 acres are withdrawn for use of the U.S. Coast Guard (including 4,230 acres of submerged lands), 5,500 acres for the U.S. Navy, more than 5,000 by the U.S. Air Force and more than 500 acres by the Federal Aviation Administration (FAA). The Aleutian Islands Unit has the most federal withdrawals (nearly 23,200 acres), followed by the Gulf of Alaska Unit (nearly 8,000 acres), the Chukchi Sea Unit (almost 1,000 acres), the Bering Sea Unit (over 700 acres) and the Alaska Peninsula Unit (about 200 acres).

State of Alaska

The State of Alaska administers more than 276,000 acres of land within the refuge.

The State of Alaska currently holds title to approximately 276,040 acres of land within the Alaska Maritime Refuge and has selected an additional 8,140 acres. Most of these lands were acquired through federal grants authorized by the Alaska Statehood Act (PL 85-508). This Act entitled the state to select 102,550,000 acres of vacant, unappropriated and unreserved land throughout Alaska under the general grant, and to select an additional 400,000 acres to promote development and expansion of established communities. The state was also granted title to most of the existing roads, airfields, and associated facilities under the Alaska Omnibus Act (Public Law 86-70).

Ownership of Lands Beneath Navigable Waters

There are more than 670,000 acres of federally-reserved submerged lands within refuge boundaries.

In general, the lands beneath tidelands and inland navigable waters were granted to the State of Alaska by the Equal Footing Doctrine, the Submerged Lands Act of 1953, and the Statehood Act of 1958. However, lands beneath water bodies that were reserved or withdrawn by the federal government prior to statehood on January 3, 1959, may have been retained by the United States.

Within the Alaska Maritime Refuge certain submerged lands were reserved or withdrawn by Presidential Proclamation, Public Land Order (PLO), or Executive Order (EO). Nearly 250,000 acres of submerged lands were set aside as part of the Semidi Island Reservation in 1932 (EO 5858) and over 15,000 acres were

withdrawn as part of the Simeonof Reservation in 1920 (41 Stat 716). The largest amount of submerged land, more than 395,000 acres, was set aside as part of the Afognak Forest and Fish Culture Reservation in 1892 (Proclamation Number 39). ANILCA stipulated that any submerged lands around Kodiak and Afognak islands in federal ownership at the time of statehood were to become part of the Alaska Maritime Refuge. The submerged lands in the Afognak Forest and Fish Culture Reservation, as well as about 7,000 acres along the Karluk coastline and more than 4,500 acres in Women's Bay were incorporated into the Alaska Maritime Refuge by ANILCA.

In many cases, ownership of submerged lands within refuge boundaries depends on whether the water body is navigable.

If the U.S. did not reserve or withdraw submerged lands prior to statehood, the ownership of submerged lands is determined on the basis of navigability. If a water body is determined to be navigable, the underlying bed of the river or lake belongs to the state; if non-navigable, the bed belongs to the adjacent landowner(s). For purposes of title, the term "navigable" has a specific legal definition and does not simply refer to whether a boat can navigate the body of water. Disagreements over what waters are navigable or non-navigable are resolved through the federal courts.

Ownership of many submerged lands within the refuge is unresolved.

From 1992-1997, the State of Alaska notified the Secretary of Interior of its intent to file real property quiet title actions to resolve submerged land ownership beneath a number of Alaska lakes and streams. The Notice of Intent filed by the State of Alaska did not include submerged lands within the Alaska Maritime Refuge and the state has taken no further action to quiet title to submerged lands within the refuge.

Judicial action through the Quiet Title Act has been the primary means of clearing title to submerged lands. However, in 2003 the Bureau of Land Management revised the regulations regarding Recordable Disclaimers of Interest (RDI) to provide an administrative means to clear title to submerged lands (43 C.F.R. 1864). Disclaimers of Interest are legal documents that allow the Secretary of Interior, acting through the BLM, to disclaim land interests that have terminated or are invalid. In February 2003, the state filed its first Disclaimer application for submerged lands beneath the Black River in northeast Alaska and has since filed additional applications. To date, no applications have been filed for submerged lands within the Alaska Maritime Refuge.

Adjudicating the extent and boundaries of navigable waterways will take many years to resolve. In the meantime, the Service is working with the state on a case-by-case basis regarding management of major waterways that may be determined navigable.

RS-2477 Claims

Until its repeal in 1976, Revised Statute 2477 authorized the development of public access routes across unreserved public land.

The State of Alaska asserts numerous claims to roads, trails, and paths across federal lands under Revised Statute 2477. This section of the Mining Act of 1866 (codified as 43 U.S.C. 932) provided that "the right-of-way for construction of highways over public lands, not reserved for public use, is hereby granted." RS 2477 was repealed by the Federal Land Policy and Management Act of 1976 (FLPMA), subject to valid existing claims. Under authority of FLPMA, the Bureau of Land Management expanded the regulations at 43 CFR 1864 to allow the State of Alaska and others to apply for federal

"Recordable Disclaimers of Interest" for routes of travel that applicants believe qualify as RS 2477 rights-of-way. Although the State of Alaska may advocate using this administrative process to settle RS 2477 claims, the BLM has no immediate plans to systematically apply the RDI process to these claims (BLM 2010).

The State of Alaska has identified 8 possible RS-2477 claims in the refuge.

The state considers a number of historical transportation routes within Alaskan refuges to be valid RS-2477 claims. Eight routes totaling nearly 850 miles cross portions of the Alaska Maritime Refuge (Table 4). Of the total trail mileage about 250 miles are within refuge boundaries; including about 78 miles across refuge managed land. The remainder crosses Native, private or state selected land. In addition to specific routes, the state also claims section line easements within the refuge. If any of these claims are determined to be valid, they could be developed as transportation corridors by the state.

Table 4. State-claimed RS-2477 routes that cross portions of the Alaska Maritime Refuge

Reference Number	*Route Name*	*Total Mileage*
122	Kotzebue to Noatak (crosses Kinuk Island)	70
213	Teller-Cape Print of Wales (crosses Cape York)	67
268	Ouzinkie Trail (Spruce Island)	3.5
299	Kaltag to Topkok to Solomon to Nome (crosses Topkok Head and Bluff Subunit)	248
387	Kotzebue-Kiwalik (crosses Chamisso Island)	70
471	Teller to Shishmaref (winter; crosses Sarichef Island)	145
472	Teller to Shishmaref (winter-easterly route; crosses Sarichef Island)	145
1623	Wales to Shishmaref (crosses barrier islands in Shishmaref area)	76
	Total Miles	**824.5**

[1] *Information from Alaska DNR RS-2477 digital data, 1995.*

Identification of potential rights-of-way does not establish the validity of these claims, nor the public's right to use them. In the absence of specific regulation or law, the validity of all RS 2477 rights-of-way will be determined on a case-by-case basis, either through the courts or by legally binding agreement of all landowners.

Easements reserved under section 17(b) of ANCSA provide access across private lands to public lands and waters. Public lands are either under state or federal ownership.

17(b) Easements

Section 17(b) of ANCSA requires the federal government to reserve easements for access to public lands or waters whenever land is conveyed to Native corporations. These easements are reserved to ensure access to public lands and waters that would otherwise be completely blocked by conveyed Native corporation lands. These

There are a total of 198 ANCSA 17(b) easements across conveyed land within the refuge boundaries.

easements can be linear easements (i.e., roads and trails) or one-acre site easements for use as temporary campsites and/or to change modes of transportation. Each 17(b) easement reserves a right to use land owned by another for a specified purpose. Public activities, such as recreation and hunting are not authorized on the easement or the surrounding private lands. The conveyance document describes in detail each 17(b) easement and the specific use(s) reserved by that easement.

Currently, there are a total of 198 existing or proposed ANCSA 17(b) easements across conveyed land. This includes 81 existing and 2 proposed site easements; 65 existing and 25 proposed trail easements; 24 existing road easements; and 1 existing airstrip easement. However, additional 17(b) easements may be created as the Bureau of Land Management conveys the remaining land entitlements to Native corporations.

Mining Claims/Oil & Gas Leases

There are no active lode or placer mining claims in the refuge.

Historically, there were 15 lode and placer mining claims within the refuge. Most (13) were located on Unga Island in the Aleutian Islands. One placer claim was located on Shuyak Island off of Kodiak Island and a lode claim was located on Sedanka Island near Unalaska Island. Most claim applications were filed around the turn of the 19th century and were officially abandoned by the mid 1980s. Currently, there are no active claims within the refuge.

There are no oil and gas leases on refuge lands. However, there are active leases near refuge lands. As of June 2011, there are active leases in the Chukchi Sea (487), and the Beaufort Sea (183). In April 2009 the U.S. Court of Appeals issued a ruling vacating and remanding the 2007-2012 Offshore Continental Shelf Oil and Gas Leasing Program. The decision requires the Secretary of Interior to reconsider the decisions made in that program after performing a more thorough analysis of environmental effects.

Wilderness and Special Status Areas

The Alaska Maritime Refuge includes 11 designated Wilderness areas totalling more than 2.6 million acres, a Biosphere Reserve, and three National Natural Landmarks.

There are a total of about 2,629,430 acres of designated Wilderness within the Alaska Maritime Refuge. In 1970, PL 91-504 designated certain lands as Wilderness, including six refuges that would later become part of the Alaska Maritime Refuge: the Bering Sea (81,340 acres), Bogoslof (175 acres), St. Lazaria (65 acres), Tuxedni (5,683 acres), Forrester Island (2,800 acres), and Hazy Islands (32 acres) refuges. In 1975, PL 93-632 created the Chamisso Island Wilderness (455 acres). A year later, PL 94-557 designated 25,141 acres on Simeonof Island as Wilderness. With the passage of ANILCA in 1980, Congress established three Wilderness areas inside the Alaska Maritime Refuge: the 1,326,630 acre Aleutian Islands Wilderness, the 256,840 acre Semidi Islands Wilderness, and the 929,160 Unimak Wilderness (Unimak Island is managed by Izembek Refuge).

In 1976, the Aleutian Islands received international recognition by being designated a Biosphere Reserve by UNESCO (United Nations Educational, Scientific, and Cultural Organization). Currently, the World Network of Biosphere Reserves consists of 553 sites in 107 countries. Biosphere Reserves are sites in diverse ecosystems that demonstrate and innovate approaches to conservation and sustainable development.

Buried 20 million years ago by a volcanic mudflow, the remnants of a petrified forest on Unga Island is now a National Natural Landmark.

There are three designated National Natural Landmarks within the refuge. The National Natural Landmarks program identifies and recognizes the best examples of biological and geological features and encourages the conservation of significant natural history sites. In 1967, Bogoslof Island was recognized as an outstanding example of volcanism at work. In 1968, both Unga Island and Simeonof Island were added to the list of sites. Unga contains the remnants of a sequoia or metasequoia petrified forest buried as a result of volcanic activity in the Tertiary Period. Simeonof was recognized for its biological value, including its role as an ancestral hauling ground for sea otters.

The Alaska Maritime Refuge is included in the Marine Protected Area (MPA) system. The refuge includes nearly 672,000 acres of federally-reserved submerged lands beneath marine waters.

Alaska Peninsula Unit

The Alaska Peninsula Unit – History

The Alaska Peninsula Unit includes the islands, rocks, and islets on the south side of the Alaska Peninsula. Seal Cape, a 9,800-acre headland south of Chignik is the only portion of the unit located on the peninsula itself. Since 1989, Seal Cape has been managed by the Alaska Peninsula Refuge.

The Alaska Peninsula Unit is comprised of two historic refuges and nearly 500,000 acres of additional land.

The unit includes two historical refuges. The first of these, the Semidi Islands Wildlife Refuge, was created by Executive Order 5858 in 1932 as a "refuge and breeding ground for wild birds and game and fur animals." The Semidi Refuge included nine named islands, nearby rocks, reefs, and islets, and nearly 250,000 acres of submerged lands.

The second refuge, the Simeonof National Wildlife Refuge, was created by PLO 1749 in 1958 as a "refuge for the preservation and propagation of the sea otter and other wildlife." The Simeonof Refuge included the tidelands and any rocks or islets located within one mile of mean low water. The refuge was to be administered for grazing purposes, limited to one grazing lease at a time. Both cattle and foxes had been introduced to the island in the 1890s. However, by the 1960s overgrazing and erosion were evident on the 10,500-acre island. The last cattle were removed in 1985 and foxes have since been eradicated.

In 1980, nearly 500,000 additional acres were added to the Semidi and Simeonof refuges to create the Alaska Peninsula Unit of the Alaska Maritime National Wildlife Refuge (PL 96-487).

Alaska Peninsula Unit – Land Status

Regional Corporation Lands. Two Regional Corporations own a total of 1,920 acres in the unit and have selected nearly 32,400 additional acres (Table 5). The Aleut Corporation owns the vast majority of these lands; Koniag, Incorporated owns less than an acre. However, Koniag has the larger percentage of land selections in the unit. Koniag has selected a total of 26,830 acres of cemetery/historic sites under ANCSA 14(h)(1), whereas the Aleut Corporation has selected about 5,306 acres of land under ANCSA

Table 5. Surface land status of the Alaska Peninsula Unit as of April 2011

Category of Lands	*Landowner*	*Acres Conveyed*[1]	*Acres Selected*	*Total Acres*[2]
Federal - Refuge	**U.S. Fish & Wildlife**[4]	NA	NA	**528,500**
Other Federal Government	**Total Other Federal**	NA	NA	**202**
State Government	State of Alaska	**10,787**	**0**	**10,787**
Native Allotments	Many	**661**	**0**	**661**
Regional Native Corporation	The Aleut Corporation	1,920	5,559	**7,479**
	Koniag, Inc.	<1	26,831	**26,831**
	Total Regional Corp.	**1,920**	**32,390**	**34,310**
Other Private	Many	**750**	**0**	**750**
Village Native Corporation	Bay View Corporation	<1	<1	**1**
	Belkofski Corporation	25,901	1,633	**27,534**
	Far West Corporation	770	200	**970**
	King Cove Corporation	6,615	2,092	**8,707**
	Lesnoi Corporation	0	623	**623**
	Oceanside Corporation	2,056	2032	**3,499**
	Sanak Corporation	1	0	**1**
	Shumagin Corporation	45,891	7,920	**53,811**
	Unga Corporation	77,544	0	**77,544**
	Total Village Corp.	**158,778**	**14,501**	**173,279**
	Total Conveyed/ Selected/Withdrawn	**173,098**	**46,891**	**219,989**

[1] *Includes patented and Interim Conveyed (IC) lands. Only land claims within the refuge boundary are reported. Many corporations have additional claims outside the refuge.*

[2] *All acreages are GIS-calculated approximations and may differ from official acreage figures reported elsewhere. All figures include conflicting and overlapping selections and land that is covered by water.*

[3] *Conflicting land claims include: (1) parcels claimed by more than one village or entity; and (2)parcels claimed twice by a single village corporation—to fulfill both a 12(a) and a 12(b) entitlement.*

[4] *Includes 264,595 acres of federally-reserved submerged lands and tidelands in the former Semidi and Simeonof refuges.*

14(h)(8) and 253 acres of cemetery/historic sites. It is likely that up to 25,000 acres of Koniag's selections will be determined to be invalid. The corporation selected all available land in the Semidi Islands, as well as the entire 19,000-acre Sutwik Island as cemetery/historic sites.

The Aleut Corporation has selected about 5,300 acres of "in-lieu" subsurface estate on Unga Island. Under ANCSA, the corporation was not permitted to receive subsurface within pre-ANILCA refuges, but was compensated with an equal acreage of "in-lieu" subsurface elsewhere. Most of the corporation's "in-lieu" estate is in the Aleutian Islands Unit (see the Aleutian Islands section of this chapter for more details).

One occupied village (Sand Point) and one abandoned village (Unga) are located within the refuge in this unit. Five other occupied villages and two abandoned villages are located nearby.

A total of nine village corporations own nearly 159,000 acres in the unit.

Village Corporation Lands. A total of nine village corporations own nearly 159,000 acres of land and have selected more than 14,000 acres in the unit.

Other Federal Lands. The U.S. Coast Guard owns a total of 202 acres in the unit. All are withdrawals for lighthouse/navigation purposes. The largest of these is at Foggy Point (100 acres) on Sutwik Island. Other lighthouse withdrawals are on Nagai and Goloi islands and an island off of Seal Cape.

State of Alaska. The State of Alaska owns nearly 11,000 acres of land in the Alaska Peninsula Unit. The largest tract, more than 7,600 acres, is on Nagai Island in the Shumagin Island group.

Native Allotments. There are a total of eight Native allotment parcels, totalling about 661 acres, within the Alaska Peninsula Unit. There are no outstanding selections in the unit.

Other Private Patents. Other private patents in the unit include a total of 24 parcels (totalling 750 acres) originally conveyed as Homesites (4 parcels), Homesteads (2 parcels), Soldier's Additional Homesteads (7 parcels), a Mission Site (1 parcel), a Sale-Cemetery Land (4 parcels), and Mineral Patent Applications (6 parcels).

All the mineral patents, totaling 384 acres, are on Unga Island in the Alaska Peninsula Unit. Gold was first discovered there in 1884 and mining became an early source of revenue before being eclipsed by the fishing industry. At the turn of the century several mines were producing gold, including the Apollo Gold Mine which operated until about 1908. Between 1891 and 1904, the Apollo, King, and Sitka mines on Unga Island produced $2 to $3 million of gold and silver – the most significant mineral production south of Cook Inlet (Berg et al. 1967).

Pending land exchanges with the Shumagin and Oceanside corporations will help consolidate ownerships and add important wildlife areas to the refuge.

Land Exchanges. The Service and the Shumagin Corporation have negotiated a land exchange to help consolidate ownerships on Nagai and Popof islands. Under the terms of the exchange, the Service would receive from Shumagin about 6,670 acres of land on Nagai Island. In exchange, the Shumagin Corporation would receive about 6,750 acres from the Service on Popof Island. Popof Island is the site of the native village of Sand Point and will be largely under Native corporation ownership after the exchange.

A pending land exchange with the Oceanside Corporation will exchange land within the Alaska Peninsula Refuge for corporation land in both the Alaska Peninsula and Alaska Maritime refuges. Under the terms of the exchange, the Alaska Maritime Refuge would gain complete ownership of Shapka, Chiachi, Paul, Jacob and Spitz islands, adding about 2,980 acres to the refuge. Consolidating Service ownership of these islands will simplify certain management objectives, including invasive species control, which can be complicated by checkerboard ownership.

Aleutian Islands Unit

The Aleutian Islands Unit – History

The Aleutian Islands Unit extends more than 1,100 miles from the tip of the Alaska Peninsula to the end of the Aleutian chain of

islands. It includes the historic Bogoslof Reservation and Aleutian Islands National Wildlife Refuge established in 1908 and 1913, respectively.

When Russian explorers first reached the Aleutian Islands in 1741, they found both thriving Aleut settlements and a rich source of fur. The Russian quest for fur set in motion a period of marine mammal exploitation and Aleut bloodshed and oppression that would continue for more than 100 years. During the period of Russian occupation, about 600,000 sea otters were taken (Lensink 1962) and the Aleut population declined to a fraction of the estimated 12,000 to 15,000 that were present at the time of first Russian contact (Corbett et al 2000). In the latter years of Russian occupation, a policy of conservation and control allowed partial recovery of sea otter populations.

In 1867, attracted by Alaska's fur and fishery resources, the United States purchased the territory from Russia. The period following the purchase was marked by a return to lawlessness and reckless exploitation as the Americans pursued sea otters and fur seals with vigor. By the time the Aleutian Islands Reservation was created in 1913 (Executive Order 1733) sea otters had been hunted nearly to extinction and sea lions were severely depleted in some areas.

The Aleutian Islands Reservation was created in 1913 for breeding birds, the propagation of reindeer and fur-bearing animals, and the development of fisheries.

The Aleutian Islands Reservation was created to protect breeding seabirds, for the propagation of reindeer and fur bearing animals, and for the development of fisheries. However, early management practices were not conducive to healthy seabird populations. Fox farming in the Aleutians had begun during the Russian times and had continued after U.S. acquisition. Although at least 32 islands were leased for fox propagation between 1882 and 1900, there were few commercial fox farms still present at the time the reservation was created. Nevertheless, fur propagation became the management focus of the newly created Reservation. By 1933 there were reportedly more than 140 islands under permit for fox farming (Spencer et al. 1979). In addition to issuing fox farming permits, the agency released reindeer on Unalaska and Umnak, and sheep on Unalaska and Unimak. A successful codfish fishery, headquartered on Unga Island, became the most active fishery.

From 1928 to 1930, several islands were removed from the reservation and others were added. The rationale was that some islands had greater value for grazing and industrial use than for wildlife; others lacked fresh water and were better suited for wildlife purposes. The islands of Akun, Akutan, Sanak, Tigalda, Umnak, and Unalaska were removed from the reservation in 1928 (E.O. 5000) and Amaknak in 1929 (E.O. 5243). In 1930, Amak Island, Sea Lion Rocks, and a nearby unnamed island were added (E.O. 5318).

In 1939, management of the reservation was transferred from the Department of Agriculture to the Department of Interior. The following year, the name was changed to the Aleutian Islands National Wildlife Refuge (Proclamation 2416). The focus also began to shift from fur farming to protecting seabird colonies and sea otters. However, these concerns were soon interrupted by the events of World War II.

In 1942, six months after the bombing of Pearl Harbor, war came to the Aleutians. Japanese forces bombed Dutch Harbor on Unalaska

Island, and seized and occupied Kiska and Attu at the end of the Aleutian chain. The Aleuts living on Attu were sent to prison camps in Japan. After the war, those that survived the ordeal were given passage to Atka, but would never again live on their native island.

In the meantime, U.S. Forces evacuated all remaining Aleuts west of Unimak Island, including those on the Pribilof Islands. They were sent to various "duration villages" in southeast Alaska. There they would spend almost three years in camps that lacked proper sanitation, heat, and medical attention. The Aleuts found themselves living under abysmal conditions in an alien environment for which they were ill-equipped to thrive.

The removal of the Aleut population cleared the Aleutians for a military offensive. Military strategists could not risk having the Aleutians used as stepping stones to the U.S. mainland. Even though the Japanese invasion of the Aleutians was widely recognized as a diversion to draw Allied troops away from the war in the Pacific, dislodging the Japanese from American soil became the overriding purpose of the U.S. military forces.

Attu Island, in the central Aleutians, was the site of the only North American land battle during World War II.

In 2008, the Aleutian campaign was commemorated by the inclusion of several sites in the newly created Valor in the Pacific National Monument.

Needing to be within striking distance of Kiska and Attu, U.S. troops constructed bases and runways in the central Aleutians (including operations on Adak, Amchitka, Tanaga and Ogliuga Islands). A new foe – the Aleutian weather – constantly plagued pilots and ground forces. Thick fog, fierce winds, violent seas, and numbing cold were constant threats. Aircraft caught in perilous weather crashed into mountains and seas. Outfitted with inadequate gear, troops succumbed to foot rot, frost bite, and hypothermia. For troops in the Aleutians, combat was infrequent, but the weather was unrelenting.

The Aleutian campaign ended a little more than a year after it began. After routing Japanese forces from Attu and Kiska, the battle for the Aleutians was over. Hastily constructed military facilities began to demobilize and the war moved elsewhere.

