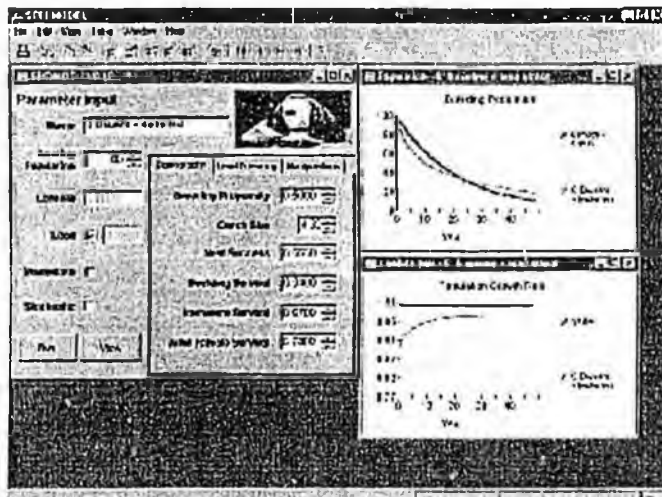


ALASKA LEGISLATURE COMMITTEE FILES 1999-2000 8672

10146 SENATE RESOURCES



The user provides estimates of demographic parameters such as the size of the nesting population, breeding propensity, nest success, duckling survival, clutch size, and adult survival. The program uses those values to calculate the expected population growth rate and project the size of the population for 50 years. In addition to demonstrating the effects of variation in demographic parameters, the program simulates the effects of lead poisoning and manipulations of the population (i.e., the addition or removal of nests or breeding females) on population size and growth. The program also introduces the effects of environmental variation (stochasticity) on animal populations. It is not intended as a tool for research, but as a tool to be used by managers and students exploring the relative influence of factors affecting spectacled eider populations. The algorithms in the program are based on a standard pre-breeding

census, birth pulse, stage projection (Leslie matrix) model.

The tutorial parameter sets provided with SPEI Model demonstrate the relative importance of each of the demographic parameters on the growth rate of spectacled eider populations. The structure of the program makes it easy to create, edit, and save new or existing parameter sets. The graphic output illustrates changes in population size, population growth rate, and potential problems with population viability.

## DOWNLOAD

- System Requirements:
  - Win 95
  - 16 MB RAM
  - 20 MB disk space available during installation
- Click here to download the program [SPEI Model](#) (8 MB)
  - Extract the setup files to a temporary directory by running *speimod.exe*
  - Run *setup.exe* from the temporary directory.
  - Delete the files in the temporary directory.
- Click here to download the [upgrade](#) (<1 MB)
  - Use the update only if you have a working version of the program on your computer.
  - Extract the update files to the directory where SPEI Model exists by running *update.exe*
- To uninstall the program:
  - From the Win 95 Control Panel, select Add/Remove Programs; select SPEI Model; click on remove program.

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U.S. Fish & Wildlife Service

## Threatened and Endangered Species Fact Sheet

### Spectacled eider (*Somateria fischeri*)

#### Status

Threatened throughout its range (*Federal Register*, May 10, 1993)

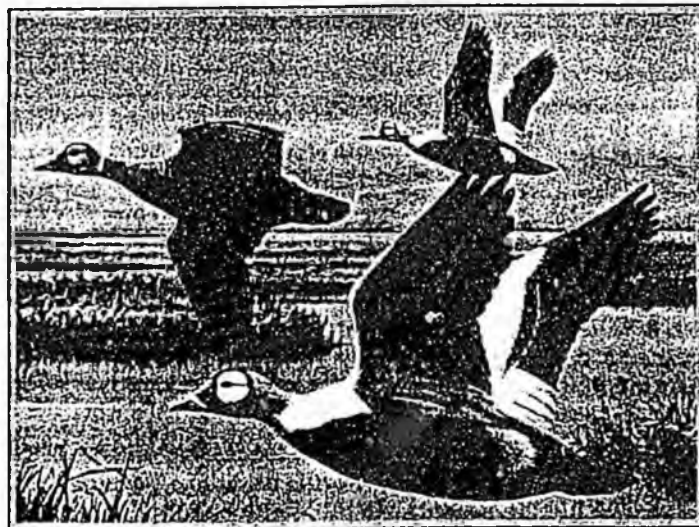
#### Description

Spectacled eiders are large sea ducks, 52-56 centimeters long (20-22 inches). In the winter and spring, adult males are in breeding plumage with a black chest, white back, and pale green head with a long, sloping forehead and white spectacle-like patches around the eyes. During the late summer and fall, males are entirely mottled brown. Females and juveniles are mottled brown year-round with pale brown eye patches.

#### Range and Population Level

Historically, spectacled eiders nested along much of the coast of Alaska, from the Nushagak Peninsula in the southwest, north to Barrow, and east nearly to the Canadian border. They also nested along much of the arctic coast of Russia. Today, three primary nesting grounds remain; the central coast of the Yukon-Kuskokwim Delta, the arctic coastal plain of Alaska, and the arctic coastal plain of Russia. A few pairs nest on St. Lawrence Island as well. Their fall and winter distribution was virtually unknown until satellite telemetry lead to the discovery of spectacled eiders at sea in 1993. Important late summer and fall molting areas have been identified in eastern Norton Sound and Ledyard Bay in Alaska, and in Mechigmenskiy Bay and an area offshore between the Kolyma and Indigirka river deltas in Russia. Wintering flocks of spectacled eiders have been observed in the Bering Sea between St. Lawrence and St. Matthew islands.

Between the 1970's and the 1990's, the breeding population on the Yukon-Kuskokwim Delta declined by over 96%, and only about 4,000 pairs nest there today. Historical data for other nesting



*As their name suggests, male spectacled eiders in breeding plumage have distinctive patches around the eye which resemble eyeglasses, or spectacles. Female spectacled eiders, like the bird on the left, are mottled brown with faint eye patches. Reprinted with permission from an original painting by Joseph Hautman.*

areas are scarce, but recent data and observations by native elders suggest populations may have also declined on the arctic coastal plain of Alaska. Biologists estimate that about 9,000 pairs currently nest on Alaska's arctic coastal plain, and at least 40,000 pairs nest in arctic Russia. The current worldwide population estimate is 360,000 birds, which is derived from winter surveys in the Bering Sea and includes non-breeding birds.

#### Habitat and Habits

Spectacled eiders are diving ducks that spend most of the year in marine waters where they probably feed on bottom-dwelling molluscs and crustaceans. Around the time of spring break-up, breeding pairs move to nesting areas on wet coastal tundra. They establish nests near shallow ponds or lakes, usually within 3 meters (10 feet) of water. During this season they feed by diving and dabbling in ponds and wetlands, eating aquatic insects, crustaceans, and vegetation. Soon after eggs are laid, males leave the nesting grounds for offshore molting areas, usually by the end of June. Females whose nests failed

leave the nesting area to molt at sea by mid-August. Breeding females and their young remain on the nesting grounds until early September. Molting flocks congregate in relatively shallow coastal water, usually less than 36 meters (120 Feet) deep. While moving between nesting and molting areas, spectacled eiders travel along the coast up to 50 kilometers (31 miles) offshore. During the winter months of October through March, they move far offshore to waters up to 65 meters (213 feet) deep, where they sometimes gather in dense flocks in openings of nearly continuous sea ice.

#### Reasons for Current Status

Causes of the decline of spectacled eiders are not well understood. Lead poisoning, caused by eiders ingesting spent lead shot as they feed, has been documented in spectacled eiders on the Yukon-Kuskokwim Delta. Hunting also poses a threat to spectacled eiders.

Predation by foxes, large gulls, and ravens on the breeding grounds may be increasing in areas where populations of these predators are enhanced by the year-round food and shelter provided by human activities and garbage dumps.



U.S. Fish & Wildlife Service

## Threatened and Endangered Species Protecting Spectacled Eiders At Sea

**S**pectacled eiders (*Somateria fischeri*) were listed as threatened in 1993 under the U.S. Endangered Species Act (*Federal Register*, May 10, 1993) after the breeding population on the Yukon-Kuskokwim Delta, Alaska, declined 96% between the 1970's and the early 1990's. Since spectacled eiders spend most of their lives at sea, minimizing harm in marine habitats is crucial to the species survival and recovery.

### At Sea Distribution and Ecology

Until recently, little was known about the habits of spectacled eiders outside their summer breeding areas. Researchers are using satellite telemetry and aerial surveys to find the birds at sea, from coastal fall molting areas to offshore wintering areas in the central Bering Sea.

In the late summer and fall after breeding in northern and western Alaska and arctic Russia, spectacled eiders gather in flocks in coastal waters to molt. During molt, the birds become flightless as their old, worn feathers are replaced with new ones.

