



BRISTOL BAY SUBSISTENCE
REGIONAL ADVISORY COUNCIL

*February 24-25, 2015
Naknek, Alaska*



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On the cover...

A healthy, black bear takes a brief pause on its morning walk.



USFWS

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

February 24 – 25, 2015
10:00 a.m. – 5:00 p.m. February 24
8:30 a.m. – 5:00 p.m. February 25
Naknek Native Village Council Hall
Naknek, Alaska

TELECONFERENCE: call the toll free number: 1-866-916-7020, then when prompted enter the passcode: 37311548

PUBLIC COMMENTS: Public comments are welcome for each agenda item and for regional concerns not included on the agenda. The Council appreciates hearing your concerns and knowledge. Please fill out a comment form to be recognized by the Council chair. Time limits may be set to provide opportunity for all to testify and keep the meeting on schedule.

PLEASE NOTE: These are estimated times and the agenda is subject to change. Contact staff for the current schedule. Evening sessions are at the call of the chair.

AGENDA

*Asterisk identifies action item.

- 1. **Roll Call and Establish Quorum** (*Secretary*).....4
- 2. **Invocation**
- 3. **Call to Order** (*Chair*)
- 4. **Welcome and Introductions** (*Chair*)
- 5. **Review and Adopt Agenda*** (*Chair*) 1
- 6. **Election of Officers***
 - Chair (*DFO*)
 - Vice-Chair (*New Chair*)
 - Secretary (*New Chair*)
- 7. **Review and Approve Previous Meeting Minutes*** (*Chair*) 5
- 8. **Reports**
 - Council Member Reports
 - Chair’s Report
- 9. **Public and Tribal Comment on Non-Agenda Items** (available each morning)

10. Old Business (Chair)

a. Rural Determination Process Review – Secretarial Proposed Rule* (*Anthropology*) Supplemental

b. Customary & Traditional Use Determination – Southeast Council Proposal (*Anthropology*) Supplemental

c. Refuges Proposed Rule on Hunting* Supplemental

e. Red Fish BOF Proposal – Naknek Lake

f. National Park Service *Subsistence Collections and Uses of Shed or Discarded Animal Parts and Plants from Park Areas in Alaska** 11

11. New Business (Chair)

a. Wildlife Closure Review*

 1. WCR14-04/06 15

b. Call for Federal Hunting and Trapping Regulatory Proposals*(*OSM Wildlife*) 20

c. Kodiak/Aleutians Council Emperor Goose Resolution* 21

d. Funding Notification – Fisheries Resource Monitoring Program Supplemental

e. Review and Approve FY2014 Annual Report* (*Council Coordinator*) 85

f. Charter Revisions* (*Council Coordinator*) 87

12. Agency Reports

(Time limit of 15 minutes unless approved in advance)

Tribal Governments

Native Organizations

 NPFMC - Salmon by-catch in Bering Sea Supplemental

Special Actions

USFWS

 a. Northern Alaska Peninsula Caribou Herd

 b. Togiak NWR 91

 c. Alaska Peninsula/Becharof National Wildlife Refuge 97

NPS

BLM

ADF&G

OSM

13. Future Meeting Dates

 Confirm date and location of fall 2015 meeting* 101

Winter 2016 All-Council Meeting Update (*Meeting Committee*)

14. Closing Comments

15. Adjourn (*Chair*)

To teleconference into the meeting, call the toll free number: 1-866-916-7020, then when prompted enter the passcode: 37311548

Reasonable Accommodations

The Federal Subsistence Board is committed to providing access to this meeting for all participants. Please direct all requests for sign language interpreting services, closed captioning, or other accommodation needs to Donald Mike, 907-786-3629, donald_mike@fws.gov, or 800-877-8339 (TTY), by close of business on February 13, 2015.

DRAFT

REGION 4
Bristol Bay Regional Advisory Council

Seat	Year Apptd Term Expires	Member Name and Community
1	1993 2016	Peter M. Abraham Togiak
2	1993 2016	Daniel J. O'Hara Naknek
3	2003 2016	Nanci A. Morris Lyon King Salmon Vice Chair
4	2007 2017	Molly B. Chythlook Dillingham Chair
5	2014 2017	Senafont Shugak, Jr. Pedro Bay
6	2014 2017	William J. Maines Dillingham
7	2003 2017	Dan O. Dunaway Dillingham
8	2012 2015	Lary J. Hill Iliamna
9	2006 2015	Thomas A. Hedlund Iliamna
10	2009 2015	Richard J. Wilson Naknek Secretary

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Meeting Minutes

Oct 28-29, 2014

BBNA Val Larson Conference Room

Dillingham, Alaska

Call to order by vice Chair Morris Lyon

Meeting called to order by vice Chair Nanci Morris Lyon.

Roll Call

Peter Abrahm, Daniel O'Hara, Nanci Morris Lyon, Dan Dunaway, Thomas Hedlund, Richard Wilson. Online member: John Jones, Sr. Excused: Molly Chythlook, Alvin Boskofsky, Lary Hill.

Introductions

Council members, staff, and public introduced themselves at public meeting.

Government Agency Employees

Donald Mike

FWS OSM

Karen Hyer

FWS OSM Anchorage

Susan Henry

FWS Togiak NWR Refuge Mgr

Andy Aderman

FWS Togiak NWR Wildlife Biologist

Orville Lind

FWS AP/Becharof NWR

Susan Alexander

FWS AP/Becharof NWR Refuge Mgr

Pat Walsh

FWS Togiak NWR Wildlife Biologist

Sherri Anderson

NPS wildlife biologist Katmai

Troy Hamon

NPS Katmai Natural Resource Manager

Diane Chung

NPS Katmai Superintendent

Mary McBurney

NPS

Amy Craver

NPS

Clarence Summers

NPS

Glenn Chen

BIA anthropologist

Ted Kreig

ADFG Subsistence Division

Sara Evans

ADFG

Neal Barton

ADFG

NGOs/Public

Gayla Hoseth
Courtenay Gomez
Craig Munsonof

BBNA Subsistence Research Specialist
BBNA Nat Res Dir
DLG

On Teleconference

Drew Larson
Dorthy Larson

ADFG Kodiak
Curyung TC DLG

Drew Crawford

ADFG

Robin Lavine

OSM Anchorage

Todd Anderson

ADFG

Heather Thomas

USFWS Anchorage

Review and Adopt agenda

Mr. O'Hara move to adopt the meeting agenda. Add Bering Sea bycatch on Chinook. Second called by Mr. R. Wilson. FWS staff suggested including the FWS proposed rule for hunting and trapping under agency reports and FWS refuge reports.

Question called. Agenda adopted

Review and approve previous minutes

Mr. Dunaway moved to adopt the meeting minutes of the previous meeting. Second called by Mr. Hedlund. Question called. Minutes adopted.

Reports

Council member O'Hara and Dunaway reported on the Meshik subsistence issue. ADFG is reluctant to place a weir site in the Meshik River for lack of suitable sites, no king harvest for locals were reported. Mr. Dunaway reported the Nushagak AC are drafting BOG proposal, on beaver, bear parts and the Mulchatna Caribou season.

Morris Lyon, reported on the FSB meeting.

The Council was referred to the meeting materials pages 11 and 15 on the recent 805c report, reporting on the actions taken by the Board on regulatory wildlife proposals. Page 15 is the Boards response to the annual reports. No comments from the Council on the agenda items.

Public Testimony

Testimony is available throughout the public meeting.

Old Business

C&T Use Determination – Dr. Jeff Brooks provided an update for the Council on the customary and traditional use determination.

New Business

FP15 -01, submitted by Southcentral RAC requests that the definition of “hook” be described in regulation as “a hook with or without a barb.” Mr. R. moves to adopt the proposal, second called by Mr. Dunaway. Motion passed to support the proposal.

Justification: The Council supported the proposal stating no conservation concerns exist and, allowing barbed or barbless hooks would protect Federally qualified subsistence users.

FP15 -08, submitted by Alvin Boskofsky on behalf of the Chignik Lake TC, requests seines as a legal type for the taking of salmon above the weir in Chignik River. Mr. R. Wilson moves to adopt the proposal. Second called by Mr. Dunaway. Motion fails.

Justification: The Council opposed the proposal stating a conservation concern exist and the system supports a small run of Chinook with many anglers fishing in the river, and current regulations is not sufficient to protect the run in the Chignik River.

FISHERIES RESOURCE MONITORING PROGRAM

Priority Information Needs for FRMP

The Council supported the priority information needs after convening a subcommittee of the Council and reported back to the Council. The Council supported the recommendation of the subcommittee and approved the Southwest Alaska Region Priority Information Needs.

Bristol Bay-Chignik

Reliable estimates of coho and sockeye salmon escapements in the Lake Clark watershed.

Historical salmon escapements into Lake Clark watershed using isotopic analysis of lake sediment cores.

Document the diversity in size and age structure of sockeye salmon among spawning populations within Lake Clark NP/P.

Rearing habitat capacity for juvenile sockeye salmon in Lake Clark NP/P.

Distribution and timing of spawning by sockeye salmon in the major Bristol Bay watersheds of Katmai NP/P

Description and analysis of the social network underlying the distribution of fish harvested for subsistence by residents of the Bristol Bay Area and Chignik Area.

Reliable estimates of Chinook salmon escapement and evaluation of “quality of escapement” measures (for example, potential egg deposition, sex and size composition of spawners, spawning habitat quality and utilization) for determining the reproductive potential of spawning stocks in the Meshik River.

Evaluation of “quality of escapement” measures (for example, potential egg deposition, sex and size composition of spawners, spawning habitat quality and utilization) for determining the reproductive potential of Chinook salmon spawning stocks in Big Creek (Naknek River), the Alagnak River, the Nushagak River and the Chignik River.

Reliable estimates of Chinook salmon escapement into the Togiak River (for example, projects utilizing weir, sonar, tower and/or mark-recapture methods).

Kodiak-Aleutians

Comparative ecological evaluation of lake rearing habitats of subsistence sockeye salmon stocks in southwest Kodiak Island, Alaska, including Olga Lakes and Akalura Lake watersheds; assessment of 1) the decline in salmon stocks and associated subsistence harvest opportunities, and 2) the potential effects of climate change on salmon production in these lake systems.

Harvest of salmon for subsistence use by residents of the communities of Cold Bay, King Cove, and Sand Point, including harvest methods and means by species and distribution practices.

FY2014 Annual Report

Mr. Dunaway commented that the issue on the NPS proposed regulation should be considered for an Annual Report item. The issue will be addressed by NPS agency staff report and will address this issue in a separate action.

The Council through consensus, that Annual Report items will be noted throughout the public meeting proceedings and be identified as an annual report item.

Recommended changes to Nominations/appointment process

Mr. Carl Johnson provided briefing regarding the nominations/appointment process.

Mr. Dunaway commented that alternates should be considered for each seat or region and noted he is in favor of carry over terms and alternates be appointed also. Mr. O’Hara commented that the process should be part of strategic plan when addressing membership to the RAC and a concerted effort to attract and encourage the younger generation to apply when the nominations process is announced.

All Council Meeting

Mr. Dunaway commented that RAC members are currently involved in other public forums in resource management issues. Supports the idea of an all RAC meeting in 2016. Ms. Morris Lyon supports the meeting and other RAC members can learn and the information sharing is beneficial to all RAC members. Additionally, make sure that the public are able to participate in the all RAC meeting. Use teleconference or video conference to get the public involved. Mr. Jones commented that it will be an opportunity for the RACs to share common resource issues and learn from other regions.

Chinook By Catch Issue

Mr. O'Hara suggested that the Bering Sea and Gulf bycatch, with the NMFS presenting the briefing, be placed at the winter meeting.

Agency Reports

Agency reports were given by FWS staff from Togiak and Alaska Peninsula.

OSM Report Mr. Carl Johnson briefed the Council on the 2015 nominations cycle.

Western Alaska LCC presentation by M. Glenn Chen, Ms. Courtenay Carty and Mr. Joel Reynolds presented reports on recent issues relating to climate change.

Ocean Acidification, Ms. Sarah Cooley provided the RAC a powerpoint presentation on ocean acidification occurring in the Bering Sea.

The Council requested prior to the start of the BBRAC public meeting, a Workshop be held to address the proposed rule of the USFWS on hunting and trapping on Federal public lands.

ADFG: Mr. Neal Barton Area wildlife biologist addressed the Council on wildlife issues, moose, caribou, brown bear, aerial wolf hunting under State registration for population control, Mulchatna Caribou herd, and moose population and hunting stating that the staff will visit villages to issue moose permits.

NPS – SRC membership:

Aniakchak SRC update – Mr. Troy Hamon and Mr. Clarence Summers briefed the Council NPS activities and update on caribou population. Mr. Hamon also informed the RAC has the authority to appoint qualified individuals to serve on the SRC.

Mr Elliott Lind's term has expired, the Council moved to reappoint Mr. Lind to serve on the SRC, question called.

SRC membership for Lake Clark NP - Mr. Hedlund commented that Mr. Carl Jensen is an elder and is unable to participate on the SRC. Mr. Hedlund suggested Mr. Keith Jensen is a possible candidate but not sure if he currently serves on the State AC. The Council nominated Mr. Jensen and Mr. Alexie to serve on the SRC.

NPS – Ms. Diane Chung and Mr. Troy Hamon briefed the Council on NPS local hire and staffing update.

ADFG – Ted Kreig and Sarah Evans, updated the Council on projects occurring with the ADFG Dillingham office.

BBNA – Ms. Courtenay Carty and Ms. Gayla Hoseth representing BBNA briefed the Council their Internship program and other projects sponsored by BBNA.

RAC closing comments.

Future mtg Dates

Confirmed winter mtg dates

Fall 2015 Oct 27-28, 2015 in DLG

I hereby certify that, to the best of my knowledge, the forgoing minutes are accurate and complete.

\s\ Donald Mike

Donald Mike, DFO
Regional Advisory Council Coordinator

Nanci Morris-Lyon, Vice Chair
Bristol Bay Subsistence Regional Advisory Council

These minutes will be formally considered by the Bristol Bay Alaska Subsistence Regional Advisory Council at its next meeting on February 24-25, 2015, and any corrections or notations will be incorporated in the minutes of that meeting.

To: Federal Subsistence Regional Advisory Councils
Date: December 2014
Subject: Scoping for Regulations to Allow *Subsistence Collections and Uses of Shed or Discarded Animal Parts & Plants from National Park System Areas in Alaska*

Issue:

The National Park Service (NPS) selected a modified Alternative D to implement its April 2014 decision regarding the environmental assessment (EA) on *Subsistence Collections and Uses of Shed or Discarded Animal Parts and Plants from Park Areas in Alaska*. The selected alternative will allow subsistence collections and uses of shed or discarded animal parts and plants to make into handicrafts for personal or family purposes, to barter, or to sell as customary trade. NPS-qualified subsistence users are residents of communities and areas with federally-recognized customary and traditional (C&T) use determinations for each species in each game management unit within the affected park areas. Subsistence users who have C&T eligibility for animal species will also be allowed to collect plant materials from those areas to make and use or sell handicrafts. The decision clears the way for the NPS to promulgate regulations to authorize such subsistence collections and resource uses on park areas in Alaska. The NPS has attempted to address concerns expressed by several Subsistence Resource Commissions (SRC) and federal Subsistence Regional Advisory Councils.

Alaska-specific regulations are needed to overcome the general nationwide NPS regulation at 36 Code of Federal Regulations (CFR) 2.1, which prohibits: “Possessing, destroying, injuring, defacing, removing, digging, or disturbing from its natural state: Living or dead wildlife and fish, or their parts or products thereof, such as antlers or nests; Plants or the parts or products thereof.” ANILCA Titles II and VIII authorize in park areas subsistence uses “of wild, renewable resources for direct or family consumption ...; for making and selling handicraft articles out of nonedible byproducts of wildlife resources taken ...; for barter ...; and for customary trade.”

The NPS indicated in a press release it would begin the process of drafting new regulations within a year of the decision. That process is underway, and we have a preliminary draft rule to available for review during the winter/spring 2015 SRC and RAC meetings. Once proposed regulations are published in the Federal Register, they are available for a 60-day public comment period. The final rule would be published after consideration of the public comments.

