

MEMORANDUM

TO: Council, AP and SSC Members

FROM: Clarence G. Pautzke  
Executive Director



DATE: January 8, 1992

SUBJECT: Seabirds

**ACTION REQUIRED**

1. Review and comment on the USFWS draft Alaska Seabird Management Plan.
2. Receive status report on the petition to list the Spectacled and Steller's Eiders as endangered species.

**BACKGROUND**

Draft Alaska Seabird Management Plan

The U.S. Fish and Wildlife Service is requesting comments on their recently published draft Alaska Seabird Management Plan (Plan). Deadline for comments was November 29, 1991, but the USFWS will still accept our comments. Copies of the Plan were sent to you in the December 27 Council mailing. Jon Nelson of USFWS will summarize its provisions.

Steller's and Spectacled Eiders

On December 10, 1990 the U.S. Fish and Wildlife Service received a petition to list the Steller's eider (Polysticta stelleri) and the spectacled eider (Somateria fischeri) as endangered species. The U.S. Fish and Wildlife Service has reviewed this petition and is determining whether these species should be listed. Item C-2(a) is the 90-day finding on this petition which Jon Nelson will review for the Council.



IN REPLY REFER TO:

WAES/DCS  
FWS/R7/CCU #90-6682

Your Information  
United States Department of the Interior

FISH AND WILDLIFE SERVICE  
1011 E. TUDOR RD.  
ANCHORAGE, ALASKA 99503

AGENDA C-2(a)  
JANUARY 1992

FEB 19 1991

Memorandum

To: Director (D), FWS  
Main Interior Building, Room 3012  
Washington, D.C.

From: Deputy Regional Director  
Region 7

*Jim G. Tognoli*

Subject: Administrative 90-day Finding on Petition to List the Steller's and Spectacled Eiders as Endangered

On December 10, 1990, the Fish and Wildlife Service (Service) received a petition from Mr. James G. King to list the Steller's eider (*Polysticta stelleri*) and spectacled eider (*Somateria fischeri*) as endangered species. The petition and supporting documentation have been reviewed to determine if substantial information has been presented indicating the requested action may be warranted. This memorandum constitutes the 90-day finding of substantiality for the petition, in accordance with Section 4(b)(3)(A) of the Endangered Species Act of 1973, as amended.

The petition includes biological, distributional, and historical information, and cites scientific articles in support of listing. The petition describes these species as imperiled because of a perceived significant reduction in population sizes over the past several decades, and potential threats throughout their ranges.

Unlike most hunted species of North American waterfowl, little emphasis has been placed on tracking the population status of Steller's and spectacled eiders. With the exception of data collected for spectacled eiders on the Yukon Delta National Wildlife Refuge (Yukon Delta), and winter surveys for Steller's eiders on the Alaska Peninsula, information regarding the populations and distribution of these species is chiefly from historical and incidental observations.

The center of nesting for Steller's eider is the Siberian arctic. In Alaska, the Steller's eider primarily nested along the coast of the Yukon Delta, and near Barrow, Alaska. A historical account from 1924 indicates that Steller's eiders were locally "common" on the Yukon Delta, although relatively few nesting records have been documented there. In recent years, three nests were found during waterfowl investigations in 1969, and the last recorded nesting on the Yukon Delta was a single nest in 1975.

No population estimate is available for Steller's eiders nesting near Barrow. Historical accounts beginning over 100 years ago suggest that the species was a rare, but regular, nester in the Barrow area. A total of 17 nests were recorded between 1975 and 1980, but no nests have been reported over the last decade.

The majority of the world population of Steller's eider winters along the north side of the Alaska Peninsula. Banding data collected since 1961 show that the majority of Steller's eiders wintering in Alaska are from Siberia, and winter survey data collected over the past 16 years show a decline of over 50 percent in the number of wintering birds. This coincides with nesting population declines reported in Siberia, where the species is now considered rare (Red Book, Category 3).