Four principle molting areas have been identified. Two molting areas on the coast of Alaska are eastern Norton Sound and Ledyard Bay, between Cape Lisburne and Point Lay. On the coast of Russia, eiders molt in Mechigmenskiy Bay on the Chukotka Peninsula and an



USFWS photo by Bill Larned

*Wintering flocks of spectacled eiders, such as this flock of over 80,000 birds, gather in the pack ice southwest of St. Lawrence Island.*

area between the Indigirka and Kolyma river deltas. Molting areas are typically less than 36 meters deep.

Eastern Norton Sound appears to be the primary molting area for females nesting on the Yukon-Kuskokwim Delta in Alaska, while females nesting in northern Alaska migrate to either Ledyard Bay or Mechigmenskiy Bay to molt. Males from all three breeding areas have been found molting in Ledyard Bay, Mechigmenskiy Bay, and in the area between the Indigirka and Kolyma river deltas.

Males reach molting areas first, beginning in late June, and may remain through mid-October. Females that did not breed or whose breeding efforts failed begin arriving in late July. Successfully breeding females

reach molting areas in late August or September, and may remain through October. Consequently, flightless eiders are present in molting areas from July to October.

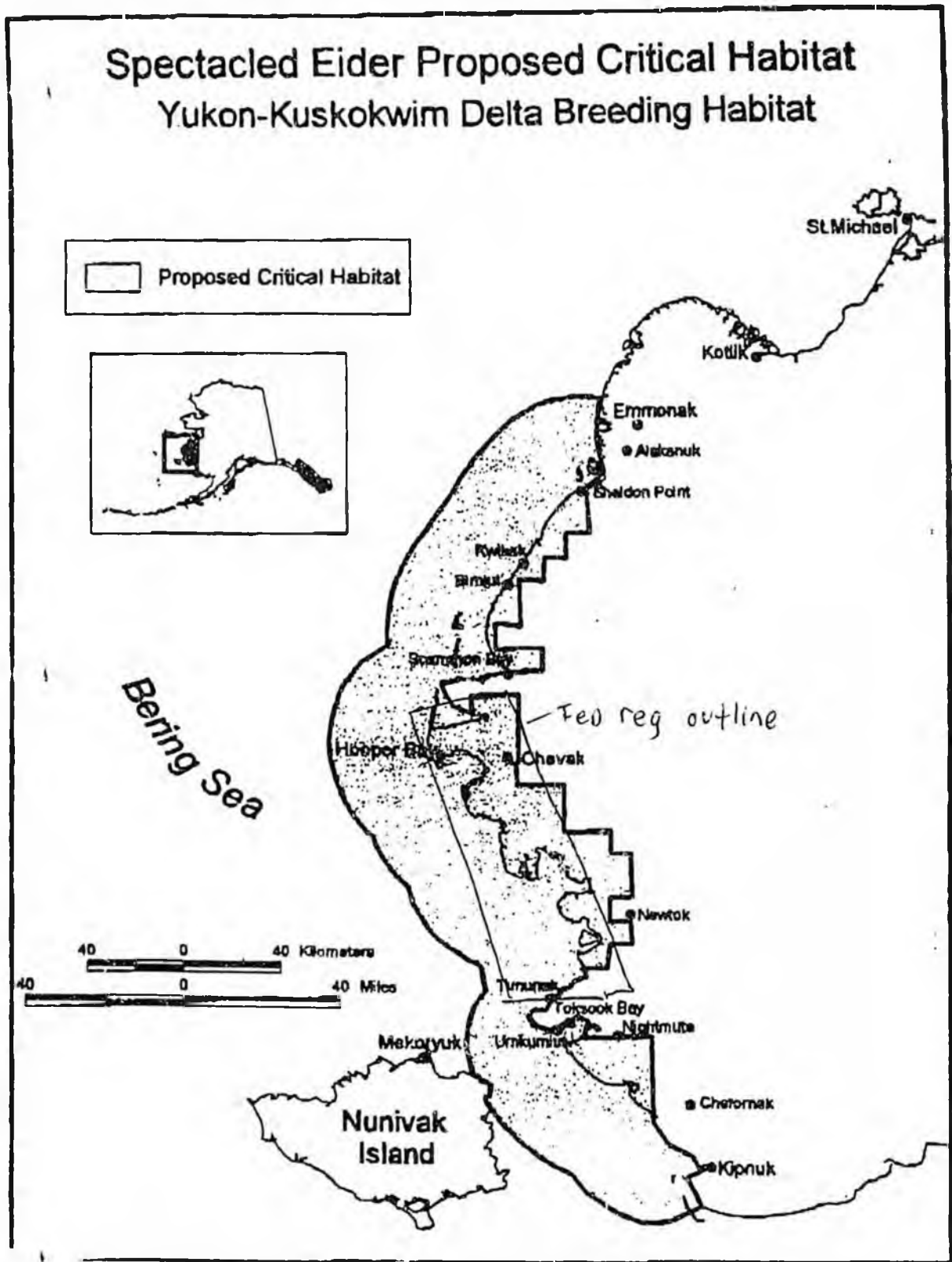
By late October, spectacled eiders follow coastal and offshore migration corridors through the Bering and Chukchi seas to offshore wintering areas. The primary wintering area is in the central Bering Sea south and southwest of St. Lawrence Island. Additional wintering areas have not yet been identified.

In early winter, spectacled eiders have been seen within 50 kilometers of St. Lawrence Island, moving farther offshore as winter progresses. Their late winter location appears to move with annual ice coverage as the birds



*While in breeding plumage (October to June), adult male spectacled eiders have a black chest, white back, pale green head with a long sloping forehead, and white spectacle-like patches around the eyes. From July to September, males are entirely mottled brown. Females and juveniles are mottled brown year-round with pale brown eye patches. One of the largest sea ducks, spectacled eiders average 52-56 centimeters (20-22 inches) in length.*

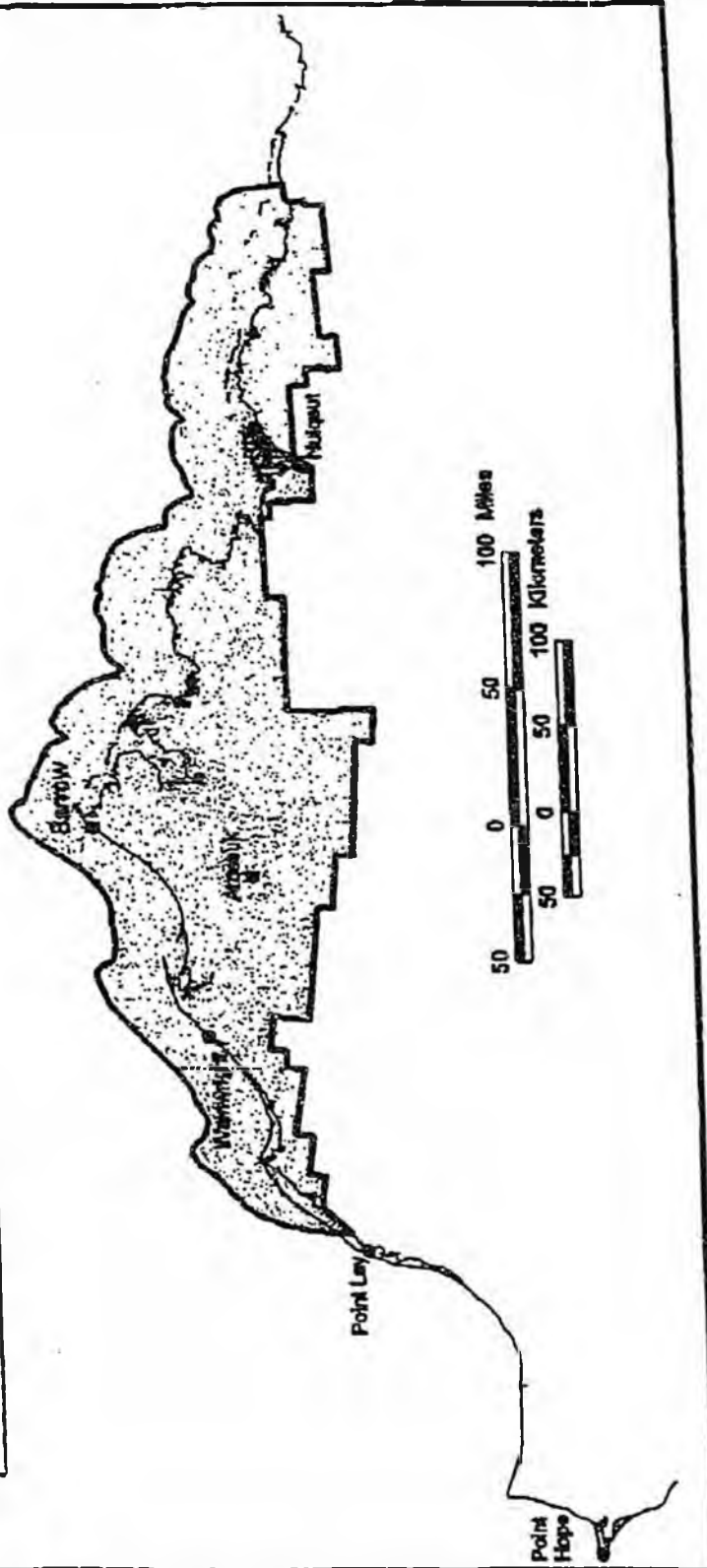
# Spectacled Eider Proposed Critical Habitat Yukon-Kuskokwim Delta Breeding Habitat