These regulations will provide a general framework for authorizing federally-qualified subsistence collections with provisions allowing Superintendents to customize the implementation as needed for local conditions through unit-specific regulations or compendia. NPS will continue consulting with SRCs, RACs, and tribes as the regulations and associated provisions to implement them are developed. Two-way discussions are needed to identify key concerns for the regulations and their implementing provisions such as appropriate types of written authorizations, specific local resource concerns that may need to be addressed in each

park area, and flexibility to address changing conditions in park areas regarding subsistence collections.

Discussion Points:

The EA decision specified the following:

- NPS-qualified subsistence users must have written authorization from the area Superintendent. Such authorization can take many forms. For example, individual permits could be issued to qualified subsistence users or written authorizations could be provided for specific resident zone communities or for areas with customary and traditional use findings for various resources.

Which type of written authorization would be best for your area and why?

- The decision adopted mitigating measures to minimize potential adverse effects on resources and values of affected NPS areas, including visitor use and enjoyment. Mitigating measures may include conditions and limits for collection activities, such as allowable quantities, locations, timing restrictions, or other restrictions to reduce resource impacts or user conflicts. Examples of areas that may be subject to restrictions of subsistence collections include archeological and historic sites; public facilities and travel corridors such as roads, airports and landing strips; and commonly used trails, rivers, and shores of ocean coasts and large lakes. Education programs and materials could be developed to inform the public and qualified subsistence users about the authorized collections.

Which areas and resources should be opened or not opened to subsistence collections and why?

What should be included in a public education program?

Contacts:

Bud Rice, Subsistence Manager, Alaska Regional Office, bud_rice@nps.gov, 907-644-3597

PRELIMINARY DRAFT

Section 13.420 is amended as follows:

By adding the following definitions:

Handicraft article is a finished product in which the shape and appearance of the natural material has been substantially changed by the skillful use of hands, such as sewing, carving, etching, scrimshawing, painting, or other means, which has substantially greater monetary and aesthetic value than the unaltered natural material(s). This term does not include a trophy or European mount of horns or antlers.

Wild renewable byproducts of wildlife means the nonedible antlers, horns, bones, teeth, claws, hooves, hides, fur, hair, feathers and quills, that have been:

- (1) Naturally shed,
- (2) Discarded from a lawfully hunted or trapped animal, or
- (3) Occur through natural mortality.

By revising the definition of *Subsistence uses*, subparagraphs (2) and (3) as follows:

(2) “Barter” shall mean the exchange of handicraft articles or fish or wildlife or their parts taken for subsistence uses—

- (i) For other fish or game or their parts; or
- (ii) For other food or for nonedible items other than money if the exchange is of a limited and noncommercial nature; and

(3) “Customary trade” shall be limited to the exchange of handicraft articles or furs for cash (and such other activities as may be designated for a specific park area in the applicable special regulations of this part).

Section 13.482 is added as follows:

§ 13.482 Subsistence collection and use of animal parts

(a) Local rural residents may collect wild renewable byproducts of wildlife, excluding migratory birds and marine animals, for subsistence uses in park areas where subsistence uses are allowed, provided that:

- (1) The resident has a federal customary and traditional use determination for the species collected in the game management unit where the collecting occurs (50 CFR Part 100), and
- (2) The resident has written authorization from the superintendent.

(b) The superintendent may establish conditions, limits, and other restrictions on collection activities. Areas opened to collections will be identified on a map posted on the park website and available at the park visitor center. Violating a condition, limit, or restriction is prohibited.

(c) Non-conflicting State regulations regarding the use of bear claws that are now or may later be in effect are adopted as a part of these regulations.

WILDLIFE CLOSURE REVIEW BRIEFING

As called for in the Closure Policy, the Office of Subsistence Management is reviewing existing wildlife closures to determine whether the original justifications for closure continue to apply. These reviews are being conducted in accordance with guidance found in the Federal Subsistence Board's Policy on Closures to Hunting, Trapping and Fishing on Federal Public Lands and Waters in Alaska, which was adopted in 2007. According to the policy, existing closures will be reviewed at least every three years, and are typically completed on a three-year rotational schedule. Most of the closures being reviewed this cycle were last reviewed by the Federal Subsistence Board (Board) in 2008. A summary of the current closure reviews which are applicable to your Regional Advisory Council (RAC) are provided.

Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA) establishes a priority for the taking of fish and wildlife on Federal public lands and waters for non-wasteful subsistence uses over the taking of fish and wildlife for other purposes (ANILCA Section 804). The Federal Subsistence Board is authorized to restrict or close the taking of fish and wildlife by subsistence and non-subsistence users on Federal public lands and waters (ANILCA Section 804 and 815(3)) when necessary for: 1) the conservation of healthy populations of fish and wildlife; or 2) to continue subsistence users of such populations. In addition, the Board may also close Federal public lands and waters to any taking of fish and wildlife for reasons of public safety, administration, or to assure the continued viability of such population (ANILCA Section 816(b)).

Distribution and abundance of fish and wildlife populations are known to fluctuate based upon a variety of factors such as weather patterns, management actions, habitat changes, predation, harvest activities, and disease. Subsistence use patterns are also known to change over time in response to many factors including resource abundance, human population changes, among others. It is for these reasons that the Board decided in 2007 to conduct reviews every 3 years or earlier if new information becomes available that would potentially allow the closure to be lifted.

A Wildlife Closure Review contains a brief history of why a closure was implemented, along with a summary of the current resource condition and the OSM recommendation as to whether the closure should be continued or lifted.

Councils are asked to consider the OSM recommendation and share their views on the issue. Input from the Councils is critical to the development of regulatory proposals needed to address adjustments to regulations. After the Council reviews the closure review, they have three options, which should be in the form of an **action item**. They can recommend to:

- maintain the status quo
- modify
- rescind.

If the Council recommends to modify or rescind, they should submit a proposal (**a separate action item**) at this time. Councils may choose to work with OSM staff to develop a proposal; however, proposals addressing these issues can be submitted by other individuals or organizations as well.

Regardless of the Council recommendation, closures remain in effect until changed by the Federal Subsistence Board, and any regulatory proposals that may result from this review process will be considered through the normal regulatory cycle. The current window for wildlife proposals for the 2016-2018 regulatory cycle closes on March 25, 2015.

**FEDERAL WILDLIFE CLOSURE REVIEW
WCR14-04 and WCR14-06**

Closure Location: WCR14-04: Unit 9C remainder; WCR14-06: Unit 9E

Current Federal Regulation

Unit 9 - Caribou

Unit 9C remainder – Federal public lands are closed to the taking of caribou *No open season*

Unit 9E – Federal public lands are closed to the taking of caribou *No open season*

Closure Dates: Year Round

Current State Regulation

Unit 9C remainder and Unit 9E Residents and Nonresidents No open season

Regulatory Year Initiated: 1999 – closure to non-Federally qualified users; 2006 – closure to all users

Regulatory History

Proposals WP99-32, WP99-33 and WP99-34 were adopted by the Federal Subsistence Board (Board) in May 1999 and closed Federal public lands to non-Federally qualified users due to the declining population of the Northern Alaska Peninsula Caribou Herd (NAPCH) and local residents' reliance upon this subsistence resource. The annual harvest limit for all users before adoption was 4 caribou in Unit 9C from Aug. 10 - Mar. 30 and 4 caribou in Unit 9E from Aug. 10 - Apr. 30. After the Board action the harvest was allowed was reduced to one bull caribou by permit in Unit 9C remainder from Aug. 10 - Sept. 20 and Nov. 15 - Feb. 28, and one bull caribou by permit in Unit 9E from Aug. 10 – Sept. 20 and Nov. 1 – Apr. 30.

The Board adopted Special Action Request WSA05-02 in August 2005, which temporarily closed Federal public lands in Units 9C remainder and 9E to the hunting of caribou by Federally qualified subsistence users. In April 2006 the Board adopted Proposal WP06-22 to close Federal public lands in Units 9C remainder and 9E to the hunting of caribou by all user groups. The Board took this action because the NAPCH population continued to decline.

At their March 2011 meeting, during the previous closure review, the Bristol Bay Subsistence Regional Advisory Council (Council) recommended to retain the closure for conservation of the NAPCH.

Closure Last Reviewed: 2010; WCR10-04 and WCR10-06

Justification for Original Closure (Section 815(3) Criteria)

Section §815(3) of ANILCA states:

Nothing in this title shall be construed as – (3) authorizing a restriction on the taking of fish and wildlife for nonsubsistence uses on the public lands (other than national parks and monuments)

unless necessary for the conservation of healthy populations of fish and wildlife, for the reasons set forth in 816, to continue subsistence uses of such populations, or pursuant to other applicable law;

The original closure to non-Federally qualified users in 1999 (WP99-32) was established to ensure a Federal subsistence priority use of the caribou population. The closure to all users in 2006 (WP06-22) was established for conservation of the NAPCH. The herd had declined to a point that it could no longer sustain any harvest.

Council Recommendation for Original Closure

The Council recommendation was to modify Proposals WP99-32, WP99-33 and WP99-34 to change harvest limits, revise season dates, and restrict user groups for caribou hunting in Unit 9C remainder and 9E. The Council also recommended opening the closed area for caribou in Unit 9E and to limit Federal registration permits to residents of Units 9C and 9E.

The Council recommendation for WP06-22 was to support the closure to caribou hunting for all users on Federal public lands because calf recruitment was insufficient to offset adult mortality, the continued population decline to 2,500 animals, and because of the State's decision to no longer issue Tier II permits, which effectively closed the season at the State level (FWS 2006).

State Recommendation for Original Closure

The State supported Proposal WP99-32, WP99-33 and WP99-34 with modification to allow the following: (a) for Unit 9C (Alagnak River), a one caribou bag limit with a season Aug. 1 - Mar. 31; (b) for Unit 9C remainder when the harvestable surplus was 1,200 caribou or less in Units 9C and 9E combined: one bull caribou bag limit with a season length of Aug. 10 - Sept. 20 and Nov. 15 - Feb. 28; (c) for Unit 9E when the harvestable surplus was 1,200 caribou or less in Units 9C and 9E combined: a one bull caribou bag limit with a season length of Aug. 10 - Sept. 20 and Nov. 1 – Apr. 30. The modifications also included closing of the season when 600 bull caribou had been taken in Units 9C and 9E combined from both Federal and State managed lands. The State noted that the NAPCH was declining and showed poor productivity and poor survival of females. Restricting the harvest limit, reducing the season, and limiting the harvest by using a quota were necessary to improve productivity of the herd.

The State supported proposal WP06-22, due to conservation concerns, and stated that the closure would complement the State's action to not issue Tier II permits.

Biological Background

The NAPCH ranges throughout Units 9C and 9E. Historically, the size of this population has fluctuated widely, reaching peaks of approximately 20,000 caribou around 1900, again in the early 1940s and most recently in 1984 (Butler 2007). Prior to 2005, the last population low of approximately 2,000 animals was during the late 1940s. By 1963, the herd had increased to more than 10,000 animals. In 1981, the estimate was 16,000 and the herd increased to 20,000 by 1984 (Butler 2007) and the herd has declined thereafter (**Table 1**). Since 2009 there has been a slight population increase and is now believed to be roughly 3,000 animals (FWS 2006, Crowley 2014).

State management objectives for the NAPCH are 35 bulls:100 cows and a population of 12,000 – 15,000 animals (Riley 2011). Composition counts since the last closure review in 2010 suggest the population is increasing. Surveys in October of 2014 resulted in ratios of 34 calves:100 cows, 40 bulls:100 cows and a rough population estimate of at least 2,700 animals (**Table 1**) (Crowley 2014). The current bull:cow

ratio exceeds the State management objective for the herd, but the population size remains well below the management objective.

Table 1. Northern Alaska Peninsula Caribou Herd composition counts and estimate of herd size, 1984-2014 (FWS 2006, Butler 2007, Riley 2011, Crowley 2014).

Year	Bulls:100 Cows	Calves:100 Cows	Composition Sample Size	Estimated Herd Size^a
1984	39	39	1,087	20,000
1990	41	29	1,484	17,000
1991	42	47	1,639	17,000
1992	40	44	2,766	17,500
1993	44	39	3,021	16,000
1994	34	34	1,857	12,500
1995	41	24	2,907	12,000
1996	48	38	2,572	12,000
1997	47	27	1,064	10,000
1998	31	30	1,342	9,200
1999	40	21	2,567	8,600
2000	38	18	1,083	7,200
2001	49	28	2,392	6,300
2002	46	24	1,007	6,600
2003	36	11	2,776	-
2004	34	7	1,355	3,400
2005	23	7	1,914	2,500
2006	26	14	1,725	-
2007	27	7	1,474	-
2008	19	10	1,841	2,000
2009	19	16	2,126	2,300
2010	25	18	1,795	-
2011	26	20	2,395	-
2012	28	22	1,352	-
2013	31	21	2,076	2,400
2014	40	34	2,295	2,700

^a From 2005 to 2014 the estimate of herd size is based on fall composition surveys that were not designed to estimate population size and are considered a minimum count of herd size.

Many of the estimates of the herd size are considered as minimum counts (2005-present). Because the NAPCH now occurs at low densities across a wide area during May and June, autumn composition surveys provide the best indications of population size. However, October composition surveys are not designed to accurately estimate herd size and estimates of herd size shown above should be considered minimum counts and only rough estimates of herd size. Alaska Peninsula/Becharof National Wildlife Refuge (Refuge) staff has not conducted any post-calving aggregation surveys (June) in recent years

because the herd now occurs at low densities across its range making surveys of population size unreliable (Watts 2014 pers. comm.). As the herd declined and caribou group size decreased, they became less detectable making accurate estimates of population size difficult. Therefore, estimates of herd size shown above are not total counts.

Exact reasons for the NAPCH decline remain unknown, but may include nutritional stress due to over-grazing of the range south of the Naknek River, disease, and predation. Biological investigations have indicated that the NAPCH generally exhibited poor body condition, low pregnancy rates, low recruitment, and many calves showing evidence of lungworm (Sellers 2003). However, surveys from 2010-2014 indicate that survival and recruitment in the NAPCH has steadily improved with bull and calf ratios the highest recorded in the past several years (Crowley 2014).

Harvest History

The decline of the NAPCH prompted both the Alaska Board of Game and the Federal Subsistence Board to implement more restrictive harvest regulations beginning in the spring of 1999. These regulations were designed to protect the survival of the herd yet allow for a limited harvest of bull caribou for qualified subsistence users.

Between 1997 and 2005, hunter success rates were typically above 61% and the reported harvest ranged from 34 to 438 caribou (**Table 2**).

Table 2. NAPCH harvest, regulatory years 1997-2014 (Butler 2005, Butler 2007; Riley 2011).

Regulatory Year	Local Resident	Nonlocal Resident	Nonresident	Unspecified Residency	Total (% Success)
1997-1998	49	112	277	0	438 (78)
1998-1999	145	136	140	0	421 (68)
1999-2000	157	6	0	2	165 (66)
2000-2001	81	1	0	9	91 (65)
2001-2002	89	0	0	0	89 (67)
2002-2003	74	6	0	2	82 (61)
2003-2004	111	13	0	0	124(72)
2004-2005	34	0	0		34 (69)
2005-2014	-----No permits issued-----				

September was historically the most important month for the harvest of NAPCH. This was especially true for nonresidents because of the combination of weather and ease of access by boat and aircraft. Some nonresident hunters were in this area on combination hunts for various species in September. The subsistence harvest had been primarily opportunistic and the chronology of harvests varied depending upon caribou availability.

OSM Preliminary Recommendation:

- maintain status quo**
- initiate proposal to modify or eliminate the closure**
- other recommendation**

Justification:

While NAPCH composition data has continued to improve, including a recent bull:cow ratio above the State management objective, the population estimate is still well below the State management objective. The current bull:cow ratio and potentially increasing population indicates there could be a small harvestable surplus of bulls. Managers would like to observe the continued State bull:cow ratio management objective being achieved again before reinstating a hunt. This herd has not yet recovered enough to resume general harvest of the population but continued positive survey results may allow for resumed subsistence harvest of surplus bulls in the future. A limited subsistence hunt of surplus bulls could occur while still allowing the herd to grow. However, until future survey results can be achieved similar to the 2014 observations, the herd should not be considered as recovered enough to resume a harvest.

At this time, Federal public lands should remain closed for the conservation of a healthy population (Section 815(3)). The necessity of the closure to Federal public lands in the affected area will be reassessed in three years, per the Federal Subsistence Board review process, or sooner if additional survey data suggest the closure should be lifted. Most likely the closure would be first lifted to Federally-qualified subsistence users.