The Yukon Delta coast is the world's primary breeding location for the spectacled eider, and it apparently nests in low numbers across the arctic coastal plain. In the remainder of coastal Alaska, north and east of the Yukon Delta, the species is considered a rare nester. Nesting concentrations also occur along the northern coast of Siberia.

It is estimated that the Yukon Delta supported between 50,000 and 70,000 pairs of nesting spectacled eiders during the early 1970's. Since then, an estimated yearly decline of 13 percent has been reported, resulting in a total decline of approximately 94 percent. Although based on relatively few study plots on the Yukon Delta, these estimates correspond to the results of greater than 30 years of aerial breeding-pair surveys in western Alaska.

The wintering locations of the spectacled eider are unknown, although it is suspected that the population winters off shore in the Bering Sea along the edge of the pack ice. Consequently, no survey of wintering spectacled eiders has been accomplished.

Although the causes of Steller's and spectacled eider population declines are not known, potential threats to both species include: increased predation, habitat loss, oil pollution, subsistence hunting, industrial pollution, fish-net mortalities, and changes in marine ecology.

The petition has been reviewed by staff at the Ecological Services Anchorage field office, and the Anchorage Regional Office. The Service finds that the petition presents substantial information indicating that the requested action may be warranted. This decision is based on scientific and commercial information contained in the petition, referenced in the petition, and otherwise available to the Service at this time. A notice announcing this finding and initiating a status review for publication in the Federal Register will soon be submitted through the normal surname route.

APPROVE \_\_\_\_\_ DISAPPROVE \_\_\_\_\_

Date \_\_\_\_\_ Date \_\_\_\_\_

TESTIMONEY BEFORE THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL  
ON THE STATUS AND TRENDS OF ALASKA SEABIRDS

Jon M. Nelson

**BACKGROUND**

Populations of seabirds off coastal Alaska are more abundant and diverse than in any similar region of the northern hemisphere. Coastal estuaries and offshore waters provide breeding, feeding and migration habitats for 66 different species. At least 38 species nest in Alaska; eight of these nest nowhere else in North America.

An estimated 50 million seabirds, 96 percent of the United States' continental population, nest in Alaska. Alaska supports approximately 1,350 colonies ranging in size from a few dozen to over a million birds. Another 50 million seabirds comprising 28 species come north to Alaska from breeding grounds in the central and south Pacific to spend the summer.

Alaska has long been recognized for its importance to seabirds. Between 1909 and 1932, nine "seabird" refuges were created: Bering Sea, Bogoslof, St. Lazaria, Tuxedni, Chamisso, Forrester, Hazy Island, Aleutian Islands, and Semidi Islands. The Alaska National Interest Lands Conservation Act of 1980, among other things, consolidated these islands and many more off the coast of Alaska into the Alaska Maritime National Wildlife Refuge. Today, refuge islands and coastal areas support 40 million, or 80 percent, of Alaska's nesting seabird population.

But the birds spend only 20 percent of their life cycle on protected areas; the other 80 percent of their time is spent at sea. We know very little about what goes on during this period.

**MANAGEMENT AND RESEARCH ACTIVITIES**

The Fish and Wildlife Service's seabird management and research program in Alaska has focused on: mapping and censusing selected breeding colonies; seabird breeding biology; general distribution patterns; and food habits and energetics.

At present, we are focusing our efforts on a few select species, those which are not only important in themselves but also are believed to be "indicator species" in that they tend to mirror the status of other species. Three characteristics of a good indicator species are that it can be reliably counted; it is widespread and fairly common; and it is sensitive and vulnerable to environmental change.

Kittiwakes and murrelets are two such indicators. The Service for over a decade has been monitoring populations and productivity rates of black-legged kittiwakes and murrelets (thick-billed and common) and other selected species at 10 sites in the Bering and Chukchi Seas and northern Gulf of Alaska. Routine monitoring

programs have recently been expanded to the western Aleutians and central Alaska Peninsula. We have done only limited monitoring in the central and eastern Aleutians, western Alaska Peninsula and Southeast Alaska. Our goal is to use censusing methods and colony site selection that will allow us to statistically detect a 20 percent change in a population's abundance.