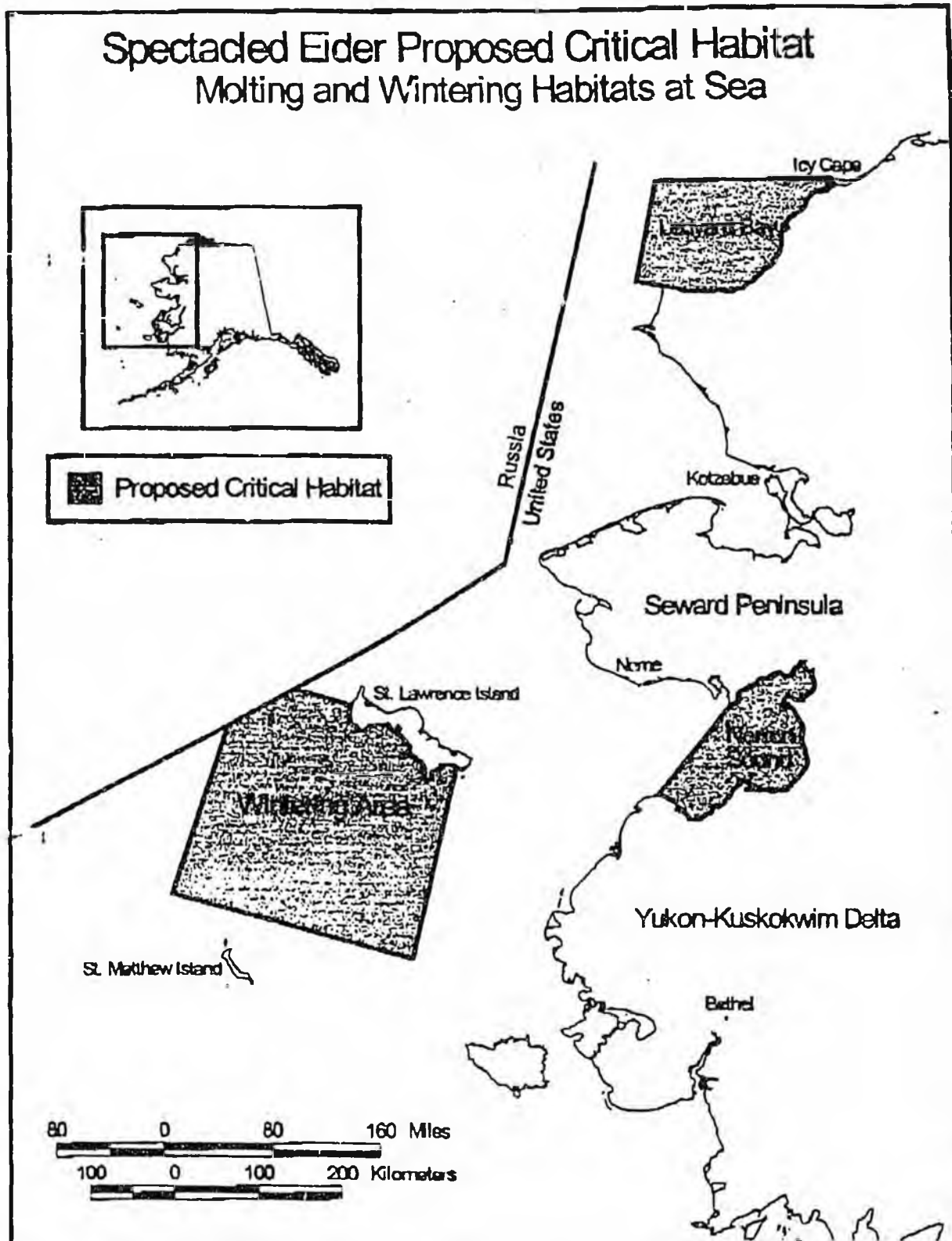


# Spectacled Eider Critical Habitat North Slope, Alaska



 Proposed Critical Habitat





# STELLAR'S EIDER

## BRIEFING PAPER

### CRITICAL HABITAT FOR STELLER'S EIDERS

March 1, 2000

#### ISSUE

- The Fish and Wildlife Service is proposing to designate critical habitat for the Steller's eider. Proposed designation of critical habitat for the Steller's eider includes nesting areas on Alaska's North Slope and the Yukon-Kuskokwim Delta (YKD), and seven marine areas in southwest and southcoastal Alaska where the species molts, winters, and stages during spring migration. The proposed units encompass approximately 16,988 square miles on land, and 8500 square miles of marine waters along approximately 9000 miles of coastline.

#### BACKGROUND

- The Steller's eider is the smallest of four eider species. The adult male has a white head with a greenish tuft and a small black eye patch, a black back, white shoulders, and a chestnut breast and belly with a black spot on each side. Adult females and juveniles are mottled dark brown. Adults of both sexes have a blue wing speculum with a prominent white border on the anterior and posterior edges.
- Steller's eiders are diving ducks that spend most of the year in shallow marine waters where they primarily feed on bottom-dwelling molluscs and crustaceans. The breeding range of the Steller's eider in Alaska formerly extended discontinuously from the eastern Aleutian Islands around the western and northern coasts of Alaska to the Canada border. They now breed on the North Slope and in extremely low numbers on the Yukon-Kuskokwim Delta.
- Steller's eiders occur in marine habitats except during the breeding season. In fall, they congregate primarily in lagoons, bays, and estuaries on the north side of the Alaska Peninsula to molt. Densities can be extremely high; tens of thousands may concentrate in a few square miles in Izembek and Nelson lagoons during the peak of molt in August and September, although use of these areas can vary considerably among years. After molt, many disperse to the Aleutian Islands, the south side of the Alaska Peninsula, Kodiak Island, and as far east as Kachemak Bay, although thousands may remain in the lagoons in which they molt unless freezing conditions force them to move to warmer or more protected areas. In March or April, Steller's eiders begin to gradually move northward, again congregating on the north side of the Alaska Peninsula and in Bristol and Kuskokwim bays. Nearly 140,000 have been counted in this region during spring migration.
- The Steller's eider occurs at such low densities in Alaska during the breeding season that precisely estimating population size is currently impossible, but it is thought that hundreds or low thousands occupy the North Slope. Population size on the Yukon-Kuskokwim Delta is also difficult to estimate, but so few nests have been found in recent decades that it is believed that the species is extremely scarce there. Historical population size and distribution are poorly understood, but it is thought that the species' abundance

and range have decreased considerably in Alaska in the last century. Causes of the decline are unknown.

#### LISTING AND LITIGATION HISTORY

- In December 1990, the Service received a petition from James G. King to list the Steller's eider as an endangered species. In May 1992, the Service determined that listing was warranted but precluded by higher listing priorities. In 1993, a status review of the species concluded that listing of the Alaska breeding population as threatened was warranted, although the available information did not support listing the species worldwide. A proposed rule was published on July 14, 1994. A final determination on whether listing was warranted was delayed by a national moratorium on listing implemented in April 1995; that moratorium was lifted in April 1996. In June 1997, the Service published a final rule listing the Alaska breeding population of Steller's eiders as threatened without critical habitat (62 FR 31748).
- On March 10, 1999, the Southwest Center for Biological Diversity and the Christians Caring for Creation filed a lawsuit in Federal District Court in the Northern District of California against the Secretary of the Department of the Interior for failure to designate critical habitat for five California species and Alaska's Steller's and spectacled eiders.
- In September 1999, the plaintiffs and the Departments of Justice and Interior entered into an agreement in which Interior agreed to re-evaluate its critical habitat determinations for spectacled and Steller's eiders. The government took this action because over the last few years, a series of court decisions have overturned previous Service determinations regarding a variety of species that designation of critical habitat was not prudent (e.g., Natural Resources Defense Council v. U.S. Department of the Interior 113 F. 3d 1121 (9th Cir. 1997); Conservation Council for Hawaii v. Babbitt, 2 F. Supp. 2d 1280 (D. Hawaii 1998)).
- The agreement stipulates that if a "prudent" determination is made, proposals for critical habitat for spectacled eiders and Steller's eiders would be finalized by February 1, 2000, and March 1, 2000, respectively. Final rules designating critical habitat would subsequently be finalized by December 1, 2000, for spectacled eiders and January 5, 2001, for Steller's eiders. Final "not prudent" determinations, if appropriate, would be finalized by August 1, 2000, for spectacled eider and September 1, 2000, for Steller's eider.