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RESOLUTION 2014-1

RESOLUTION OF THE KODIAK/ALEUTIANS SUBSISTENCE REGIONAL
ADVISORY COUNCIL IN SUPPORT OF MODIFICATIONS TO THE PACIFIC FLYWAY
MANAGEMENT PLAN FOR EMPEROR GEESE AND ENHANCEMENT OF POPULATION
SURVEY METHODS

WHEREAS, the Kodiak/Aleutians Subsistence Regional Advisory Council (Council) is empowered by Section 805 of the Alaska National Interest Lands Conservation Act to review and evaluate management plans relating to subsistence uses of fish and wildlife in the region and provide a forum for the expression of opinions and recommendations by persons in any matter related to subsistence uses of fish and wildlife in the region;

WHEREAS, the Emperor Goose is a customary and traditional subsistence resource for the rural residents of the Kodiak/Aleutians Region, as well as other regions in southwest Alaska;

WHEREAS, subsistence hunting of Emperor Geese has been prohibited by law since 1987;

WHEREAS, the Council has been advocating for over ten years on behalf of subsistence users in the region to allow for the opportunity to have a limited subsistence hunt of Emperor Geese;

WHEREAS, the Council has raised the issue of subsistence hunting of Emperor Geese on numerous occasions in its annual reports to the Federal Subsistence Board;

WHEREAS, the Council has submitted a regulatory proposal to the Alaska Migratory Bird Co-Management Council to provide for a subsistence hunt of Emperor Geese;

WHEREAS, none of the Council's efforts in following protocol to provide for a subsistence hunt of Emperor Geese have been successful;

WHEREAS, the Council has consistently questioned the validity of the 80,000 population threshold for allowing a subsistence hunt established in 1988 by the Pacific Flyway Management Plan for Emperor Geese;

WHEREAS, the Council has requested a thorough review of the survey methodology that determines the population of Emperor Geese and has not received a response;

WHEREAS, the Council believes that the current survey process could be improved and enhanced by involving local residents and developing a survey document in cooperation with Izembek National Wildlife Refuge staff;

LET IT THEREFORE BE

RESOLVED, that, in order to provide for a subsistence hunt of Emperor Geese at some time in the foreseeable future, a revised and reduced population threshold of Emperor Geese be developed in accordance with standard scientific principles and taking into account traditional ecological knowledge, and that such a revision be reflected in the Pacific Flyway Management Plan for Emperor Geese;

BE IT FURTHER RESOLVED, that, in order to improve future population surveys of Emperor Geese, the agencies that currently conduct such surveys should engage in a meaningful effort to coordinate and collaborate with other agencies and with local subsistence users to maximize the potential for developing more accurate population counts.

FINALLY, BE IT RESOLVED, that, in order to ensure maximum input from local subsistence users in the development of future revisions to the Pacific Flyway Management Plan for Emperor Geese, representatives from the Kodiak/Aleutians Subsistence Regional Advisory Council, as well as any other Federal Subsistence Regional Advisory Council representing subsistence users of Emperor Geese which adopts this resolution, should be provided opportunity to review and comment on such revisions.

CERTIFICATION

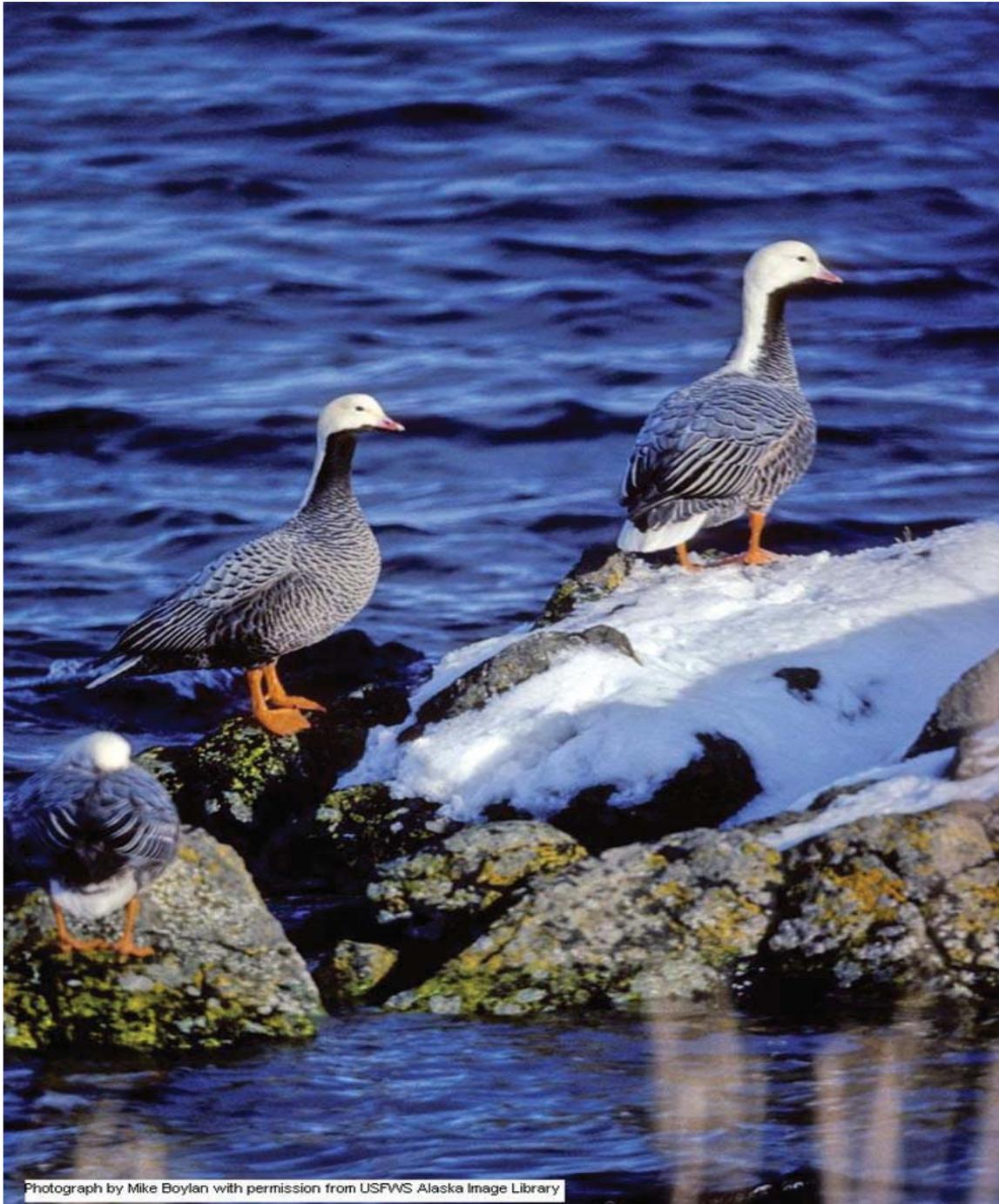
I hereby certify that the foregoing resolution was adopted by the Kodiak/Aleutians Subsistence Regional Advisory Council on September 11, 2014, at a publicly-noticed meeting in King Cove, Alaska, and in accordance with the Federal Subsistence Board's *Subsistence Regional Advisory Council Correspondence Policy*.



Speridon Simeonoff, Sr., Chair
Kodiak/Aleutians Subsistence Regional Advisory Council

Pacific Flyway Management Plan for the

Emperor Goose



Photograph by Mike Boylan with permission from USFWS Alaska Image Library

PACIFIC FLYWAY MANAGEMENT PLAN

FOR THE

EMPEROR GOOSE

Prepared for the:

Pacific Flyway Council
U.S. Fish and Wildlife Service

By the

Pacific Flyway Study Committee
Emperor Goose Subcommittee

And

Alaska Migratory Bird Co-Management Council
Emperor Goose Subcommittee

MAY 1988

JULY 1994

JULY 2006

Approved by: _____
Chairman, Pacific Flyway Council

Date

Suggested Citation: Pacific Flyway Council. 2006. Pacific Flyway Management Plan for the Emperor Goose. Emperor Goose Subcommittee, Pacific Flyway Study Committee [c/o USFWS], Portland, OR. Unpub. rept. 24 pp. + appendix.

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Pacific Flyway Study Committee, Emperor Goose Subcommittee members included:

Tom Rothe, Alaska Department of Fish and Game
Russ Oates, USFWS Region 7

Alaska Migratory Bird Co-Management Council, Emperor Goose Subcommittee members included:

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Russ Oates, USFWS Region 7
Peter Devine, Aleutian/Pribilof Islands Association
Austin Ahmasuk, Kawerak, Inc.
Ralph Andersen, Bristol Bay Native Association
Tim Andrew, Association of Village Council Presidents
Bob Leedy, USFWS Region 7
Julian Fischer, USFWS Region 7
Christian Dau, USFWS, Region 7

The Council offers special thanks to the staff of the Izembek National Wildlife Refuge for continuation of fall age ratio and family group size counts as long-term indices of productivity; and to Dr. Joel Schmutz for his contributions toward developing survival rates for emperor geese and for working in cooperation with Dr. Jerry Hupp (USGS-ASC) on an analysis of distribution through satellite tracking.

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- Appendix 1. Descriptions of key emperor goose use areas in Alaska and the Russian Far East.
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I. INTRODUCTION

Emperor geese (*Chen canagica*) are distributed in remote maritime habitats of Alaska and the Russian Far East (Figure 1, Appendix A). Most emperor geese winter along the Alaska Peninsula and in the eastern Aleutian Islands. Spring and fall migrants use staging areas along the Alaska Peninsula (Figure 2). Emperor geese nest in western and southwestern Alaska and along the east and north coasts of Chukotka with the majority on the Yukon-Kuskokwim Delta, Alaska. The historical breeding range on the Alaska mainland extended from the north side of the Seward Peninsula to south of Kuskokwim River near Carter Bay (Gabrielson and Lincoln 1959). Nesting distribution is presently constricted as emperor geese are uncommon nesters on the Seward Peninsula (Kessel 1989) and they are no longer known to breed south of the Yukon-Kuskokwim Delta (Seppi 1997).

The earliest estimate of emperor goose population size was 139,000 observed during a late spring survey from Kuskokwim Bay to Port Moller on the Alaska Peninsula in 1964 (King 1965). Fall migration surveys in the late 1960's estimated a population size of 150,000 (King and Lensink 1971). Petersen and Gill (1982) estimated a 34% decline in population size from 1971 to 1980, which prompted the initiation of annual spring and fall migratory staging surveys (Dau and Mallek 2005, Mallek and Dau 2004). A 3-year running average of spring surveys from 1981 to 1986 indicated a further 36% decline (Dau and King 1986). The spring population index has continued to decline but at a much slower rate since 1986 and the 1981-2004 with the 3-year running estimate of population size declining at 0.4%/year (Appendix B).

Estimates of breeding success on the Yukon-Kuskokwim Delta remained relatively constant during the 1970's and early 1980's (Eisenhauer and Kirkpatrick 1977, Petersen 1987), and the annual estimate of total nests has gradually increased since 1985 (Fischer et al. 2004). Fall age ratios, collected along the Alaska Peninsula since 1985, average 18.3% juveniles (Anderson et al. 2004) and indicate an average decline of 4.3%/year. These recent data suggest that increased mortality of pre or post-fledging young may be a factor restricting population growth.

Hunting mortality and predation are manageable factors involved in the decline of emperor geese that must be decreased to restore the population. In 1985 the bag limit of emperor geese was reduced from 6 to 2 birds per day and the season was closed completely in 1986. Under the terms of the Yukon-Kuskokwim Delta Goose Management Plan (YDGMP), subsistence hunting of emperor geese also was closed in 1987; however, harvest continues to occur (Wentworth and Wong 2002, Wolfe et al. 1990, Wolfe and Paige 2002).

The historical lack of a system to regulate subsistence harvest has limited effective management of goose populations, including emperor geese, on the Yukon-Kuskokwim Delta of Alaska. In order to better manage these populations, an agreement was signed in January 1984 between Alaska Natives of the Yukon- Kuskokwim Delta (Association of Village Council Presidents), the U.S. Fish and Wildlife Service, the Alaska Department of Fish and Game, and the California Department of Fish and Game. The agreement was

renamed the Yukon-Kuskokwim Delta Goose Management Plan and has been updated and modified periodically to the present day. In 1993 the states of Oregon and Washington also became signatories to the Plan. Alaska Native government entities representing other areas of Alaska with interest in emperor goose populations and habitat have yet to become signatories to this plan.

The 1916 Convention for the Protection of Migratory Birds between the U.S. and Great Britain prohibited the harvest of geese and most other species between March 10 and September 1. In Russia, emperor geese are protected as a “Red Book” species of concern (Kolosov and Skarlato 1983) however, illegal harvest still occurs. The migratory bird treaties with Canada and Mexico were amended in 1997 to allow for regulated customary and traditional use during the previously closed period. In Alaska, the Alaska Migratory Bird Co-Management Council (AMBCC) was established in October 2000 to develop proposed regulations to manage harvests occurring from March 10 to September 1. Spring and summer subsistence harvest of migratory birds is now rules established in 50 CFR Part 92. The AMBCC established a standing Harvest Technical Committee to provide guidance on design and implementation of statewide migratory bird harvest assessments of all species open to subsistence hunting. The AMBCC Emperor Goose Subcommittee was formed to address species-specific issues.

The purpose of this plan is to update previous versions of this plan (Pacific Flyway Council 1988) and reemphasize established goals and strategies for management of emperor geese in the Pacific Flyway that facilitate meeting objectives presented herein. This plan identifies management actions, associated information needs, and agency responsibilities for implementation during 2006-2010.

II. GOALS AND OBJECTIVES

The goal of this management plan is to restore the emperor goose population to historical levels and maintain it for all its values to society, including ecological, educational, recreational, and scientific uses, both consumptive and non-consumptive.

Objectives:

- A. Maintain a minimum population of 150,000 emperor geese based on spring surveys.
- B. Protect and manage nesting and brood rearing habitats in sufficient quantity and quality necessary to achieve population objectives. Emphasis should be increased on research and management activities to improve the quality of broodrearing habitat.
- C. Protect and manage migratory staging and wintering habitats in sufficient quantity and quality to achieve population objectives.
- D. Reduce harvest to achieve population objectives. Hunting will be closed when the population is below 60,000 geese based on the current 3-year running average of

spring population estimates. Hunting may be considered again when the 3-year running average reaches 80,000 geese.

- E. Achieve fall juvenile age ratios of $\geq 20\%$. This objective is dependent on reducing predation rates on goslings and increasing the quantity and quality of brood rearing habitat.

III STATUS

Abundance and Trends

Emperor geese inhabit remote areas of western and southwestern Alaska and the Russian Far East (Palmer 1976, Bellrose 1980), areas plagued by unfavorable climate and difficult logistics making population surveys challenging. Hence, limited historical information is available on population size or distribution. Aerial surveys of southwest Alaska in the 1960's estimated spring and autumn numbers of migratory staging emperor geese at 139,000 and 150,000, respectively (King 1965, King and Lensink 1971). Eisenhower and Kirkpatrick (1977) summarized available survey data to the 1970's suggesting a fall population between 175,000 and 200,000 and estimated 140,000 - 160,000 survived to spring. The current 3-year running average of spring and fall population estimates are 57,492 and 83,175 geese, respectively (Dau and Mallek 2005, Mallek and Dau 2004) (Appendix B, Figure 3). Russian and Alaskan breeding emperor geese mix during migration and winter, based on observations of marked birds and band recoveries (Schmutz and Kondratyev (1995).