Today, there are still lands withdrawn for military use and many reminders of the so-called "Forgotten War" in the Aleutians. Although looting is an on-going problem, the isolation of the Aleutians has helped preserve many relics of the war. The deteriorating remains of roads and bridges, airstrips, revetments, artillery, construction equipment, and aircraft are still present.

In commemoration of this facet of World War II, President George W. Bush established the Valor in the Pacific National Monument (Presidential Proclamation 8327) in 2008. The new monument includes nine sites, including three sites totalling nearly 5,000 acres in the Aleutian Islands Unit: the crash site of a Consolidated B-24D Liberator bomber on Atka Island, the Japanese occupation site on Kiska Island, and the battle site on Attu. A management plan for the national monument is currently being prepared.

After the war, the focus of the Aleutian Islands Refuge began to shift from promoting fur farming to protecting and restoring the natural ecology it was created to protect. The first efforts to eradicate non-native foxes began in the early 1950s on Amchitka (Spencer et al 1979).

NOAA National Marine Sanctuaries. Courtesy of National Archives

Aleut otter hunters with bidarkas on Unalaska Island circa 1890.

In 1980, the Aleutian Islands Refuge (including the islands that had been removed in 1928-29) became the Aleutian Islands Unit of the Alaska Maritime National Wildlife Refuge (PL 96-487).

Aleutian Islands Unit – Land Status

Regional Corporation Lands. The Aleut Corporation (TAC) is the only regional corporation that owns land (about 10,935 acres) within the Aleutian Islands Unit. About 7,040 acres are ANCSA 14(h)(8) conveyances on Unalaska Island. The remainder (3,895 acres) are conveyances for cemetery/historic sites under ANILCA 14(h)(1). In addition, TAC has selected about 710 acres of cemetery/historic sites that have not yet been conveyed.

Adak played a military role in both World War II and the Cold War.

The Aleut Corporation exchanged some of their land rights under ANCSA for lands on Adak Island. After years of negotiations, the Aleut Corporation, the Department of Defense, and the Service completed a large land

Figure 3. Location of Adak, Alaska

exchange in 2004. The exchange significantly changed the land ownership patterns in the Aleutian Islands Unit by consolidating TAC's land ownership.

In a 2004 land exchange, the Aleut Corporation gained title to about 47,500 acres of land and existing infrastructure on Adak Island. In exchange, the corporation relinquished a similar acreage of their ANCSA entitlements.

Located about 600 miles from the Alaska Peninsula, Adak is remote and isolated, but has a long history of human use. Native occupation dates to at least 9,000 years ago. By the 1830s, however, Russian traders occupied Adak and the permanent Aleut villages had been abandoned.

During the 20th century, Adak gained importance as a strategic military base. Portions of the island had been withdrawn for military purposes since 1901 and played a critical role in the U.S. offensive against the Japanese invasion during WWII. The island's military role culminated in the 1959 withdrawal of about half the island for use by the navy. At its peak, the Adak Naval Air Station housed over 6,000 naval and U.S. Coast Guard personnel and families and served as a surveillance center for Soviet submarine activities. Adak's strategic importance faded with the demise of the Cold War and the base succumbed to the Defense Base Closure and Realignment Act of 1990. Family housing and schools closed in 1994 and the base officially closed in 1997.

Adak was located within the boundaries of the Alaska Maritime Refuge so military relinquishment meant that the land would return to refuge management, if accepted by the Service. Because the extensive infrastructure on Adak made it unsuitable as refuge land without large-scale demolition and cleanup, the Service was interested when the Aleut Corporation suggested a land exchange. The Aleut Corporation had been unable to gain title to Adak under the provisions of ANCSA and was interested in obtaining lands vacated by the military. Lengthy negotiations led to a land exchange agreement which conveyed more than 47,500 acres of former Navy lands, facilities and infrastructure to the Aleut Corporation and removed these lands from refuge status. In exchange, the Aleut Corporation agreed to relinquish a similar acreage of ANCSA surface and subsurface selections and entitlements. These lands were suitable additions to the refuge and are now being managed as refuge lands.

"Old" refuges are those that were created prior to ANILCA. Special ANCSA conveyance rules prevail in these areas.

The Aleut Corporation also owns subsurface lands within the Aleutian Islands Unit. Generally, except for allowances for cemetery sites and historical places, the conveyance rules of ANCSA did not allow regional corporations to select either the surface or subsurface in national wildlife refuges that were established prior to 1971 ("old refuges"). Village corporations, however, could select up to 69,120 acres in these areas. Ownership of the subsurface estate beneath village conveyances is determined by whether or not a village conveyance is within an "old refuge". If so, the federal government reserves ownership of the subsurface; if not, the regional corporation automatically receives the subsurface at the time of surface conveyance.

The Aleut Corporation owns more than 42,000 acres of "in-lieu" subsurface lands on Umnak and Unalaska islands.

Although at first glance the Aleutian Islands Unit appears to be an "old refuge", it is actually a mix of old and new. Although the Aleutian Islands Reservation was created in 1913, a number of islands were removed from the reservation in the 1920s and were later added back to the refuge by ANILCA in 1980. These islands (Akun, Akutan, Amaknak, Sanak, Tigalda, Umnak, and Unalaska) are home to some of the largest communities in the unit. On these

islands, the subsurface estate beneath village lands is owned by The Aleut Corporation. On other islands, including the inhabited islands of Atka and Unimak, the federal government received the subsurface beneath the village lands.

There are five occupied and two abandoned villages within refuge boundaries in this unit. The community of Adak (a former Navy station) is located near the refuge.

The ANCSA conveyance rules also allowed the regional corporations to select "in-lieu" subsurface lands equivalent in acreage to the amount of village conveyances within the "old refuge" areas. Under this provision, the Aleut Corporation owns a total of 42,656 acres of in-lieu subsurface lands on Unalaska (2,559 acres) and Umnak (40,097 acres).

Village Corporation Lands. Eight village corporations own more than 646,000 acres of land within the Aleutians Island Unit. Almost 49,000 acres are selected, but not yet conveyed.

Eight village corporations own more than 646,000 acres in the Aleutian Islands Unit. Two of these are located on the distant Bering Sea islands of St. Paul and St. George.

The general land entitlement framework of ANCSA allowed villages to select and receive land in the immediate vicinity of the village site. However many villages in the Aleut region were unable to select enough lands adjacent to the village to complete their entitlement, either because they are located on small islands or are within "old refuges." In old refuges, village conveyances were limited to 69,120 acres, less than the full entitlement for all but the smallest villages. To remedy the situation, ANCSA allowed these villages to select their remaining entitlement in designated "deficiency areas" that were often far from the village site. Under this provision, the villages of St. Paul and St. George (located in the Bering Sea Unit) were able to select nearly 200,000 acres of land on Unalaska and Umnak islands in the Aleutian Islands Unit.

About 70 percent of the federal withdrawals within the refuge are in the Aleutian Islands Unit.

Other Federal Lands. There are more than 23,000 acres of federal withdrawals in the Aleutian Islands Unit. The largest of these (PLO 1949) withdrew lands on Adak and Attu for use by the U.S. Navy. Most of the lands occupied by the Navy on Adak were transferred to the Aleut Corporation in 2004, however the Navy retained about 5,500 acres in the north end of the island due to potential unexploded ordnance.

U.S. Air Force

Site of the former Driftwood Bay Radio Relay Station on Unalaska Island. Originally part of the DEW Line constructed in the 1950s, the station was deactivated in 1977. The lands are selected by the Ounalashka Corporation and will likely be conveyed to the Native corporation when site restoration is complete.

The military withdrawal on the southeastern coast of Attu Island (totalling 1,784 acres) at the end of the Aleutian chain was originally used by the Army (1941), was transferred to the Navy, and then finally to the U.S. Coast Guard. The Attu withdrawal had been used as a navigation station since shortly after WWII. The Attu Loran Station was manned by a small number of Coast Guard personnel until the end of August 2010, when the station was decommissioned. The Coast Guard has stated their intent to relinquish this withdrawal.

In late 2000, Public Law 106-554 gave the U.S. Air Force primary control and jurisdiction over Shemya Island (3,450 acres) and the Service secondary jurisdiction. Shemya had become part of the Aleutian Islands Reservation in 1913, but had been used by the military for bombing missions in WWII, as a refueling station during the Korean War, and for surveillance during the Cold War. The Eareckson Air Station on Shemya (P.L. 106-544) is still a strategic refueling stop for military aircraft and a link in the long-range early warning radar system.

The Air Force has filed a notice of intent to relinquish two other withdrawals in the unit, including the former Nikolski RRS (Radio

Vice Admiral H. Arnold Karo, NOAA's Historic Coast and Geodetic Survey Collection

The 1945 installation of the first electronic navigation system to use Shoran (Short Range Navigation) involved pulling supplies 1,700 feet up Cape Wrangell Peak on Attu Island. The island was used continuously as a navigation aid until the U.S. Coast Guard decommissioned the LORAN-C (Long-Range Navigation) Station in August 2010.

Relay Site) on Umnak (PLO 2374; which currently conflicts with a Chaluka Village selection) and the former Driftwood Bay RRS (Radio Relay Station; PLO 1851) on Unalaska Island. Both facilities have been deactivated and the buildings demolished or removed. The Air Force filed a Notice of Intent to relinquish the Nikolski and Unalaska lands in 2005 and 1981, respectively. Public Law 108-136 (117 Stat. 1737) contained language that would enable the Secretary of Interior to convey to the Chaluka Corporation the former Nikolski Radio Relay Site on Umnak Island (pending satisfactory environmental restoration by the U.S. Air Force). In exchange, the Chaluka Corporation and Aleut Corporation would relinquish surface and subsurface ownership, respectively, of another parcel of land on Umnak Island.

Executive Order 3406 (2/13/1921) withdrew more than 6,500 acres throughout Alaska for lighthouse stations and other navigational aids. Within the Aleutian Islands Unit, there are about 100 acres of lighthouse withdrawals managed by the U.S. Coast Guard. The largest Coast Guard withdrawal (9,300 acres), however, is on Unimak Island at the east end of the Aleutian chain. Although located within the Alaska Maritime Refuge, Unimak Island is managed by the Izembek Refuge.

The only 44 L.D. 513 appropriation within the Refuge is on Unalaska Island.

The U.S. Air Force also appropriated about 41 acres of land under 44 L.D. 513 for a road corridor between facilities in the Driftwood Bay RRS on Unalaska Island. This is the only appropriation

Table 6. Surface land status of the Aleutian Island Unit as of April 2011

Category of Lands	*Landowner*	*Acres Conveyed*[1]	*Acres Selected*	*Total Acres*[2]
Federal - Refuge	**U.S. Fish & Wildlife**	NA	NA	**3,159,692**
Other Federal Government	**Total Other Federal**	NA	NA	**23,183**
State Government	State of Alaska	**30,168**	**0**	**30,168**
Native Allotments	Many	**2,249**	**0**	**2,249**
Regional Native Corporation	The Aleut Corporation	10,935	710	11,645
	Total Regional Corp.	**10,935**	**710**	**11,645**
Other Private	Many	**1,352**	**3**	**1,355**
Village Native Corporation	Akutan Corp	88,209	15,842	104,051
	Atxam Corp.	74,805	0	74,805
	Chaluka Corp.	76,849	249	77,098
	Isanotski Corp.	52,597	0	52,597
	Ounalashka Corp.	128,568	12,272	140,840
	Sanak Corp.	29,455	0	29,455
	St. George Tanaq Corp.	88,768	14,153	102,921
	Tanadgusix Corp. (TDX)	107,141	6,065	113,206
	Total Village Corp.	**646,392**	**48,581**	**694,973**
	Total Conveyed/ Selected/Withdrawn	**714,279**	**49,294**	**763,573**

[1] *Includes patented and Interim Conveyed (IC) lands. Only land claims within the refuge boundary are reported. Many corporations have additional claims outside the refuge.*

[2] *All acreages are GIS-calculated approximations and may differ from official acreage figures reported elsewhere. All figures include conflicting and overlapping selections and land that is covered by water.*

[3] *Conflicting land claims include: (1) parcels claimed by more than one village or entity; and (2)parcels claimed twice by a single village corporation—to fulfill both a 12(a) and a 12(b) entitlement.*

under this statute within the refuge. Until its repeal in 1976, the instructions on page 513 of Volume 44 of the Land Decisions (January 13, 1916) established a procedure for federal agencies to appropriate public land without a formal withdrawal. The process consisted of simply requesting BLM to approve a requested use as shown on maps or field notes that described the location and extent of the proposed use. Any improvements constructed on the site became the property of the United States. The appropriated lands are treated as a right-of-way interest to the United States in subsequent patents. The right-of-way terminates only when it is no longer needed or used by the United States and applicable disposal procedures have been followed.

State of Alaska. The State of Alaska owns three tracts of land, totalling nearly 30,170 acres in the unit. All are on Umnak Island.

Pending land exchanges will help consolidate ownerships, add important wildlife areas to the refuge, and help resolve problems created by split estates.

Native Allotments. There are a total of 19 Native allotment parcels, totalling nearly 2,250 acres, within the Aleutian Islands Unit. There are no outstanding selections in the unit.

Other Private Patents. Other private patents in the unit include a total of 1,352 acres originally conveyed as Trade and Manufacturing Sites (243 acres), Homesites (5 acres), Homesteads (15 acres), Soldier's Additional Homesteads (108 acres), Mission Sites (494 acres), Sales of Cemetery Land (15 acres), Townsites (191 acres), and Quit Claims (281 acres). The largest tracts of private patents are on Unalaska and Umnak islands.

Land Exchanges. A number of land exchanges have been proposed or completed within the unit. A recent exchange on Unimak Island conveyed to the Isanotski Corporation the reserved federal subsurface underlying corporation lands in exchange for surface lands important to wildlife. The exchange resolved problems created by a split estate in which the corporation owns the surface and the Service owns the underlying subsurface estate. A similar exchange is in process on Atka Island where the Service owns more than 60,600 acres beneath Atxam Corporation land.

An exchange with the Akutan Corporation will add about 18,880 acres to the refuge in exchange for about 16,660 acres of refuge land. The exchange will consolidate ownerships on Tigalda, Avatanak, and Unalga islands and add important puffin colonies, sea lion rookeries, and sea otter loafing/pupping areas to the refuge.

Bering Sea Unit

The Bering Sea Unit – History

The Bering Sea Unit includes two former refuges created in 1909.

In 1909, nearing the end of his second term in office, President Theodore Roosevelt used his presidential powers to set aside both the Bering Sea Reservation (E.O. 1037) and Pribilof Islands Reservation (E.O. 1044) as a "preserve and breeding ground for native birds". The 81,000 acre Bering Sea reservation included the islands of St. Matthew, Hall, Pinnacle and Gull Rock. The Pribilof Island Reservation included two small islands (Walrus and Otter) in the Pribilof Island group, but excluded the larger, occupied islands of St. George and St. Paul. In 1940, both reservations were renamed national wildlife refuges.

In 1980, ANILCA incorporated the Bering Sea and Pribilof refuges into the Alaska Maritime National Wildlife Refuge. The two former refuges and "all other public land on islands, islets, rocks, reefs, spires, and designated capes and headlands in the Bering Sea" became the Bering Sea Unit of the Alaska Maritime Refuge.

The Pribilof Islands were a special case. The two largest Pribilof Islands (St. Paul and St. George) had never been withdrawn as refuge land and were not incorporated into the Alaska Maritime Refuge by ANILCA. On the other hand, Walrus and Otter islands (which together comprised the former Pribilof Refuge) were included as part of the new Alaska Maritime Refuge, but both had already been entirely conveyed to the St. Paul village corporation (Tanadgusix Corporation).

NOAA National Marine Sanctuaries. Courtesy of National Archives

In the late 1700s, Russian fur traders shifted their efforts from the declining Aleutian sea otter population to the fur seal rookeries they discovered in the Pribilof Islands. To supply manpower, Aleut hunters from the Aleutians were forced to labor in the seasonal Pribilof seal harvest. The Russian discovery of the Pribilof islands served to extend the fur trade for another 80 years.

By the 1820s, permanent Aleut settlements were present on both St. George and St. Paul (pictured: the St. Paul Russian Orthodox Church circa 1891). After the U.S. purchased the Alaska territories in 1867, Pribilof sealing continued to generate revenues — now for the U.S. Treasury. The federal government administered the Pribilof Islands and the commercial seal harvest from 1910 until it ceased in 1983. After more than a century as wards of the government, the Aleut communities of St. Paul and St. George were allowed to assume administrative control over their respective islands. Today, the Pribilof Islands are home to the largest remaining Aleut communities in the world.

The seabird colonies of the Pribilofs were home to some of the largest seabird colonies in the State of Alaska and the Service was interested in ensuring their conservation. Prior to the passage of ANILCA, the Service had negotiated the purchase of the seabird cliffs from the Native corporation landowners. Section 1417 of ANILCA ratified the purchase agreement, known as the "Pribilof Terms and Conditions" and authorized and directed the expenditure of $7.2 million to acquire the seabird cliffs and lease two administrative sites from the Native corporation landowners (the Tanadgusix Corporation of St. Paul and the Tanaq Corporation of St. George). Between 1982-1985, the U.S. purchased Walrus and Otter islands (170 acres), more than 6,000 acres on St. Paul and St. George, and 2,000 acres on Unalaska (owned by Tanaq) to be incorporated into the Alaska Maritime Refuge.

The "Pribilof Terms and Conditions" also stipulated that the Service receive the subsurface estate under the acquired land. In

Table 7. Surface land status of the Bering Sea Unit as of April 2011

Category of Lands	*Landowner*	*Acres Conveyed*[1]	*Acres Selected*	*Total Acres*[2]
Federal - Refuge	**U.S. Fish & Wildlife**	NA	NA	166,994
Other Federal Government	**Total Other Federal**	NA	NA	734
State Government	State of Alaska	**4,876**	**941**	**5,817**
Native Allotments	Many	**7,092**	**117**	**7,209**
Regional Native Corporation	Bering Straits Native	60	733	793
	Calista Corporation	5	0	5
	Total Regional Corp.	**65**	**733**	**798**
Other Private		**10**	**0**	**10**
Village Native Corporation	Alaska Peninsula Corp (formerly (Meshik Inc.)	630	0	630
	Becharof Corporation	32	0	32
	Brevig Mission	94	0	94
	Choggiung Limited	554	0	554
	Diomede Native Corp.	3,830	0	3,830
	Golovin Native Corp.	8,053	0	8,053
	King Island Native	2,609	0	2,609
	Koyuk Native Corp.	19	0	19
	Kuitsarak, Incorporated	104	0	104
	Nelson Lagoon Corp.	1,449	0	1,449
	Saguyak Incorporated	1,933	42	1,975
	Shaktoolik Native Corp.	2,883	0	2,883
	Sitnasuak Native Corp.	244	0	244
	Solomon Native Corp.	205	0	205
	St. Michael Native Corp	133	0	133
	Stebbins Native Corp.	27,602	0	27,602
	Tanadgusix Corporation	2	0	2
	Teller Native Corp.	3	0	3
	Togiak Natives Limited	2	0	2
	Unalakleet Native Corp	636	0	636
	White Mountain Native	676	9,680	10,356
	Total Village Corp.	**51,693**	**9,722**	**61,415**
	Total Conveyed/ Selected/Withdrawn	**64,470**	**11,513**	**75,983**

[1] *Includes patented and Interim Conveyed (IC) lands. Only land claims within the refuge boundary are reported. Many corporations have additional claims outside the refuge.*

[2] *All acreages are GIS-calculated approximations and may differ from official acreage figures reported elsewhere. All figures include conflicting and overlapping selections and land that is covered by water.*

[3] *Conflicting land claims include: (1) parcels claimed by more than one village or entity; and (2)parcels claimed twice by a single village corporation—to fulfill both a 12(a) and a 12(b) entitlement.*

compensation to the Aleut Corporation (the former subsurface owner), the "Pribilof Terms and Conditions" authorized an equal-acre land exchange between the Service and the Aleut Corporation. In exchange for giving up their subsurface rights under the acquired land in the Pribilofs, The Aleut Corporation chose an equal-acreage of subsurface estate on Unalaska and Umnak Islands in the Aleutian Islands Unit.

Bering Sea Unit – Land Status

Only King Island village is located within the refuge boundaries in this unit, however another 20 villages are located nearby.

Regional Corporation Lands. Two regional corporations own a total of about 65 acres in the Bering Sea Unit; more than 700 acres have been selected, but not yet conveyed (Table 7). The conveyances include about 60 acres of cemetery/historical sites in the Bluff area (Bering Straits Native Corporation) and an unnamed 5-acre island off the Yukon Delta coastline (Calista Corporation). The Bering Straits Native Corporation has selected 730-acre Sledge Island (currently withdrawn by the U.S. Coast Guard) and a 2-acre cemetery/historical site on Whale Island.

Two regional corporations and 21 village corporations own nearly 52,000 acres in the Bering Sea Unit. More than 10,000 acres are selected, but not yet conveyed.

Village Corporation Lands. A total of 21 village corporations own nearly 51,700 acres of land in the Bering Sea Unit; more than 9,700 acres are selected, but not yet conveyed.

Other Federal Lands. There are currently two federal withdrawals in the Bering Sea Unit. The National Oceanic and Atmospheric Administration has a small withdrawal (less than 3 acres) off the southern coast of St. Paul and the U.S. Coast Guard has a 732-acre lighthouse withdrawal on Sledge Island. The Coast Guard filed a notice of intent to relinquish the withdrawal in 1978, pending clean-up operations. The relinquishment is still pending. About 465 acres of the withdrawn lands were also selected by the Bering Straits Native Corporation under ANCSA (14(h)(8). These lands will likely be conveyed to the corporation after the Coast Guard relinquishment is complete.

State of Alaska. There are nearly 4,900 acres of land conveyed to the State of Alaska. The largest tracts of state-owned land in the unit are on the north side of the Alaska Peninsula, including 2,095 acre Deer Island near Port Moller. The State of Alaska also has about 941 acres of selected lands, including 718 acres at Bluff, on the northern coast of Norton Sound.

Native Allotments. To date, 79 Native allotment parcels, totalling 7,092 acres, have been conveyed under the Native Allotment Act of 1906. One Native Vietnam veteran was deeded a 47-acre parcel in the Safety Sound area of the Bering Sea Unit under the 1998 amendment.

Another 117 acres in the Safety Lagoon area are selected, including one Vietnam veteran allotment claim. These lands have already been conveyed to the State of Alaska, however.

Other Private Patents. There are only two private patents within the unit. Both were originally conveyed as Trade and Manufacturing Sites. These include a 0.5 acre parcel near Port Moller originally conveyed to the Alaska Pacific Salmon Corporation, and 9.5-acre Egg Island (near Nelson Lagoon) conveyed to Pacific American Fisheries, Inc.

Chukchi Sea Unit

The Chukchi Sea Unit – History

The northern Chukchi Sea Unit includes over 80 miles of coastal barrier islands. These islands are almost entirely under private or State of Alaska ownership.