#### PRELIMINARY RESULTS

A. **Seabird Diets and Energetics...**Diets have been described for seabirds in the Chukchi and Bering seas, and portions of the Gulf of Alaska. Information includes preferred fish species and the predominance of these species in the diets of adults and the food they carry to their chicks.

Commercially important fish which are also important to seabirds are: juvenile walleye pollock, herring and Atka mackerel. Non-commercial fish species also important in seabird diets are capelin and Pacific sand lance. In any given region, most seabird species share a single dominant prey, such as capelin in the northwest Gulf of Alaska, sand lance in the Aleutians and Norton Sound, and walleye pollock in the Bering Sea and southwestern Gulf.

Seabirds may require up to 80 percent of the prey fish near a large colony. Many breeding seabirds depend on a single prey species, which may comprise 40 to 90 percent of all prey fed to the young each summer. At colonies where breeding success is monitored, productivity can be correlated directly with the availability of prey.

B. **Population Trends...**Seabird monitoring has been too irregular at many colonies to reveal statistically reliable population trends. After a site is selected, several consecutive annual visits are required to determine baseline numbers and variability. Thereafter, the site is monitored biennially or triennially. We are only now establishing baseline population numbers for many sites.

#### CAPE PEIRCE:

Black-legged kittiwake numbers have shown no significant population trends since 1985 at 15 study plots.

Common Murres numbers and productivity declined significantly in the mid- to late-1980's, then increased again in 1989-90. No overall population trend is apparent.

#### BLUFF (E. OF NOME ON SEWARD P. COAST):

Black-legged kittiwake numbers have fluxuated significantly at 5 plots since 1978. In general, abundance was high in the late '70's and early 80's; low in the mid-1980's; and high again in the late 80's and 1990. It appears that both productivity and abundance correlate directly with abundance of sand lance near the colony.

Common Murres abundance mirrors that of kittiwakes.

We are unable to detect any rising or declining population trends in either kittiwakes or murres at Bluff.

#### CAPE THOMPSON:

Black-legged kittiwakes have shown a slow but steady increase in abundance since monitoring began in 1960; and in 1990 were the highest ever recorded (2.6 times the 1960 levels)

Murres, on the other hand, have shown a slow, but steady decline during the same period.

#### BERING SEA:

Red-legged kittiwakes have declined more than 50 percent since 1978. Alaska's current red-legged kittiwake population is estimated to be 250,000; 95 percent of these breed at a single colony on St. George Island in the Pribilofs.

Black-legged kittiwakes have also declined more than 50 percent in the Pribilofs since the 1970's.

#### CHUKCHI SEA AND GULF OF ALASKA:

Black-legged kittiwake populations are stable or increasing at selected monitoring sites.

#### IN CONCLUSION:

1. Kittiwakes and murres have fluxuated significantly over the past 10-13 years or more they have been monitored. Abundance and productivity of murres and kittiwakes in 1990 in all study areas EXCEPT BERING SEA, were generally high and, at least in one instance, was the highest since monitoring began. In the Bering Sea, kittiwake and murre populations have declined precipitously to half or less of former abundance.
2. The abundance of prey species, such as sand lance, pollock and capelin, is probably the single most dominant factor influencing seabird abundance and year-to-year variability, although other factors such as predation by gulls and ravens may be important under certain conditions.
3. The abundance and availability of forage prey for seabirds, particularly during the critical nesting and chick rearing periods, can be influenced by several conditions, including: abundance and productivity of parent stocks; and near-shore environmental conditions. For example, water temperatures in the vicinity of Cape Thompson in 1990, when kittiwake productivity and abundance were high, was 2 degrees C. warmer than in 1986 when productivity was low.