Kistchinski (1976) suggested up to 80% of emperor geese summering in Russia are molting non-breeders. Uspenskii (1984) reported as early as 1969 that the nesting population in Chukotka Peninsula was decreasing rapidly. Historic population estimates are 12,000 - 15,000 emperors breeding and molting in Chukotka, with 200 wintering in the Commander Islands (Kistchinski 1973 and 1976, A. Kistchinski pers. comm.). Estimates of numbers in Chukotka, prior to the arrival of molt migrants (Jones 1972, Eisenhower and Kirkpatrick 1977), come from late June aerial surveys in 1974 (Kistchinski 1976) and 1993-95 (Hodges and Eldridge 2001). Population estimates for generally similar areas of the north Chukotka coast from Bering Strait west to Cape Shmidt were 7950 birds in 1974 and 2952 in 1993-95 (-63%). Hodges and Eldridge (2001) estimated a total Russian summering population of emperor geese at 5,079 including 2,952 in Chukotka, 223 from the Kolyma to Indigirka river deltas and 1,904 in inland areas from the Indigirka River to the Yana River. The arrival of molt migrants from Alaska enlarges the summering population in Russia. During recent aerial surveys in 2002 of "all key coastal wetlands of eastern Chukotka" 21,500 emperor geese were counted and the total population was speculated to be 25,000-30,000 (E. Syroechkovskiy, Jr. pers. comm.) The reported two-fold increase in summering emperor geese in Chukotka from 1974 to 2002 may be related to an apparent decline in molting on St. Lawrence Island (Murie 1936, Fay 1961, King and Derksen 1986, King and Butler 1987, Hogan and Rearden 1987, Eldridge and Bollinger 1988).

The U.S. Fish and Wildlife Service began annual migration surveys of emperor geese in fall 1979, and since 1981, aerial surveys have been conducted in southwest Alaska staging areas

in spring and fall. The spring survey completed from late April to early May, is used as the management index because the population is concentrated during a shorter time period than during the more protracted fall migration completed in early October. During spring, emperor geese congregate in Bristol Bay estuaries and along the northern Alaska Peninsula where the population is estimated prior to their moving north to breeding sites (Petersen and Gill 1982, Dau and Mallek 2005) (Appendix B).

Data on distribution and abundance of emperor geese in the Aleutian Islands are primarily from incidental counts made during early spring marine mammal surveys (Kenyon 1962, Eldridge 1987, T. Evans pers. comm., J. Haddix pers. comm.). Survey design and emphasis on recording emperor geese was not consistent between years so these late winter Aleutian surveys provide only a subjective indication of population trend. Counts declined from 24,712 emperor geese in 1962 to 1,319 in 2000, however, distributions were similar with preferred use areas from Tanaga Island to the Krenitzin islands.

Breeding Areas

In Alaska, most emperor geese breed in the coastal zone of the Yukon-Kuskokwim Delta (Palmer 1976, Bellrose 1980, King and Dau 1981, Petersen et al. 1994) with small numbers on the Seward Peninsula (Kessel 1989). (Figure 1, Appendix A). Fay and Cade (1959) and Fay (1961) reported 1,000 to 2,000 breeding on St. Lawrence Island while earlier reports were of breeding “in large numbers” (Friedmann 1932). Small numbers of emperor geese may currently breed on Nunivak Island (H. Ivanof pers. comm.). Emperor geese breed in coastal habitats preferring slough borders, pond shorelines, peninsulas, ericaceous tundra and pingos and small islands as nesting sites (Kistchinski 1972, Mickelson 1975, Eisenhauer and Kirkpatrick 1977, Petersen 1985). Breeding chronology varies due to timing of snow melt and the availability of nest sites. Median nest initiation dates on the Yukon-Kuskokwim Delta ranged from 20 May to 3 June (Petersen 1990, 1992a).

Broods move from nest sites to coastal salt marsh and estuarine habitats within one week of hatching, partially to find refuge from predators. Laing and Raveling (1993) found that goslings selected vegetated mudflats in coastal salt marsh and spent over 80 percent of their feeding time there. Goslings initially feed on nitrogen-rich salt marsh plants (Kistchinski 1972, Laing and Raveling 1993), and crowberries (*Empetrum nigrum*) are important during fall (Mickelson 1975).

A molt migration consisting of most sub adults and failed breeders occurs in mid-June from the Yukon-Kuskokwim Delta to St. Lawrence Island and coastal lagoons of Chukotka (Murie 1936, Fay and Cade 1959, Fay 1961, Jones 1972, Kistchinski 1973, 1988). In recent years, use of St. Lawrence Island as a molting site has declined with a corresponding 100% increase in Chukotka (King and Derksen 1986, King and Butler 1987, Hogan and Rearden 1987, Eldridge and Bollinger 1988, E. Syroechkovskiy, Jr. pers comm.).

In Russia, emperor geese breed throughout coastal Chukotka from Mallen Lagoon along the Bering Sea north and west to Cape Shmidt along the Chukchi Sea (Kistchinski 1973, Portenko 1981, Schmutz and Kondratyev 1995, Dorogoi and Beaman 1997, A. Kistchinski,

pers. comm.). Nesting in Chukotka begins in mid June (Kistchinski 1972, Krechmar and Kondratyev 1982, P. Tomkovich pers. comm.).

Fall Migration

Emperor geese migrate up to 2,200 km from molting sites to staging areas in southwest Alaska (Petersen et al. 1994, Izembek NWR files) (Figure 2). Molt migrants arrive first from early to mid-August followed by successful breeders by late September. Banding and satellite telemetry data suggest most of the emperor goose population follows western Alaska migratory routes (Schmutz and Kondratyev 1995, Hupp et al. 2001, 2004). Few emperor geese are seen in fall along the Bering Sea coast of Kamchatka and wintering numbers are small there and in the Commander Islands (Kistchinski 1973, Palmer 1976, E. Lobkov pers. comm.).

Emperor geese exhibit strong fidelity of to staging lagoons within and among seasons and remain at single sites for more than one month (Schmutz 1992). Over 80 percent of the population in spring and fall stage from Cinder River Lagoon to Nelson Lagoon (Figure 2, Appendix A). Three estuaries along the south coast of the Alaska Peninsula (Ivanof Bay, Chignik Lagoon and Wide Bay), islands south of the Alaska Peninsula and Kodiak Island are important to smaller numbers of emperor geese.

Petersen (1983) observed emperor geese foraging on blue mussels (*Mytilus edulis*) and macoma clams (*Macoma* spp.) during low tide and roosting onshore at high tide. Schmutz (1994) reported that flocks with disproportionately more juveniles continued to feed during high tide due to greater nutritional demands. At Izembek Lagoon, emperor geese also feed on eelgrass (*Zostera* spp.) and crowberries (*Empetrum* spp.), roosting at high tides along beaches or adjacent uplands.

Wintering Areas

By November, most emperor geese disperse from fall staging areas to wintering sites throughout the Aleutian Islands, islands south of the Alaska Peninsula and the Kodiak Archipelago. In mild winters some birds remain in Alaska Peninsula estuaries if ice free habitat exists (Palmer 1976, Hupp et al. 2001, 2004). In Russia, emperor geese winter in the Commander Islands and along the southern Kamchatka coast. Petersen et al. (1994) report accidental winter records from Hawaii, Sundai City, Japan and Wrangel Island, Russia. The occasional single or small group of emperors sighted in British Columbia, Washington, Oregon and northern California are likely the result of parasitic laying in the nests of other species of geese which winter in these areas and breed on the Yukon-Kuskokwim Delta (Lensink 1969).

In the central and western Aleutians, emperor geese arrive from October to November, although occasional sightings occur in early September. Most wintering birds arrive by mid-December and depart in spring by mid-April. Observations of marked birds suggest strong site fidelity within and between years (Byrd 1989, Byrd et al. 1992, Hupp et al. 2001, 2004, R. McIntosh pers. comm.).

Wintering emperor geese prefer shallow estuaries and shorelines for foraging and roosting. In the Aleutian Islands larger numbers use islands with extensive intertidal habitats and small numbers use conical volcanic islands with high energy beaches (J. Williams pers. comm.). The winter diet consists of *Fucus* spp., *Ulva* spp., eelgrass, kelp and various molluscs and other marine organisms associated with intertidal habitats, and vegetation including the shoots of *Elymus* spp. and rhizomes and herbaceous parts of *Equisetum* spp. (Murie 1959).

Spring Migration

Emperor geese begin migrating from Aleutian Island wintering sites as early as March (Byrd et al. 1974, Byrd 1988) to staging areas on the Alaska Peninsula where most remain until making non-stop flights to the Yukon-Kuskokwim Delta in early May (Hupp et al. 2001, 2004) and later to more northerly breeding areas. Emperor geese arrive on the Yukon-Kuskokwim Delta in early to mid-May, with large influxes occurring two to 16 days later (Petersen 1990, 1992a). Most Russian breeders migrate along the western Alaska coastline through the Bering Strait, arriving in Chukotka in early June (Kistchinski 1972, Krechmar and Kondratyev 1982). Birds wintering in the Commander Islands and southern Kamchatka are assumed to migrate along the eastern Bering Sea coastline to Chukotka (A. Kistchinski pers. comm.).

Production and Mortality

Prior to 1985 there were no comprehensive measures of emperor goose productivity at nesting sites. Since 1985, intensive random ground plot surveys have been conducted on the Yukon-Kuskokwim Delta (Fischer et al. 2004) in conjunction with aerial surveys (Butler and Malecki 1986, Eldridge and Hodges 2004) to provide annual estimates of population size and production. Data indicate low, positive annual growth rates of +2.4% for total birds (Appendix C, Figure 4) and +1.2% for active nests (Appendix D) while the population estimate from spring surveys indicates a very low annual decline of -0.4%/year (Figure 3).

Emperor geese initiate nests on the Yukon-Kuskokwim Delta from 20 May to 3 June (Petersen 1991, Petersen et al. 1994). In Chukotka, nests were initiated from 6 to 20 June (Kistchinski 1972, Krechmar and Kondratyev 1982). Nest initiation dates for marked individuals were similar each year (Petersen 1992a). Early nest initiation is advantageous as goslings are able to attain larger body size, which is positively correlated with survival (Schmutz 1993). In climatically late years, when nest site availability was delayed, nest initiation coincides with snow melt and runoff (Petersen 1990).

Normal clutch size is four to six eggs (average 4.9 eggs) (Petersen 1991). Kistchinski (1972) and Krechmar and Kondratyev (1982) report clutch sizes of two to nine eggs (average 4.2 eggs) in Chukotka. Climatically late springs can result in reduced clutch size and non-breeding in the Arctic (Barry 1960, 1967). On the subarctic Yukon-Kuskokwim Delta, emperor goose clutch size did not vary between early and late seasons, averaging 5.0 eggs (Fischer et al. 2004) (Appendix D). However, clutch size did decline later in the nesting season due to one or more factors including continuation of partially destroyed clutches, re-

nesting, first attempts by inexperienced individuals, and depletion of nutrient reserves during climatically late years (Petersen 1992a).

Female emperor geese often parasitically lay eggs in nests of other females and less commonly in the nests of other goose species. Petersen (1991) found over 62% of emperor goose nests were parasitized, and over 14% of goslings produced were from parasitic eggs. Costs of accepting parasitic eggs included slightly reduced hatching success of host eggs. Parasitic females were not known to incubate clutches in seasons they laid parasitically.

Petersen (1992a) reported 43-70% of marked female emperor geese nested each year. Nesting propensity was independent of the previous year's nest fate, clutch size, nest initiation date, and arrival date, and the current year's arrival date or timing of habitat availability. Low nesting rates may be related to variability in annual adult mortality rates. The proportion of adult females that survived to the following summer was significantly higher among geese that did not nest than among geese that nested suggesting that non-nesting is a strategy used by emperor geese when nesting increases the risk of adult mortality (Petersen 1992b).

Nesting success varied from 90.6% in 1982 to 0.1% in 1986 (n=746 nests) (Petersen 1992a). Predation by arctic foxes was the primary cause of nest loss (Stickney 1989, Petersen 1992a). Stehn (1991) concluded that factors other than nest success, clutch size, nesting chronology, and egg production may be more important determinants of fall population size. Most important factors affecting population size are the number of pairs (i.e. adult survival), the proportion of breeding pairs that attempt to nest, and the survival of goslings to fledging. Glaucous gulls (*Larus hyperboreus*) are a primary factor limiting juvenile survival on the Yukon-Kuskokwim Delta consuming from 21,000 to 52,000 goslings in 1994 (Bowman et al. 1997). Predation by gulls, exclusive of other mortality factors, exceeded the estimated 16,000 goslings surviving to early August (Bowman et al. (1997).

Prior to 1985, fall age ratio counts to estimate emperor goose productivity were conducted by the Izembek NWR (Izembek NWR files). Comprehensive annual fall photographic age ratio surveys in estuaries on the north side of the Alaska Peninsula where begun in 1985 (Butler et al. 1985) providing a 20-year average of 18.3% young (Anderson et al. 2004) (Appendix E). The proportion of juveniles has declined by an average of 4.3% per year since 1985. Estimates of fall age ratio and family group size at the Izembek NWR since 1966 provide averages of 23.2% juveniles (Appendix F) and family group size of 2.8 juveniles per family (Appendix G). Juvenile age ratios at Izembek NWR have declined at 1.7% per year since 1966. Winter age ratio estimates in the Aleutian Islands (Byrd et al. 1992, Alaska Maritime NWR, files) averaged 14.5% juveniles, an average of 37.8% below corresponding fall estimates; this may provide an index of juvenile mortality (Figure 5, Appendix H). Byrd et al. (1992) suggested that there is proportionally more mortality among juveniles than adults and suggested eagle predation and oiling were among possible causes.

Seasonal and annual survival estimates of emperor geese, based on mark resightings, were found to be low compared to other goose species (Petersen et al. 1994, Schmutz et al. 1994). Adult monthly winter survival rate was 0.940, whereas monthly over-summer survival varied

among years from 0.940 to 0.980 (Schmutz et al. 1994). Estimates of monthly survival of juveniles during their first winter period averaged 0.710. Subsequent monthly survival of juveniles was 0.943, similar to adults. Annual adult survival, estimated at 0.631 after adjustment for collar loss, was similar to the 0.587 reported by Petersen (1992b). Schmutz and Morse (2000) suggest that neck collared geese have lower return rates than tarsus-banded birds, and Schmutz et al. (1997) indicate average annual survival rates just over 0.80 are more realistic.

Natural mortality among juveniles is high during brood rearing (Bowman et al. 1997) and over their first winter, with survival positively correlated with body condition during fledging (Schmutz 1993). Heavy goslings had significantly higher survival than lighter goslings between late pre-fledging and arrival on fall staging areas. Results suggest that body mass affected the ability of juveniles to depart breeding areas, and/or affected survival during the first phase of migration. Differences in body mass may be caused by variable hatch dates, growth rates and forage qualities (Schmutz 1993), or differential energetic demands. Schmutz et al. (1994) point out that lack of agricultural foods, and relatively high latitude and inclement weather of winter habitat may lead to high natural mortality for juvenile and adult emperor geese in comparison to other goose species. Bowman et al. (1997) found glaucous gull predation was higher on emperor goose goslings than on other goose species.

Emperor geese have shown a variable but slow increase in population trend on the Yukon-Kuskokwim Delta since regulations stopped sport hunting and a combination of regulations and negotiations were initiated to slow subsistence harvest (Figure 6). Sport and subsistence harvest reductions throughout the Pacific Flyway increased survival, recruitment and population sizes of both cackling Canada geese and greater white-fronted geese that also nest on the Yukon-Kuskokwim (Trost and Drut 2004). However, similar harvest restrictions on emperor geese have failed to increase population size (Figure 3). Continued population decline is precipitated by low productivity rates and continued illegal harvest, which appears to be exceeding the recruitment of breeding adults into the population.

Eliminating or reducing illegal harvest and managing predators on breeding areas are the most realistic strategies for increasing survival and recruitment of emperor geese and increasing total population size. Adequate quantitative data on size of the illegal harvest are lacking (Wolfe and Paige 2002), and harvest is likely to be completely additive to natural mortality, particularly when the proportion of juveniles is low (Schmutz et al. 1994).

Little is known about the winter ecology of emperor geese. The relationship of habitat conditions to winter survival, nutritional and energy requirements, food availability, importance of winter conditions to reproductive capabilities, effects of pollution, predation rates and disturbance all require further study. Oil-stained emperor geese have been observed in the Aleutian Islands suggesting there may be a chronic problem with oil contamination from vessel sinkings and fuel discharges. Emperor geese are susceptible because they spend approximately 5 months each year foraging and roosting in the intertidal zone where oil deposits were found (Byrd et al. 1992). Emperor geese surviving contact with oil may experience reduced fitness, either due to ingestion or loss of insulation coupled with common adverse weather conditions (Byrd et al. 1992). Due to their remote and dispersed

winter distribution and the nature of known mortality factors (e.g. eagle predation, chronic oiling, etc.), management options to improve winter survival for emperor geese are limited.