In 1912, President William H. Taft established the 420-acre Chamisso Island Reservation (Executive Order 1658) which set aside Puffin and Chamisso islands and nearby rocky islets as a "breeding ground for native birds." The reservation was named after Adelbert von Chamisso, a German botanist who had visited the Bering and Chukchi seas during a scientific voyage around the world in 1816. The reservation became the Chamisso National Wildlife Refuge in 1940 (Proclamation 2416) and was designated as Wilderness in 1975 (P.L. 93-632). In 1980, ANILCA incorporated the Chamisso Refuge as a subunit of the Chukchi Sea Unit of the Alaska Maritime National Wildlife Refuge. The Chukchi Sea Unit includes

Table 8. Surface land status of the Chukchi Sea Unit as of April 2011

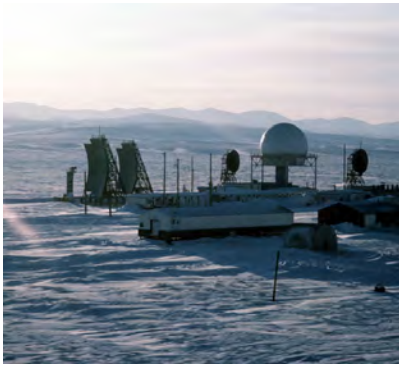
Category of Lands	*Landowner*	*Acres Conveyed*[1]	*Acres Selected*	*Total Acres*[2]
Federal - Refuge	**U.S. Fish & Wildlife**	NA	NA	126,467
Other Federal Government	**Total Other Federal**	NA	NA	998
State Government	State of Alaska	**5,736**	**2,920**	**8,656**
Native Allotments	Many	**4,943**	**76**	**5,019**
Regional Native Corporation	Arctic Slope Regional	39,804	34,691	74,495
	Bering Straits Native	<1	<1	1
	NANA Corporation	2,136	0	2,136
	Total Regional Corp.	**41,940**	**34,692**	**76,632**
Other Private		**43**	**0**	**43**
Village Native Corporation	Cully Corp. (Point Lay) (formerly Meshik Inc.)	3,199	0	3,199
	Deering Ipnatchiak	<1	0	<1
	Diomede Native Corp.	1,820	0	1,820
	Kikiktagruk Inupiat (Kotzebue)	1,475	0	1,475
	Kivalina Sinuakmeut	196	0	196
	Shishmaref Native	11,836	0	11,836
	Tigara Corp. (Pt. Hope)	37,783	0	37,783
	Wales Native Corp.	1,730	2,937	4,667
	Total Village Corp.	**58,040**	**2,937**	**60,977**
	Total Conveyed/Selected/ Withdrawn	**111,700**	**40,625**	**152,325**

[1] *Includes patented and Interim Conveyed (IC) lands. Only land claims within the refuge boundary are reported. Many corporations have additional claims outside the refuge.*

[2] *All acreages are GIS-calculated approximations and may differ from official acreage figures reported elsewhere. All figures include conflicting and overlapping selections and land that is covered by water.*

[3] *Conflicting land claims include: (1) parcels claimed by more than one village or entity; and (2)parcels claimed twice by a single village corporation—to fulfill both a 12(a) and a 12(b) entitlement.*

more mainland capes and headlands and coastal barrier islands than other units of the refuge.



Tech Sgt. Donald Wetterman

The former Point Lay DEW Station circa 1987. The station was deactivated in the 1990s and the facilities demolished or removed. The military intends to relinquish control of this 14-acre withdrawal, pending completion of the revocation process.

In the Chukchi Sea Unit, only the village of Diomede is within refuge boundaries; another seven villages are located nearby.

Eight village corporations and three regional corporations own more than 100,000 acres of land in the unit.

Chukchi Sea Unit – Land Status

Regional Corporation Lands. Three regional corporations (the Arctic Slope Regional Corporation, the NANA Corporation, and the Bering Straits Corporation) own a total of 41,940 acres of land within the boundaries of the Chukchi Sea Unit (Table 8). Almost 34,700 acres are selected. The Bering Straits Native Corporation is the only regional corporation that has been conveyed a cemetery/historical site in the unit (less than one acre).

Village Corporation Lands. A total of eight Village corporations own about 58,040 acres of land in the unit. Less than 3,000 acres are selected, but not yet conveyed.

Other Federal Lands. There are a total of 998 acres of other federal lands within the unit. The U.S. Army (PLO 2020) has a 1-acre withdrawal on Sarichef Island and the U.S. Air Force has two withdrawals: 983 acres at Cape Lisburne (PLO 2034) and 14 acres at Point Lay (PLO 1851). Both the former Point Lay DEW (Distant Early Warning) Station and the Cape Lisburne Long Range Radar Site (LLRS) were originally part of a system of radar stations set up in the 1950s to detect incoming Soviet bombers during the Cold War. A 4,800 foot gravel airstrip still provides access to the LLRS and communication station at Cape Lisburne; the Point Lay Station was deactivated in the 1990s and infrastructure removed. In 1999, the Air Force filed a notice of intent to relinquish the Point Lay withdrawal. The lands will be returned to the refuge pending satisfactory cleanup and rehabilitation of the site.

State of Alaska. The State of Alaska owns more than 5,700 acres of land in the Chukchi Sea Unit and has an additional 2,920 acres of selections. The State of Alaska owns much of the barrier islands to the south of Icy Cape. The largest tract of selected land (1,390 acres) is on the mainland near Cape Thompson.

Native Allotments. Within the Chukchi Sea Unit a total of 65 Native allotment parcels (4,943 acres) have been conveyed. Another two parcels (76 acres) are selected, however, these conflict with State of Alaska conveyances.

Other Private Patents. Other private patents in the unit include two Quit Claim Deeds from the Bureau of Indian Affairs to the State of Alaska (school sites; 5 acres), one Sale for Recreation and Public Purposes (American Lutheran Church; 2 acres), and one Soldier's Additional Homestead (35 acres).

The Gulf of Alaska Unit includes a portion of the former Afognak Forest and Fish Culture Reservation and four former refuges.

Gulf of Alaska Unit

The Gulf of Alaska Unit – History

The Gulf of Alaska Unit includes some of the earliest conservation lands and waters in the United States. In 1892, eleven years before creation of the first federal bird sanctuary in Florida, President Benjamin Harrison created the Afognak Forest and Fish Culture

Reservation. Portions of the lands and waters that made up this reservation later became part of the Kodiak Refuge and the Gulf of Alaska Unit of the Alaska Maritime Refuge, including 395,530 acres of submerged lands and several islands (including Sea Lion Rocks and Sea Otter Island) off of Afognak Island.

In 1909, President Theodore Roosevelt authorized the creation of the Tuxedni (E.O 1039) and Saint Lazaria (E.O 1040) reservations in Alaska. Each was set aside as a "preserve and breeding ground for native birds." The Tuxedni Reservation included Chisik, Egg, and other small islets at the entrance to Tuxedni Harbor in Cook Inlet. The Saint Lazaria reservation included the island of Saint Lazaria and nearly rocks and reefs at the entrance to Sitka Sound.

The Gulf of Alaska Unit includes four historical refuges and part of the former Afognak Forest and Fish Culture Reservation.

Three years later, President William Taft authorized two additional reserves in southeast Alaska, the Forrester Island and Hazy Islands reservations. Again, the purpose of each was to protect important bird breeding areas.

In 1939, jurisdiction of all four reserves transferred from the Department of Agriculture to the Department of Interior. A year later, Proclamation 2416 designated them as units of the national wildlife refuge system.

In 1980, ANILCA established the Alaska Maritime Refuge. The Gulf of Alaska Unit of the newly created refuge included portions of the Afognak Fish Culture Reservation, the Forrester, Hazy, Tuxedni, and Saint Lazaria refuges plus more than 700,000 acres of additional islands, rocks, reefs and islets in southern Alaska.

Gulf of Alaska Unit – Land Status

One occupied village, Ouzinkie, and an abandoned village, Woody Island, are within refuge boundaries in this unit. Another nine villages are located nearby.

Regional Corporation Lands. Three regional corporations own nearly 2,050 acres of land in the unit and have selected about 670 acres (Table 9). Chugach Alaska is the largest regional corporation landowner in the unit. The Cook Inlet Region, Inc. (CIRI) has 326 acres of deficiency lands in the unit on the west side of Cook Inlet. None of the regional corporations have selected cemetery/historical sites in the unit.

Village Corporation Lands. A total of 11 village corporations own more than 121,000 acres of land in the Gulf of Alaska Unit; nearly 4,000 acres are selected, but not yet conveyed. Originally there were 14 corporations in this region, but several have merged: Natives of Akhiok and Kaguyak, Inc. merged to form Akhiok-Kaguyak, Inc.; Natives of Afognak merged with Port Lions to form Afognak Native Corporation; and Nu Nachk Pit merged with the regional corporation, Koniag, Inc.

Three regional corporations and 11 village corporations own nearly 124,000 acres of land in the Gulf of Alaska Unit.

Other Federal Lands. There are currently nearly 8,000 acres of federal withdrawals in the Gulf of Alaska Unit. The U.S. Coast Guard has a total of 7,422 acres of lands and waters in the unit, including 4,232 acres of submerged lands in Women's Bay on Kodiak Island. Many of the Coast Guard withdrawals were originally lighthouse withdrawals, dating from 1914 to 1925. The largest of these is 1,045-acre Rugged Island which was withdrawn in 1925. Other large lighthouse withdrawals are on Elizabeth Island (325

Table 9. Surface land status of the Gulf of Alaska Unit as of April 2011

Category of Lands	*Landowner*	*Acres Conveyed*[1]	*Acres Selected*	*Total Acres*[2]
Federal - Refuge	**U.S. Fish & Wildlife**	NA	NA	442,797*
Other Federal Government	**Total Other Federal**	NA	NA	7,941
State Government	State of Alaska	**224,468**	**4,280**	**228,748**
Native Allotments	Many	**2,400**	**502**	**2,902**
Regional Native Corporation	Chugach Alaska	1,707	0	1,707
	Cook Inlet Region Inc.	329	669	998
	Koniag, Inc.	11	0	11
	Total Regional Corp.	**2,047**	**669**	**2,716**
Other Private	Many	**2,834**	**0**	**2,834**
Village Native Corporation	Afognak Joint Venture	158	0	158
	Afognak Native Corp.[4]	28,968	0	28,968
	Akhiok-Kaguyak, Inc [5]	3,255	3,532	6,787
	English Bay Native	56	1	57
	Lesnoi Inc.	1,797	0	1,797
	Natives of Kodiak, Inc.	189	0	189
	Nu Nachk Pit [6] (merged with Koniag)	8,078	0	8,078
	Old Harbor Native	65,534	0	65,534
	Ouzinkie Native Corp.	9,779	201	9,980
	Port Graham Corp.	3,674	12	3,686
	Seldovia Native Corp.	91	0	91
	Total Village Corp.	**121,579**	**3,746**	**125,325**
	Total Conveyed/ Selected/Withdrawn	**361,269**	**9,197**	**370,466**

[1] *Includes patented and Interim Conveyed (IC) lands. Only land claims within the refuge boundary are reported. Many corporations have additional claims outside the refuge.*

**Includes 407,121 acres of submerged lands that were in federal ownership at the time of statehood (including the former Afognak Fish Culture Reservation, portions of Women's Bay, and a one-mile strip off the coast in the Karluk area of Kodiak Island).*

[2] *All acreages are GIS-calculated approximations and may differ from official acreage figures reported elsewhere. All figures include conflicting and overlapping selections and land that is covered by water.*

[3] *Conflicting land claims include: (1) parcels claimed by more than one village or entity; and (2)parcels claimed twice by a single village corporation—to fulfill both a 12(a) and a 12(b) entitlement.*

[4] *Natives of Afognak merged with Port Lions to form Afognak Native Corporation.*

[5] *Natives of Akhiok and Kaguyak, Inc. merged to form Akhiok-Kaguyak, Inc.*

[6] *The village corporations for Larsen Bay (Nu Nachk Pit) and Karluk Native Corporation merged with Koniag, Inc.*

acres) and East Amatuli Island (140 acres). The Coast Guard also has nearly 1,500 acres on Sitkinak Island that was the site of a LORAN station. The agency filed a notice to relinquish the withdrawal in 1979 and completed clean-up of the site in 2007. Relinquishment is still pending. These lands would transfer to the state if a proposed land exchange on the Izembek Refuge is completed (see PL 111-11). The authorizing legislation states that the Secretary must determine that the exchange is in the public interest before proceeding. The Service is currently preparing an environmental impact statement to analyze the potential effects of the exchange. If there is no land exchange, the withdrawn lands would return to Service jurisdiction after restoration to Service standards.

There are nearly 8,000 acres of other federal withdrawals in the Gulf of Alaska Unit.

The Federal Aviation Administration has almost 520 acres withdrawn for their use within the Gulf of Alaska Unit. Two FAA withdrawals are on Middleton Island: a 508-acre FAA Administrative Site (PLO 4721) and a 10-acre Air Navigation Site (ANS 191) on the northeastern end of the island. Another 280-acre FAA withdrawal was recently revoked and the lands returned to refuge management (PLO 7756; January 11, 2011). Located on the northeast tip of Shuyak Island, just north of Afognak Island, a wireless telegraph station known as the Shuyak Radio Communication Center (ANS 237) began operating in 1947. The FAA abandoned the station in 1968 and removed structures and equipment in 2000. The FAA's 2007 request to relinquish the withdrawal was granted in January 2011.

State of Alaska. The State of Alaska manages more than 224,000 acres within the unit and has selected about 4,280 acres that have not yet been conveyed. However, all of these selection conflict with either Native allotment or village selections. The largest blocks of state conveyed land are on Raspberry, Marmot, Shuyak and Augustine islands.

Native Allotments. To date, a total of 25 Native allotment parcels, totalling 2,400 acres, have been conveyed under the Native Allotment Act of 1906. Another 502 acres are selected.

More than 5,000 acres have been deeded to Native allottees and other private landowners.

Other Private Patents. There are 2,834 acres conveyed as private patents within the unit. The majority (about 1,500 acres) were originally conveyed under one of several homestead acts. Five parcels (574 acres) were conveyed as Mission Sites, seven as Homesites (25 acres), and two as Townsites (485 acres). All these parcels are located either on islands in Kachemak Bay or on islands near Kodiak Island.

Conservation Easements. In 1996 the Kodiak Island Borough sold 26,963 acres on Shuyak Island to the State of Alaska, subject to a conservation easement granted to the Service. The lands are managed by the state as part of Shuyak Island State Park. An enforcement easement is held by the Service to ensure the preservation and protection in perpetuity of those resources damaged by the Exxon Valdez oil spill.

3. Important Resources and Private Lands

This section explores some of the important biological resources of the refuge and their occurrences on private lands within refuge boundaries. The primary focus is on those species for which there are refuge-wide databases – seabirds and Steller sea lions.

For a more complete discussion of the diversity of resources found on the refuge, consult the Alaska Maritime Comprehensive Conservation Plan (USFWS 1988).

Wildlife Resources — Birds

Alaska Peninsula Unit

The huge abundance of seabird nesting habitat gives international significance to the refuge.

The islands in the Alaska Peninsula Unit are teeming with bird life. Approximately 120 species of birds are found in the unit and at least 70 species breed here. At last estimate about 4,500,000 seabirds were nesting on islands within the unit. However, present populations of burrow-nesting and ground-nesting seabirds are probably fractions of their former numbers due to the introduction of foxes for fur farming beginning in the 1800s. Introduced foxes have disappeared from many islands and been removed from others, but they still thrive on some islands and have undoubtedly affected seabird populations in the unit.

A large percentage of the statewide population of horned puffins and Cassin's auklets nest in the Alaska Peninsula Unit.

The Alaska Peninsula Unit provides habitat for more than 19% of the seabirds nesting in the refuge and 15% of the seabirds in the State of Alaska. This includes nearly 740,000 horned puffins (almost 80% of the statewide population), and about 60% of the statewide Cassin's auklet population (nearly 300,000 birds). Other species present in relatively large numbers (at least 20% of statewide totals) include ancient murrelets, black oystercatchers, common murres, glaucous-winged gulls, northern fulmars, pigeon guillemots, red-faced cormorants, and tufted puffins. Although actual numbers are unknown, the unit also supports large numbers of storm-petrels – probably well over a million birds. Storm petrels are nocturnal on their nesting colonies, always arriving at their burrow nest site before dawn and leaving after dark. This minimizes encounters with other avian predators, but it makes an accurate census very difficult to obtain.

Most of the largest seabird colonies in the unit occur on lands managed by the Service.

The Service manages the majority of important seabird islands in this unit. Only three percent of the total nesting population is found on private conveyed land. However, about 56% nest on islands that are partially or completely selected by a village or regional corporation. While these lands are currently managed as refuge land, a portion of them may eventually be conveyed out of federal ownership. Without a doubt the most important of the selected islands are in the Semidi Island group.

Art Sowls

The Semidi Island group (including South Island pictured below) supports huge numbers of nesting seabirds including nearly a quarter of the state's nesting population of horned puffins (above). Originally designated the Semidi Wildlife Refuge in 1932, the area became part of the Alaska Maritime Refuge in 1980.

Kevin Bell

Castle Rock supports nesting colonies of 16 of the 22 species found in the Shumagin Islands. Nearly 300,000 seabirds, including black-legged kittiwakes, (pictured) nest here each year.

The Semidi Islands, a group of nine named islands and numerous small islets, support about half of the seabirds nesting in the Alaska Peninsula Unit. Seven islands in the group support colonies larger than 100,000 birds and two have colonies in excess of a half million birds. Possibly the largest nesting colony of horned puffins in the world (a quarter million birds) is on Suklik Island in the Semidi group. In addition, neighboring Aghiyuk Island supports about 440,000 nesting murres, or about eight percent of the statewide population. Most are common murres, but thick-billed murres occur in lesser numbers. The Koniag Regional Corporation has selected all of the islands in this group as cemetery/historic sites (under ANCSA 14(h)(1) . However, it is likely that most of the selection is invalid and will eventually be relinquished or rejected.

Next in importance to the Semidi Islands are two other major island groups: the Sandman Reefs and the Shumagin Islands. The former, a large group of small, low islands, has the second largest numbers of nesting seabirds in the Alaska Peninsula Unit. These islands are particularly important to nocturnal nesting seabirds, including fork-tailed and leach's storm-petrels. The fact that fox introductions were limited – and unsuccessful – in this group of islands is probably the reason for the large seabird population. Except for Cherni Island, the largest in the group, these islands are managed by the Service.

The Shumagin Islands, a large group of 30 named islands, is the third most important area for nesting seabirds in the unit. More than a million birds, and nearly all of the crested auklets in the Alaska Peninsula Unit are found in the Shumagin Islands. The group also supports relatively large numbers of black-legged kittiwakes and tufted puffins, about 40% and 30% of the totals counted within the unit, respectively. Foxes were indigenous to several larger islands in this group, and were introduced to at least nine others. Ground squirrels, voles, and even bison have also been introduced to islands in this group. Although non-native fox populations have naturally disappeared or been eradicated from these islands, historical numbers of seabirds were probably much larger than they are today. About 50% of the land in the Shumagins is conveyed to private owners and another 1.3% is selected. Most of

Steve Hillebrand

Some large seabird colonies occur on lands selected by Native corporations.

U.S. Fish and Wildlife Service

In addition to seabirds, many other birds frequent the Alaska Peninsula Unit. The Unit is especially important to wintering waterfowl, including emperor geese (pictured) and Steller's eiders. The Semidi Islands support a population of Aleutian cackling geese.

U.S. Fish and Wildlife Service

The entire North American population of whiskered auklets breeds in the Aleutian Islands. Less abundant and less colonial than crested and least auklets, the whiskered auklet is also less studied because of its isolated range and secretive, nocturnal behavior at breeding sites.

the private land is concentrated on the larger islands of Unga, Popof and Nagai, however. About 10% of the seabirds in the Shumagin Islands nest on privately owned lands, including Egg (12,500 birds), High (8,500 birds), and Round (2,050 birds) islands.

Although these three island groups support most of the seabirds in this unit, a few other scattered islands have relatively large seabird colonies, including Ugaiushak (52,000 birds), Spitz (40,000 birds), and Rona (18,000) islands. The first is partially selected and the latter are completely selected by Native corporations.

Aleutian Islands Unit

More than 10.5 million seabirds of 26 species nest in the Aleutian Islands – more than anywhere in North America. About 36% of the seabirds in the state, and 45% of the seabirds in the refuge, nest in this unit. The three largest breeding aggregations, on the islands of Chagulak, Buldir and Kiska, total more than 6.7 million seabirds.

Storm-petrels are probably the most abundant family. An accurate census of these nocturnal species is difficult, but the last estimate exceeded 4.8 million birds. About 70% of the statewide total number of Leach's storm-petrels, and 74% of the fork-tailed storm petrels nest on these islands.

Auklets are also present in high numbers. The unit provides nesting habitat for high proportions of the statewide totals of Cassin's auklets (25%), crested auklets (30%), least auklets (41%) and parakeet auklets (16%). Whiskered auklets, one of the rarest in the family, breed nowhere else in North America.

Three other species that nest in high proportions in the Aleutians are tufted puffins, red-faced cormorants, and northern fulmars. About 55% of the statewide population of breeding tufted puffins, 54% of red-faced cormorants, and 35% of the northern fulmars nest in the Aleutians. The vast majority of the latter nest on Chagulak Island in the central Aleutians, the largest known colony in North America.

Most of these seabird colonies use lands managed by the refuge. Only about 2.4% of nesting seabirds are found on islands that are under private ownership (in whole or in part). Another 0.2% are on selected lands. Most of the colonies on private islands (conveyed lands) tend to be relatively small. However, several islands including Ananiuliak, Poa, Puffin, Tangik, and North Island in Akun Strait, support colonies of more than 20,000 seabirds. The Service will acquire most of these islands in a pending land exchange with the Akutan Corporation. The largest colony (more than 10,000 birds of nine species) on selected land is at Ship Rock, a small island in Umnak Pass, between Umnak and Unalaska islands.

In addition to seabirds, more than 50 species of shorebirds have been documented in the Aleutians. Most are spring and fall migrants, but several species nest there. At last estimate, about 31% of the total population of black oystercatchers were observed in the Aleutians. Asiatic species are common visitors and occasionally nest in the western Aleutians. Many of these are seen nowhere else in North America.

Although the Aleutian Islands do not contain the quality waterfowl

habitats found elsewhere in the state, they still attract up to several hundred thousand birds during annual migrations. Some species nest in the Aleutians, including the common eider, the most abundant nesting sea duck. Others overwinter in the unit, including much of the North American emperor goose population. The unit is also the primary nesting area of the Aleutian cackling goose, once listed as an endangered species.

U.S. Fish & Wildlife Service

Not only seabirds are found in the Aleutian Islands. The Aleutian chain is an important feeding and resting stop for many migrants, including Asiatic species. Whooper swans (pictured) are regular visitors to the central and western Aleutians, but are rarely seen elsewhere in North America. They nest in high latitudes across most of Eurasia.

Bering Sea Unit

About 5 million seabirds breed in the Bering Sea Unit. Nearly 17% of the seabirds in the state and 21% of the seabirds in the refuge breed in this unit. Thick-billed murres, followed by least auklets are the most abundant species. However, several other species are present in high proportions compared to statewide totals. More than 80% of the world population of red-legged kittiwakes, 62% of parakeet auklets, and 33% of northern fulmars nest in this unit. On the other hand, nocturnal seabirds including storm-petrels, are not known to nest in the unit and surface-nesting gulls and terns are scarce.