#### PROPOSED CRITICAL HABITAT: NESTING AREAS

- Nesting areas on the YKD and North Slope are proposed as critical habitat. Identification of critical habitat for nesting is based on the known distribution of Steller's eiders from aerial survey information or historical records and presence of nesting habitat with primary constituent elements.
- Proposed critical habitat on the YKD and North Slope is delineated by township.

#### North Slope Nesting Unit (~15,800 mi<sup>2</sup>)

- The proposed North Slope unit extends across the North Slope of Alaska, from the

mouth of the Utukok River on the Chukchi Sea coast, to the Colville River delta, on the Beaufort Sea coast. Primary constituent elements of Steller's eider nesting habitat on the North Slope are described as follows: small ponds and shallow water habitats particularly those with emergent vegetation, moist tundra within 100m of permanent surface waters including lakes, ponds, and pools, the associated aquatic invertebrate fauna, and adjacent nesting habitats. Area: ~15,800 mi<sup>2</sup> or 10,098,348 acres.

#### **Yukon-Kuskokwim Delta (YKD) Nesting Unit (~1201 mi<sup>2</sup>)**

- The proposed Yukon-Kuskokwim Delta Nesting Unit is located within 30 km of the coast, bounded by Kokechik Bay and the Askinuk Mountains to the north, and extending south to include Kigigak Island and the north end of Nelson Island. Primary constituent elements of Steller's eider nesting habitat on the YKD are similar to those described for the North Slope: small ponds and shallow water habitats particularly those with emergent vegetation, moist tundra within 100m of permanent surface waters including lakes, ponds, and pools, the associated aquatic invertebrate fauna, and adjacent nesting habitats. Area: ~1201 mi<sup>2</sup> or 769,158 acres.

#### **PROPOSED CRITICAL HABITAT: MOLTING, MIGRATION STAGING, AND WINTERING AREAS**

- Proposed critical habitat for molting and wintering is based on known distribution of Steller's eiders.
- Proposed critical habitat at sea is described by geographic coordinates, geographic features, and shoreline.
- Primary constituent elements of this habitat include the marine waters up to 10 m (30 ft) deep and the underlying substrate, the associated invertebrate fauna in the water column and in and on the underlying substrate, and, where present, eelgrass beds and associated flora and fauna.
- Areas proposed for designation as critical habitat include: the coastal waters around Nunivak Island; the north side of Kuskokwim Bay; selected lagoons and bays along the north side of the Alaska Peninsula; and nearshore marine waters along the coast of the eastern Aleutian islands, the south side of the Alaska Peninsula, a portion of Kachemak Bay and marine waters in the vicinity of Ninilchik, and waters of the Kodiak archipelago. Area: ~8500 mi<sup>2</sup> or 5,440,000 acres and 9000 miles of coastline.

#### **NEXT STEPS**

- The proposed rule was finalized by the March 1, 2000, Settlement Agreement date. A 60-day public comment period will open when proposed rule is published. Public comments will be accepted during this period and scientific peer review will be sought on the proposal. Requests for public hearings will be accepted.
- The Service will initiate and publish for public comment an analysis of the potential economic effects of the proposal to designated critical habitat for the spectacled eider.

- After considering all comments on the proposal and any economic effects, the Service must complete a final rule designating critical habitat by January 5, 2001.

**CONTACT**

- David B. Allen, Regional Director, (907) 786-3542, or LaVerne Smith, Assistant Regional Director for Fisheries, Ecological Services, and Marine Mammals (907) 786-3411.



## Questions and Answers About Critical Habitat for the Steller's Eider

### Q. What is critical habitat?

A. Critical habitat is a term used in the Endangered Species Act. It refers to specific geographic areas that are essential for the conservation of a threatened or endangered species and that may require special management considerations. These areas do not necessarily have to be occupied by the species at the time of designation.

### Q. Do listed species in critical habitat areas receive more protection?

A. Designation of an area as critical habitat provides a means by which an endangered or threatened species' habitat can be protected from adverse changes or destruction resulting from Federal activities or projects. In most cases, critical habitat designation duplicates the protection provided by section 7 of the Endangered Species Act. It does not create a nature preserve or refuge, and does not affect ownership of land in the area. It does not allow Federal or public access to private lands, and does not change the rights of private landowners. It does not limit private, local or State actions unless Federal funding or authorization is involved. Listed species and their habitats are protected by the Endangered Species Act whether or not they are in an area designated as critical habitat.

### Q. What protection does the Steller's eider currently receive as a listed species?

A. The Endangered Species Act forbids the import, export, or interstate or foreign sale of protected animals and plants without a special permit. It also makes "take" illegal - forbidding the killing, harming, harassing, possessing, or removing of protected animals from the wild. Federal agencies must also consult with the Service to conserve listed species on

their lands and to ensure that any activity they fund, authorize, or carry out will not jeopardize the survival of a listed species.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species for scientific purposes, to enhance the propagation or survival of the species, or for incidental take in the course of certain otherwise lawful activities.

In addition, the Endangered Species Act requires Federal agencies to pursue actions to recover species to the point where they no longer require protection and can be delisted.

### Q. What is the purpose of designating critical habitat?

A. The purpose of designating critical habitat is to require Federal agencies to consult with the Service on actions they carry out, fund, or authorize that might destroy or adversely modify critical habitat.

Critical habitat designation has no effect on situations in which no Federal agency is involved-for example, a landowner undertaking a project on private land that involves no Federal funding or permit.

### Q. Do Federal agencies have to consult with the Service outside critical habitat areas?

A. Yes. Even when there is no critical habitat designation, Federal agencies must consult with the Service to ensure any action they carry out, fund, or authorize is not likely to jeopardize the continued existence of a listed species.

### Q. What is the impact of a critical habitat designation on economic development?

A. The vast majority of human activities that require

a consultation with the U.S. Fish and Wildlife Service proceed with little or no modification.

**Q. Does the Act require an economic analysis as part of designating critical habitat?**

**A.** Yes. The Service must take into account the economic impact of specifying any particular area as critical habitat. The Service may exclude any area from critical habitat if it determines that the benefits of such exclusion outweigh the benefits of specifying the area as part of critical habitat unless it determines, based on the best scientific and commercial data available, that the failure to designate the area as critical habitat will result in the extinction of the species.

**Q. Does this economic analysis have any effect on the decision to list a species?**

**A.** No. Under the Act, a decision to list a species is made solely on the basis of scientific data and analysis.

**Q. For how many species has the Service designated critical habitat?**

**A.** To date, the Service has designated critical habitat for 116 of the 1,206 species listed as threatened or endangered.

**Q. Why hasn't the Service designated critical habitat for more species?**

**A.** After a Congressional moratorium on listing new species ended in 1996, the Service faced a huge backlog of proposed species listings. At that point, the Service assigned a relatively low priority to designating critical habitat because it believed that a more effective use of limited resources was to place imperiled species on the threatened and endangered species list. The ESA requires Federal agencies to consult with the Service whenever they carry out, fund, or authorize any activity that may jeopardize a listed species; potential impacts to listed species, including those caused by habitat loss, are considered during the consultation process.

Recent court decisions, however, have required the Service to designate critical habitat for an increasing number of listed species.

**Q. Why is critical habitat for the Steller's eider being proposed?**

**A.** At the time Steller's eiders were listed as threatened in 1997, we did not believe that the species would benefit from having critical habitat designated. In 1999, we were sued for failure to designate critical habitat and we agreed to reanalyze the benefit. This proposal is the result of this reanalysis.

**Q. How does the Service determine what areas to designate?**

**A.** Biologists consider physical or biological habitat features needed by the species. These include, but are not limited to:

- o space for individual and population growth and for normal behavior;
- o food, water, air, light, minerals, or other nutritional or physiological requirements;
- o cover or shelter;
- o sites for breeding and rearing offspring;
- o habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

**Q. Are all areas within critical habitat boundaries considered critical habitat?**

**A.** No. Only areas that contain the primary constituent elements required by the species are considered critical habitat. Primary constituent elements are those physical and biological features of a landscape that a species needs to survive. There are many areas within Steller's eider critical habitat boundaries that do not contain the constituent elements and are not considered critical habitat. For example, marine waters deeper than 10 meters (30 feet), certain dry uplands, and existing structures such as buildings, roads, oil platforms, and docks are not considered critical habitat.

**Q. Are all Steller's eiders protected by the Endangered Species Act?**

**A.** No. There are three populations of Steller's eiders. Two breed in Russia and one breeds in Alaska. Only the Alaska-breeding population is classified as threatened under the Endangered Species Act.

**Q. Where does the Alaska-breeding population of Steller's eiders occur?**

**A.** The Alaska-breeding population of Steller's eiders

nests in two general areas: on the North Slope where hundreds or low thousands occur; and on the Yukon-Kuskokwim Delta, where an extremely small but unknown number remain. After nesting, Steller's eiders move from their terrestrial nesting areas to shallow, nearshore marine waters, where they spend the remainder of the year.