The impacts of long-term environmental changes in emperor goose habitats, while unknown, are likely negative (e.g., warming Bering Sea temperatures, reduced sea ice, increased rates and impacts of storm surges, vegetation changes) (Owen 1980, Petersen 1985, Schmutz et al. 1994). Predator populations, increasing seasonally or in the long-term, adversely impact emperor geese. Predatory gull populations on Yukon-Kuskokwim Delta are increasing at a rate of >4% per year (Platte and Stehn unpubl. data). Gulls may be benefiting from increased productivity and survival related to expanded fisheries and at-sea processing in the North Pacific and Bering Sea (Hamilton-Paterson 1992). Arctic foxes are important nest predators that may be increasing due anthropogenic factors that have increased over-winter survival and reduced harvest.

Banding

Approximately 9,782 emperor geese had been banded and 145 recoveries had been reported as of August 2004 (J. Schmutz, pers. comm.). The majority of recoveries came from Alaska with a few reports from British Columbia and Washington. Limited banding of molting emperor geese in Russia has resulted in two recoveries, both in Alaska; one near Cold Bay and one on St. Lawrence Island. Two birds with Russian bands were sighted in Cold Bay in the fall of 1993 (Schmutz and Kondratyev 1995). There is one report of a young of the year bird banded on the Yukon-Kuskokwim Delta in August 1968 and recovered in July 1973 in Chukotka.

Sport Harvest

Sport harvest of emperor geese was reduced from a bag limit of 6 to 2 per day in 1985 and has been completely closed since 1986. Estimates of annual sport harvest by the Alaska Department of Fish and Game from 1970-1980 (Appendix I) averaged 2,100 emperor geese (1,400-3,000) and seldom exceed two percent of the estimated total population size. Most sport harvest occurred at staging areas along the north side of the Alaska Peninsula, most notably the Izembek State Game Refuge and Izembek National Wildlife Refuge.

Subsistence Harvest

In Alaska, harvest of emperor geese and their eggs is a traditional and customary use (Wolfe et al. 1990). Wolfe and Paige (2002) estimate over 4,500 birds were taken annually during the early 1990's, representing nearly 8% of the spring population index. Geographic coverage and sampling intensity suggest this estimate may be low

Subsistence harvest surveys estimate magnitude and timing of take relying on the trust and cooperation of subsistence hunters sampled anonymously (Wentworth and Wong 2001). The first study of subsistence waterfowl take on the Yukon-Kuskokwim Delta was made in 1964 (Klein 1966) and the estimated 8,200 emperor geese reported accounted for approximately 6% of the estimated spring population (King 1965). From 1985 to 2000, harvest estimates

averaged 2,119 emperor geese shot (1616-4031) and 290 eggs collected (40-518) however, these data underestimate harvest because several villages where harvest is known to occur, did not initially participate in most years (Wentworth and Wong 2001, Wentworth, unpubl. data) (Figure 6, Appendix J).

Historically, emperor geese have been taken on St. Lawrence Island by shooting during migration or driving of molting birds, a practice reported to be declining (Fay and Cade 1959, Fay 1961). Preliminary harvest surveys on St. Lawrence Island in 2002 estimated over 1,700 emperor geese were taken (A. Ahmasuk pers. comm.).

A 12-month survey in 1986-1987 at three Alaska Peninsula communities (Pilot Point, Ugashik, and Port Heiden) identified two distinct periods of waterfowl hunting. At Pilot Point, Ugashik and Port Heiden a total harvest of 205 emperors (64 in the spring and 141 in the fall) was reported (Fall and Morris 1987). Wentworth and Wong (2001) reported an average of 379 emperor geese take annually by Bristol Bay villages from 1995-2000. Fall surveys conducted in False Pass and Nelson Lagoon reported 26 and 44 emperors harvested for each respective community (Stanek 1990). The magnitude, timing, and location of the subsistence harvest needs to be more accurately documented and monitored to facilitate management efforts to restore the population.

Predation and over-winter mortality causes most of the losses in juveniles while most adult mortality is attributed to subsistence harvest during spring and summer. In Alaska an estimated 70% of the subsistence harvest of emperor geese is during spring and summer (Wentworth and Wong 2001). Low first year juvenile survival and first breeding at 3 years old, suggests recruitment rate of breeding adults is low. Current best estimates suggest spring and summer harvest exceeds recruitment of breeding adults and is therefore a factor in the continued decline in population size.

In 1997, the governments of Canada, Mexico and the United States amended the 1916 MBTA and the subsequent 1936 Mexico Convention for the Protection of Migratory Birds and Game Mammals. These amendments allowed harvests of migratory birds and their eggs during the previously closed period. The Alaska Migratory Bird Co-Management Council (AMBCC) was established in October 2000 to recommend subsistence harvest regulations to the Service and to the Flyway Councils for implantation in Alaska. The AMBCC consists of Alaska Native, Federal and State of Alaska representatives with equal voting responsibilities. Recommended regulations were expedited and the first legal season openings took place in 2003. The AMBCC followed agreements from the Yukon Delta Goose Management Plan and recommended continued closed season for emperor geese

Nonconsumptive Use

The extent of nonconsumptive use of emperor geese is unknown but likely limited due to their remote distribution. Limited viewing and photographic opportunities exist near Kodiak, Cold Bay, Shemya and Adak, as well as near many villages throughout their range. A public information program on arctic nesting geese (Teach About Geese), with an emphasis on emperor geese, prepared by the Fish and Wildlife Service received limited use in schools

throughout Alaska.

IV. MANAGEMENT ISSUES

- A. Emperor goose spring survey estimates since 1981 indicate greater than a 50% decline in population size from the historic level and a long-term decline of 0.4% per year.
- B. Illegal harvest of emperor geese continues to occur in Alaska at an undetermined rate. Although the MBTA Protocol has resulted in legal spring and summer subsistence hunting of migratory birds, current regulations have kept all seasons closed. Efforts to explain the need for hunting closures and encourage compliance should be increased, particularly in emperor goose staging and wintering areas.
- C. Regional or Statewide surveys to estimate timing and magnitude of emperor goose harvest need to be fully funded and implemented. The MBTA Protocol stipulates that harvest will not increase in relation to the continental population. Comprehensive harvest surveys are necessary to assure this mandate is met.
- D. Harvest of emperor geese occurs in Russia but information on the timing and magnitude are lacking.
- E. An estimated mortality of up to 40% of goslings produced on the Yukon-Kuskokwim Delta, due to predation by an increasing numbers of glaucous gulls, is a primary factor preventing growth of the emperor goose population. A study proposed to evaluate management strategies to reduce this predation has not been implemented.
- F. Fox predation on emperor goose eggs, goslings and adults is poorly documented and may be increasing. Information on the magnitude of losses is needed to determine appropriate management strategies.
- G. The emperor goose population would face increased risks during migration and winter by proposed oil exploration and development in Bristol Bay and along the Alaska Peninsula.
- H. Cooperative management agreements, easements, land exchanges or purchases of refuge in holdings and adjacent properties are needed to insure protection of key nesting, molting and staging areas of emperor geese. Management plans are lacking for some State and Federal owned coastal habitats important to emperor geese. Land use plans and regulations are necessary to avoid impacts of habitat loss and disturbance on emperor geese.
- I. Habitat changes on the Yukon-Kuskokwim Delta may impact survival of emperor goose goslings. Historically, goose populations and productivity were higher and they maintained larger expanses of grazed habitats. Lower numbers of geese since the 1980's may have reduced the amount and quality of preferred brood rearing

- habitat by over grazing.
- J. Insufficient data on wintering ecology is hindering understanding of winter survival factors and needs for management actions.
 - K. Aerial and ground inventories of Russian breeding and molting habitats are needed to understand emperor goose ecology and monitor population trends.
 - L. Habitat losses and disturbance from human activities include commercial fishing, oil spills and chronic oil pollution, introduced animals such as foxes and rats, and disturbances from aircraft, boats, all-terrain vehicles, and commercial/industrial activities.
 - M. Band return rates of emperor geese are low. Lack of data hampers analysis of seasonal distribution of harvest and estimation of survival rates and longevity.

V. RECOMMENDED MANAGEMENT STRATEGIES

The following management procedures are recommended and assigned a priority rating. Their implementation will be influenced by staff availability, fiscal and legislative constraints. When possible, management procedures in this plan should be coordinated and incorporated into those recommended in plans for other species and populations in the Pacific Flyway. Agencies should involve local residents in management activities, where feasible, throughout the range of the species.

A. Harvest Management

1. Implement provisions of this plan and the Yukon-Kuskokwim Delta Goose Management Plan requiring closure of all hunting if the current 3-year running average of spring population estimates is below 60,000 birds. Resumption of harvest may be considered when the population reaches a current 3-year index of 80,000 birds.

Responsibility: USFWS, ADFG, AMBCC (AVCP-WCC)
Priority: I
Schedule: Continuing

2. Continue to implement and enforce federal regulations for harvest of emperor geese and their eggs.

Responsibility: USFWS, ADFG, ADPS-ABWE, AMBCC
Priority: I
Schedule: Continuing

3. Continue support of the Yukon-Kuskokwim Delta Goose Management Plan.

Responsibility: USFWS, USGS, AMBCC (AVCP), ADFG, CDFG, ODFW, WDFW
Priority: I
Schedule: Continuing

4. Conduct annual subsistence harvest surveys throughout habitats used by emperor geese to determine magnitude and timing of emperor goose subsistence harvest in Alaska and monitor trends.

Responsibility: USFWS, ADFG, AMBCC
Priority: I
Schedule: New Start

5. Continue education and outreach programs designed to increase awareness of emperor goose management and biology with the goal of reducing both deliberate and incidental harvest.

Responsibility: USFWS, AMBCC, ADFG
Priority: I
Schedule: Continuing

B. Management and Research (Incorporate Traditional Ecological Knowledge into ongoing management and research activities as appropriate.)

1. Continue annual spring aerial population survey of migratory staging areas to produce the primary population management index.

Responsibility: USFWS
Priority: I
Schedule: Continuing

2. Continue annual fall aerial population survey of migratory staging areas. These data are used in conjunction with photographic age ratio surveys (B.3) to estimate the proportion of juveniles in the fall population.

Responsibility: USFWS
Priority: II
Schedule: Continuing

3. Continue fall aerial photographic survey to determine the proportion of juveniles at staging sites. Continue ground sampling to estimate age ratios and average family group size at Izembek NWR to maintain historic database.

Responsibility: USFWS
Priority: I
Schedule: Continuing

4. Continue aerial breeding population survey in the coastal zone of the Yukon-Kuskokwim Delta. Use in conjunction with random nest plot survey to estimate total nests and potential production.

Responsibility: USFWS
Priority: I
Schedule: Continuing

5. Continue annual random nest plot survey on the Yukon-Kuskokwim Delta coastal zone to index productivity.

Responsibility: USFWS
Priority: I
Schedule: Continuing

6. Conduct an aerial photographic survey of brood flocks on the Yukon-Kuskokwim Delta to compare family size during late brood rearing to family group sizes during migration on the Alaska Peninsula and to assess the effects of potential predator management procedures (Procedure 7).

Responsibility: USFWS
Priority: II
Schedule: Intermittent

7. Initiate studies to determine the effects of predator management designed to reduce emperor goose egg and gosling mortality on the Yukon-Kuskokwim Delta. Evaluate the effectiveness of these actions by estimating juvenile survival rates in relation to other factors influencing gosling mortality. Determine the effect of increased juvenile recruitment on population size.

Responsibility: USFWS
Priority: I
Schedule: New start

8. Communicate with Russians to obtain breeding, molting and migrating information throughout the Russian Far East. Arrange opportunities for cooperative aerial and ground surveys.

Responsibility: USFWS, Russia
Priority: I
Schedule: Continuing

9. Complete population model using best available information to estimate how survival and reproduction effect population change and how manipulations might affect these changes.

Responsibility: USGS-ASC, USFWS
Priority: I
Schedule: Continuing

10. Initiate a study of emperor goose ecology in winter to determine habitat requirements, physiological and nutritional requirements, and mortality factors.

Responsibility: USFWS, USGS-ASC
Priority: I
Schedule: Undetermined

11. Support establishment of protective measures and retain existing ones to maintain adequate breeding and molting areas. Develop cooperative management agreements and public use plans with landowners to protect emperor goose habitat.

Responsibility: USFWS, ADFG, local governments, Alaska Native organizations, conservation organizations
Priority: II
Schedule: Ongoing

12. Support establishment of protective measures and retain existing ones to maintain adequate migratory staging and wintering areas. Develop cooperative management agreements and public use plans with landowners to protect emperor goose habitat.

Responsibility: USFWS, ADFG, local governments, Alaska Native organizations, conservation organizations
Priority: II
Schedule: Ongoing

13. Determine contaminant levels in emperor geese, examining both juveniles and adults, and assess potential effects on health and survival.

Responsibility: USFWS
Priority: II
Schedule: Undetermined

14. Continue cooperative educational and volunteer programs associated with the Yukon-Kuskokwim Delta Goose Management Plan with Alaska Native organizations. Expand education and information programs on emperor goose conservation to include villages in Bristol Bay, Alaska Peninsula, St. Lawrence Island, Seward Peninsula and Aleutian Islands.

Responsibility: USFWS, ADFG, AVCP, AMBCC
Priority: I
Schedule: Ongoing

VI. PLAN IMPLEMENTATION AND REVIEW

An Emperor Goose Subcommittee of the Pacific Flyway Study Committee shall monitor the status of the population, coordinate management activities, and review progress toward achieving the goal and objectives of this plan. The subcommittee shall coordinate with the AMBCC Emperor Goose committee to revise this plan as needed and report, through the Pacific Flyway Study Committee, accomplishments and shortcomings of management efforts to the Pacific Flyway Council, state and federal agencies having relevant management responsibilities, and organizations interested in emperor goose management.

The subcommittee shall be responsible for integrating plan provisions with other plans and programs for waterfowl management. In addition, the subcommittee will ensure that emperor goose management and research guidelines complement the goals of the North American Waterfowl Management Plan.

The subcommittee shall be composed of a representative from each federal and state agency having management responsibility for this goose population. Chairmanship shall be appointed biannually and rotated among member agencies. The subcommittee will exercise its prerogative to invite participation (ex officio) at meetings by any individual, group, agency or representative whose expertise, counsel or managerial capacity is required for coordination and implementation of management programs.

Rotation of the chair shall alternate between USFWS Region 7 and ADFG. Terms begin October 1 and continue for 2 years.