U.S. Fish & Wildlife Service

Least Auklet nesting habitat on St. Matthew Island in the Bering Sea.

The largest seabird colonies are in three distinct locations: the Pribilofs (2 million seabirds), St. Matthew and the associated islands of Hall and Pinnacle (2 million), and King Island (245,000) off the Seward Peninsula. Although St. Matthew is managed by the Service, the other locations are Native conveyed in whole (King Island) or in part (the Pribilofs).

Only about 7% of the seabird colonies in the unit nest on private lands. However, a large percentage (about 45%) nest in the Pribilof Islands where the Service owns the seabird cliffs themselves, but most of the island is Native conveyed. The Pribilof Islands are unique in that only the seabird cliffs are within the Alaska

Maritime Refuge boundary – the private lands are outside the official boundary. The Pribilof Island of St. George has the largest concentration of murres (1.3 million) in Alaska, more than 80% of the world population of red-legged kittiwakes and 37% of the North American parakeet auklet population.

King Island supports the largest seabird colonies on private land in the Bering Sea Unit. About 245,000 seabirds of 12 species nest here, including 10% of the statewide population of parakeet auklets (42,000 birds), along with 80,000 least auklets, 90,000 murres, and 22,000 crested auklets.

The Bering Sea Unit includes several tracts of land on mainland Alaska. Several of these are under private ownership. One of these, known as Bluff, supports a large colony of common murres. However, the murre population has been declining steadily since the 1970s when more than 56,000 murres nested in the area.

Only one other privately-owned island in the unit supports more than 10,000 nesting birds. At the southern end of the unit, an unnamed island in Nelson Lagoon (north side of the Alaska

U.S. Fish and Wildlife Service

Murres nest in noisy colonies on the cliffs of the Pribilof Islands. Adults do not build a typical "nest", but arrange pebbles and other debris close to their single egg. The debris is cemented in place with feces and helps prevent the egg from rolling off the ledge.

Deep underwater divers, murres use their wings to "fly" through the water, routinely reaching depths of more than 300 feet in search of fish, squid, and crustaceans to feed their chicks.

Seabirds

Fork-tailed storm petrel

C. Schlawe

Thick-billed murre

Art Sowls

Crested auklet

Glen Tepke

Whiskered auklet

Ron Laubenstein

Tufted puffin

Steve Hillebrand

Red-legged kittiwake

U.S. Fish & Wildlife Service

Populations of seabirds in Alaska are larger and more diverse than any where else in North America. At least 38 species breed in Alaska and eight of these breed only in Alaska and adjacent Siberia.

Seabirds are a fascinating group. In general, seabirds live longer (up to 60 years), start breeding later (up to 10 years) and have smaller clutches (often only one egg) than other birds do. Many species come ashore only to mate, often nesting in colonies that can vary in size from a few birds to millions. Both parents help raise the young and in some cases display remarkable site fidelity – returning to the same burrow or nesting site year after year.

Many species migrate after the nesting season. Some species travel only short distances; others undertake remarkable journeys. The Arctic tern's trans-global flight between the Arctic and Antarctica may approach 24,000 miles round trip.

Parakeet auklet

Vernon Byrd

Auklets n flight , U.S. Fish & Wildlife Service

Peninsula) is used by a large colony of nesting glaucous-winged gulls and small numbers of common eiders, Arctic terns, double-crested cormorants and tufted puffins.

Chukchi Sea Unit

A total of 1.2 million seabirds, or about 5% of the seabirds in the refuge, nest in the Chukchi Sea Unit. In addition to offshore islands, the unit includes a few hundred thousand acres of mainland habitats, as well as numerous barrier islands backed by coastal lagoons.

In the Chukchi Sea Unit nearly half of the nesting seabirds occur on private lands.

The largest concentrations of seabirds are at Cape Thompson and Cape Lisburne on the mainland, and Little Diomede Island. Thick-billed murres and black-legged kittiwakes are the most numerous species at the mainland sites, whereas least and crested auklets are most numerous on Little Diomede. A small colony of dovekies nests on Little Diomede, one of only a few known colonies in the state. Nocturnal seabirds, including storm petrels and ancient murrelets, do not nest in this unit.

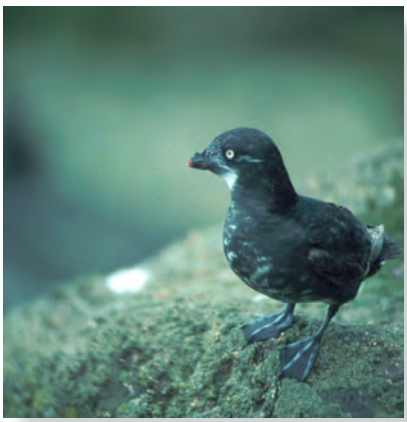
Unlike the other units, a large percentage (45%) of seabirds nest on privately-owned land in this unit. Most of these are on Little Diomede, which is entirely Native-owned. The steep bluffs of Little Diomede host more than half a million nesting seabirds of 13 species. Second in terms of numbers, Cape Thompson attracts about 20,000 seabirds annually. Ownership of Cape Thompson is mixed; both refuge and private lands provide habitats for nesting seabirds.

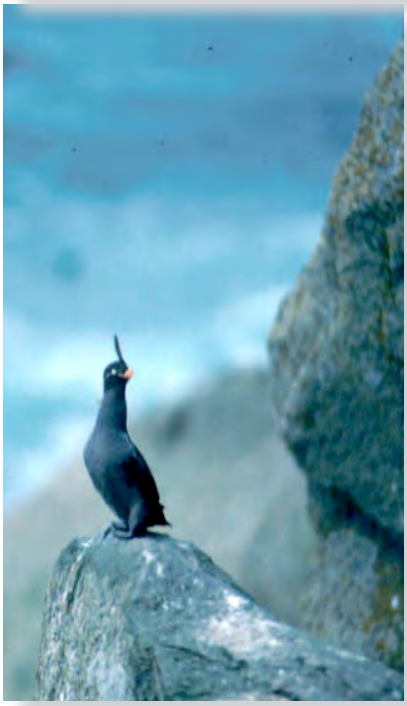
Seabird colonies on other private and state lands are generally very small (less than 100 individuals). However, bird species other than seabirds nest on some of these lands. State-owned barrier islands bordering Kasegaluk Lagoon at the northern end of the unit are

Donna Dewhurst

Small colonies of Arctic terns nest on the low barrier islands of the Chukchi Sea Unit. This tern species is best known for its remarkable migration – each year flying from Arctic nesting grounds to Antarctica and back.

Arctic terns nest in shallow depressions on the ground and fiercely defend both nest and young. Although too small to inflict serious damage, adults will aggressively strike at humans and other large mammals when defending nests.





Elaine Rhode

Over 400,000 least (top) and crested (bottom) auklets nest on Little Diomede Island. Located near the international date line, and only 2.5 miles from Russian-owned Big Diomede, Little Diomede is rugged and isolated. A Native village is located on the island, but access is limited. There is no airstrip and rough seas and frequent fog limit floatplanes.

used by small colonies of nesting Arctic terns and glaucous gulls, but the most prominent breeding birds are common eiders. This area is also an important fall staging area for brant, oldsquaw, and several shorebird species.

U.S. Fish and Wildlife Service

Common eiders nest on barrier islands of the Chukchi Sea Unit (female eider on nest pictured). After leading their young to water, hens often "creche" their broods into groups of ducklings. Once formed, a creche tends to stay together throughout the brood-rearing period.

Gulf of Alaska Unit

Almost 2.4 million seabirds nest in the Gulf of Alaska Unit, or about 10% of the refuge total and over 8% of the statewide total. The most abundant species and the corresponding proportion of the statewide population nesting in the unit are: Leach's storm-petrels (22%), fork-tailed storm-petrels (15%), tufted puffins (15%), and black-legged kittiwakes (21%).

Within the unit, more than half of the breeding birds nest in three subunits off the southeastern Alaska panhandle (Forrester Island, St. Lazaria, and Hazy Islands subunits). The most southerly, the Forrester Island Subunit, supports the largest breeding population of seabirds in the Gulf of Alaska Unit. More than a million birds, primarily fork-tailed and Leach's storm-petrels and Cassin's and rhinoceros auklets, nest on this small group of rocks and islands. About 170 miles to the northwest, the St. Lazaria Subunit supports nearly half a million seabirds, the most numerous being Leach's and fork-tailed storm-petrels. The third subunit, the Hazy Islands, supports small colonies of nine species, including glaucous-winged gulls, Leach's storm-petrels, and three species of cormorants. It is one of the few breeding sites for Brandt's cormorants in Alaska.

The next largest numbers of nesting seabirds, over 400,000 birds, occur in the Barren Islands, a group of islands 60 miles south of Homer. The easternmost island in the group, East Amatuli, hosts the largest colonies – more than 130,000 nesting fork-tailed storm-petrels and 74,000 tufted puffins, among other species.

All of these important areas are managed entirely by the refuge, with the exception of a lighthouse withdrawal on East Amatuli. However, about 17% of the seabirds in the Gulf of Alaska Unit do nest on private land or on islands comprised of a mix of federal and private land. In fact, a total of 141 islands, islets and rocks, supporting seabird colonies of more than 400,000 individuals, are partially or completely controlled by entities other than the Service. The State of Alaska manages 61 rocks, islands, and islets supporting a total nesting population of 28,000 seabirds. Native corporations

U.S. Fish & Wildlife Service

Three species of murrelets, ancient, Kittlitz, and marbled (pictured), nest in the Gulf of Alaska Unit. The entire North American population of Kittlitz murrelets and about 91% of marbled murrelets nest in Alaska. Both species have experienced steep population declines in recent decades.

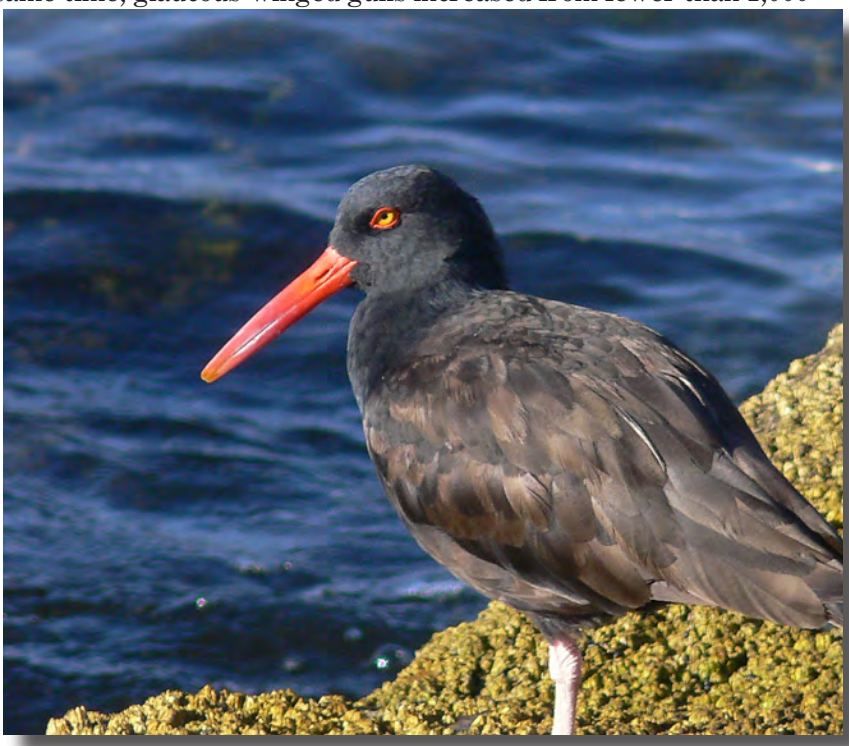
Each species is unique. Unlike most seabirds, Kittlitz and marbled murrelets use camouflage and secretive behavior to avoid predation rather than safety in numbers (colonial nesting) In contrast, ancient murrelets nest colonially, but are unique in rearing their chicks entirely at sea. The downy chicks follow the adults to sea within days of hatching – even before their first meal.

and private individuals own 74 sites (with an estimated 370,000 nesting seabirds) and other federal agencies manage six sites with over 4,000 nesting seabirds.

The Triplet Islands, a group of three small Native-conveyed islands in the Kodiak Archipelago, support the largest concentration of nesting seabirds on private lands. A total of about 108,000 birds, of at least 13 species, nest there. Tufted puffins are the most numerous, followed by fork-tailed storm-petrels and murres.

Two other Native-owned islands, Flat and Gull islands, have large seabird colonies. Located on the east side of Kachemak Bay off the Kenai Peninsula, Gull Island is easily accessed by boat from Homer. More than 11,000 black-legged kittiwakes and seven other species, totaling more than 17,000 birds, nest on this small island. Flat Island, near Kaguyak on Kodiak Island, supports about 30,000 tufted puffins, 1,000 black kittiwakes and small colonies of murres, gulls, and storm-petrels.

Of the islands under mixed federal/private ownership, Middleton Island, located about 65 miles south of Prince William Sound, supports the largest seabird colonies (totaling about 150,000 birds). Species composition on this island has been in flux over several decades. Formerly one of the world's largest black-kittiwake colonies, the population has declined about 80% since 1981. At the same time, glaucous-winged gulls increased from fewer than 1,000



U.S. Fish & Wildlife Service

An important indicator species of nearshore ecosystem health, the black oystercatcher is a conspicuous shorebird that feeds on intertidal marine invertebrates. Its restricted range, small population size, and vulnerability to disturbance make it a species of concern (Alaska Shorebird Working Group, 2000).

birds in the late 1970s to an estimated 12,500 birds (Denlinger 2006). This is due to the large 1964 earthquake that created an extensive intertidal zone by lifting the island nearly four meters. Numbers of black oystercatchers have increased dramatically from two birds in 1976 to 718 in 2002 (Tessler et al. 2007). The island is also one of a handful of oceanic islands used by nesting Canada geese and hosts a wide variety of vagrants during spring and fall migrations – more than 220 species have been recorded.

Wildlife Resources — Steller Sea Lions

The Steller sea lion ranges from the Channel Islands off southern California, around the Pacific Rim to northern Japan. Most rookeries and haulouts are on remote rocks and islands, including many within the Gulf of Alaska, Aleutian Islands, Alaska Peninsula and Bering Sea units of the Alaska Maritime Refuge. The Gulf of Alaska and Aleutian Islands support the greatest concentration of rookeries (NMFS 1992).

The refuge is home to two stocks of sea lions. The western stock is classified as "endangered" under the Endangered Species Act, whereas the eastern stock is listed as "threatened".

The Steller sea lion population has declined substantially from historic levels. Large numbers of sea lions were hunted from the 1800s to the 1930s for oil, hides, and other products. In the early 1900s, sea lions were also hunted to reduce competition for fish. Although most of these hunts were discontinued in the late 1950s, the population continued to decline. From the late 1950s to 1980, the population declined by 52% (Merrick et al., 1987). Declines were most dramatic in the Aleutian Islands and western Gulf of Alaska where Steller sea lions declined by more than 80% between the late 1970s and early 1990s.

In 1990, the sea lion was listed as a threatened species under the U.S. Endangered Species Act. Currently, the population is being managed as two genetically distinct stocks: the eastern stock is classified as "threatened" and the western stock is classified as "endangered". The dividing line between the two lies near Prince William Sound (144º W. longitude) in the middle of the refuge's Gulf of Alaska Unit.

Since 2004, NMFS has observed a slight population decline in the central Gulf of Alaska and an increase at the eastern Gulf sites. However, the increase in the eastern Gulf of Alaska may be due to immigration of animals from southeastern Alaska (eastern stock), since the counts in Southeastern Alaska were lower than expected. Pup production has been declining.

The National Marine Fisheries Service (NMFS) has surveyed sea lions at rookeries and haulouts since the mid-1970s. By monitoring sites on a regular basis, the agency is able to estimate population sizes and trends over time.

Surveys indicate that the western stock of sea lions declined by an average of about 5.4% annually from 1991 to 2000, before showing an increase during the 2000-2004 period of about 3% annually. The most recent trend data (2004-2008) suggest that the western stock of sea lions in Alaska is stable or declining slightly, although there is considerable regional variability (Fritz et al. 2008). From 2005 to 2009, pup counts increased 18% throughout the eastern Aleutian Islands and Gulf of Alaska, but declined by 6% in the western and central Aleutians. Currently, the minimum population size of the U.S. portion of the western stock is estimated to be about 41,200. This estimate is considered a minimum because it was not corrected to account for animals that were at sea during the surveys.

The sharp decline in the western population through the 1980s was mirrored by population growth in southeast Alaska, British Columbia and Oregon. Overall, the size of the eastern stock has been increasing over the last few decades, although the 2008 counts were

U.S. Fish &Wildlife Service

Ugamak Island rookery circa 1967. From 1970-72, nearly 3,800 pups were commercially harvested from the Ugamak rookery. Although harvests were discontinued, pup numbers continued to decline. By 1990, a total of only 851 pups were counted at the site (NMFS 1992).

lower than expected (Allen et al. 2009). The number of Steller sea lion pups counted in 2009 in Southeast Alaska (7,462) exceeded any previous counts dating to the 1960s. Pup production has increased at a rate of almost 4% per year at the five major southeastern rookeries since the late 1970s. The current minimum population estimate for the eastern stock is slightly over 44,400 animals. The states of Alaska, Washington, and Oregon have petitioned NMFS to delist the Southeast Alaska stock on the basis that it has met its recovery goals under the Endangered Species Act.

Alaska Peninsula Unit

There are 21 major Steller sea lion haulouts and rookeries in the Alaska Peninsula Unit. Currently, the largest rookeries are at Chernabura, Pinnacle Rocks, and Clubbing Rocks. All 21 sites are on refuge land, although one haulout (Sutwik Island) and one rookery (Chowiet Island) are on lands selected by the Koniag Regional Native corporation. However, it is likely that most of this selection will eventually be relinquished.

Aleutian Island Unit

There are 78 major rookeries and haulouts in the Aleutian Islands Unit. Most of these are on lands managed by the refuge. However, one of the two largest rookeries is on village corporation land (Akutan Island), and the other is on a U.S. Coast Guard withdrawal (Ugamak Island). In total, there are eight haulouts or rookeries on privately-owned land within the unit. However, the refuge is receiving three of these sites, including the large Cape Morgan rookery on Akutan Island, in a land exchange negotiated with the Akutan Corporation.

Bering Sea Unit

A total of 10 rookeries and haulouts in the Bering Sea Unit were included in the 1993 designation of critical habitat. NMFS has not surveyed this area as intensively as the others. Nevertheless, sites in the northern Bering Sea are thought to be important – particularly to males which migrate through the region in the summer months. In addition, these sites may represent an outer range that could be abandoned if there is a range contraction due to a long-term population decline (NMFS 2001).

Four of the haulouts/rookeries in this unit are on islands managed by the Service. The rest are on islands under mixed ownership (three sites in the Pribilof Islands), entirely conveyed to Native corporations (two sites on St. Lawrence Island), or on state land (Round Island in the Walrus Island State Game Sanctuary).

Gulf of Alaska Unit

There are 27 major Steller sea lion haulouts and rookeries within refuge boundaries in the Gulf of Alaska Unit. Three of these sites are in southeastern Alaska and are used by the eastern (threatened) stock of Steller sea lions. The remaining 24 sites are within the range of the western (endangered) stock, although there may be some movement of eastern stock animals into this area at certain times of the year.

Female and pup

U.S. Fish & Wildlife Service

Bull with harem on Buldir Island

U.S. Fish & Wildlife Service

Male Steller sea lions come ashore at rookeries in mid-May. Females arrive shortly after and give birth to a single pup within days of being on land. Pups generally nurse for a year and are weaned before the next breeding season. However, some pups may maintain a bond with their mothers for up to three years.

Amak Island Haulout

Kevin Bell, U.S. Fish & Wildlife Service

The largest rookeries are in the Forrester Island Subunit, the Hazy Island Subunit, Seal Rocks at the entrance to Prince William Sound, and Sugarloaf Island in the Barren Island group. All of these are on lands managed by the refuge, except for state-owned Seal Rocks.

A total of four other rookeries and three haulouts are on state-owned land within the unit. The largest of these is the Marmot Island rookery, east of Afognak Island. A total of five haulouts within the unit are on Native-conveyed lands. The largest of these are in the Kodiak Island area, including Two-Headed Island (near Kaguyak Bay) and an unnamed island off Cape Ugat.

U.S. Fish & Wildlife Service

Tufted puffins typically select islands or cliffs relatively inaccessible to predators, close to productive waters, and high enough that they can take to the air easily.

Climate Change — the Big Unknown

Alaska is extremely vulnerable to observed and projected climate change and its impacts. Over the next 100 years, climate change is expected to accelerate, contributing to major physical, ecological, social and economic changes.

Seabirds are intrinsically linked to the marine environment. Their fate depends on the availability of high quality prey and adequate nest sites. Changes in prey availability in response to climate driven factors such as surface sea temperature and sea ice extent are likely to change both the distribution and abundance of seabird species—some species will be favored and others will not.

Several large-scale die-offs of seabirds, primarily surface-feeding species, have been observed in the Gulf of Alaska during the past decades. Starvation caused the death of an estimated 100,000 common murres in 1993. Fisheries scientists have noted a corresponding change in marine fish communities since the 1970s, marked especially by a shift from high quality forage species such as capelin and Pandalid shrimp to low-quality pollock. These changes followed a "regime shift", a rapid reorganization of the climate system from one relatively stable state to another. During the 1970s, the Aleutian Low pressure system shifted south and intensified, leading to stronger westerly winds and warmer surface waters in the Gulf of Alaska. The result was a shift from a colder to a warmer system. One biological consequence was the collapse of some forage fish populations (Anderson et al. 1997, Bechtol 1997) which was devastating to piscivorous sea bird and marine mammal populations (Piatt & Anderson 1996, Merrick et al. 1997).

Scientists are also observing changes in the Bering Sea ecosystem. Half of all the seafood taken in the United States each year comes from these productive waters. Higher water temperatures are triggering a later, weaker bloom of the algae which forms the base of the entire food chain. If unavailable at the time when it is needed most, its absence can cause a ripple effect throughout the entire ecosystem, affecting bottom-dwelling creatures like crabs, and creatures that feed on clams and shellfish such as walruses. The future state of the Bering Sea ecosystem remains uncertain.

Climate change will likely affect all areas of the refuge. The extent of the changes to the marine environment will depend both on the degree and the rate of warming. Rapid changes can exceed a species ability to adapt or emigrate to more favorable conditions and could produce catastrophic declines in wildlife populations.

4. Key Management Concerns

The Alaska Maritime Refuge is managed to conserve native fish and wildlife populations and their habitats, while providing opportunities for subsistence, compatible types of recreation, and research. In practice, management issues are often very complex, and decisions may represent a compromise between the conflicting values and competing interests of various user groups. The task is further complicated by the patchwork of public and private lands within refuge boundaries.

The Alaska Maritime Refuge is managed to respect the rights of private landowners while still conserving refuge resources.

A large component of the land within the Alaska Maritime Refuge will always be owned and managed by Native corporations, the State of Alaska, or private individuals. Refuge goals and policies are designed to accommodate the rights of these landowners while conserving the refuge's natural resources. However, building cooperative agreements and/or acquiring key lands or easements from willing owners can help us address management concerns. In other cases, external threats such as global climate change may influence our decisions.