The range of the Alaska-breeding population during the non-nesting season remains poorly understood. Over a hundred thousand Steller's eiders that nest in Russia move to Alaska and winter in a huge area including the north and south sides of the Alaska Peninsula, the eastern Aleutian Islands, and southcoastal Alaska including the Kodiak Archipelago and parts of southern Cook Inlet. It is believed that the threatened Alaska-breeding population likely also occurs within this area during winter, but it is not known whether they occur in specific portions or throughout this broad range.

**Q. Where do Steller's eiders molt?**

A. Like other waterfowl, Steller's eiders undergo a several-week long flightless period in which they "molt", or replace their wing and tail feathers. Steller's eiders molt in a number of locations on the Bering Sea coast, but most concentrate in a few bays and lagoons on the north side of the Alaska Peninsula. The most important molting areas are Nelson and Izembek lagoons, where up to a hundred thousand molt in some years. Banding information shows that at least some Alaska-breeding Steller's eiders molt in these two lagoons.

**Q. Why have Alaska-breeding Steller's eiders declined?**

A. The Alaska-breeding population of Steller's eiders was listed as threatened because its range in Alaska contracted substantially and its population size declined, increasing the vulnerability of the remaining population to extirpation. Causes of the decline remain unknown but possible contributing factors include over-hunting, lead-poisoning from ingesting spent lead shot while feeding, changes in the number or diet of predators, and changes in the marine ecosystems where Steller's eiders molt and winter.

**Q. Will the public have an opportunity to comment on the critical habitat designation?**

A. Yes. The U.S. Fish and Wildlife Service will be accepting public comment for 60 days following the

publication of this proposal in the Federal Register.

## *More questions?*

Call or write:

U.S. Fish and Wildlife Service  
Ecological Services Fairbanks Field Office  
101 12th Ave. Box 19, Room 110  
Fairbanks, AK 99701

(907) 456-0203





## U.S. Fish & Wildlife Service

# Threatened and Endangered Species

## Steller's eider (*Polysticta stelleri*) Other names: Iginikkauktuk (Inupiaq) Anarnissaguq (Yup'ik)

### Status

Threatened - Alaska breeding population  
(*Federal Register*, June 11, 1997)

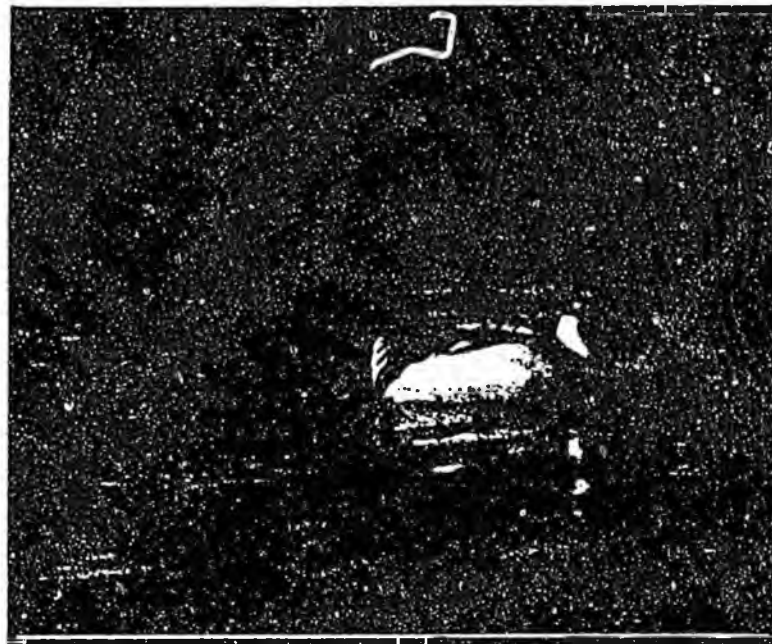
### Description

Steller's eiders are the smallest of the four eider species, averaging 43-47 centimeters long (17-18.5 inches). In the winter, spring, and early summer adult males are in breeding plumage with a black back, white shoulders, chestnut breast and belly, a white head with a greenish tuft, and small black eye patches. During the late summer and fall, males are entirely mottled dark brown. Females and juveniles are mottled dark brown year-round. Adults of both sexes have a blue patch with a white border on the upper wing, similar to a mallard.

### Range and Population Size

Three breeding populations of Steller's eiders are recognized, two in Arctic Russia and one in Alaska. The Russian Atlantic population breeds in western Russia and winters in the north Atlantic Ocean while the Russian Pacific population nests in eastern Russia and winters in the southern Bering Sea, including southwest Alaska. Neither Russia-breeding population is classified as endangered or threatened; only Steller's eiders that nest in Alaska are considered threatened under the Endangered Species Act.

The Alaska-breeding population historically nested in western and northern Alaska. In western Alaska, they were formerly considered locally common in portions of the Yukon-Kuskokwim Delta and were recorded nesting on Saint Lawrence Island, the Seward Peninsula, the Alaska Peninsula, and Aleutian Islands. Today, however, they are extremely scarce on the Yukon-Kuskokwim Delta and have not been found breeding elsewhere in western



*Named after Georg Steller, who first described the species to western science, Steller's eiders are the smallest of the four eider species. An adult female is on the left, and an adult male is on the right. Photo by Michele M. Johnson.*

Alaska for several decades. The species' current breeding range in Alaska is primarily confined to the Arctic Coastal Plain between Wainwright and Prudhoe Bay, with a notable concentration near Barrow. After nesting, Alaska's Steller's eiders move into the nearshore marine waters of southwest Alaska where they mix with the much more numerous Russian Pacific population. Adults undergo a flightless molt in autumn; most molt in the protected bays and lagoons on the north side of the Alaska Peninsula, most notably Izembek and Nelson lagoons. Although some remain in molting areas throughout winter, others disperse into the coastal waters of the eastern Aleutian Islands, south side of the Alaska Peninsula, Kodiak Archipelago, and southern Cook Inlet. During spring migration, Steller's eiders concentrate in Kuskokwim and Bristol bays to await the retreat of sea ice and opening of overwater migratory routes.

Population sizes are only imprecisely known. The Russian Atlantic population

is believed to contain 30-50,000 individuals, and the Russian Atlantic population likely numbers 100-150,000. The threatened Alaska-breeding population is thought to include hundred or low thousands on the Arctic Coastal Plain, and possibly tens or hundreds on the Yukon-Kuskokwim Delta.

### Habitat and Habits

Steller's eiders are diving ducks that spend most of the year in shallow, near-shore marine waters. Molting and wintering flocks congregate in protected lagoons and bays, as well as along rocky headlands and islets. They feed by diving and dabbling for molluscs and crustaceans in shallow water. In summer they nest in tundra adjacent to small ponds or within drained lake basins. During the breeding season they feed on aquatic insects and plants in freshwater ponds and streams.

### Reasons for Current Status

Causes of the decline are unknown but several potential threats have been

identified. Lead poisoning, caused by eiders ingesting spent lead shot as they feed, may have affected Steller's eiders on the Yukon-Kuskokwim Delta. Predation by ravens, large gulls, and foxes on the breeding grounds may be increasing in areas where populations of these predators are enhanced by food and shelter provided by human activities and garbage dumps. Shipping and fishing poses the risk of oil spills and disturbance of feeding flocks in marine waters. Other possible threats include marine contaminants and changes in the Bering Sea ecosystem affecting food availability.

### Management and Protection

To protect Steller's eiders and their breeding, molting, and wintering habitat, the U.S. Fish & Wildlife Service recommends the guidelines below for projects and activities within the range of Steller's eiders. Adherence to these guidelines will help avoid the illegal take of Steller's eiders, and reduce the potential for adverse effects to the species. If these guidelines cannot be followed, consultation with the U.S. Fish & Wildlife Service is required for federal actions. Under federal law, all federal agencies must consult with the U.S. Fish & Wildlife Service on any project they authorize, fund, or carry out that may affect Steller's eiders or other listed species.

For projects within the breeding range of Steller's eiders:

- Assess whether Steller's eiders are likely to use the project area for nesting or brood-rearing. Contact the U.S. Fish & Wildlife Service, Ecological Services Fairbanks Field Office for assistance. For projects conducted during the breeding season, a Service-approved survey for Steller's eiders should be conducted in the year of construction, prior to initiation of activities.

For more information on this and other threatened and endangered species, contact the U.S. Fish & Wildlife Service, Ecological Services Field Office near you.

**Ecological Services Anchorage Field Office**  
Phone (907)271-2888  
Lead office for Aleutian Canada goose, spectacled eider, short-tailed albatross, and Aleutian shild-fern. Project review for western and southcentral Alaska

**Ecological Services Fairbanks Field Office**

Phone (907)456-0203  
Lead office for Steller's eider, American peregrine falcon, and Eskimo curlew  
Project review for northern Alaska

**Juneau Fish and Wildlife Service Office**

Phone (907)586-7240  
Ketchikan Sub-office, phone (907)225-9691  
Status review for old-growth forest species in southeast Alaska



Distribution of Steller's eiders in Alaska and Russia.