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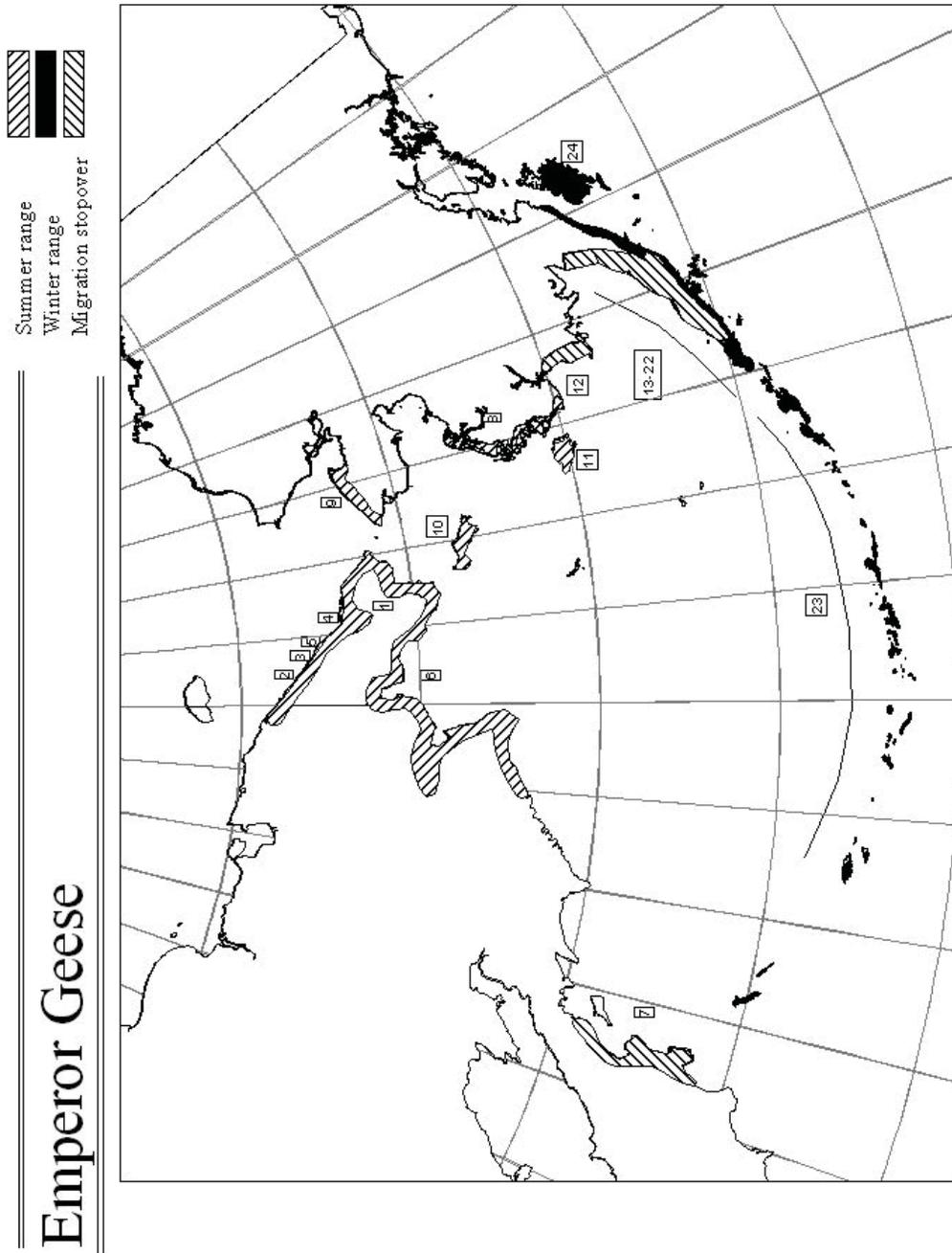


Figure 1. Range of the emperor goose (Numbers refer to Appendix A).

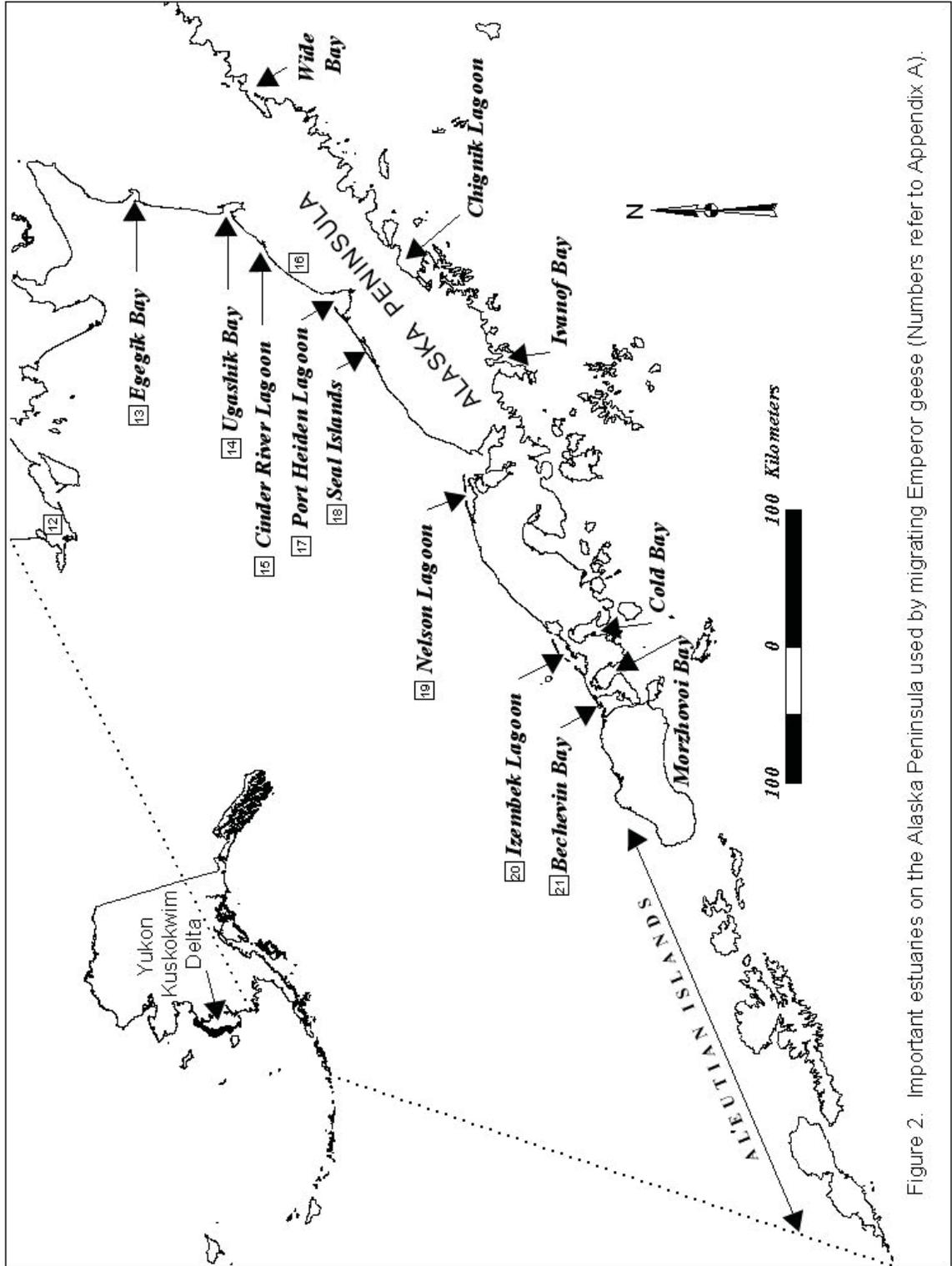


Figure 2. Important estuaries on the Alaska Peninsula used by migrating Emperor geese (Numbers refer to Appendix A).

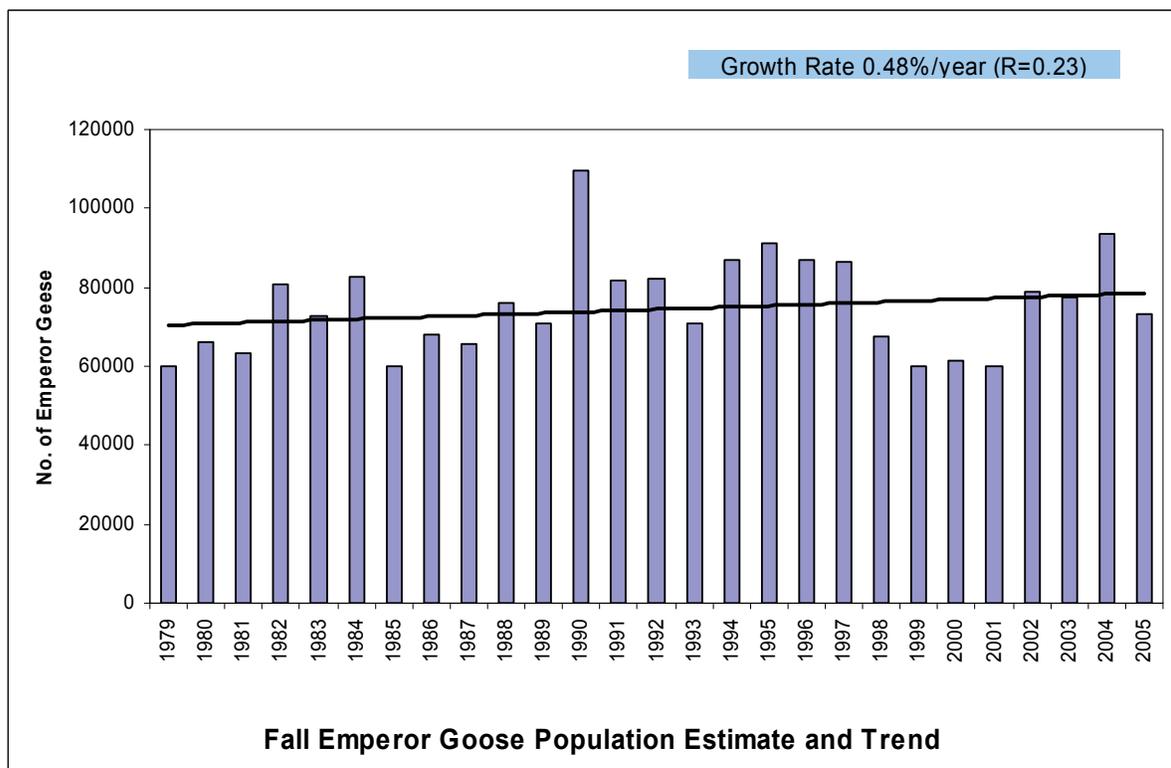
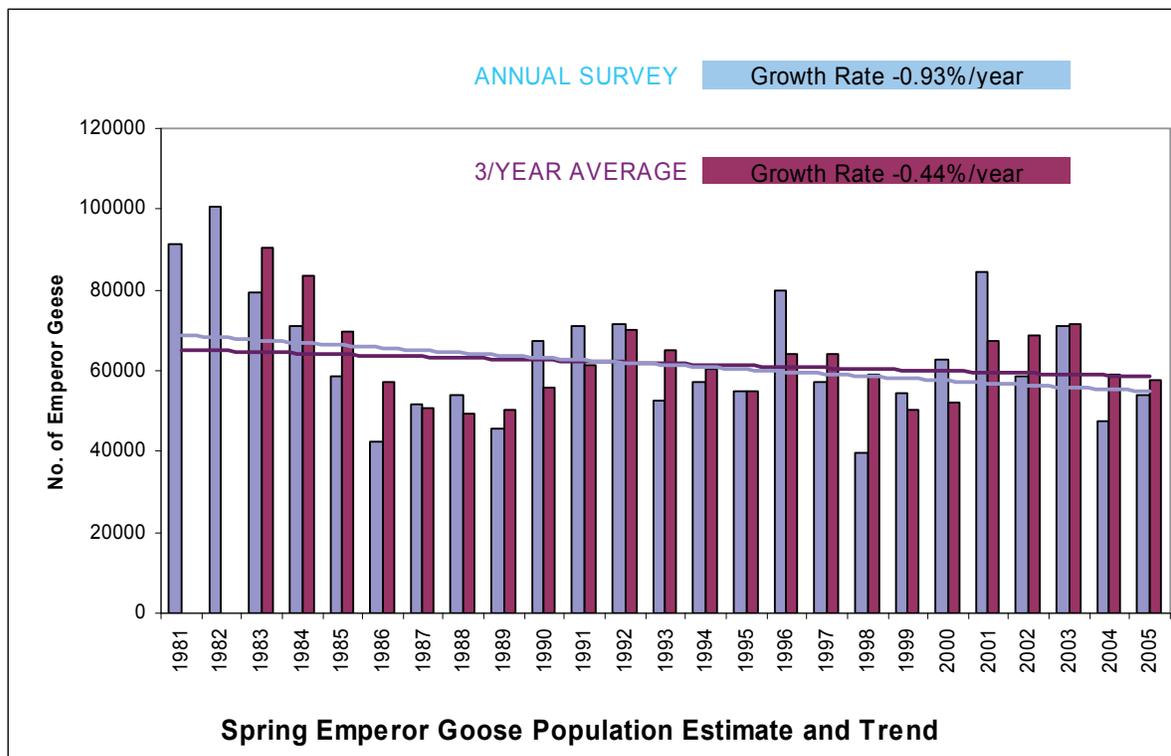
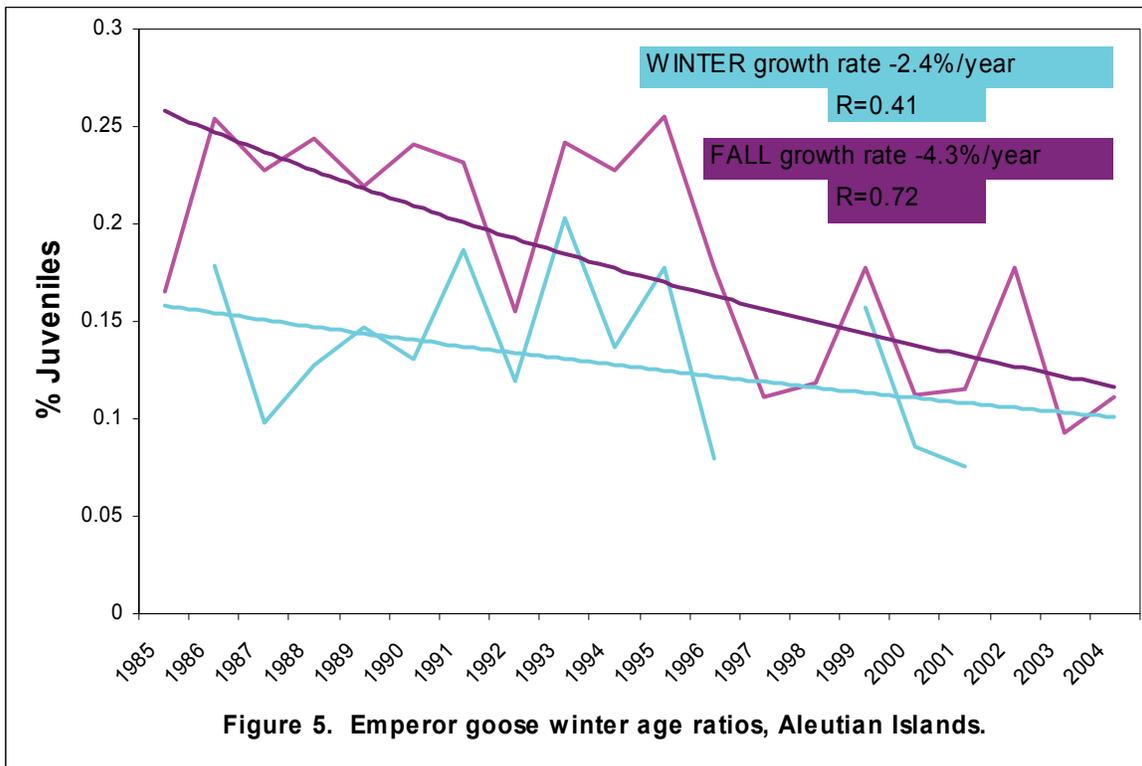
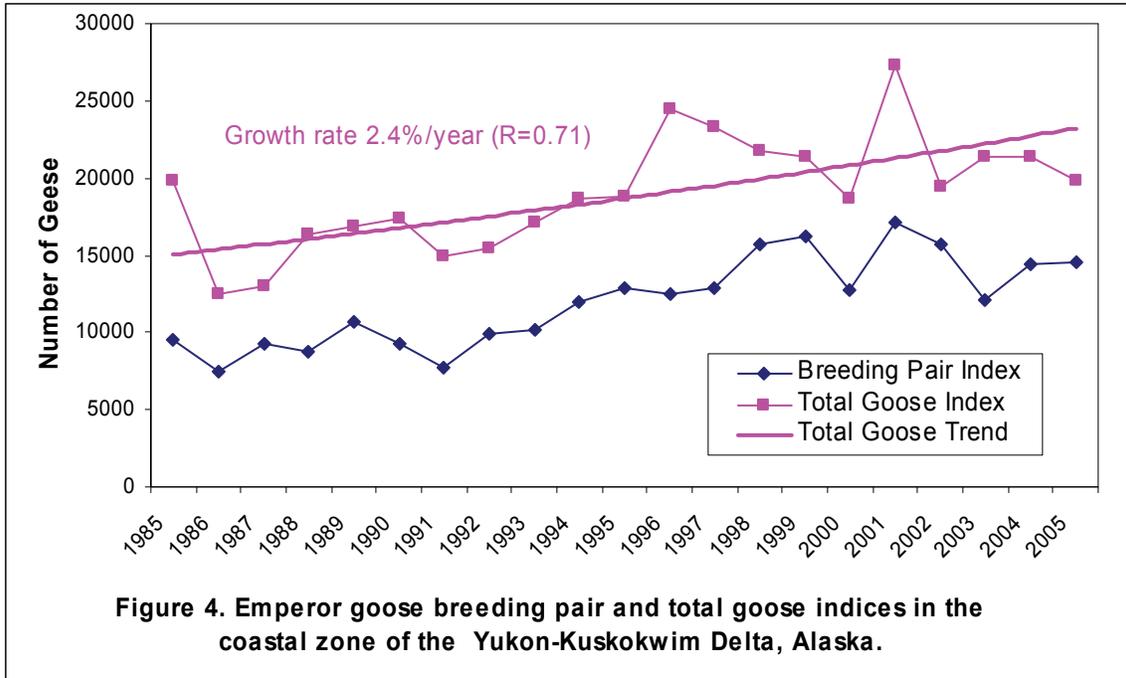


Figure 3. Emperor goose population estimates during spring and fall migration.