There will always be large blocks of private lands within the Alaska Maritime Refuge.

This section is not an exhaustive discussion of all refuge management issues. Rather, it will address some refuge management concerns that might be alleviated through particular land actions.

Maintaining or Restoring Healthy Ecosystems

The Alaska Maritime Refuge currently supports both relatively undisturbed and intact ecosystems and areas where human's actions have disrupted the normal balance. Maintaining, or restoring if necessary, the integrity of these systems is one of our primary concerns. Characteristics such as species diversity, functioning of natural ecological processes, patterns and connectivity of lands and waters, and the balance between predator and prey are indicators of the health of the system.

Land conservation measures can help us maintain the health and integrity of the entire system.

Invasive Species - Islands are particularly vulnerable to disruption from introduced species. In general, islands are less diverse than mainland habitats. The species that inhabit them are limited to those that can fly, swim, or drift there. Over time these colonizers either disappear or adapt to their island home. Some may diverge significantly from their mainland cousins - even evolving into unique subspecies or species. Mammals are often limited or absent from islands, whereas birds may be abundant.

Eradicating invasive species is critical to restoring seabird populations on affected islands.

In the absence of mammal predators or competitors, seabirds can flourish on remote islands. Historically, many islands in the refuge provided exceptional seabird habitat. The absence of natural predators and the productivity of the oceans provided ideal conditions for rearing chicks. But the arrival of introduced animals, such as foxes and rats, proved devastating to many bird populations.

Art Sowls, U.S. Fish & Wildlife Service

Least auklet killed by a rat. The small drop of blood at the nape is a telltale sign.

These island-nesting seabirds had no adaptations to cope with newcomers. These birds nest on the ground, on cliffs or in burrows that are often accessible to predators.

Beginning in the 1700s, trappers, government agencies, homesteaders, shipwrecks, and stowaways all introduced non-native animals to the islands of the refuge. The refuge itself permitted and encouraged some introductions until the 1950's. Over the past two centuries, rats, foxes, ground squirrels, rabbits, mice, cattle, horses, sheep, hogs, reindeer, caribou and bison have been introduced to some islands within the refuge. For over 50 years, the refuge has been undoing this damage by removing the introduced animals, restoring the native ecosystems and bringing the birds back.

Consolidating Land Ownership Patterns

Land ownership patterns can substantially influence resource management options for wildlife refuges. Within the Alaska Maritime Refuge, much of the land selected by or conveyed to village and regional Native corporations is consolidated in contiguous blocks surrounding villages. Many islands are either privately-owned or entirely administered by the refuge. However, other islands have complex land ownership patterns in which parcels of private land are interspersed with blocks of refuge-administered lands. Multiple ownerships can complicate land management. When the refuge shares ownership of an island, it can limit the management tools available to refuge managers. For example, removing invasive species from refuge land would have little effect if adjacent private parcels are a continual source of non-native species (cats, dogs, rats, etc.).

Cattle and bison are present on several Refuge islands. Cattle were first introduced to Chirikof Island in 1888. During the 1900s, a series of hopeful ranchers with BLM grazing leases tried, but failed, to produce a profitable beef market on this remote island.

By the time the last grazing lease expired in 2000, Chirikof Island had become part of the Alaska Peninsula Unit of the Alaska Maritime Refuge. Unfortunately, overgrazing and introduced foxes had degraded habitats and decimated seabird populations. The Service began working with the cattle's owner to remove them and restore the island's native habitats. Removal proved to be difficult, however, and was not completed before the owner's death. Removal and restoration efforts are on hold while the courts settle issues regarding legal ownership of the remaining cattle.

U.S. Fish & Wildlife Service

Preparing for Climate Change

A changing climate could have profound effects on refuge habitats and resources. Warming ocean waters would significantly alter marine ecosystems and have important implications for the seabirds and marine mammals that rely on accessible and productive fish

A changing climate increases the risk that invasive species will be able to thrive in areas that were previously unsuitable.

populations. Large northward shifts in fish and shellfish species are expected to accompany a warmer climate. Recent climate-related impacts observed in the Bering Sea include unusual algal blooms, abnormally high water temperatures, and reductions in marine mammal and some seabird populations, including common and thick-billed murres and red- and black-legged kittiwakes.

In addition to ecological changes, actual physical changes in refuge lands could occur. Rising sea levels and increased storm frequency and intensity could erode or inundate habitats. Barrier islands could disappear, increasing the impacts of erosion on mainland coastlines.

Minimizing or eliminating environmental stressors that exacerbate the effects of climate change helps promote resiliency in natural systems.

Although there is much uncertainty over the extent and types of changes that might result from a changing climate, it is imperative that we consider climate change when faced with management decisions. Using the best science available, we may need to make hard decisions and invest our time and money on those lands and resources that have the most promising outcomes. We also need to take action to minimize or eliminate other stessors that could exacerbate the effects of a changing climate.

Preserving Wilderness Character

Noise, permanent structures and other evidence of human presence can alter nearby Wilderness character.

The Wilderness Act of 1964 defines Wilderness as "untrammeled by man ... retaining a primeval character and influence, and without permanent improvements or human habitation." Section 2(a) directs that Wilderness areas "be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness..." Wilderness offers "outstanding opportunities for solitude or a primitive and unconfined type of recreation".

The Service is committed to the preservation of refuge Wilderness character. However, certain uses on private lands have the potential to affect the aesthetic, experiential, and symbolic values of adjacent Wilderness areas. Even noise and visual presence can have effects that reach beyond property boundaries to degrade Wilderness character on surrounding refuge lands.

Access to refuge inholdings is guaranteed by ANILCA.

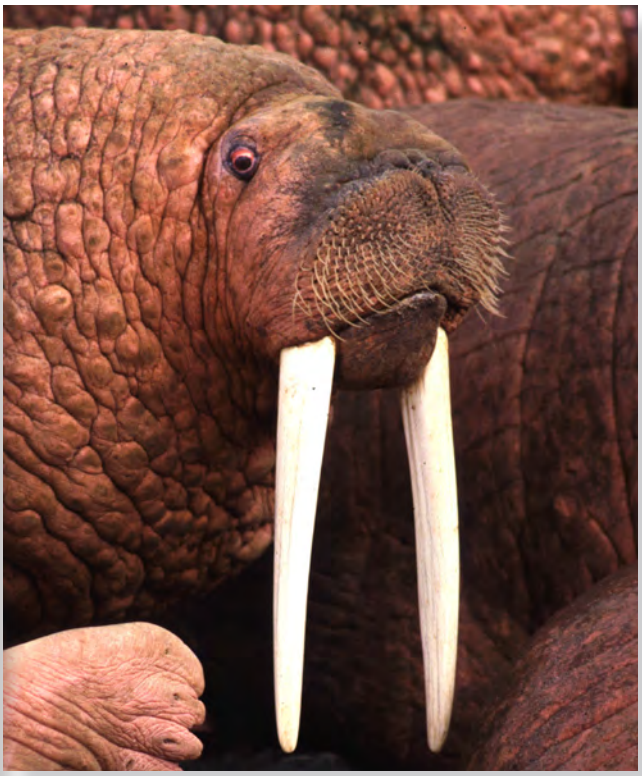
Section 1110(a) of ANILCA, which addresses Alaskan Wilderness areas, authorizes the use of snowmachines (during periods of adequate snow cover and frozen river conditions), motorboats, and airplanes, for traditional activities and for travel to and from villages and homesites. In addition, under §1110(b) any landowner with a valid refuge inholding including a Wilderness inholding, is ensured adequate and feasible access to their property, for economic or other purposes. Access routes across Wilderness lands to private parcels may degrade Wilderness characteristics and disrupt the quietude of refuge visitors seeking a Wilderness experience using non-motorized access methods.

Intermixed land ownership patterns can complicate Wilderness management. Of the 2,576,288 acres of Wilderness in the refuge, about 1,840 acres are selected or conveyed to private landowners. Most are historic and cemetery sites that are still being reviewed by the Bureau of Land Management. These sites are important cultural sites that are unlikely to be developed. However, other private parcels have the potential to be used in ways that could affect the Wilderness character of adjacent refuge lands. Acquiring certain private parcels from willing sellers could alleviate these concerns.

Harbor seals

Kevin Bell, U.S. Fish & Wildlife Service

Pacific walrus



U.S. Fish & Wildlife Service

Several species of marine mammals use the nearshore waters and coastal areas of the refuge. Some provide an important source of meat, fur, or oil for area residents.

The walrus is a gregarious species that winters in the Bering Sea pack ice and follows the receding ice northward in the spring. The bearded seal is primarily a solitary species that is always closely associated with moving ice. Harbor seals are nonmigratory, but may make limited movements in response to prey availability. They are usually solitary in the water, but may haul out in large groups on land. Sea otters are found in coastal waters from the Aleutian Islands south.

Liz Labunski

Bearded seal

Northern sea otter

U.S. Fish & Wildlife Service

5. Resource Protection Methods

Existing Resource Protections

State and Federal Laws and Regulations: Various federal, state and local laws have been enacted to protect certain key resources. For example, development in the vicinity of lakes or rivers is subject to state water quality laws and the federal Clean Water Act. Other federal laws regulate human activities affecting migratory birds, wetlands, and threatened or endangered species.

The State of Alaska has enacted a variety of laws to protect wildlife and aquatic life, their habitats and harvest. The Alaska Department of Fish and Game administers the majority of these laws and is responsible for the protection, management, conservation, and restoration of Alaska's fish and game resources throughout the state. The Board of Fisheries and the board of Game are the state's regulatory authority that passes regulations to conserve and develop Alaska's fish and wildlife resources for sustained yield.

In addition to Alaska-specific federal laws, such as ANCSA and ANILCA, and applicable state land use laws and regulations, landowners must also comply with nationwide environmental legislation such as the federal Clean Water Act, the Clean Air Act, and the Endangered Species Act.

Coastal areas, including the Alaska Maritime Refuge, have been afforded some protection through the Alaska Coastal Management Program (ACMP). Local coastal management plans help ensure that development actions or other activities that may affect the uses or resources of the coastal zone are consistent with the state coastal management program. The Alaska Maritime Refuge spans many different coastal resource service areas, each with a local coastal management plan. Development actions that are within, or affect, the coastal zone must comply with these local plans.

The Alaska Coastal Management Program authorities are set to expire at the end of June 2011. The result is that all ACMP regulations and local management plans will be unenforceable on July 1, 2011. Reauthorizing the program will require action by the state legislature making its future uncertain at this time.

Federal laws regulate human activity that would impact habitat or populations of endangered or threatened species, such as the Steller's eider and Steller sea lion. In addition to these regulations the following offer some measure of protection:

ANCSA: Sections 14(h)(1) & 22(g)

Section 14(h)(1) of ANCSA affords some resource protection to cultural sites.

Two provisions of ANCSA grant a limited level of resource protection. ANCSA Section 14(h)(1) authorizes regional Native corporations to acquire culturally significant cemetery sites and historical places. Sites must be certified by the Bureau of Indian Affairs (BIA) prior to conveyance. A covenant in the conveyance document requires that these sites be maintained and preserved solely as cemetery sites or historical places by the regional corporation (43 CFR 2653.5). Wildlife and other natural resources are likely to benefit from this protection as well.

To date, about 1,337 acres have been conveyed under the provisions of 14(h)(1). More than 32,000 acres have been selected, but have not yet been reviewed by the BLM.

Section 22(g) of ANCSA specifies two title restrictions that pertain to conveyed lands within the boundaries of pre-ANCSA wildlife refuges. All conveyances within those parts of Alaska Maritime that were refuge lands prior to 1971 are subject to 22(g)):

1. The United States retains a right of first refusal on the sale of former refuge lands that were conveyed to a Village Corporation.

2. Former refuge lands remain subject to the laws and regulations governing the use and development of the refuge.

Private lands within historical refuges are subject to the provisions of ANCSA 22(g).

The right of first refusal is a statutory right and procedures for implementation are provided for in 43 CFR 2650.4-6. The United States has 120 days to respond after being advised of a bona fide offer to purchase. If the right is not exercised, and that sale is completed, the right of first refusal terminates for that particular parcel. The right of first refusal will do little to protect refuge resources unless the Service has the funds to purchase parcels that are offered for sell.

The statute also states that the laws and regulations governing the use and development of the refuge also apply to these private lands. Unlike the right of first refusal, this part of 22(g) remains with the land. Only Congress can remove 22(g) restrictions. Regardless of how often the land is sold, or whether its title is transferred by gift, inheritance, or by other means, this use and development covenant remains in force.

The Service prepares Compatibility Determinations whenever adjacent landowners propose a new use of 22(g) lands. The Compatibility Determination evaluates how the use would effect the adjacent refuge land and the ability of the refuge to achieve its purposes.

Because 11 pre-ANCSA refuges were incorporated into the Alaska Maritime Refuge, many conveyed Native Corporation lands in the refuge are subject to Section 22(g) restrictions. Whenever new uses are proposed for 22(g) lands, the Service must prepare a Compatibility Determination that evaluates how these uses will affect adjacent refuge lands and the ability of the refuge to achieve its purposes (50 CFR 25.21(b)(1)). The Compatibility Determination only evaluates the effects on the adjacent refuge; it does not address the effects on the 22(g) lands.

A use is "compatible" if it does not materially interfere or detract from the purposes of the refuge.

If a finding of "not compatible" is likely, the refuge manager will contact the landowner prior to rendering a decision to encourage dialog about how the use might be modified to be compatible. Landowners may appeal a decision of "not compatible" to the Regional Director (CFR 36.41(i)(3) through (5)). A high priority is placed on working with private landowners to conserve fish and wildlife resources on adjacent refuge lands.

ANILCA §304(c) – Mineral Development: No recoverable quantities of oil have been discovered on lands within the refuge and the potential appears to be low. However, private landowners can pursue oil and gas development on their lands if they choose. In addition, there is oil/gas potential in many offshore areas near refuge lands. Lease sales have occurred in Cook Inlet, the Gulf of Alaska, Norton Sound, and in the Bering, Beaufort and Chukchi Seas. Currently, there are 487 active leases in the Chukchi Sea, 2 in Cook Inlet, and 186 in the Beaufort Sea.

Oil and gas exploration and development on refuge lands would only be allowed if the Secretary of the Interior determined these uses to be in the national interest and if the refuge Comprehensive Conservation Plan were amended (CCP amendments include a public review process and the completion of a refuge compatibility determination). Seismic and geophysical exploration would require a Special Use Permit with site-specific stipulations to ensure compatibility with refuge purposes and consistency with CCP management objectives.

Under the authority of Section 304(c) of ANILCA, the refuge is closed to new locations, entries, and patents. Mineral assessment techniques that do not have lasting impacts are permitted throughout the refuge, but such activities require a Special Use Permit complete with provisions to ensure compatibility with refuge purposes and consistency with CCP management objectives.

The Service will consider only those resource protection options beneficial to both the landowner and the Service.

Options for Additional Resource Protection

Interested landowners can work with us in a variety of ways to help protect natural resources on their lands. The options range from simple cooperative land management agreements, to selling key parcels of land to the Service. It is important to understand that these options are entirely voluntary on the part of the landowner. We will take no action unless the landowner wants to work with us. Together the Service and a willing landowner may find that one of the following methods provides a mutually beneficial way to protect the resources.

A cooperative agreement is a working partnership between a landowner and the Service.

Cooperative Agreement: A landowner and the Service may establish a formal written agreement in which each party agrees to manage the land in a manner that benefits wildlife (Sections 304(f) and 809 of ANILCA). For example, a landowner may agree to maintain or restore important wildlife habitats located on their lands. In return, we may help develop land management plans or provide expertise and assistance restoring damaged wildlife habitats.

A lease is a short-term rental of property.

Cooperative agreements place no legal restrictions on the land. No money is involved, and either party may cancel the agreement after giving adequate notice to the other party. Because landowners or management priorities may change, cooperative agreements do not

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Rats and seabirds don't mix. Controlling rats can be a critical step in restoring seabird habitat. However, rat control can be difficult on islands under multiple ownerships. A Cooperative Agreement between the Service and the private landowner is one means of developing and implementing a strategy to control rats and other invasive species.

grant permanent protection to fish and wildlife resources. However, cooperative agreements can help develop positive, working relationships between local landowners and the refuge.

Lease: A lease is a short-term agreement for full or specified use of a parcel of land. The lease generally gives the Service occupancy rights and the landowner receives a rental payment based on fair market value. When the lease is terminated, all rights revert back to the landowner. This option is useful when management objectives are short-term, or the owners are unable to provide other forms of land transfer. We will rarely enter into a long-term lease because the cost of the lease can eventually exceed the cost of purchasing the land outright.

A conservation easement is a transfer of limited property rights and is intended to restrict certain types of development.

Easement: An easement is the transfer of limited property rights to another. Easements specifically allow or prohibit certain land uses. For example, an easement may allow public access across the property or restrict certain types of development that are not compatible with resource management objectives. Easements are legal agreements that become part of the title to the property and are usually permanent. If the property is sold or inherited, the easements continue as part of the title.

A conservation or non-development easement is one of the most common easements acquired for land protection. Designed to prevent destruction or degradation of wildlife habitat, these easements often limit or prevent land development while allowing the landowner to retain the property. They may also allow refuge staff to manage uses of the land to benefit wildlife. Typically, we consider purchasing conservation easements only when lands supporting key wildlife habitats are at high risk for development. The terms of each conservation easement are unique. We must work with the landowner to develop the specific conditions or restrictions to be included in a particular conservation easement. Once in place, conservation easements must be monitored by refuge staff to ensure that the terms of the agreement are being met.

A land exchange is the trade of lands having equal market value.

Easements usually reduce the market value of a piece of property. The tax assessed value of property with a conservation easement is often lower than the market value. The result is a tax savings for the landowner if the land is taxable. The tax relief benefits of conservation easements are rarely important in Alaska since undeveloped Native corporation lands cannot be taxed, and only incorporated boroughs or municipalities tax property owners. Conservation easements are occasionally used in Alaska, but are generally used only for large parcels of land.

Land Exchange: Sometimes a landowner wants to trade land for other lands managed by the Service. We are willing to consider these proposals in situations where both parties will benefit. For example, a landowner may wish to trade an isolated tract of wetlands for a more accessible upland parcel that is less costly to develop. A land exchange may help consolidate land ownership, eliminating isolated tracts or checkerboard ownership patterns. However, because there are high administrative costs associated with land exchanges, we usually pursue exchanges only when large acreages are involved, when the parcel we would acquire by the Service has very high habitat values, and/or when the exchange would result in a significant consolidation of lands.

Department of Interior policy (602 DM 1) requires that the lands, or interests in lands to be exchanged must have equal market value as determined by an appraisal. The market value for a property is based on the price paid for similar land being sold at the same time in the same general area. For the purposes of a land exchange, oil, gas, and mineral rights are considered interests in land. Due to differences in per acre land value, the size of parcels being exchanged may be quite different. In cases where the lands to be exchanged have substantially different values, cash payments may be used to make up the difference.

Permanent resource protection and tax benefits are incentives for land donations.

Donation: Some people choose to donate lands or interests in lands to the Service to benefit conservation programs and receive tax benefits. Land preservation may be an important legacy within a landowner's family, and land donation is a means of achieving that legacy. The landowner may place restrictions or reservations on the donated property. For example, a donor may want to reserve life-use of the donated land. In this case, the Service receives title to the land, but the donor has the right to continue to use the property during their lifetime, in accordance with the terms of the deed. Another option, donation by will, takes effect only upon the death of the donor.

Rather than making a donation directly to us, a landowner might consider donating land to a private conservation organization. Several organizations, such as The Nature Conservancy and The Conservation Fund, accept donations of land for wildlife conservation. These organizations may hold and monitor the donation themselves, or they may put the donated land in trust for future addition to the refuge. Donations of land to a conservation organization can often be accomplished quickly.

The Service may buy land from a willing seller.

When a landowner donates lands to the Service or a conservation organization they may be eligible for some federal income tax benefits. For additional information, interested landowners should consult with a tax advisor, local Internal Revenue Service office, or a private conservation organization that specializes in land conservation.

Purchase: In some cases, a property owner may want to sell their land to the Service. Purchasing land is the most direct means we have for obtaining land title. However, funding for land acquisition is very limited and competitive. Consequently, we must carefully prioritize the use of these funds. In most cases, lands we purchase are considered a high priority for resource protection at the national level.

In Alaska, we must offer landowners the opportunity to exchange lands before we will consider purchase.

Our policy is to buy land only from people willing to sell. All purchases by the federal government must be based on fair market value as determined by qualified appraisers. Usually, we only consider "fee title purchase" which means the government would acquire most rights to the property. However, in some cases the landowner may choose to withhold certain rights (such as use reservations, water rights, or mineral rights), or we may choose not to acquire these land interests. As with land donations, many types of use reservations can be negotiated.

In Alaska, the Service must offer to exchange lands prior to purchasing them outright (Public Law 105-277, Section 127). If the landowner is only interested in selling, he or she must indicate

Funds for acquisition are limited, and the Service can only consider lands having a high priority for resource protection.

that the exchange offer was refused before the land purchase can proceed. Lands purchased by the refuge are managed in the same manner as the surrounding refuge land.

As with donations, non-profit conservation organizations may be able to purchase lands with exceptional wildlife values from a willing landowner. These organizations might then sell or donate the lands to the Service at a later date. Regardless of the method used to purchase lands, our policy is to buy land only from willing sellers.

We do not condemn land in Alaska.

Condemnation: The Alaska Native Claims Settlement Act stipulated that ANCSA lands could not be condemned (taken without the consent of the owner). Then in 1987, an amendment to ANCSA made all Native land and interests in land, conveyed pursuant to ANCSA, subject to condemnation for public purposes. However, it is a long-standing Service policy in Alaska that lands will not be acquired through adverse condemnation. We will acquire land only from landowners who want to sell their land.

Participation in any Service resource protection option is entirely voluntary.

No Action: Sometimes the landowner or the Service may decide not to take action to protect wildlife resources on a particular piece of property. There are several reasons for a "no action" decision. Some landowners may not be interested in the land protection options available, and our policy is to work only with owners who want to work with us. On the other hand, even if the landowner is interested, we may decide that a parcel does not contain key wildlife habitat or warrant further protection.

A final reason for "no action" is that the Service may not have funding to pursue resource protection on a parcel of land. There are millions of acres of inholdings in Alaskan wildlife refuges and many of our methods have an associated cost. Many landowners desire to sell their properties, but acquisition is expensive. Even if we wanted to, we could not afford to acquire all refuge inholdings. There will always be inholdings in Alaska refuges, and cooperation with private landowners is often the best way to achieve fish and wildlife conservation on private lands.

6. Resource Protection Priorities

Setting Priorities

As discussed in the introduction, the uniqueness of the Alaska Maritime Refuge led us to look at new ways of setting priorities. We developed an approach that used an existing seabird database to identify and focus on seabird species that are "under-represented" in the conservation estate.

The term "under-represented" simply means that proportionally fewer individuals of these species use lands that are managed for conservation. Although about 80% of the seabirds in Alaska nest within the refuge boundaries, a GIS analysis revealed that some species of seabirds use private lands more than other species. Nearly all of certain species nest on lands managed for conservation, whereas others nest in relatively high proportions on private lands or on islands were ownership is mixed.