- If Steller's eider nests are in the project area, the following activities require special permits within 200 meters (656 feet) of nest sites:

Vehicle and foot traffic from May 20 through August 1, except on existing roads.

Construction of permanent facilities, placement of fill, or alteration of habitat.

Introduction of high noise levels from May 20 through August 1, including but not limited to noise from airports, blasting, and compressor stations.

Eiders are present on breeding grounds from mid-May through mid-September, but activities any time of year may affect them through habitat modification

For projects in coastal marine waters around the Alaska Peninsula, Kodiak Island, lower Cook Inlet, and Nunivak Island, contact the U.S. Fish & Wildlife Service, Ecological Services Anchorage Field Office for guidelines and recommendations.

Hunting of eiders is regulated under the Migratory Bird Treaty Act. In Russia, hunting of Steller's eiders has been closed

since 1981, but subsistence harvest occurs in Siberia at an unknown level. In Alaska, reported subsistence harvest on the Yukon-Kuskokwim Delta has averaged 34 Steller's eiders over the past six years. Sport hunting of Steller's eiders in Alaska has been closed since 1991. Non-toxic shot must be used for all waterfowl hunting. Use of lead shot for waterfowl hunting has been prohibited throughout the United States since 1991.

### References

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Kertell, K. 1991. Disappearance of the Steller's eider from the Yukon-Kuskokwim Delta, Alaska. *Arctic* 44(3):177-87.

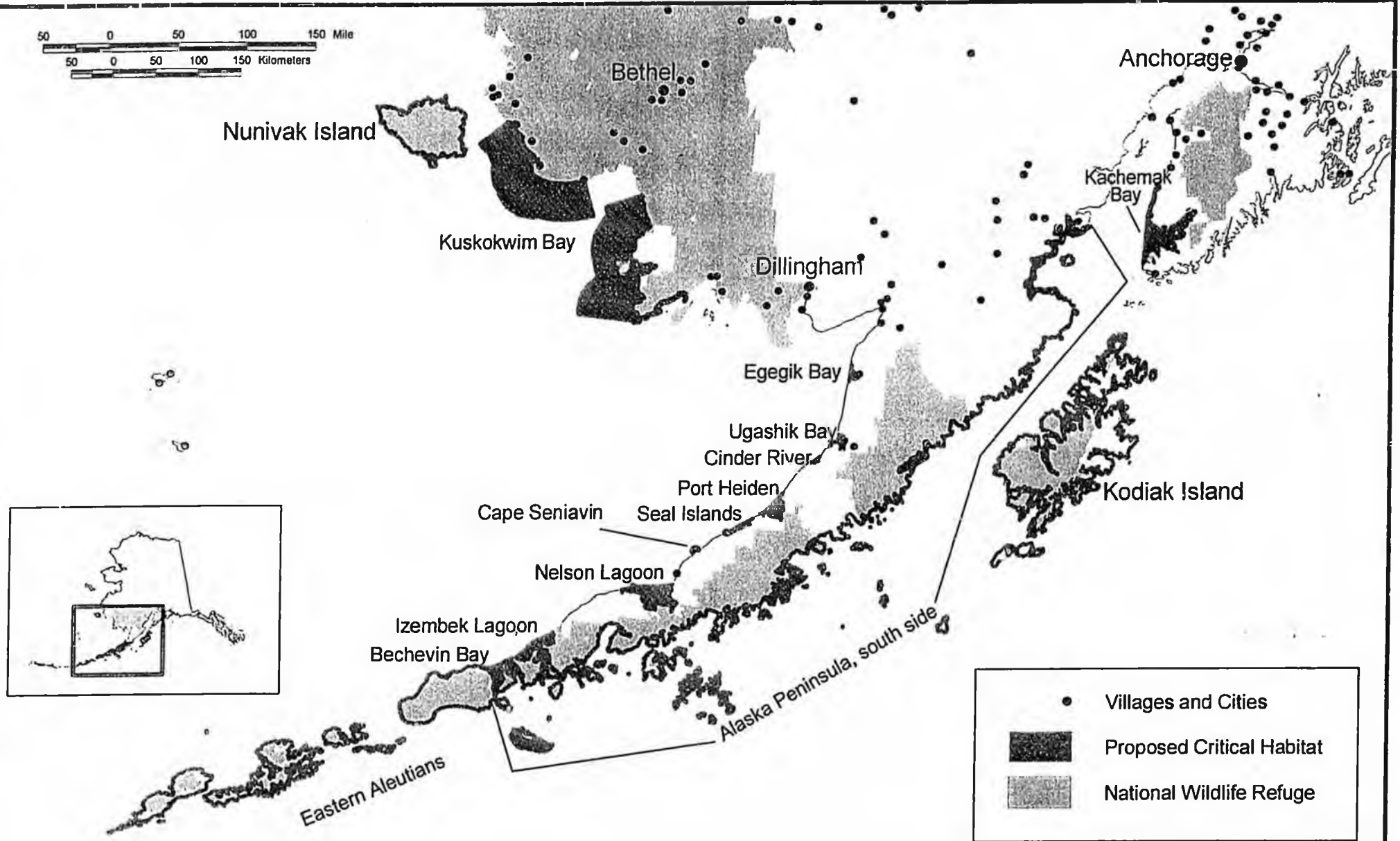
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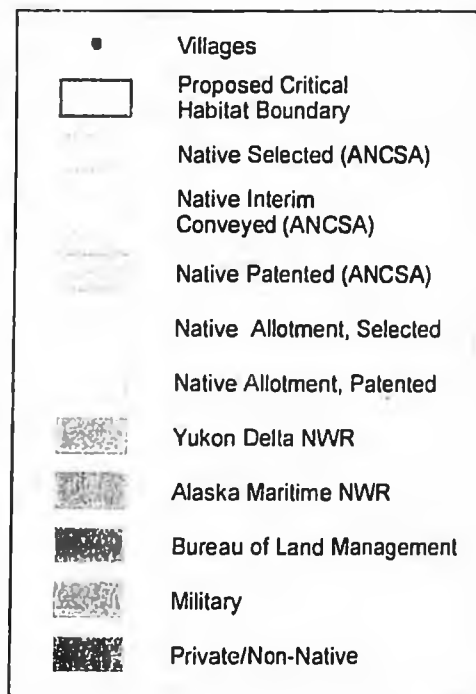
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Petersen, M. 1981. Populations, feeding ecology and molt of Steller's eiders. *Condor* 83:256-262.

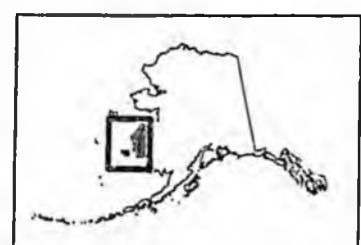
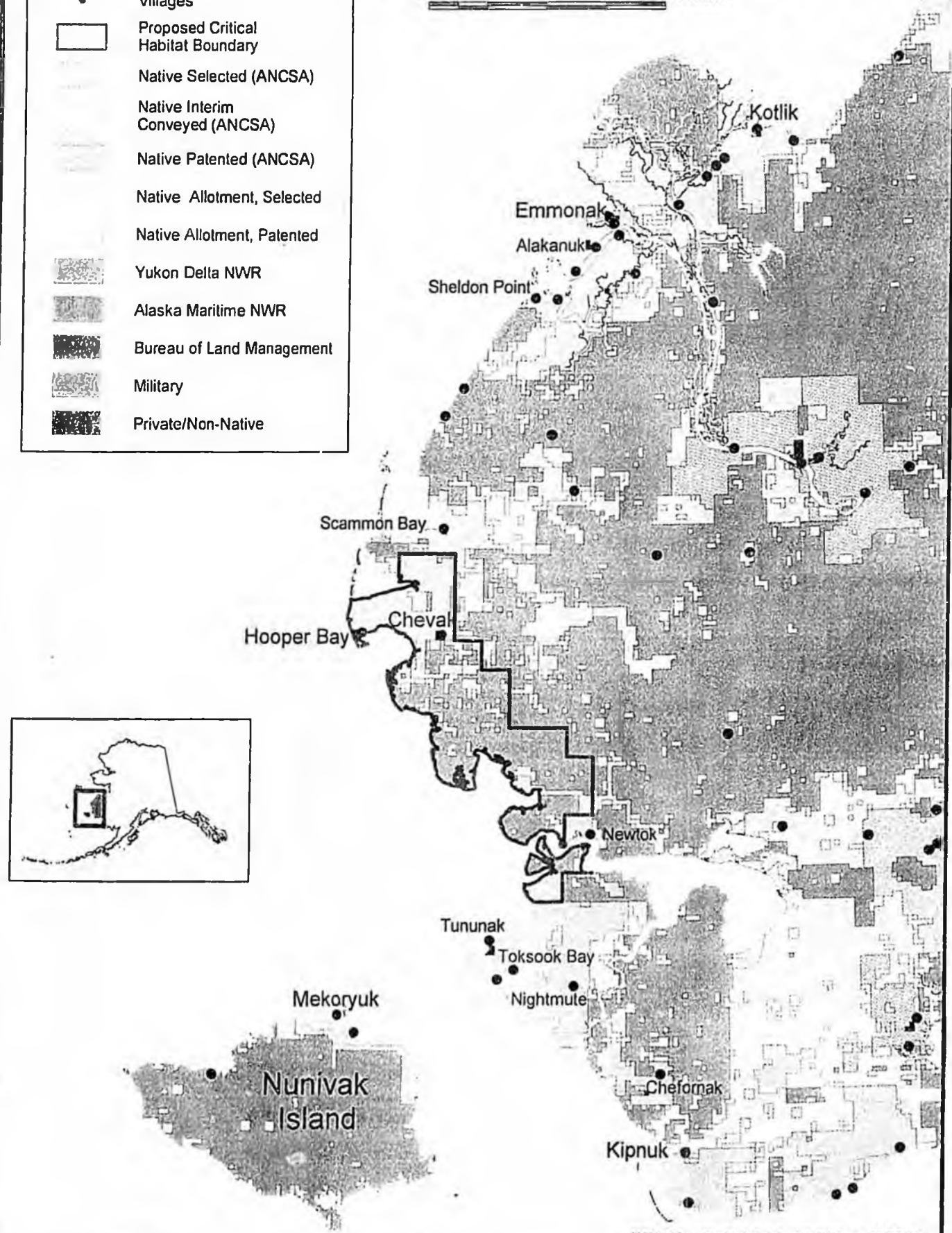
# Steller's Eider Proposed Critical Habitat Marine Units