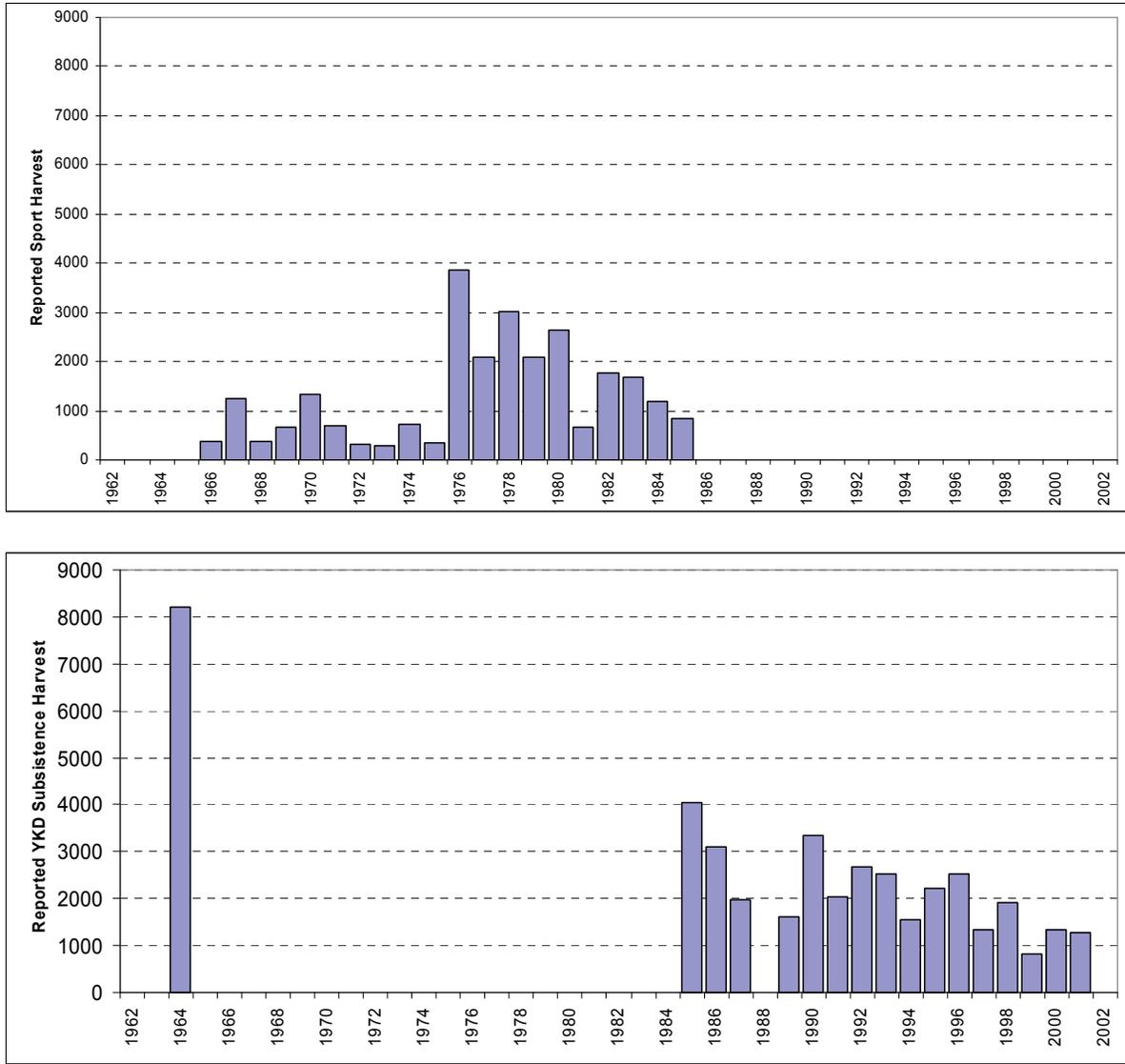


Figure 6. Emperor goose harvest estimates.

Appendix 1. Descriptions of key emperor goose use areas in Alaska and the Russian Far East.

Area	Use	Number ¹	Season	Ownership	Threats
RUSSIA					
1. Chukotsk coastal areas (Cape Schmidt to Mallen Lagoon)	Nesting	3,000-8,000	Spring-Summer		Hunting/Oil Spill/Unknown
	Molting	>21,500			
2. Tenkergynpilken Lagoon	Molting	<21,500	Summer		Hunting/Oil Spill/Unknown
3. Ukouge Lagoon	Molting	>2,000	Summer		Hunting/Oil Spill/Unknown
4. Kolyuchinskaya Bay	Nesting Molting	Unknown <21,500	Spring-Summer		Hunting/Oil Spill/Unknown
5. Vankarem Lagoon	Nesting	Unknown	Spring-Summer		Hunting/Oil Spill/Unknown
6. Kresta Bay	Nesting	Unknown	Spring-Summer		Hunting/Oil Spill/Unknown
7. Kamchatka Peninsula/ Commander Islands	Wintering	Unknown	Winter	Nature Reserves	Oil Spill/Unknown
ALASKA					
8. Yukon-Kuskokwim Delta	Nesting	80-90% of pop	Spring-Summer	Yukon Delta NWR, 22(g) lands	Hunting/Oil Spill/Predation
	Molting	80-90% of pop			
9. Kotzebue Sound coastal	Nesting	+1,000	Spring-Summer	50% Bering Land Bridge NP	Hunting/Oil Spill/Unknown
10. St. Lawrence Island	Nesting Molting	≤300-1,000 3,000-10,000	Spring-Summer Summer	Native owned	Hunting/Oil Spill/Unknown
11. Nunivak Island	Nesting	Unknown	Spring-Summer	Yukon Delta NWR, 22(g) lands	Hunting/Oil Spill/Unknown
	Staging	2,000/2,000	Spring/Fall	Yukon Delta NWR, 22(g) lands	Hunting/Oil Spill/Unknown
12. Chagvan Bay/Nanvak Bay	Staging	11,200/200	Spring/Fall	Togiak NWR	Hunting/Oil Spill/Unknown

Appendix 1. Continued.

Area	Use	Number ¹	Season	Ownership	Threats
13. Egegik Bay	Staging	1,800/2,300	Spring/Fall	Part Egegik State CHA	Hunting/Oil Spill/Unknown
14. Ugashik Bay	Staging	4,275/2,500	Spring/Fall	Part Pilot Point State CHA	Hunting/Oil Spill/Unknown
15. Cinder River Lagoon	Staging	13,825/24,000	Spring/Fall/Winter	Cinder River State CHA	Hunting/Oil Spill/Unknown
16. Hook Lagoon	Staging	1,000/2,000	Spring/Fall/Winter	Private Lands	Hunting/Oil Spill/Unknown
17. Port Heiden	Staging	33,187/28,600	Spring/Fall/Winter	Port Heiden State CHA	Hunting/Oil Spill/Unknown
18. Seal Island	Staging	14,000/20,000	Spring/Fall/Winter	Private Lands	Hunting/Oil Spill/Unknown
19. Nelson Lagoon	Staging	60,000/39,400	Spring/Fall/Winter	Part Port Moller State CHA	Hunting/Oil Spill/Unknown
20. Izembek Lagoon	Staging	18,300/9,100	Spring/Fall/Winter	Izembek NWR/SGR, 22(g) land	Hunting/Oil Spill/Unknown
21. Unimak/False Pass	Staging	120/4,000	Spring/Fall/Winter	Izembek NWR, 22(g) land	Hunting/Oil Spill/Unknown
22. Alaska Peninsula (south side)	Staging	4,200/9,600	Spring/Fall/Winter	Alaska Peninsula, Becharof, and Izembek NWRs	Hunting/Oil Spill/Unknown
23. Aleutian Islands	Wintering	Unknown	Winter	Alaska Maritime NWR, DOD land	Hunting/Oil Spill/Unknown
24. Kodiak Island	Wintering	Unknown	Winter	Kodiak NWR, 22(g) land	Hunting/Oil Spill/Unknown

¹ Areas 12-22, numbers are averages for Spring/Fall emperor goose surveys.

Appendix 2. Population indices for emperor geese - spring and fall surveys, 1979-2005.

Year	Spring Survey	3/Year Spring Average	Fall Survey
1979			59808
1980			65971
1981	91267		63130
1982	100643		80708
1983	79155	90355	72551
1984	71217	83672	82842
1985	58833	69735	59790
1986	42231	57427	68116
1987	51633	50899	65663
1988	53776	49213	76165
1989	45800	50403	70729
1990	67581	55719	109531
1991	70962	61448	81782
1992	71319	69954	82295
1993	52546	64942	71051
1994	57267	60377	87086
1995	54852	54888	91009
1996	80034	64051	87018
1997	57059	63982	86669
1998	39749	58947	67744
1999	54600	50469	60226
2000	62565	52305	61626
2001	84396	67187	59987
2002	58743	68568	78692
2003	71160	71433	77290
2004	47352	59085	93544
2005	53965	57492	73212

Data provided by USFWS, Migratory Bird Management, Anchorage.

Appendix 3. Indicated total and pair indices for emperor geese from the coastal zone of the Yukon-Kuskokwim Delta, Alaska, 1985-2005.

Year	Pairs ¹	Indicated Total Geese	SE
1985	9,542	19,805	1,960
1986	7,413	12,430	1008
1987	9,312	13,035	1,121
1988	8,695	16,392	1,402
1989	10,737	16,855	1,220
1990	9,282	17,347	1,401
1991	7,758	14,888	1,284
1992	9,879	15,416	994
1993	10,183	17,147	1,230
1994	12,007	18,733	1,059
1995	12,892	18,764	1,072
1996	12,433	24,413	2,476
1997	12,820	23,287	1,451
1998	15,686	21,741	1,541
1999	16,208	21,406	1,591
2000	12,798	18,667	949
2001	17,112	27,297	1,473
2002	15,646	19,504	1,326
2003	12,141	21,378	1,746
2004	14,410	21,396	1,097
2005	14,490	19,798	1,190

¹ Indicated pairs = 2 x (singles + pairs)

Appendix 4. Population size estimates of nests and eggs on the Yukon-Kuskokwim Delta (YKD), Alaska 1985-2005. The number of nests and eggs outside the ground sampled area was calculated by multiplying the ground sampled estimate by the ratio of indicated breeding pairs outside/inside the ground sampled area, as determined by aerial surveys. Indicated breeding pairs were based on twice the number of singles plus the number of birds in pairs observed.

Year	# plots	Total		Active		Active		Clutch Size	n
		Nests	SE	Nests	SE	Eggs	SE		
1985	48	19941	4653	9452	2967	49422	15312	5.2	113
1986	101	25432	2447	17830	1752	90482	8933	5.2	218
1987	125	24569	2491	22728	2320	114672	12048	5.1	361
1988	95	16480	2133	15033	2081	77714	11937	5.1	192
1989	89	25862	3236	23089	2816	116311	14387	5.1	292
1990	101	24239	2015	21438	1957	107902	9741	4.9	288
1991	97	33066	3232	31432	3076	155655	16039	5.0	356
1992	66	26807	2645	25548	2608	127809	13305	5.0	259
1993	99	24085	2524	22851	2428	108142	11652	4.9	285
1994	43	38294	4053	36231	3949	179393	20344	4.9	308
1995	50	31388	3431	30367	3363	147737	16140	4.9	297
1996	54	32086	3031	30264	2947	155068	15507	5.1	280
1997	75	22062	2227	21142	2184	101024	10497	4.8	230
1998	72	26890	2653	25515	2583	119215	12226	4.7	266
1999	59	31391	3087	28971	2878	128247	12718	4.5	224
2000	80	35490	3607	34982	3549	174409	17979	5.0	344
2001	81	14174	1390	10995	1207	52486	6179	4.8	127
2002	84	36062	4226	33546	3952	168609	19806	5.0	303
2003	83	24166	2784	19334	2407	92930	12085	4.8	211
2004	81	32324	3085	30866	2991	150507	14764	4.9	338
2005	83	37645	3438	35448	3228	178427	16361	5.0	380

Appendix 5. Fall age ratio estimates from aerial photographs of emperor geese on the north side of the Alaska Peninsula, 1985-2005.

Year	Age Ratio	SE	No. Geese Classified	No. Photos
1985	0.165	0.026	3,193	155
1986	0.254	0.051	6,830	311
1987	0.228	0.008	10,177	703
1988	0.244	0.009	11,180	483
1989	0.219	0.011	12,718	390
1990	0.241	0.009	13,541	474
1991	0.232	0.009	14,569	412
1992	0.155	0.008	14,832	403
1993	0.242	0.013	5,735	255
1994	0.228	0.01	16,881	479
1995	0.255	0.013	11,664	361
1996	0.178	0.014	10,793	182
1997	0.111	0.008	11,138	205
1998	0.118	0.007	16,544	336
1999	0.178	0.01	13,489	392
2000	0.112	0.009	7,748	263
2001	0.115	0.008	11,186	365
2002	0.178	0.01	6,458	402
2003	0.093	0.007	8,686	421
2004	0.111	0.007	6,237	370
2005	Waiting data.			

Appendix 6. Emperor goose annual production estimates, Izembek NWR, 1966-2005.

Year	Adults	Juveniles	Total Classified	% Juveniles
1966	699	265	964	27.5
1967	1,457	585	2,042	28.6
1968	1,195	585	1,780	32.9
1969	4,149	2,980	7,129	41.8
1970	9,722	4,933	14,655	33.7
1971	1,842	3,458	11,600	29.8
1972	4,680	2,270	6,950	32.7
1974	2,025	377	2,402	15.7
1975	744	405	1,149	35.2
1976	1,923	324	2,247	14.4
1977	996	683	1,679	40.7
1978	1,395	495	1,890	26.2
1979	841	113	954	11.8
1980	1,777	586	2,363	24.8
1981	1,067	495	1,562	31.7
1982	1,653	140	1,793	7.8
1983	1,058	393	1,451	27.1
1984	2,753	795	3,548	22.4
1985	2,245	503	2,748	18.3
1986	3,283	1,381	4,664	29.6
1987	2,926	1,523	4,512	33.8
1988	3,884	1,242	5,126	24.2
1989	3,811	1,136	4,947	23.0
1990	4,002	1,068	5,070	21.1
1991	8,599	2,882	11,481	25.1
1992	9,291	1,347	10,638	12.7
1993	13,976	2,176	16,152	13.5
1994	4,658	792	5,450	14.5
1995	6,434	1,618	8,052	20.1
1996	3,128	631	3,759	16.8
1997	1,345	144	1,489	10.0
1998	1,595	432	2,027	21.4
1999	2,395	527	2,922	18.0
2000	1,870	410	2,280	18.0
2001	1,232	228	1,460	15.6
2002	4,789	1,842	6,631	27.8
2003	5,744	785	6,529	12.0
2004	4,600	1,288	5,888	21.9
2005	2,844	1,139	3,983	28.6

Appendix 7. Emperor goose family group counts at the Izembek NWR, 1966-2005.

Year	Total Families	Total Juveniles	Avg. Family Group Size
1966	132	331	2.51
1967	66	215	3.26
1968	40	112	2.80
1969	161	530	3.29
1970	383	1,115	2.91
1971	484	1,318	2.72
1972	210	641	3.05
1974	50	130	2.60
1975	51	149	2.92
1976	207	567	2.74
1977	108	302	2.80
1978	62	188	3.03
1979	53	175	3.30
1980	40	93	2.33
1981	181	571	3.15
1982	32	85	2.66
1983	192	612	3.19
1984	80	230	2.88
1985	125	354	2.83
1986	266	794	2.98
1987	186	577	3.10
1988	200	616	3.08
1989	145	455	3.14
1990	97	309	3.19
1991	147	487	3.31
1992	151	451	2.99
1993	161	441	2.74
1994	301	703	2.34
1995	99	319	3.22
1996	125	330	2.64
1997	43	114	2.65
1998	97	239	2.46
1999	82	200	2.44
2000	105	229	2.18
2001	42	103	2.45
2002	260	696	2.68
2003	218	439	2.01
2004	235	568	2.42
2005	131	365	2.79

Appendix 8. Emperor goose winter productivity estimates, Aleutian Islands, Alaska¹.