Seabird species nest on both private land and conservation lands. Some species use private lands more than others.

The analysis showed that more than 50% of the breeding population of three species [crested auklets (61%), dovekies (100%) and parakeet auklets (62%)] nest in colonies on private land or on islands where mixed ownerships could limit management options, such as invasive species control. In addition, from 25% to 49% of the breeding population of 12 species nest on private land or on mixed ownership islands. These species include: Aleutian tern (36%), Arctic tern (43%), black-legged kittiwake (34%), common murre (35%), double-crested cormorant (34%), glaucous gull (28%), glaucous-winged gull (26%), least auklet (43%), mew gull (32%), pelagic cormorant (43%), pigeon guillamot (25%), and red-faced cormorant (36%).

Tables 10-14 list current priorities for the refuge as Priority 1, 2 or 3. Parcels are listed alphabetically within each of the Priority 1, 3, or 3 categories.

We generated a list of the private lands within the refuge boundary that supported one or more of these species. This list formed the basis of our land protection priorities (Tables 10 - 14). All privately-owned lands that supported colonies of greater than 10,000 birds were considered the highest priorities (Priority 1). All of these large colonies included at least one "under-represented" species. Priority 2 lands generally supported colonies of between 5,000 and 10,000 individuals and Priority 3 lands generally supported fewer than 5,000 birds. Other important characteristics or resource values (e.g. sealion haulouts or rookeries) could elevate a parcel's ranking; whereas other characteristics might decrease its ranking (see "Other Factors Influence Priorities" at the end of this chapter).

Some lands that do not meet the criteria of our prioritization process may warrant additional protection. These are addressed in the "General Recommendations" section at the bottom of each table.

Tables 10 -14 list each parcel in alphabetical order within each category (Priority 1, 2 and 3). Each table includes general recommendations for that unit. Parcels that have no "under-represented" species, but may warrant protection for other reasons (i.e. restoration potential or key access) are addressed in the general recommendations. The priorities for each refuge unit are also displayed in maps (Figures 4 - 8b) at the end of this chapter.

Only conveyed private lands are ranked. Neither selected lands nor the subsurface estate are included in the priority list.

Only conveyed surface lands are included in the priority list, neither selected lands nor the subsurface estate are ranked. Selected lands are refuge lands until they are conveyed out of federal ownership. Many selections are eventually relinquished and the land remains under refuge control. We do not prioritize the subsurface estate and are generally not interested in acquiring subsurface lands. However, we may be interested in exchanging refuge managed subsurface for privately-owned surface lands.

Limitations. All methods for setting priorities have strengths and weaknesses. In this case, we were fortunate to have a large seabird colony database for the entire refuge. However, some of the data are old. The huge number of colonies and the expense of visiting each one presents challenges for updating data. Many islands were last systematically surveyed in the 1970s or 1980s.

Some "under-represented" species are more of a conservation concern than others.

In addition, the assumption behind our approach was that "under-represented species" might benefit the most from additional land protection measures. This may not always be the case. Some species on our list probably nest in relatively high numbers on private land simply because they are so numerous and widespread. These species are not high conservation concerns. One example is the glaucous-winged gull. Its fearless nature and opportunistic feeding habits (taking advantage of fish processing waste sites, garbage dumps and landfills) make it very adaptable; some even nest on the roofs of waterfront buildings.

Other species on our list, especially the dovekie, occur in very small numbers in Alaska. Although abundant in the North Atlantic, the breeding population in Alaska is estimated to be only about 60 individuals. All the documented colonies occur on privately-owned land. However, additional land protection efforts are highly unlikely to have any affect on the size of the Alaska population.

The priority list is a planning tool that can help us evaluate whether to purchase or exchange lands.

However, other species on our list such as least and crested auklets are relatively widespread, but vulnerable to disturbance at colonies and predation from introduced predators. Both species have been extirpated from some Aleutian islands and reduced on others due to the presence of foxes and rats. These under-represented species might indeed benefit from additional protection.

How do we use the priority list? The priority list is a proactive planning tool that helps us evaluate opportunities when they arise. For instance, we may use the priority list to decide which lands to include in an proposed exchange or whether to purchase an allotment that is offered for sale. The list helps us make decisions, but is usually not the sole basis for a decision. The priority ranking reflects the biological value of the parcel, but many other factors may influence our decisions. Some of the non-biological factors are discussed in more detail in the latter sections of this chapter.

Although we may purchase some of the priority parcels, most will remain in private ownership.

Many private parcels within the refuge boundaries have high resource values. If offered for sale we may purchase some of these lands. However, we neither intend nor expect to purchase all of them. In many cases, the landowner is not interested in selling. In other cases, current uses are relatively compatible with wildlife, and additional resource protection measures are unnecessary. Even if additional protection is warranted and the landowner wishes to sell, acquisition funding is very limited. We are unlikely to have

sufficient funds to purchase more than a small fraction of the high-value private lands within the refuge. Furthermore, land acquisition is not always the best means for addressing resource threats or management concerns. Developing cooperative agreements or pursuing other management or administrative strategies may provide a more cost effective way to resolve a potential threat to refuge resources.

The priorities are displayed graphically in Figures 4 through 8b at the end of the chapter. Generally, the priority symbols are placed at the site of each seabird colony listed in Tables 10-14. A symbol in the center of an island means that the seabird count was totalled for the entire island.

Species Codes. Tables 10 - 14 use the following species codes:

Code	Species
ALTE	Aleutian Tern (*Sterna aleutica*)
ANMU	Ancient Murrelet (*Synthilboramphus antiquus*)
ARTE	Arctic Tern (*Sterna paradisaea*)
BLGU	Black Guillemot (*Cepphus grylle*)
BLKI	Black-legged Kittiwake (*Rissa tridactyla*)
BLOY	Black Oystercatcher (*Haematopus bachmani*)
CAAU	Cassin's Auklet (*Ptychoramphus aleuticus*)
COEI	Common Eider (*Somateria mollisima*)
COMU	Common Murre (*Uria aalge*)
CRAU	Crested Auklet (*Aethia cristatella*)
DCCO	Double-crested Cormorant (*Phalacrocorax auritus*)
DOVE	Dovekie (*Alle alle*)
FTSP	Fork-tailed Storm-Petrel (*Oceanodrama furcata*)
GLGU	Glaucous Gull (*Larus hyperboreus*)
GWGU	Glaucous-winged Gull (*Larus glaucescens*)
HOPU	Horned Puffin (*Fratercula corniculata*)
LEAU	Least Auklet (*Aethia pusilla*)
LESP	Leach's Storm-Petrel (*Oceanodrama leucorhoa*)
MAMU	Marbled Murrelet (*Branchyrampus brevirostris*)
MEGU	Mew Gull (*Larus canus*)
NOFU	Northern Fulmar (*Fulmarus glacialis*)
PAAU	Parakeet Auklet (*Aethia psittacula*)
PECO	Pelagic Cormorant (*Phalacrocorax pelagicus*)
PIGU	Pigeon Guillemot (*Cepphus columba*)
RFCO	Red-faced Cormorant (*Phalacrocorax urile*)
RHAU	Rhinoceros Auklet (*Cerorhinca monocerata*)
RLKI	Red-legged Kittiwake (*Rissa brevirostris*)
TBMU	Thick-billed Murre (*Uria lomvia*)
TUPU	Tufted Puffin (*Fratercula cirrhata*)
UNCO	Unidentified Cormorant (*Phalacrocorax* spp.)
UNGU	Unidentified Gull (*Larus* spp.)
UNMU	Unidentified Murre (*Uria* spp.)
UNPU	Unidentified Puffin (*Fratercula* spp.)
WHAU	Whiskered Auklet (*Aethia pygmaea*)

Table 10. Alaska Peninsula Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Priority 1						
Brothers Island (Eastern)	40	Village Corp (Oceanside)	BLKI GWGU PECO TUPU UNMU DCCO RFCO ANMU FTSP	6,800 1,800 80 6,000 300 4 310 1 1	1979	
Cherni Island (Sandman Reefs)	570	Native Allotment (4 owners)	ANMU CAAU DCCO GWGU HOPU LESP MEGU PECO PIGU RFCO TUPU	1 1 770 2,320 300 1 20 460 20 1,250 4,180	1978	Possibly largest double-crested cormorant colony in Alaska vole spp present Within 1 mile of an island with rats
Egg Island	34	Village Corp (Shumagin)	BLKI GWGU HOPU TUPU	40 3,500 1,000 8,000	1973	Largest known tufted puffin colony in the Unit
Priority 2						
Chiachi	60	Village Corp (Oceanside)	GLWG RFCO TUPU	3,000 36 7,000	1973	FWS to receive in Oceanside land exchange
High Island	32	Village Corp (Shumagin)	GLWG HOPU TUPU	2,000 500 6,000	1973	Within 1 mile of an island with rats; snowshoe hares and bison on adjacent Popof Is.
Olga Island	15	Village Corp (Belkofski)	GLWG PIGU TUPU	250 100 6,000	1973	Within 1 mile of an island with rats
Priority 3						
Anguvik	10	Village Corp (Far West)	BLOY GLWG HOPU PIGU	10 30 500 6	1979	
Brothers (West)	80	Village Corp (Oceanside)	ANMU FTSP GWGU HOPU PIGU TUPU	1 1 400 120 20 900	1979	
Chankliut Island	750	Village Corp (Far West)	BLKI GWGU HOPU PECO PIGU RFCO	240 220 40 100 400 520	1979	Arctic fox introduced - no longer present Introduced vole spp present

Table 10. Alaska Peninsula Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Dark Cliffs (Popof Is.)	456	Village Corp (Shumagin)	GWGU UNCO	2,400 1,200	1973	Bison and snowshoe hares introduced on island; fox introduced - no longer present
Delarof Harbor (Unga)	562	Village Corp (Unga) and Private patent	BLKI GWGU HOPU TUPU UNCO	55,000 500 1,000 6,000 2,000	1973	Island is largely Native-owned
E. Dolgoi Entrance	0.2	Village Corp (Belkofski)	GWGU PIGU	500 100	1973	Red foxes present on nearby Dolgoi Island (0.12 miles)
Egg	329	Village Corp (Oceanside)	ARTE	80	1976	Arctic fox introduced - no longer present
Entrance Island (Dolgoi)	2.5	Village Corp (Belkofski)	GWGU	200	1973	Red foxes present on nearby Dolgoi Island (0.12 miles)
Gull Island (Unga)	1.2	Village Corp (Shumagin)	HOPU PIGU TUPU	150 20 300	1973	
Inner Iliasik Island	420	Village Corp (Belkofski)	GWGU	50	1983	Red fox presence documented in early 1980s, but current status unknown. Restoration potential?
Round Island (Unga)	31	Village Corp (Shumagin)	BLKI GWGU HOPU TUPU	1,750 1 300 1	1995	
**Acreage of conveyed parcels only; selected and/or federal lands not included*						
General Recommendations						
Restoration. The introduction of introduced species (including rats, hares, foxes and livestock) has negatively affected seabird habitat on some islands in the Unit. Acquiring islands that historically supported thriving seabird colonies would enable the Service to remove introduced species and restore seabird habitat. *Consolidation.* It is advantageous to both the Service and private landowners to manage large contiguous holdings, rather than numerous small tracts interspersed with lands controlled by other landowners. The Service and the Shumagin Corporation are involved in a land exchange that will help to consolidate ownerships on Popof and Nagai islands.						

Table 11. Aleutian Island Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Priority 1						
Adugak	202	Village Corp (Chaluka)	FTSP GWGU HOPU LESP PIGU RFCO TUPU WHAU	1 347 44 1 62 20 400 4	1980	Steller sea lion rookery (620 adults/juveniles in 2009) Fox introduced - no longer present; Cassin's auklets formerly abundant (before fox introductions)
Ananiuliak Island (Fox Islands)	330	Village Corp (Chaluka)	DCCO FTSP GWGU HOPU LESP PECO PIGU TUPU WHAU	32 100 1,500 25 1 90 246 21,436 2	1980	Hares present; within 1 mile of an island with rats
North Island (Akun Strait)	27	Village Corp (Akutan)	ANMU CAAU FTSP HOPU LESP PAAU PIGU RFCO TUPU	400 1 200 8 1 1 162 20 53,372	1980	FWS will receive the island in a pending land exchange;
Poa Island	123	Village Corp (Akutan)	ANMU FTSP GWGU LESP PIGU TUPU WHAU	1,000 5,000 1,060 700 15 33,484 25	1980	Hares present; FWS will receive the island in a pending land exchange; within 1 mile of an island with rats
Puffin (Akun)	10	Village Corp (Akutan)	ANMU FTSP LESP PIGU TUPU WHAU	200 800 100 45 35,374 10	1980	FWS will receive the island in a pending land exchange; within 1 mile of an island with rats
Tangik	52	Village Corp (Akutan)	ANMU FTSP GWGU LESP PIGU RFCO TUPU WHAU	350 4,500 350 300 18 38 20,228 10	1980	Hares present; within 1 mile of an island with rats
Priority 2						
Amlia	4,885	Village Corp (Atxam)	GWGU HOPU PECO PIGU RFCO TUPU	280 900 46 980 30 7,100	1982	Fox no longer present; 192 Steller sea lion adults/ juveniles on east end of island in 2009

Table 11. Aleutian Island Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Black Cape Islets (Umnak)	30	Village Corp (Chaluka)	FTSP GWGU HOPU LESP PIGU TUPU	1 374 44 1 6 13,000	1980	
Priority 3						
Akutan Harbor Islets	?	Village Corp (Akutan)	GWGU HOPU PIGU TUPU	44 24 58 40	1980	Within 1 mile of an island with rats
Akutan Point	23	Village Corp (Akutan)	DCCO HOPU PECO RFCO TUPU WHAU	4 66 4 636 2,500 2	1980	Rats present on island
Atka (East End)	?	Village Corp (Atxam)	CAAU GWGU HOPU PECO PIGU RFCO TUPU	800 190 120 30 400 60 5,600	1982	Fox and rats present on island
Battery Point (Akutan)	100	Village Corp (Akutan)	COMU DCCO GWGU HOPU PIGU RFCO	22 30 60 130 1 192	1980	Rats present on island
Breadloaf Island (Umnak)	17	Village Corp (Chaluka)	GWGU LESP PECO	700 1 30	1980	
Cape Morgan (Akutan)	100	Village Corp (Akutan)	DCCO HOPU PIGU RFCO TUPU	46 4 20 784 1,000	1980	Rats present on island; FWS will receive area in a pending land exchange; Steller sea lion rookery (904 adults/juveniles in 2009)
Captains Bay Islets (Unalaska)	40	Village Corp (Ounalashka) and Native Allotment	HOPU PIGU	92 70	1980	Within 1 mile of island with rats and livestock; within 1 mile of contaminant site - WWII era drums (ADEC)
Cathedral Rocks (Unalaska)	6	Village Corp (Ounalashka)	HOPU PECO PIGU TUPU	26 16 6 1	1981	Within 1 mile of island with rats and livestock
Chernofski Harbor (Unalaska)	4,565	Village Corp (Tanadgusix)	PIGU UNCO	77 80	1981	Cattle, sheep, horses present on island; Norway rats and ground squirrels present; within 1 mile of contaminant site - transfer and defense port (ADEC)

Table 11. Aleutian Island Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Clifford Island	420	Village Corp (Sanak)	GWGU	800	1976	Fox no longer present
Eider Point (Unalaska)	50	Village Corp (Ounalashka)	RFCO	30	1981	Cattle, sheep, horses present on island; Norway rats, fox, and ground squirrels present
Greg Island (Unalaska)	42	Village Corp (Ounalashka)	GWGU HOPU PIGU	20 44 180	1981	Within 1 mile of island with rats, fox, and livestock
Hog Island (Unalaska)	125	Private	GWGU HOPU PIGU	200 54 142	1980	Pigs and hares present; within 1 mile of an island with rats and fox
Sedanka Point Islet (Unalaska)	7	Village Corp (St George Tanaq)	ANMU CRAU GWGU HOPU LESP PIGU TUPU WHAU	6 1 4 38 1 30 459 1	1981	Cattle, sheep, horses, rats, fox, ground squirrels present on Unalaska Island (0.5 miles from islet)
Islet off South Amaknak (Unalaska)	24	Village Corp (Ounalashka)	PIGU	18	1980	Less than 1 mile to islands with ground squirrels, fox, and rats Rare plant present: *Calamagrostis crassiglumis* (Thurber's reed grass)
Jackass Point (Akun)	50	Village Corp (Akutan)	DCCO FTSP GWGU LESP RFCO TUPU	214 1 163 1 98 340	1980	
Lava Point (Akutan)	50	Village Corp (Akutan)	GWGU HOPU RFCO	6 32 1,408	1980	Rats present on island; 166 Steller sea lion adults/ juveniles in 2009
Paso Point (Unalaska)	50	Village Corp (Tanadgusix)	DCCO	66	1981	Cattle, sheep, horses present on island; Norway rats, fox, and ground squirrels present;
Portage Bay (Unalaska)	50	Village Corp (Ounalashka)	PECO	42	1981	Cattle, sheep, horses present on island; Norway rats, fox, and ground squirrels present;
Reef Point (Akutan)	50	Village Corp (Akutan)	DCCO GWGU HOPU PIGU RFCO	8 4 6 34 1,036	1980	Rats present on island; FWS will receive area in a pending land exchange; adjacent to Steller sea lion haulout
Rootok	3,270	Village Corp (Akutan)	DCCO GWGU HOPU PIGU RFCO	20 20 74 8 68	1980	Fox present; FWS will receive the island in a pending land exchange; 60 adult/juvenile Steller Sea Lions in 2009 survey

Table 11. Aleutian Island Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Sadatanak (Atka)	300	Village Corp (Atxam)	TUPU PECO PIGU	500 2 40	1982	Within 1 mile of an island with rats
Sagchudak (Atka)	550	Village Corp (Atxam)	ANMU GWGU HOPU LESP PAAU PECO PIGU TUPU	1 350 100 1 20 30 90 200	1982	Fox no longer present; unknown presence of rats
Talus Point (Akutan)	50	Village Corp (Akutan)	HOPU PIGU RFCO	65 1 108	1980	Rats present on island
Unalga	6,168	Village Corp (Akutan)	DCCO FTSP HOPU LESP PIGU RFCO TUPU UNCO	164 1 189 1 135 144 35 52	1980	Fox present; Within 1 mile of island with rats; FWS will receive the island in a pending land exchange; Unalga Navy Radio Station - contaminant site (ADEC) Restoration potential
West Point (Unalaska)	40	Village Corp (Tanadgusix)	DCCO GWGU PECO RFCO	32 34 14 34	1981	Within 1 mile of island with rats, fox, and livestock

**Acreage of conveyed parcels only; selected and/or federal lands not included*

General Recommendations

Restoration. The introduction of foxes and rats has decimated burrow-nesting seabirds on some islands in the Unit. Acquiring islands that historically supported seabird colonies, such as Samalga or Unalga islands, would enable the Service to remove introduced species and restore seabird habitat.

Subsurface Exchange. The Service owns the subsurface estate beneath village conveyed lands on Atka (Atxam) and Unimak (Isanotski) islands. Split ownership can complicate management for both the Service and the surface landowner. The Service and the Isanotski Corporation have completed an exchange that transferred the Service-owned subsurface on Unimak Island to the village corporation in exchange for surface lands. A similar exchange might be beneficial on Atka Island where the Service owns the subsurface of 60,600 acres of Atxam Corporation lands.

Visitor Use or Access Areas. Acquisition of key parcels could increase recreational opportunities (such as wildlife viewing) for refuge visitors. On Unalaska Island, the Peace of Mind trail crosses refuge land but ends at a privately-owned parcel containing a lake and wetland habitats. Acquiring this parcel and a public-access easement to connect the trail to the public road could enhance the visitor experience on Unalaska Island.

Table 12. Bering Sea Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Priority 1						
Bluff	660	Village Corp (White Mountain)	BLKI COMU GLGU HOPU PAAU PECO TBMU TUPU	7,000 56,000 18 800 65 114 560 5	1975 for PAAU; 1976 for all other species	
King Island	2,600	Village Corp (King Island)	BLKI COMU CRAU GLGU HOPU LEAU PAAU PECO PIGU TBMU TUPU	4,000 45,000 22,000 90 4,700 80,000 42,000 120 700 45,000 2,300	1976	Walrus haulout (up to 5,000 in summer)
Unnamed Island East of Lagoon Point (Nelson Lagoon)	150	Village Corp (Nelson Lagoon)	ARTE DCCO GWGU TUPU	100 20 12,600 30	1976	
Priority 2						
Cape Denbigh, North	1,550	Village Corp (Shaktoolik)	BLKI COMU GLGU HOPU	1,200 5,840 30 40	1976	
Cape Denbigh, South	1,550	Village Corp (Shaktoolik)	BLKI GLGU COMU HOPU PECO TBMU	700 50 4260 35 48 40	1975 (BLKI, GLGU) 1976 (all others)	
Chistiakof Island		Village Corp (Alaska Peninsula; formerly Meshik)	GWGU UNCO	5,500 50	1970	
Egg Island	58	Village Corp (St Michael) and Native Allotment	BLKI COMU HOPU PAAU PECO TBMU TUPU	700 1,960 210 23 10 40 25	1984 (BLKI, PAAU, PECO); 1976 for all others	
Safety Lagoon	400	Native Allotments and State of Alaska	ARTE ALTE	19 480	1975 (ARTE); 1979 (ALTE)	

Table 12. Bering Sea Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Square Rock (Bluff)	5	Regional Corp (Bering Straits)	BLKI COMU GLGU HOPU PECO TUPU	550 3,200 30 125 4 1	1975 (HOPU); 1976 (all others)	
Priority 3						
Besboro Island	636	Village Corp (Unalakleet)	GLGU HOPU PECO PIGU TUPU	47 250 182 4 20	1975 (HOPU); 1984 (all others)	
Cannery Islands (Nelson Lagoon)	20	Village Corp (Nelson Lagoon)	ARTE GWGU	1 400	1976 (ARTE): 1981 (GWGU)	
Cape Darby	5,600	Village Corp (Golovin) and Native Allotments	GLGU HOPU PECO TUPU	290 575 448 52	1976	
Eider Duck Island	15	Village Corp (St Michael)	ARTE GLGU HOPU	4 8 30	1975	
Walrus Island	450	State of Alaska	ARTE	80	1975	
Whale & Beulah Islands	40	Native Allotment and Village Corp (St Michael)	BLKI HOPU TUPU	100 140 10	1976	

**Acreage of conveyed parcels only; selected and/or federal lands not included*

General Recommendations

Conservation Easements. Several islands in the Unit support very large seabird colonies that might benefit from additional protection in the future. The islands of St. George and St. Paul in the Pribilof Islands are home to some of the largest seabird colonies in the state. More than 80% of the world's breeding population of red-legged kittiwakes and the largest breeding colony of thick-billed murres are found on St. George. Although the seabird cliffs are managed as part of the Refuge, the surrounding lands are Native corporation owned and are not within refuge boundaries. The purchase of easements restricting incompatible uses on adjacent private lands could increase protection by creating a conservation buffer around sensitive areas.