# Steller's Eider Critical Habitat and Land Status Yukon-Kuskokwim Delta Breeding Habitat

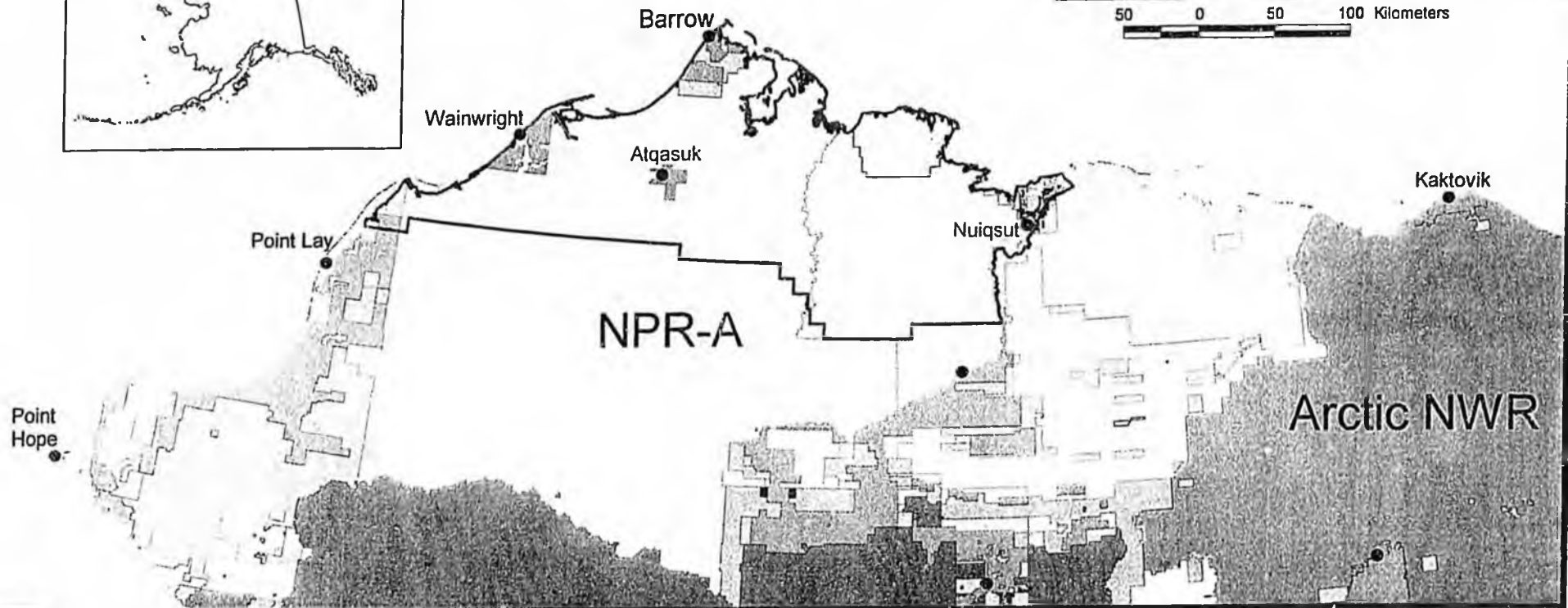
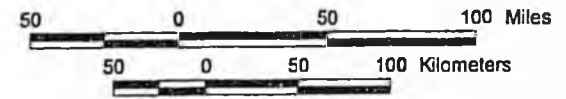
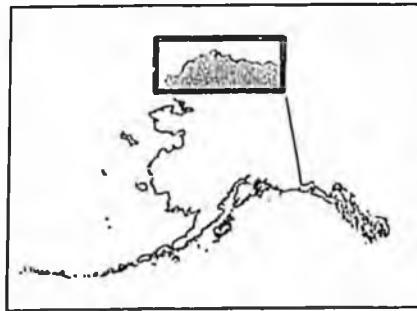


St. Michael


















# Steller's Eider Critical Habitat and Land Status

## North Slope Breeding Habitat



### Land Status

	Proposed Critical Habitat Boundary		Bureau of Land Management (non-NPRA)		Joint Native/State
	Villages		National Park		State Patented
	National Petroleum Reserve-Alaska (NPR-A)		National Wildlife Refuge		State Tentatively Approved
	Northeast Planning Area (NPR-A)		Native Patented		Private/Non-Native
	Teshekpuk Lake Surface Protection Area		Native Interim Conveyed		Military



# United States Department of the Interior

## OFFICE OF THE SOLICITOR

Alaska Region  
4230 University Drive  
Suite 500  
Anchorage, Alaska 99508-4626

### PRIVILEGED ATTORNEY-CLIENT COMMUNICATION

November 29, 1999

#### MEMORANDUM

**TO:** Laverne Smith  
Associate Regional Director, Fisheries & Ecological Services  
U.S. Fish and Wildlife Service, Region 7

**FROM:** Lisa Del Compare  
Attorney  
Alaska Region

**SUBJECT:** Proposed Rule to Designate Critical Habitat for the Spectacled Eider

The attached proposed rule was submitted to this office on November 12, 1999 for our review. The proposed rule proposes to designate areas on the Alaska's North Slope, the Yukon-Kuskokwim Delta, Norton Sound, Ledyard Bay, and the central Bering Sea south of St. Lawrence Island as critical habitat areas for the spectacled eider. We are surmising this proposed rule with the changes indicated on the draft. However prior to finalization of a rule designating critical habitat, the Service should consult with the Solicitor's office in addressing how the definition of critical habitat applies in circumstances in which potential habitat loss is not a factor affecting the recovery of a species, as appears to be the situation with regard to the spectacled eiders in their breeding grounds. Some preliminary thoughts are set forth below to providing a starting point for discussion. > X

Within those geographical areas currently occupied by a species, critical habitat is defined as areas containing those physical or biological features essential to the conservation of the species, and that may require special management considerations or protection. 16 U.S.C. § 1532(5)(A)(i); 50 C.F.R. § 424.02(d). The first part of this definition refers to the "conservation" of the species, not just the survival of the species. "Conservation" is defined by the Endangered Species Act (ESA) as "all methods and procedures which are necessary to bring any endangered or threatened species to the point at which the measures provided pursuant to [the ESA] are no longer necessary." 16 U.S.C. § 1532(3).

Given this focus in the ESA on the conservation of the species, this office believes it appropriate to consider the criteria for recovery in the Recovery Plan for the spectacled eider in the analysis > X

of the definition of critical habitat. The Recovery Plan states that spectacled eiders will be considered recovered when each of the three recognized populations: 1) is stable or increasing over 10 or more years and the minimum estimated population size is at least 6,000 breeding pairs, or 2) numbers at least 10,000 breeding pairs over 3 or more years, or 3) numbers at least 25,000 breeding pairs in one year.