Cooperative Agreements. Cooperative agreements with the surface landowner may be the best mechanism to ensure the Service has legal access to long-term monitoring sites that were recently conveyed into private ownership.

Table 13. Chukchi Sea Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Priority 1						
Cape Thompson (also see General Recommendations)	160	Native Allotment	BLKI HOPU UNMU GLGU PECO TUPU	6,300 178 12,000 4 2 1	1960 (GLGU, PECO, TUPU); 1961 (all others)	
Little Diomede	1,820	Village Corp (Inalik)	BLGU BLKI COMU CRAU DOVE GLGU HOPU LEAU PAAU PECO PIGU TBMU TUPU	1 35,000 35,000 140,000 50 135 25,000 980,000 20,000 160 275 25,000 1,000	1985 (DOVE); 1977 (all others)	
Priority 3						
Cape Dyer	7,800	Village Corp (Tigara)	GLGU HOPU PECO TUPU	20 48 24 26 4	1977	
Kasegaluk Lagoon (Islands # 1-7, 11, 12)	65	Village Corp (Cully)	ARTE COEI GLGU	22 120 140	1983	Common eider nesting area
Niak Creek	244	Native Allotments (3 parcels)	PECO	2	1977	
Noyalik Peak	160	Native Allotment	HOPU PECO TUPU UNMU	35 4 12 20	1977	
Point Lay Barrier Island	1,080	Village Corp (Cully)	ARTE GLGU	54 4	1976	
S. Utukok Pass Island	680	Village Corp (Cully)	ARTE COEI GLGU	16 56 2	1976	Common eider nesting area
Sarichef	1,380	Village Corp (Shishmaref)	ALTE	6	1973	
Sikok Point Barrier Island	1,092	Village Corp (Cully) and State of AK	ARTE	28	1976	

**Acreage of conveyed parcels only; selected and/or federal lands not included*

General Recommendations

Access. Acquire parcels that are key access points. In particular, a Cape Thompson Native allotment (no seabirds) provides critical access to all seabird colonies on the Cape. This allotment is considered a top acquisition priority. *Conservation Easement or Cooperative Agreement.* The largest seabird colonies in the unit occur on the island of Little Diomede. Although no specific land protection measures are recommended at this time, future changes in land use could warrant the consideration of a conservation easement, cooperative agreement or other measure to conserve seabird populations.

Table 14. Gulf of Alaska Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Priority 1						
Flat Island (Kaguyak Area)	13	Village Corp (Akhiok-Kaguyak)	BLKI COMU FTSP GWGU LESP TUPU	1,000 100 1 70 1 30,000	1978	
Gull Island (Kachemak Bay)	2.8	Village Corp (Seldovia)	PIGU GWGU PECO RFCO BLKI COMU HOPU TUPU	19 713 222 30 11,368 5,075 1 28	1990	
Middleton Island	2,210	Regional Corp (Chugach Alaska); Private Patent; Other Federal	BLKI COMU GWGU PECO TBMU TUPU RHAU	123,920 10,000 2,500 7,580 100 5,000 5,000	1986	European hares present; ADEC contaminant site on island (petroleum hydrocarbons, transformer oil)
The Triplet Islands	60	Village Corp (Ouzinkie)	COMU DCCO GWGU RFCO ANMU CAAU FTSP HOPU LESP PECO PIGU TUPU UNMU	1 26 700 154 1,300 1 38,000 80 900 80 1 67,464 1,300	1977 (DCCO, GWGU, RFCO, UNMU) 1985 (all others)	
Priority 2						
Anton Larsen Bay Islands	435	Private Patent: 210 acres; Native Allotment: 160 acres Village Corp (Ouzinkie): ~65 acres	ARTE BLKI GWGU HOPU MEGU PAAU PECO PIGU	216 1,728 362 140 2 1 42 44	1975	
Chiniak Island & Rock	12	Village Corp (Lesnoi)	BLKI COMU GWGU' PIGU TUPU UNCO	5,016 1 120 1 1,750 20	1990 (BLKI); 1994 (all others)	Steller sea lion haulout (116 adults and juveniles in 2009)

Table 14. Gulf of Alaska Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Eider & Nelson Islands	62	Private Patent: Nelson; Village Corp (Ouzinkie)	GWGU HOPU PECO PIGU RFCO TUPU PAAU	208 46 158 4 2 3,530 26	1977 (PAAU); 1975 (all others	Foxes introduced, but no longer present
Flat Islands (two islands near English Bay)	10	Village Corp (English Bay)	HOPU PIGU TUPU	4 22 3,752	1976	
Island west of Bare Island	8	Village Corp (Afognak)	BLKI TUPU	BLKI TUPU	3,000 1,000	
Jap Bay	11	Village Corp (Akhiok-Kaguyak)	BLKI GWGU PAAU TUPU	3,000 100 150 700	1976	
Long Island	1,100	Village Corp (Lesnoi)	GWGU HOPU PIGU TUPU RHAU	154 166 80 1,666 160	1978 (RHAU); 1975 (all others)	Red and Arctic fox introduced, but no longer present; ADEC contaminant site on island (PBCs); Steller sea lion haulout - east end of island (39 adults and juveniles in 2009)
Outer Long Island	40	Village Corp (Lesnoi)	BLKI	188	1993	Steller sea lion haulout (39 adults and juveniles in 2009)
Priority 3						
Amook - "Small Island"	0.3	Village Corp (Koniag, Inc. formerly Nu-Nachk Pit)	ARTE BLKI GWGU HOPU	42 78 2 2	1994	
Akhiok Bay	3	Village Corp (Akhiok-Kaguyak)	ALTE ARTE PIGU	1 600 2	1976	
Alexander Island	6	Village Corp (Afognak)	GWGU PIGU TUPU	8 10 180	1976	
Alf Islands (3 small islands south of Alf Island)	10	Village Corp (Koniag, Inc. formerly Nu-Nachk Pit)	ARTE BLKI GWGU HOPU PECO PIGU RFCO TUPU	44 848 85 1 1 2 1 1	1994	60-acre Alf Island has been acquired by the Service
Ayakulik Island	11	Private Patent	GWGU HOPU PECO PIGU TUPU UNCO	900 10 1 10 50 20	1978	Foxes introduced, but no longer present

Table 14. Gulf of Alaska Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Bear Island	57	Village Corp (Koniag, Inc. formerly Nu-Nachk Pit)	HOPU PIGU TUPU UNCO	2 4 24 66	1976	
Beautiful Island	10	Village Corp (Port Graham)	GWGU PECO	6 10	1976	
Coxcombe Point Island	0.5	State of Alaska	BLKI GWGU	848 1	1994	State acquired - Old Harbor Exchange
Crooked Island	50	Private Patent	GWGU TUPU HOPU BLKI PECO PIGU RFCO	30 2 30 54 50 5 1	1990 (GWGU, TUPU, HOPU); 1995 (all others)	
Double Islet west of Kazakof Bay	0.5	Village Corp (Afognak)	GWGU	30	1976	
Dusk Island	4	State of Alaska	BLKI GWGU PIGU TUPU	710 97 2 1,500	1977 (TUPU) 1994 (all others)	State acquired - Old Harbor Exchange
East Chugach Island	3,325	Village Corp (Port Graham)	GWGU TUPU	40 20	1976	Fox present
Ermine Point	5	State of Alaska	BLKI GWGU TUPU	1 30 1	1994	
Granite Islands (3 islands)	10	Village Corp (Old Harbor)	TUPU GWGU	260 93	1977 (TUPU); 1994 (GWGU)	
Island 1.6 mile north of Alexander Island	0.5	Village Corp (Afognak)	PIGU TUPU	6 100	1976	
Inner Long Island	126	Village Corp (Lesnoi)	BLKI PECO	334 36	1993	Adjacent to haulout on Long Island & Outer Long Island
Island - northwest side of Amook Bay		Village Corp (Koniag, Inc. formerly Nu-Nachk Pit)	ARTE BLKI GWGU PECO TUPU	2 438 48 1 8	1994	
Island Bay Islands						
Island - east side of Kazakof Bay	0.6	Village Corp (Afognak)	BLKI GWGU RFCO TUPU	114 40 1 260	1976	Within 1 mile of ADEC contaminant site (Danger Bay Log Camp)

Table 14. Gulf of Alaska Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Island near Sharatin Bay	1	Village Corp (Ouzinkie)	BLKI GWGU TUPU	228 40 40	1975	
Island west side of Kazakof Bay	1.4	Village Corp (Afognak)	BLKI GWGU PECO	186 50 30	1976	
Islands in Izhuit Bay	7	Village Corp (Natives of Kodiak)	DCCO GWGU HOPU PECO PIGU RFCO TUPU UNCO	10 28 30 68 4 4 100 1	1976	
Izhuit Bay Complex	4	Village Corp (Natives of Kodiak)	BLKI GWGU HOPU PECO	1 1 4 10	1976	
Jug Island	1	Village Corp	GWGU PIGU TUPU PECO RFCO	18 4 500 1 1	1992 (PECO, RFCO); 1975 all others	
Kalsin Island	60	Native Allotment (same owner as Queer Is)	BLKI GWGU PECO PIGU RFCO TUPU UNCO	822 220 34 12 1 1 16	1994 (GWGU, TUPU) 1995 (all others)	Fox introduced, but no longer present
Kekur Island	0.5	Village Corp (Lesnoi)	BLKI COMU GWGU PECO RFCO TUPU	1,778 1 22 1 1 211	1990 (BLKI); 1994 (all others)	
Keyhole Rock	0.3	Village Corp (Lesnoi)	PECO RFCO	18 16	1994	
Lamb Island	1.6	Village Corp (Afognak)	GWGU PIGU TUPU	2 30 70	1976	
Largest island in S. Icon Bay	6	Village Corp (Ouzinkie)	GWGU HOPU TUPU	10 2 350	1975	
Low Island	10	Village Corp (Ouzinkie)	BLKI RFCO TUPU UNCO	25 5 1,800 5	1975	Fox introduced, but no longer present
Midarm Island	14	Village Corp (Afognak)	PIGU TUPU	12 300	1976	

Table 14. Gulf of Alaska Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Middle Island	0.7	Village Corp (Lesnoi)	BLKI GWGU HOPU PECO PIGU RFCO TUPU	852 71 2 1 1 6 620	1992 (PIGU); 1994 (all others)	Fox introduced, but no longer present
Natalia Point Rock (Sitkalidak Island)	.03	Village Corp (Old Harbor)	BLKI PIGI	42 10	1976	Fox introduced on Sitkalidak, but no longer present
North Aiaktalik	977	Native Allotments (219 ac) and State of Alaska (758 acres)	GWGU	400	1977	East end of island is selected by both the State of Alaska and Akhiok-Kaguyak, Inc.; within 1 mile of islands with foxes (Geese Islands)
Pinnacle Rock	0.3	Village Corp (Lesnoi)	BLKI	114	1994	
Queer Island	40	Native Allotment (same owner as Kalsin Is)	BLKI GWGU HOPU PECO PIGU RFCO TUPU	240 14 1 2 1 1 1	1990 (HOPU); 1994 (TUPU); 1995 (all others)	Fox introduced, but no longer present
Reef 2 (Kizhuyak Bay)	2.7	Village Corp (Afognak)	GWGU TUPU UNCO	30 400 20	1975	
Rocky Bay Island	18	Village Corp (Port Graham)	GWGU PECO TUPU	20 46 1,600	1976	
Slate Island	37	Village Corp (Port Graham)	HOPU PIGU	110 100	1979	
Stack & island by channel marker (south of Midarm Is)	14	Village Corp (Afognak)	GWGU PIGU TUPU	20 2 50	1976	
Svitlak Island	15	Village Corp (Lesnoi)	HOPU PIGU GWGU TUPU BLKI PECO RFCO UNCO	1 1 206 290 242 1 8 2	1992 (HOPU, PIGU): 1994 (all others)	Fox introduced, but no longer present
Trount Triangle (Kizhuyak Bay)	0.3	Village Corp (Afognak)	BLKI	200	1975	
Tuxedni River	10	Regional Corp (CIRI)	GWGU	30	1976	
Utesistoi Island	2.5	Village Corp (Lesnoi)	BLKI GWGU PECO RFCO TUPU	1,122 1 1 1 290	1994	Fox introduced, but no longer present

Table 14. Gulf of Alaska Unit Priorities						
Name	*Size* (Ac)*	*Owner Type*	*Seabirds*		*Survey Date*	*Other Info*
Whale Island	8,900	Village Corp (Afognak)	BLKI GWGU HOPU PECO PIGU TUPU UNCO	6,000 110 80 40 90 340 20	1977 (BLKI); 1975 (all others)	Fox introduced, but no longer present
Windy Bay	10	Village Corp (Port Graham)	BLKI GWGU TUPU	30 340 80	1976	
**Acreage of conveyed parcels only; selected and/or federal lands not included*						
General Recommendations						
Restoration. Introduced species (including foxes and hares) have affected seabird populations on some islands in the Unit. Introduced foxes have naturally disappeared from many islands, but are still present on some (including East Chugach, Elizabeth, Marmot, Ugak, and Geese islands). Islands offered for sale should be evaluated for their restoration potential. Acquiring islands in their entirety enables the Service to remove introduced species and restore seabird habitat.						

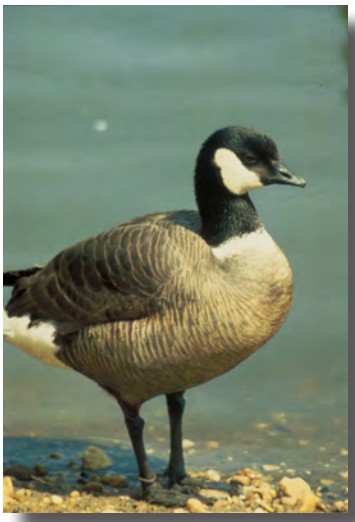
U.S. Fish and Wildlife Service

Proximity to Homer makes Gull Island (Gulf of Alaska Unit) one of the most visited islands within the Refuge boundaries. This 2.9 acre rock is used by more than 10,000 nesting black-legged kittiwakes and 5,000 common murres annually. The island is owned by the Seldovia Natives Association.

U.S. Fish & Wildlife Service

The Aleutian Shield Fern (Polystichum aleuticum) has been found only on Adak Island in the Aleutian Island Unit. It differs from other shield ferns in North America, but is similar to a dwarf species located in the southwestern mountains of Asia. It has been listed as endangered since 1988.

The Aleutian cackling goose (Branta hutchinsii leucopareia), a small cackling goose subspecies, was nearly driven to extinction by introduced foxes. It was listed as endangered in 1973, but successful recovery efforts led to delisting in 2001.



Glen Smart, U.S. Fish & Wildlife Service

Islands differ from continental land masses in many ways. Species are limited to those that can fly, swim, or drift there; and dispersal may be limited. Geographic isolation reduces gene flow between populations, so endemic species that are found nowhere else are more common on islands. Larger islands tend to have a more diverse assemblage of species than smaller islands and islands that are close to the mainland may contain more mainland species than those farther away. In fact, it is somewhat unpredictable what plant and animal species will colonize new environments. Climate, proximity to other land masses, and sheer chance play major roles. Both plants and animals can be carried from the mainland on rafts of natural vegetation washed out to sea when river banks collapse. Storms can transport airborne organisms, such as insects and birds. With luck and the right combination of currents and other factors, these stowaways may become established on distant shores.

The closer the island to a "source" land mass, the higher the probability of colonization. However, the actual assemblage of plants and animals may differ markedly from the source. Over time, colonial populations may diverge from their parent population due to natural selection, mutation, and/or genetic drift.

Anne Morkill, U.S. Fish & Wildlife Service

The insular vole or St. Matthew Island vole (Microtus abbreviatus) is a species found only on St. Matthew and Hall islands in the Bering Sea Unit.

U.S. Fish & Wildlife Service

Bird watching, hunting, fishing, and other types of wildlife-dependent recreation are important priority uses of the refuge.

U.S. Fish & Wildlife Service

U.S. Fish & Wildlife Service

Our priority lists help guide our actions, but many other factors may influence our decisions.

Other Factors Influence Priorities

We rank lands based on their biological values, but other factors may influence our priorities. These factors are somewhat subjective, but can influence our actions, especially when we have the opportunity to buy land. For instance, if several landowners wish to sell parcels with similar biological values, these factors can help us choose the wisest use for limited funds.

Some of the factors we consider are:

- *the location of a parcel relative to villages, other private lands, and to refuge land*
- *the potential to consolidate ownership patterns and simplify management*
- *the type and ease of access to a parcel*
- *current and potential uses/restoration potential*
- *climate change*

Location: Whenever a landowner offers to sell, we consider the location of the parcel in relation to other private lands. Acquiring small parcels embedded in a larger block of private land provides little benefit to refuge resources and can create

additional management problems. Habitats located near a village or commercial development may already be affected by development. Acquiring a conservation easement or title to these lands may provide little benefit for fish and wildlife. Therefore, small parcels located near villages or within conveyed lands are usually low priority for additional protection measures.

The Service seldom acquires small parcels embedded in larger tracts of private lands or lands adjacent to villages.

On the other hand, small, isolated parcels embedded in refuge lands have the potential for far-reaching impacts on adjacent refuge resources, depending on their use and location. The parcel may act as a point from which human disturbance, invasive species, or pollution radiates out into surrounding refuge lands. Acquiring these isolated tracts can be very beneficial.

Certain land uses on private property can affect important resources on adjacent refuge lands.

Isolated private tracts may also complicate or preclude some types of refuge management. For example, eliminating rodents or foxes on refuge land is unlikely to be effective if adjacent landowners do not make the same commitment.

Consolidation: It is advantageous to both the Service and private landowners to manage large contiguous holdings, rather than numerous small tracts interspersed with lands controlled by other landowners. On many islands, Native corporations or other private landowners share ownership with the refuge. Some landowners may wish to consolidate their holdings by exchanging lands with the Service so that entire islands are under a single ownership. Large land exchanges are time consuming and expensive, but can be justified when the expected benefits are substantial. Acquisition or exchange of key parcels can be an important mechanism to consolidate refuge lands.

Consolidating lands may simplify management for both the refuge and private landowners.

Split Estate: Under ANCSA conveyance rules, the Service received the subsurface estate beneath village conveyances within pre-ANILCA refuges. This situation can be problematic for both the Service and the surface owner. If the surface owner needs sand and gravel for development projects these materials must be purchased from the subsurface owner (the Service, in this case). Split ownership may also limit surface uses. The Service is unlikely to support a surface use such as a landfill that could impact the subsurface estate. In general, the Service is interested in land exchanges that trade Service-owned subsurface for surface lands elsewhere.

Access: Section 1110(a) of ANILCA allows the use of snowmachines, motorboats, airplanes, and non-motorized surface transportation for conducting traditional activities, and travel to and from villages and homesites. Section 1110(b) of ANILCA ensures adequate and feasible access, for economic or other purposes, across a refuge for any person or entity that has a valid inholding. In addition, Section 811 of ANILCA allows subsistence users to use traditional means of surface transportation, subject to reasonable regulation (50 CFR 36.12). However, the Service can regulate access if necessary to protect refuge resources from damage. In some situations, access needs of private landowners could become a concern for the refuge. For instance, constructing a road through sensitive nesting habitat to develop private lands could impact refuge wildlife populations.

We consider access issues when setting land protection priorities.

When we develop land conservation priorities, we must consider our responsibility to accommodate access to inholdings, provide

opportunities for public use of refuge lands, and protect fish and wildlife resources from the impacts of these uses. In some cases, we may be interested in acquiring certain lands to improve public access or to manage access for the purpose of protecting resources in key areas.

The natural inaccessibility of many islands limits their potential for human use and development. We are less likely to acquire lands that have no threats to their natural resources.

Some islands in the refuge have very limited access. Steep bluffs and rocky terrain can hinder both air and sea access. These islands are naturally protected from outside disturbance. Islands that face few threats to island resources are generally considered low priorities for acquisition.

Land Use and Site Characteristics: When setting priorities, we consider existing or potential land uses that could harm wildlife, their habitats, or other important refuge resources. A wide variety of land use practices can affect wildlife and habitats. Direct effects such as destruction of nesting habitat may be easily identified and measured. Indirect effects, such as habitat fragmentation or human disturbance in key habitat areas, may be much more difficult to quantify. Certain uses on private lands may affect important resources found on adjacent or even distant refuge lands. For example, commercial or industrial development along a river which flows onto refuge lands can impact areas downstream. Spilled fuel, oil, or chemicals can be easily transported into the refuge, contaminating water and habitats far from the source.

Prior uses, such as fox farming, had dramatic effects on some refuge islands.

Beginning in the 1700s, humans significantly altered many of the Alaska Maritime islands by introducing non-native species, including foxes and rodents. Unlike mainland areas, island communities are limited to the species that can fly, swim, or drift there. Many evolve without mammal predators – in their absence, seabirds can flourish. It is easy to see how the sudden introduction of previously unknown predators, such as foxes, could devastate bird populations. Less obvious are the indirect effects on the island ecosystem as a whole. Results of a recent study, (Croll et al. 2005) suggest that fox introductions transformed islands from grasslands to less productive maritime tundra. Introduced foxes preyed on seabirds and reduced their numbers and distribution, which in turn reduced nutrient transport from sea to land. Fewer seabirds – and seabird droppings – meant less fertilizer was being brought to the islands. The result was a shift to a more nutrient-impoverished ecosystem that favored less productive forbs and shrubs over more productive grasses and sedges.

Seabird habitat could be restored on some islands by removing invasive species.

Mixed ownerships on an island may limit our ability to control invasive species and restore native seabird habitat.

Research also suggests that the presence of rats can dramatically alter the intertidal zone, reducing the amount of seaweed and increasing the numbers of snails, barnacles, and other invertebrates. Some bird species are major invertebrate predators. On islands where these species have been devastated by rats, the snails, limpets, and other grazers increased in abundance, ate more algae, and cleared more space for other invertebrates to settle and grow. The result was a shoreline practically stripped bare of the usual seaweed cover (UCSC 2008).

The only way to undo the damage and restore natural diversity is to first remove the invasive species. The refuge began a successful fox eradication program over 50 years ago and is now eradicating rats as well. Our ability to restore seabird habitat is facilitated by working with partners and other landowners that share the same goals. We are interested in collaborating with other landowners to

U.S. Fish & Wildlife Service

Large blocks of Native corporation land surround each community within the refuge (Atka Village pictured above). Generally, consolidated large parcels pose less threat to refuge resources than do small, isolated inholdings in sensitive wildlife areas.

eliminate invasive species from affected islands. We may also be interested in acquiring lands that have restoration potential. In any case, the potential to restore an island to its natural condition is a serious consideration in developing our priorities.

The potential threats to refuge wildlife populations and their habitats, and our ability to minimize them, are important considerations in developing a land protection plan. Parcels with exceptional wildlife values may not be a high priority for protection if it is likely the land will always be used in wildlife-compatible ways. Conversely, the imminent risk of incompatible land use practices could elevate a lower ranking parcel to higher priority. Both the resource value of the land and the potential opportunity for reducing impacts to refuge resources influence our priorities.

"Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level."

Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (2007)

Climate Change: Rising temperatures are altering Alaska's coastlines. Over the next decades, the greatest physical changes to lands within the refuge will likely occur on the low-lying barrier islands in the Chukchi and Bering Sea Units. Warming seas with thinner, less extensive sea ice and more open water allow stronger wind-generated waves and more wave-induced erosion. Rising sea-levels and thawing permafrost exacerbate the problem.

The vulnerability of coastlines to erosion depend on several factors: the amount of sea level rise, the properties of the coastal material (solid rock is less vulnerable than unconsolidated sand) and whether the local coastline is rising or subsiding may all play a role. In some areas of the state, the thinning of icefields and glaciers is causing

the earth to rebound as the weight of ice is removed. There is evidence that coastlines are emerging in areas of southeast Alaska as glaciers and icefields melt. In fact, the greatest known rates of glacier rebound in the world are occurring around Glacier Bay in southeastern Alaska (Larsen et al. 2005, Motyka et al. 2007). In contrast, the low-lying islands of the Chukchi and Bering Sea Units are generally not rising. These low sand islands are particularly vulnerable to the combined effects of rising sea levels and increased erosion.

These types of predictions, the consequences of a changing climate, influence our priorities and are likely to affect our decision if lands are offered for sale. Generally, low-lying barrier islands and spits are low priorities for acquisition, unless there are short term benefits that outweigh the risk of purchasing land that may ultimately disappear beneath the sea.

Mike Boylan

The red-faced cormorant is a shy species, nesting in widely dispersed colonies on steep cliff faces. The U.S. breeding range is restricted to Alaska.

Extremely sensitive to local environmental conditions and disturbance at nesting sites, the entire colony may move in response to food scarcity, human disturbance, or predators. Predation by both natural and introduced predators, including gulls, foxes, and Norway rats, is likely a major source of mortality.

The population appears to be declining, but the specific reasons are unknown. Some possible causes (prey availability, disease) are beyond our ability to control, whereas others (predation by introduced species, human disturbance) might be alleviated by specific land protection measures.

7. Effects of Land Protection Measures

Refuge management actions may affect people and other refuge resources as well as fish and wildlife. In this chapter, we briefly address potential effects of land protection measures on the human environment, including cultural resources and the local economy.

Effects on Cultural/Historical/Paleontological Resources

In addition to abundant natural resources, the refuge preserves a rich cultural and historical legacy. More than 9,000 years ago, the ancestors of today's Native people came to settle along Alaska's coast to subsist on the abundant resources of the sea. All of the maritime peoples of Alaska: Inupiat and Yupik Eskimos, Aleuts, Alutiiq and Chugach Aleuts, Cook Inlet Dena'ina Athabascans and southeastern Alaska Tlingits and Haidas have left their mark on parts of the refuge (Corbett 2003).

At the time of first European contact, the Bering Sea Unit was occupied primarily by Yupik-speaking people that depended heavily on sea mammals for sustenance. To the north were the Inupiaq-speaking people of the Chukchi Sea Unit. Like their Yupik neighbors, marine resources were vitally important to their survival. However, whale hunting played a much bigger role in the yearly subsistence cycle. Both the Yupik and Inupiaq occupied permanent winter villages with semi-subterranean houses.

The Alaska Maritime Refuge has likely been populated for more than 9,000 years.

The Aleutian Islands were occupied by the Aleut people. The Aleuts subsisted almost entirely on marine resources, including most local whale species and other marine mammals, fish, invertebrates, and seabirds. For protection from the weather, even small Aleut camps tended to have large subterranean houses that housed several families. The Pacific coast of the Alaska Peninsula was occupied by Alutiiq speaking Eskimos. The Peninsula was an important crossroad, where several prehistoric cultures met and merged, creating a unique local culture.

The Gulf of Alaska Unit is the most culturally diverse unit in the refuge. The Kodiak Island area of the Gulf of Alaska Unit was occupied by the Koniag, Alutiiq-speaking maritime hunters and fishermen. Although the subsistence base was primarily maritime, the Koniag people augmented their diet with plants and animals harvested from the land. The Cook Inlet area was occupied by Dena'ina Athabascans. Originally big game hunters from the interior, the Dena'ina developed a marine-oriented economy in the lower part of Cook Inlet. The islands in southeast Alaska were within the traditional use area of the Tlingit and Haida people.

Russian fur traders were the first outsiders to explore large areas of what is now the refuge. Beginning in the mid 1700s, the fur trade and the introduction of fox farming had dramatic impacts on the Aleutians, the Pribilofs, and the Kodiak and Alaska Peninsula areas.

The Aleut people, in particular, suffered devastating changes to their way of life. During the first 50 years of Russian control, the Aleut population was reduced to a fraction of its former size from diseases, wars, malnutrition and privation.

The next major historical event to affect the refuge was World War II. The Japanese occupation of Attu and Kiska and the battle for the Aleutians left their mark on the refuge. Three of the World War II sites in the Aleutians have been designated as part of the Valor in the Pacific National Monument, established by Presidential Proclamation 8327 in 2008. A management plan for the monument is currently being prepared.

A total of 10 sites within the boundaries have been designated as National Historic Landmarks, including seven sites on selected or conveyed lands. The sites include the remains of World War II military bases, historic village sites, a Russian Orthodox church, and even the remnants of a Sitka spruce "plantation", planted by Russian settlers in 1805.

The Alaska Heritage Resources Survey database is an inventory of all reported historic and prehistoric sites in Alaska. The database lists 109 sites in the Alaska Peninsula Unit, 1,689 sites in the Aleutian Islands Unit, 19 sites in the Bering Sea Unit, 52 sites in the Chukchi Sea Unit, and 22 sites in the Gulf of Alaska Unit. Most of these are archaeological, but the list also includes cemeteries, mythological sites, and historic buildings.

Under Section 14(h)(1) of the Alaska Native Claims Settlement Act, regional corporations claimed 339 historic and cemetery sites within refuge boundaries. The majority of these (308) were claimed by the Aleut Corporation in the Aleutian Island Unit. These 14(h)(1) claims include archaeological sites, historic villages and camps, and resource sites.

In addition to cultural and historical resources, some paleontological resources (fossil remains from past geologic periods) have been found and documented within the refuge. These include 26 sites in the Chukchi Sea Unit and one site in the Alaska Peninsula Unit.

U.S. Fish & Wildlife Service

The remains of Aleut sod barabaras can be found in some areas of the refuge.

Leo Halter

World War II touched American territorial soil when the Imperial Japanese Army bombed Dutch Harbor on Unalaska Island and occupied the Aleutian Islands of Kiska and Attu. In the spring of 1943, U.S. forces landed on Attu to retake the island.

The battle for Attu was one of the most costly of the Pacific campaign. The U.S. suffered a high number of casualties (3,829) compared to the number of Japanese troops on the island (2,650). After nineteen days of fighting, the Japanese soldiers launched a final banzai charge in an attempt to break through the American line. The forces clashed in furious, close-quarter, and often hand-to-hand combat near Massacre Bay on the southeast coast of the island. The Japanese troops fought almost to the last man – only 28 prisoners were taken. The Japanese defeat on Attu increased the vulnerability of the remaining Japanese troops on Kiska Island. Under cover of thick fog, the Japanese managed to slip through Navy and aerial reconnaissance and evacuate Kiska Island without detection. Eighteen days later, an Allied assault force of 34,000 troops landed on the island and was stunned to find it deserted.

Although the Aleutian Campaign is often called the Forgotten War, it was an integral piece of Japan's strategic plan to control the Pacific Ocean. In the Aleutians, the U.S. military innovated the leapfrog offensive that would be used to devastating effect to isolate and neutralize Japanese troops elsewhere in the Pacific. The lessons learned in the unforgiving environment of the Aleutians were put to good use in subsequent amphibious operations and on the Italian front.

Today some of the best preserved WWII battlefields in the world are found in the Aleutian Islands. Sites on Atka, Kiska, and Attu are now part of the Valor in the Pacific National Monument.

Despite this relatively large body of information, many additional sites undoubtedly exist. The amount of information available is proportional to the level of survey effort and was collected in response to specific legal requirements. The archeology is better known on islands with permanent villages or where the government has undertaken large projects (such as Amchitka). Systematic surveys and oral history collection would undoubtedly identify many more historic and culturally important locations.

Fossils dating to the Devonian period (400 million years ago) have been found in the Chukchi Sea Unit.

The Service is committed to protecting cultural resources on refuge lands and willing to assist private landowners in protecting resources on their lands. The assistance may take the form of advice, jointly prepared preservation plans, or technical assistance.

If the Service acquires properties containing cultural resources, they are protected under Section 106 of the National Historic Preservation Act of 1966. The Act requires federal agencies to consider the effects of agency actions on cultural properties. The sites are also protected under the Archaeological Resources Protection Act which requires permits for research and provides criminal and civil penalties for looting or vandalism of sites.

The Service will protect cultural resources on acquired lands.

Effects on Landowners

The communities of Akutan, Atka, False Pass, Nikolski, Sand Point, and Unalaska lie within the boundaries of the Alaska Maritime Refuge. Another 30 communities are located near one of the refuge units. The refuge headquarters is located outside the refuge boundaries in the city of Homer on the Kenai Peninsula.

Although there are many people living within the refuge borders, implementing the recommendations of this land protection plan will have little effect on most landowners. Most permanent residents within the refuge live in, or near, one of the local communities within large blocks of privately-owned land. Generally, the large blocks that surround these communities, and the small private parcels embedded in them, are unsuitable for acquisition by the Service.

Most other private lands are undeveloped and owned by Native corporations or by Native allottees. Most of these lands are used primarily for subsistence purposes. Some landowners interested in selling could receive a cash payment for their land. However, in Alaska, we must offer to exchange lands prior to purchasing lands outright (Public Law 105-277, Section 127). If the landowner is interested only in selling, he or she must indicate that the exchange offer was refused before the purchase can proceed.

Implementing this plan will have minimal effects on most local residents.

In some cases, landowners may be interested in exchanging their land for Service-owned land that is more suitable for development. For example, privately-owned wetlands with high wildlife value might be exchanged for Service land in more desirable building locations, or for Service-owned subsurface (sand, gravel, rock, etc.) beneath private lands. In some cases, land exchanges can help consolidate both public and private holdings. However, the Service will consider land exchanges only if they will benefit the refuge as well as the private landowner.

The land protection plan could benefit large landowners by providing opportunities to improve management of both private and public resources through land exchanges, cooperative management

agreements, or conservation easements. Any land the Service acquires is preserved in its present state, or restored to natural conditions, and managed in the same manner as nearby refuge lands.

Some landowners may wish to exchange their land for land with greater development potential.

Effects on the Economy

The communities in the refuge generally support a mixed subsistence / cash economy. Many residents rely heavily on hunting, fishing, and gathering to obtain food and materials for their own consumption.

A mixed subsistence/cash economy predominates in refuge communities.

Commercial fishing is a primary source of employment and income in many areas of the refuge. Other sectors that provide employment include federal, state, and local government, commercial/retail services, construction, utilities, and Native corporations.

Currently, recreational use of the refuge by people living outside the local area is low in all but a few areas. Islands accessible from Homer and Seward are probably the most visited areas of the refuge. Recreational use is limited by the difficult logistics and expense of visiting remote islands. However, it is possible that the demand for visitor services will increase in the future as adventure travel becomes increasingly popular. The Service gives preference to local residents and to those Native corporations that were most directly affected by the establishment of the refuge (ANILCA § 1307(b)), when contracting for the provision of visitor services. Visitor services include any service available for a fee, such as providing food, accommodations, transportation, tours, and guides, with the exception of guided sport hunting and fishing (ANILCA § 1307(c)). In addition, Native lands are given priority consideration in the siting of refuge administration sites and visitor facilities. Native lands may be leased, or acquired by purchase or exchange.

Carla Stanley

For the 21st consecutive year, Dutch Harbor on Unalaska Island was the top port in the nation in 2009 for the total number of fish landed.

Land protection measures may have a positive effect on these industries. Land conservation measures within the refuge boundaries may prove beneficial by helping to protect the watersheds and drainages that serve as spawning and rearing areas for anadromous species. Conservation of habitat and resources through public stewardship will benefit recreational use, as well as commercial fishing offshore. Managing the resource to provide habitat for wildlife and fish will ensure that hunting, fishing and other recreational opportunities continue.

The local economy may benefit if an active land acquisition or exchange program develops in the future. Some landowners could receive a cash payment for their land, or for an interest in their land (such as a conservation easement). The local economy receives direct benefits from the refuge through the refuge Revenue Sharing Act. Designed to assist communities located near refuges, the Act authorizes annual payments to the local government for any inholdings acquired by a refuge. If local communities are not yet organized into a regional government with taxing authority, the payments authorized under this act are paid to the state.

Land protection measures help ensure healthy watersheds and populations.

Effects on Public Access

Local governments receive annual revenue sharing payments when the Service acquires inholdings.

Access is a component of public use that can be affected by land ownership. In Alaska, most refuge lands are open to public access. Most non-local visitors access the refuge via boat, air taxi or private plane, while local residents rely on the full range of access modes identified under ANILCA Section 1110. In addition, ANILCA Section 810 allows subsistence users access using motorboats, snowmobiles and other traditionally-employed means of surface transportation. However, access can be regulated if needed to protect refuge resources, but only after public hearings and a determination that the use is detrimental to area resources.

In Alaska, most refuge lands are open to public access.

Section 17(b) of ANCSA provides public access across Native corporation lands. This section provided for public use easements across lands and at periodic points along major waterways within Native conveyed lands. There are currently about 140 miles of 17(b) easements within the refuge boundaries. Unfortunately, recreationists often have difficulty determining whether they are on public or private land, especially in areas of checkerboard ownership. The result is a tendency to use private lands as though they are part of the refuge.

Any new land acquired by the refuge will become part of the refuge will be managed in the same manner as the surrounding refuge lands, consistent with ANILCA. Existing public access to the acquired property will generally be maintained. The refuge may impose regulations on public use to protect resources, however private landowners are more likely to restrict public access or require user fees. All commercial ventures occurring on the acquired lands, including guided fishing and hunting, would be subject to the same special use permit restrictions required on adjacent refuge land.

In general, traditional public access is maintained on lands acquired by a refuge.

Effects on Subsistence

Subsistence is a primary purpose of this refuge. Furthermore, Title VIII of ANILCA established in law special protection for subsistence activities on most federal lands in Alaska. Rural residents receive a priority to harvest wildlife for subsistence purposes on all refuge lands where the Federal Subsistence Board has determined that there is a customary and traditional use of a particular wildlife population or fish stock. However, the subsistence harvest may be restricted or prohibited in order to protect the continued viability of wildlife populations, or to continue subsistence uses. Subsistence harvest is resumed when populations recover to sustainable levels.

Title VIII of ANILCA ensures a subsistence priority for rural residents on refuge lands.

The State of Alaska provides subsistence opportunities for all Alaskans on all lands, except in non-subsistence areas or unless specifically preempted by federal law. However, acquisition by the Service ensures a subsistence priority for rural residents on the acquired lands. The benefit to residents may be limited at times by special harvest restrictions, or because there is no subsistence priority for certain species. For further information, see the Subsistence Management Regulations for federal Public Lands in Alaska (USFWS 2010).

8. Evaluating Resource Conservation Proposals

When a landowner or the Service proposes resource protection measures, each proposal is evaluated individually. In most cases, land protection decisions within the Alaska Maritime Refuge will be based on the following guidelines:

Many factors influence our land protection priorities.

1. **Relative priority**
   - *High priority lands within the refuge have sufficient resource values for the Service to consider acquiring an interest in the land.*
   - *Typically, higher ranked lands are acquired before lower ranked lands.*
   - *Lower priority lands are considered on a case-by-case basis and may have special features or resources that warrant protection even though they did not rank highly in our prioritization system.*

Emerging development pressures or management concerns may cause priorities to change over time.

2. **Special management values**
   - *Protecting or acquiring certain non-federal lands could help the refuge meet specific management goals and objectives.*
   - *Special management values include consolidating refuge ownership, improving management of public access, or acquiring areas with restoration potential.*

3. **Development potential and its effect on refuge resources**
   - *While some types of development may increase the opportunities for public use and enjoyment of the refuge, others may seriously impact refuge wildlife, habitats, or other resources. The threat of incompatible development adds urgency to the need for protection.*

A parcel surrounded by private land is generally unsuitable for acquisition.

4. **Effect of land protection measures on overall refuge management**
   - *Land protection measures should simplify, not complicate, refuge management.*
   - *We seldom acquire tracts of land close to concentrated residential developments or those embedded in larger blocks of private property.*

In general, isolated parcels with high biological value warrant land protection.

5. **Effect of land protection measures on biological integrity, diversity, and the environmental health of the refuge**
   - *Land protection strategies should preserve or increase biological diversity, integrity and environmental health.*
   - *To protect key habitats or geographic areas, we may consider adopting similar land protection measures across all lands in the area of interest, regardless of their priority ranking.*

We consider the ecology of the entire area.

All our land protection methods require the cooperation of the landowner. We will take action only if the landowner is interested.

- *We are interested in strategies that allow us to work cooperatively with landowners to protect the ecosystem now and in the future.*

6. **Landowner's willingness to work with us to protect natural resources on their land**
   - *We acquire land or interests in lands only from willing sellers.*
   - *Interest in land can be obtained by lease, easement, exchange, donation, or fee title purchase.*
   - *Cooperative agreements with landowners may adequately protect resources if acquisition is not necessary, or if the landowner is willing to consider resource protections other than selling specific land interests.*

Funding shortfalls may limit our ability to buy or exchange lands.

7. **The availability of funds for land acquisition or other protection measures**
   - *Funds are not always available for land protection measures.*
   - *Each refuge must compete nationally with other federal wildlife refuges for acquisition funding.*

The Service does not prioritize subsurface interests.

Subsurface interests are not prioritized in our land protection plans. In Alaska, the Service rarely acquires subsurface interests because: 1) surface use is already regulated wherever the surface is refuge land; and 2) the vast amount of privately-owned surface land must receive primary consideration. We generally acquire subsurface interests only through special mandates in response to legislative action.

The Service may be interested in acquiring some low priority lands if seabird habitat can be restored by removing introduced foxes, rats, or other invasive species.

U.S. Fish & Wildlife Service

9. Public Involvement

Wildlife conservation is the driving mission behind the National Wildlife Refuge System, but ultimately refuges benefit people, today and for generations to come. ANILCA states that one purpose for designating Conservation System Units in Alaska, including National Wildlife Refuges is to:

> *"...preserve for the benefit, use, education and inspiration of present and future generations certain lands and waters in the State of Alaska that contain nationally significant natural, scenic, historic, archeological, geological, scientific, wilderness, cultural, recreational, and wildlife values..."*

We encourage landowners, and other interested public, to be involved in the land protection planning process.

Refuge lands represent many things to many people. Alaska refuges have an allure that can capture the hearts and minds of people in distant locales. Many people care about refuge lands even though they may never experience them firsthand. Refuge lands have a different significance for those who live, work, and play within refuge borders. For more than 10,000 years, Alaskan Natives have depended on the cyclical flow of the seasons to provide food, shelter, and a link to their cultural past. Recent generations of Alaskans have come to depend on this landscape, as well.

Since land protection measures can influence wildlife resources and the management of wildlife refuges, we want to involve the public in the planning process. Input from interested individuals helps us tailor land protection plans to meet the needs of landowners, wildlife, the Service, and the public. We encourage landowners and interested members of the public to learn more about these refuges and help us identify important land conservation and management issues.

The Service contacted the public early in the planning process.

The planning process began with statewide public meetings in Anchorage and Fairbanks during October 1990 to announce the beginning of the land protection planning process for all refuges in Alaska. These statewide meetings were followed by public meetings specifically focused on the Alaska Maritime Land Protection Plan. Between January and August of 1993, we held public meetings in Anchorage and 13 communities within or near the Alaska Maritime Refuge. Service staff outlined the objectives of the Alaska Maritime Land Protection Plan, answered questions, and recorded issues or comments expressed during the meetings. The information from these meetings was compiled and summarized. Unfortunately, later that year work was suspended on the Alaska Maritime Land Protection Plan because the computer technology was not sufficiently advanced to allow data analysis of such a large and complex spatial area.

We reinitiated work on the Alaska Maritime LPP in 2005. Refuge staff have met with key representatives from the local communities, Native groups and other interest organizations to brief them on the status of the Alaska Maritime LPP and to answer questions and provide additional opportunities for discussion. The Service is willing to schedule additional meetings at the request of any interested individuals or groups.

Land Protection Plan Revision

If you have any questions or would like to request a meeting, please contact the Alaska Maritime Refuge.

Land ownership on the Alaska Maritime Refuge will change as land is conveyed, subdivided, or sold. We maintain a computerized database of land ownerships and a list of owners who express an interest in land conservation opportunities. The following page contains a form that landowners can use to express an interest in working with us. Just fill in the form, tear it out, fold it, and mail it to the address preprinted on the back.

We will periodically review the Alaska Maritime Land Protection Plan. If land ownership or land uses change enough to alter our land protection priorities, we will consider revising the plan. Whenever we propose significant revisions, we will notify landowners and the public.

Our policy is to prepare land protection plans for each refuge. These plans serve primarily to foster communication between the refuge and interested landowners and to help us identify our priorities. They do not require us to take any specific actions. This plan helps us identify areas with high resource value and provides a framework for working with interested landowners and managers to protect key resources.

Land protection planning is an ongoing process.

Steve Ebbert, U.S. Fish & Wildlife Service

Evermann's rock ptarmigan, an Aleutian subspecies, disappeared from Agattu after fur merchants stocked arctic foxes on the island in the 1800s. After removing non-native foxes, ptarmigan were successfully reestablished on the island in the mid 2000s.

Landowners: Would you like to work with us to protect wildlife on your land?

Refuge Planning Participants: Would you like to receive future mailings concerning the Alaska Maritime Refuge Land Protection Plan?

Please use this form to express your interest in the refuge Land Protection Plan. The information you provide here will be used primarily for planning purposes, and does not constitute an offer to buy land.

Name:_____

Address:_____

_____

Telephone:_____

☐ Please check this box if you would like your name added to the Alaska Maritime Land Protection Plan mailing list.

There are 6 basic options that have been identified in the Plan. Please check the options in which you have interest.

☐ **No Action** (I am not interested in participating)

☐ **Cooperative Agreement** (An agreement between a landowner and the Service to help each other manage land. No money is involved.)

☐ **Conservation Easement** (Landowner keeps title to land but sells development rights to the Service).

☐ **Exchange** land for other federal land

☐ **Sell** land to the Fish and Wildlife Service

☐ **Donate** land to the Fish and Wildlife Service

Legal Description of my parcel or allotment (on the Deed or other official correspondence):

T_____N R_____E Section _____ Lot _____

Comments: _____

_____

If you have any questions, please contact one of the following:

Refuge Manager
Alaska Maritime National Wildlife Refuge
95 Sterling Highway, Suite 1
Homer, Alaska 99603-7473
(907) 235-6546

U.S. Fish and Wildlife Service
Division of Realty and Natural Resources
1011 E. Tudor Road
Anchorage, AK 99503
(907) 786-3414
(888)-697-9826 (toll free)

Please fold form and mail to address on other side.

Fold Here

From: _____

Place
Stamp
Here

To: U.S. Fish & Wildlife Service
Division of Realty and Natural Resources
1011 East Tudor Road, MS 211
Anchorage, Alaska 99503-6119

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