The proposed rule proposes to designate all those geographic areas occupied by the spectacled eider as critical habitat. The Service appears to have taken the approach that those areas occupied by the spectacled eider contain physical or biological features such as food or water necessary for breeding or molting that are essential to the conservation of the species. While it is true that spectacled eiders could not survive without any habitat, let alone reach the level required for delisting, it is certainly possible that the spectacled eider could recover despite the loss of a portion of those geographic areas it currently occupies. Although the Service may not know how much of the occupied areas is necessary for recovery or which portion of the occupied areas is necessary for recovery, the Service has determined recovery goals for the spectacled eider. The Service could address whether potential threats to habitat in the occupied areas could potentially result in the loss of physical or biological elements of the habitat to such an extent that it would become difficult or impossible to reach the recovery goals. X

In the draft proposed rule, the Service suggests that potential habitat loss on the Alaska breeding grounds would not have an impact on whether recovery goals are achieved in the foreseeable future. The proposed rule indicates that future oil development on the North Slope can be expected to cause less surface disturbance than was experienced at Prudhoe Bay, where gravel fill amounted to less than 0.25%. It also states that the potential for small amounts of future human development on the Y-K Delta and North Slope due to the increasing human population there is not a conservation issue in the foreseeable future. In addition, millions (or is billions?) of acres are being proposed as critical habitat in the breeding grounds alone, and a significant percentage of this acreage contains primary constituent elements. In contrast, during winter, nearly all individuals of spectacled eider tend to occupy an area of ocean less than 50 km in diameter, and the species is particularly vulnerable to habitat disturbances such as oil spills or environmental contaminants affecting these areas. X

If in fact, the Service has determined that potential habitat loss on the breeding grounds is not a factor limiting the recovery of the spectacled eider in the foreseeable future, it might not be appropriate to consider the breeding grounds as having those physical and biological elements essential to the conservation of the spectacled eider. Otherwise all occupied areas will be areas essential to the conservation of the species, since presumably all occupied areas will contain at least one primary constituent element such as food or water or the area would not be an occupied area in the first place. As stated above, the definition of critical habitat in the ESA is explicit that critical habitat in occupied areas contain physical or biological elements essential to the conservation of the species, 16 U.S.C. § 1532(5)(A)(i), and conservation is defined in terms of recovery of the species, 16 U.S.C. § 1532(3). X

Those situations where potential habitat loss is not a factor limiting the recovery of a listed species, also call into question whether there is any need for special management considerations or protection. In occupied areas, the definition of critical habitat requires that geographic areas designated as critical habitat need special management considerations or protection. We are unaware of any definitive guidance on what constitutes a need for special management considerations or protection. However, it could be argued that implicit in the definition of critical habitat is that the special management considerations or protections be to protect habitat, not merely the survival of the species. Thus habitat-related threats would be required in order for special management considerations or protections to be necessary. In occupied areas where potential habitat loss is not a factor limiting the future recovery of the species in the foreseeable future, it seems questionable whether there would ever be a need for special management considerations or protections to protect habitat. X

These views are the preliminary views of the Alaska Region of the Office of the Solicitor. We expect additional viewpoints and discussion to be generated during the public comment period on the proposed rule. We recommend further discussions between the Service and the Solicitor's office on this issue throughout and following the comment period.

I would be glad to discuss this proposed rule with you. Please do not hesitate to contact me if you have any questions regarding my comments. I can be reached at (503) 271-4131.

Sincerely,

  
Lisa Del Compare

cc: Pete Raynor, SOL DC Parks and Wildlife

# SENATE COMMITTEE REPORT

DATE: 4/11/00

FURTHER:

DATE TURNED  
IN TO OFFICE: 4/14/00

Resources Committee considered

HOUSE JOINT RESOLUTION NO. 60

Opposing the designation of millions of acres of Alaska as critical habitat for the Spectacled Eider and the Steller's Eider.

and recommends:

be replaced with S CS HJR 60 (RES)

adopt previous \_\_\_\_\_ CS \_\_\_\_\_ (\_\_\_\_\_)

attached amendment(s)

adopt Letter of Intent by \_\_\_\_\_ Committee

further referral to the \_\_\_\_\_ Committee

Senate Bill:

same title

new title

House Bill:

same title

technical title

new: SCR# \_\_\_\_\_

SIGNING DO PASS	DP	OTHER RECOMMENDATIONS	NR	DNP	AM
<i>Adrian J. Tappan</i>	<input checked="" type="checkbox"/>				
<i>Lyda Green</i>	<input checked="" type="checkbox"/>				
<i>Pete Kelly</i>	<input checked="" type="checkbox"/>				
<i>Donna...</i>	<input checked="" type="checkbox"/>				
<i>11</i>	<input checked="" type="checkbox"/>				
CHAIR: <i>Keith Halford</i>	<input checked="" type="checkbox"/>	CHAIR:			

**NEW FISCAL NOTE(S):**

Department                      Date      Zero      Fiscal

Department	Date	Zero	Fiscal

**PREVIOUS FISCAL NOTE(S):\***

Department                      Date      Zero      Fiscal

Department	Date	Zero	Fiscal
House Resources	4/3/00	<input checked="" type="checkbox"/>	

APPROPRIATION -- no fiscal note

\*include fiscal notes accompanying Governor's bill

**SENATE CS FOR HOUSE JOINT RESOLUTION NO. 60(RES)**

**IN THE LEGISLATURE OF THE STATE OF ALASKA**

**TWENTY-FIRST LEGISLATURE - SECOND SESSION**

**BY THE SENATE RESOURCES COMMITTEE**

**Offered:**

**Referred:**

**Sponsor(s): HOUSE RESOURCES COMMITTEE**

**A RESOLUTION**

1 **Opposing the designation of millions of acres of Alaska as critical habitat for the**  
2 **Spectacled Eider and the Steller's Eider.**

3 **BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

4 **WHEREAS** the United States Fish and Wildlife Service listed the Spectacled Eider  
5 as a threatened species under the Endangered Species Act (ESA) in May 1993; and

6 **WHEREAS** the United States Fish and Wildlife Service listed the Steller's Eider as  
7 a threatened species under the ESA in June 1997; and

8 **WHEREAS**, in response to a lawsuit, the United States Fish and Wildlife Service  
9 published proposed regulations on February 8, 2000, to designate large marine and terrestrial  
10 areas of Alaska as critical habitat for the Spectacled Eider; and

11 **WHEREAS** a lawsuit does not constitute "new information" for purposes of  
12 determining whether a critical habitat designation is warranted, and the United States Fish and  
13 Wildlife Service has not presented any other new information that justifies making a critical  
14 habitat designation; and

15 **WHEREAS** the proposed regulations would designate over 50,000,000 marine and  
16 terrestrial acres, as well as numerous miles of coastline between Bristol Bay and Cook Inlet,

1 as critical habitat for the Spectacled Eider and the Steller's Eider; and

2       **WHEREAS** the United States Fish and Wildlife Service has not adequately justified  
3 the need for the overly expansive designations of critical habitat for the Spectacled Eider; and

4       **WHEREAS** up to 65 percent of the area designated as critical breeding habitat is  
5 already within federal wildlife refuges; and

6       **WHEREAS** the United States Fish and Wildlife Service is purposely distorting the  
7 original intent of the ESA to limit critical habitat areas to those areas most crucial to the  
8 survival of endangered and threatened species rather than to designate overly broad, expansive,  
9 and unjustified areas where the species may not even exist as critical habitat; and

10       **WHEREAS** the overly broad identification of vast marine and terrestrial areas as  
11 critical habitat for endangered or threatened species could have an unnecessary negative  
12 economic effect on reasonable and critically needed programs to develop resources of Alaska;  
13 and

14       **WHEREAS** the overly broad identification of large expanses of marine areas as  
15 critical habitat could have an unnecessary negative effect on important subsistence and  
16 commercial fishing activities in rural Alaska;

17       **BE IT RESOLVED** that the Alaska State Legislature strongly opposes the designation  
18 of overly large areas of Alaska as critical habitat for the Spectacled Eider and the Steller's  
19 Eider; and be it

20       **FURTHER RESOLVED** that the Alaska State Legislature urges Governor Tony  
21 Knowles to pursue legal action against the United States Fish and Wildlife Service if the  
22 agency continues with the final adoption of regulations to designate critical habitat for the  
23 Spectacled Eider and the Steller's Eider; and be it

24       **FURTHER RESOLVED** that the Alaska State Legislature urges the members of the  
25 Alaska delegation in Congress to assist by whatever means available to block the adoption of  
26 final regulations establishing critical habitat areas for the Spectacled Eider and the Steller's  
27 Eider; and be it

28       **FURTHER RESOLVED** that the Alaska State Legislature urges the United States  
29 Fish and Wildlife Service to adopt final regulations that do not designate new critical habitat  
30 areas for the Spectacled Eider and the Steller's Eider in Alaska.

31       **COPIES** of this resolution shall be sent to Jamie Rappaport Clark, Director, Fish and

- 1 Wildlife Service, U.S. Department of the Interior; and to the Honorable Ted Stevens and the
- 2 Honorable Frank Murkowski, U.S. Senators, and the Honorable Don Young, U.S.
- 3 Representative, members of the Alaska delegation in Congress.