Year	Estimates ²			% Juveniles
	Adults	Juveniles	Total	
1988/89	4142	597	4739	12.6
1989/90	5249	923	6172	15
1990/91	3595	537	4132	13
1991/92	13424	2925	16349	17.9
Sum	26410	4982	31392	
Average	6603	1249	7849	15.9

¹ Data supplied by the Alaska Maritime NWR - Aleutians Islands Unit.

² Estimates represent cumulative totals from multiple surveys.

Appendix 9. Reported fall harvest of emperor geese in Alaska, 1970-1986.

Year	Harvest ¹
1970	1,400
1971	715
1972	1,840
1973	2,373
1974	2,067
1975	2,891
1976	2,592
1977	2,198
1978	2,968
1979	2,055
1980	2,306
1981	700
1982	1,770
1983	1,674
1984	1,188
1985	835
1986-Present	Closed

¹ Harvest information based on ADF&G mail questionnaire surveys (1970-76 and 1982-85) and USFWS harvest surveys (1977-81).

Appendix 10. Emperor goose spring population and subsistence harvest estimates, 1985-2002.

Year	Population Size	Y-K Delta		Bristol Bay		Togiak		Alaska Peninsula	
		Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
1985	58,833	4031 (6.9)							
1986	42,231	3091 (7.3)							
1987	51,633	1352 (2.6)							
1988	53,776	No Survey							
1989	45,800	1616 (3.5)							
1990	67,581	3440 (5.1)							
1991	70,962	2394 (3.4)							
1992	71,319	2669 (3.9)							
1993	52,546	2602 (5.0)							
1994	57,267	1493 (2.6)							
1995	54,852	2041 (3.7)							
1996	80,034	2374 (3.0)	123 (0.22)				187 (0.34)		144 (0.26)
1997	57,059	1469 (2.6)	No Survey				32 (0.04)		148 (0.18)
1998	39,749	1899 (4.8)	16 (0.03)				97 (0.17)		236 (0.41)
1999	54,600	818 (1.5)	No Survey				481 (1.20)		126 (0.32)
2000	62,565	1352 (2.2)	37 (0.07)				113 (0.21)		No Survey
2001	84,396	1078 (1.3)	No Survey				59 (0.09)		249 (0.40)
2002	58,743	1250 (2.1)	45 (0.05)				8 (0.01)		173 (0.20)
			NA				NA		NA

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AERIAL SURVEY OF EMPEROR GEESE AND OTHER WATERBIRDS IN SOUTHWESTERN ALASKA, SPRING 2014

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Abstract: We conducted the 32nd annual spring aerial emperor goose survey (1981-2012, 2014) from 23 to 29 April 2014. The survey included coastline and estuarine habitats from Jacksmith Bay to Wide Bay, including the north and south sides of the Alaska Peninsula. We counted a total of 79,883 emperor geese, 18.2% above the 2012 count of 67,588, and 22% above the long-term average (65,486, 1981-2012). The current management index (most recent 3-year average, 2011-12, 2014) is 73,879 (7.4% above the previous 3-yr average of 68,772). Other species of emphasis included Pacific brant and Steller's eider with counts of 64,588 and 15,212, respectively.

Key words: Aerial survey, emperor geese, waterbirds, southwest Alaska. June 2014

INTRODUCTION

Since 1981 we have conducted an annual spring emperor goose survey to monitor spring distribution, abundance, and population trends of emperor geese and other waterbirds at migratory staging areas in southwestern Alaska. The aerial survey was cancelled in 2013 due to aircraft mechanical issues. The survey focuses on coastline and estuarine habitats from southern Kuskokwim Bay south and west along the north side of the Alaska Peninsula to Bechevin Bay and includes the south side of the Alaska Peninsula east to Wide Bay. Survey coverage along the south side of the Alaska Peninsula focuses on known emperor goose use areas and omits habitats where birds have not traditionally been observed staging, based on more inclusive historical surveys. A 3-year moving average of survey totals is used as the population index for management in accordance with the Pacific Flyway Emperor Goose Management Plan (2006). These data provide long-term population trends, distribution, and habitat use for emperor geese and associated species.

METHODS

We flew the 2014 survey between 23-29 April within the core portion of 143 shoreline/estuarine segments (Mallek and Dau 2000; Figure 1). We conducted the survey in an amphibious Cessna 206 (N9623R) flown at 45m (150 feet) above sea level and at 175km/hour (95 knots). Aircraft map displays along with 1:500,000 aeronautical and 1:63,360 topographical maps were used for navigation. Observations of habitat and survey conditions including wind, temperature, sky condition, visibility, sea and fresh-water ice conditions, and tide stage were recorded during the survey.

Survey timing targets spring staging emperor geese on the Alaska Peninsula prior to arrival on the Yukon-Kuskokwim Delta and following their departures from the eastern Aleutian Islands and Kodiak Island. Less than 100% of all emperor geese are within the survey area at the time the survey is conducted, but it is expected that the proportion present is consistent among years. Because not all emperor geese are present within the survey area, the total count is considered a population *index*, rather than a *total population estimate*.

The 2014 survey began on 23 April at Jacksmith Bay (Segment 14) and continued to Nanvak Bay (Segment 22). The portion of the survey from Egegik Bay to Moffet Point (Segments 36-59) was flown on 24 April. Moffet Bay, Izembek Lagoon and Kinzarof Lagoon (Segments 60-65, 84-85) were flown on 25 April. Segments west of Cold Bay (66-68, 80-83) were completed on 28 April along with a replicate survey of Moffet Bay and Izembek Lagoon. The south side of the Alaska Peninsula, east to Wide Bay (within Segments 88-137), was flown on 29 April. We used laptop computers and the aircraft Global Positioning System (GPS) to associate geographic coordinates with each voice-recorded observation. Record and Transcribe programs were used to collect and process data (J. Hodges, MBM-Juneau).

SURVEY CONDITIONS

Ice and snow conditions in 2014 were indicative of the mild 2013-14 winter conditions and an early spring break-up, in comparison to the cold, delayed spring of 2012. Sea ice was absent offshore and in estuaries throughout the survey area in 2014. Only the largest lakes in northern Bristol and Kuskokwim bays (Segments 14-22) had remnant ice. Snow cover was approximately 5% from Nanvak Bay (Seg. 22) north, and was otherwise absent in coastal lowlands throughout the survey area.

April 23: Jacksmith Bay to Dillingham (Segments 14-22): Conditions were good with minimal sun glare seaward of the survey route. Winds were light and variable (≤ 10 knots) and ceilings were scattered to overcast at 2,000-3,000 feet. Air temperatures ranged from 35° to 40°F.

April 24: Dillingham to Cold Bay (segments 36-59): Survey conditions were good. Light southwest winds (≤ 5 knots) increased to southeast at 15 knots with ceilings of 2,500 to $\geq 5,000$ feet scattered to overcast. Air temperatures increased from 30° to 40°F during the day.

April 25: Cold Bay and Izembek Lagoon (Segments 84-85, 60-65): Survey conditions were good with mid-level tide in Izembek Lagoon and high tide in Cold Bay. Ceiling was 2,000 feet overcast with southeast wind at 8 knots and air temperature was 40°F.

April 28: Izembek Lagoon to Bechevin Bay and the southside to Cold Bay (Segments 60-65 [Izembek replicate], 66-68, 80-85): Survey conditions were good with mid-level tide in Izembek Lagoon high tide along the Pacific side of the Alaska Peninsula. Winds were north westerly at 15-20 knots with a ceiling of 900 feet overcast and an air temperature of

45°F.

April 29: Belkofski Bay to Wide Bay (Segments within 88-137). Ceilings were greater than 1,000 feet with thin scattered to clear skies and winds were calm to southerly at ≤ 10 knots. Very little sun glare was encountered and the far east portion of Wide Bay had fog. Air temperature was 45°F.

RESULTS/DISCUSSION

Totals counts in 2014 are presented by survey segment (Table 2). Most emperor geese were found in their traditional estuaries along the Bering Sea coast of the central and western Alaska Peninsula, with slightly lower than average counts (1981-2012) from Cape Newenham north (1 versus 1.9% of the total count), west of Izembek Lagoon (0 versus 0.3%), and along the south side of the Alaska Peninsula (2.6 versus 3.6%). The largest aggregations of emperor geese in 2014 were observed near Port Heiden and Nelson Lagoon. Observations at Unalaska, west of the survey area in the eastern Aleutian Islands, suggested that most emperor geese had departed by 18 April with late stragglers on 20 April (2 adults with 18 juveniles; S. Golodoff, pers. comm.). Near the town of Kodiak, departure of up to 85% of the wintering population was indicated from 13-23 April, with few remnant birds reported on 28 April (R. MacIntosh/S. Berns, pers. comm.).

Emperor Goose

The 2014 emperor goose spring count (79,883) was 18.2% above the 2012 estimate of 67,588 (Dau and Mallek 2013 and Table 2, this report) and 22.0% above the long term average of 65,487 (1981-2012). The current management index (i.e., 3-year average, 2011-12, 2014) of 73,879 birds is 7.4% above the previous average of 68,772 (2010-2012; Table 3). Primary staging sites along the north side Alaska Peninsula held 96.3% of birds observed in 2014, versus the long-term average of 91.4% (1981-2012). Below average counts of emperor geese were made from Jacksmith Bay to Cape Pierce (Segments 14-22; n=814 birds; 1981-2012 average 1,302). No emperor geese were seen in the westernmost areas of Bechevin Bay/Morzhovoi Bay (Segments 67-68/80-81) versus the 1981-2012 average of 157. In 2014, a total of 2,058 (2.6%) were observed along the south side of the Alaska Peninsula (Segments 88-137) versus the 1981-2012 average of 2,846 (3.6%). Observations of the early departures of emperor geese from Unalaska confirm that most migrants from the eastern Aleutian Islands were likely in the survey area. Likewise, observations of migrants from Kodiak Island suggest that most emperor geese from that wintering population were likely in the survey area.

Pacific Brant

We observed a total of 64,588 brant during the 2014 survey (Table 2) which is 9.7% below the long-term average for this spring survey (71,495, 1981-2012). We observed 40,135 brant, 62.1% of the total, in Izembek Lagoon and adjacent areas (Segments 60-68, 80-85). The long-term average for that area is 78.4% (1981-2012). Also, we observed

20,972 brant in Chagvan and Nanvak bays (Segments 20, 22), which is well above the long-term average of 12,349 brant for those segments. Based on these observations, we believe our brant count may have been low due to an accelerated, yet geographically spread migration, in response to the mild, early spring conditions. The first brant were arriving at the Tutakoke River (Yukon-Kuskokwim Delta) on approximately 23 April, as we were beginning the survey (J. Sedinger, pers. comm.), while observations from British Columbia to Oregon, and at Izembek lagoon, indicated some were still enroute from southern wintering and staging areas.

We flew a replicate survey of Izembek (Segments 60-65) and Kinzarof (Segment 85) lagoons on 28 April, during which 50,967 brant were observed. Three days earlier (25 April) our initial count of the area revealed 33,265 brant. Ground-based observations suggested brant were actively arriving to the Izembek area during this period (C. Dau, H. Wilson, and Izembek NWR staff pers. obs.).

Steller's Eider

We observed only 15,212 Steller's eiders during the survey (Table 2). This low count may have also been due to an accelerated migration in response to the mild, early spring conditions, as we indicated with brant. However, only 209 Steller's eiders were observed from Jacksmith Bay to Nanvak Bay (Segments 14-22), indicating that most of the population had likely migrated north of the survey area prior to 23 April. The 2014 count is 68.6% below the long-term average of 48,652 (1981-2012). Distribution was similar to previous years with most Steller's eiders observed from Port Heiden to Izembek Lagoon (11,459 birds, 75.3%). Steller's eider flock composition, recorded by the right seat observer, showed that 90.2% of 41 total observations were of equal ratios (i.e., adult males versus brown-plumaged birds).

CONCLUSIONS

Since an indicated population decline in 1981-82, the trend in the annual population index for emperor geese has remained essentially flat to slightly increasing; with an overall annual growth rate of 0.2% (1981-2012, 2014, Figure 3, Table 3). However, the growth rate since harvest closure in 1987 (1.2%) has been substantially more favorable. This slow, but steadily increasing trend, suggests that the closure to hunting in 1987 may have positively influenced conservation of the species. Overall, continued mortality pressures (anthropogenic and natural) and subdued productivity (relatively low proportion of juveniles counted in the fall) are likely precluding population growth, as indicated by the spring survey index.

Fall age ratios (% hatching-year birds) have declined at approximately 1%/year, with annual estimates around the long-term mean of 0.19 (SD: 0.06) representing a range of poor (0.1-.12) to good (0.23-0.26) years from 1985-2013 (Stehn and Wilson 2014). Six of the past 10 years (60%) and 14 of the overall 29 years (48%) have been below the long-term average juvenile age ratio (Stehn and Wilson 2014); indicating production has been less than ideal. Declining numbers of juveniles lowers potential recruitment of

breeding age adults (3⁺ yrs). The likelihood that birds harvested in spring are breeding-age adults rather than young, is higher in years following a summer of poor production. Mortality of breeding-age adults is especially harmful to the overall emperor goose population because it lowers both current population size and potential production of future goslings. We believe low annual productivity (as indexed by fall age ratios) and a failure to increase adult survival, are the primary factors limiting recovery of the population. A better understanding of additive losses from continued hunting (intentional and unintentional take and crippling) would help quantify this impact on the population. However, this effort will first require more reliable documentation (Wolfe and Paige 2002, Naves 2011).

We believe that two realistic management options for increasing population size are 1) reducing human harvest year-round and 2) increasing nest success and lower gosling predation rates on the Yukon-Kuskokwim Delta. Gosling survival is estimated to be low due to high predation rates, primarily by gulls (Bowman et al. 1997). Gosling growth and survival rates also appear to be negatively influenced by grazing pressure and competition for preferred habitats (Schmutz and Laing 2002). Additional, uncontrollable, negative factors during nesting and brood rearing include storm surge flooding, increased pond salinity and sedimentation, and erosion of nesting habitat. However, emperor geese exhibit high rates of egg production and nest success through late incubation in most years (Fischer and Stehn 2012), which indicates good potential for gosling production.

The following are our views of problems limiting recovery of the emperor goose population and potential management options to address them:

- 1) **Problem:** Illegal hunting in spring, summer, fall and winter. Comprehensive harvest surveys are needed in Alaska and Russia to assess temporal and spatial distribution and age composition within the harvest.
Management option: Increase compliance with regulations through outreach and enforcement to reduce take. Expand and provide analytical support for harvest surveys to better assess take.
- 2) **Problem:** Predation on goslings is high (Bowman et al. 1997), productivity is relatively low, and survival of juveniles is chronically low from pre-fledging through winter (Schmutz et al. 1997).
Management option: Predator management options on the YKD should be evaluated for local and area-wide effectiveness in increasing productivity and gosling survival (Bowman et al. 1997). Monitoring of age and season specific survival rates should be continued. Increase monitoring of climate-change impacts on quantity and quality of nesting and brood rearing habitats.
- 3) **Problem:** Wintering ecology and survival of emperor geese is poorly understood and very low juvenile survival is indicated.
Management option: Quantify mortality factors during winter and

determine if management options exist to reduce them. Marking and satellite tracking studies of emperor geese have helped locate possible study sites (Hupp et al. 2007, 2008a,b).

The spring emperor goose survey continues to provide an index to population size and trend as required by the Pacific Flyway management plan (Pacific Flyway Council 2006 and Alaska Migratory Bird Co-management Council (AMBCC) Technical Subcommittee - Emperor Goose). We believe this survey would benefit from complete or partial replicate counts at high density staging sites (e.g. Port Heiden, Nelson Lagoon, and Izembek). Replicate counts could 1) help qualify the accuracy of the population index and 2) provide useful measures of timing and duration of use of most important sites.

The findings and conclusions in this article are those of the author(s) and do not necessarily represent the views of the U.S. Fish and Wildlife Service.

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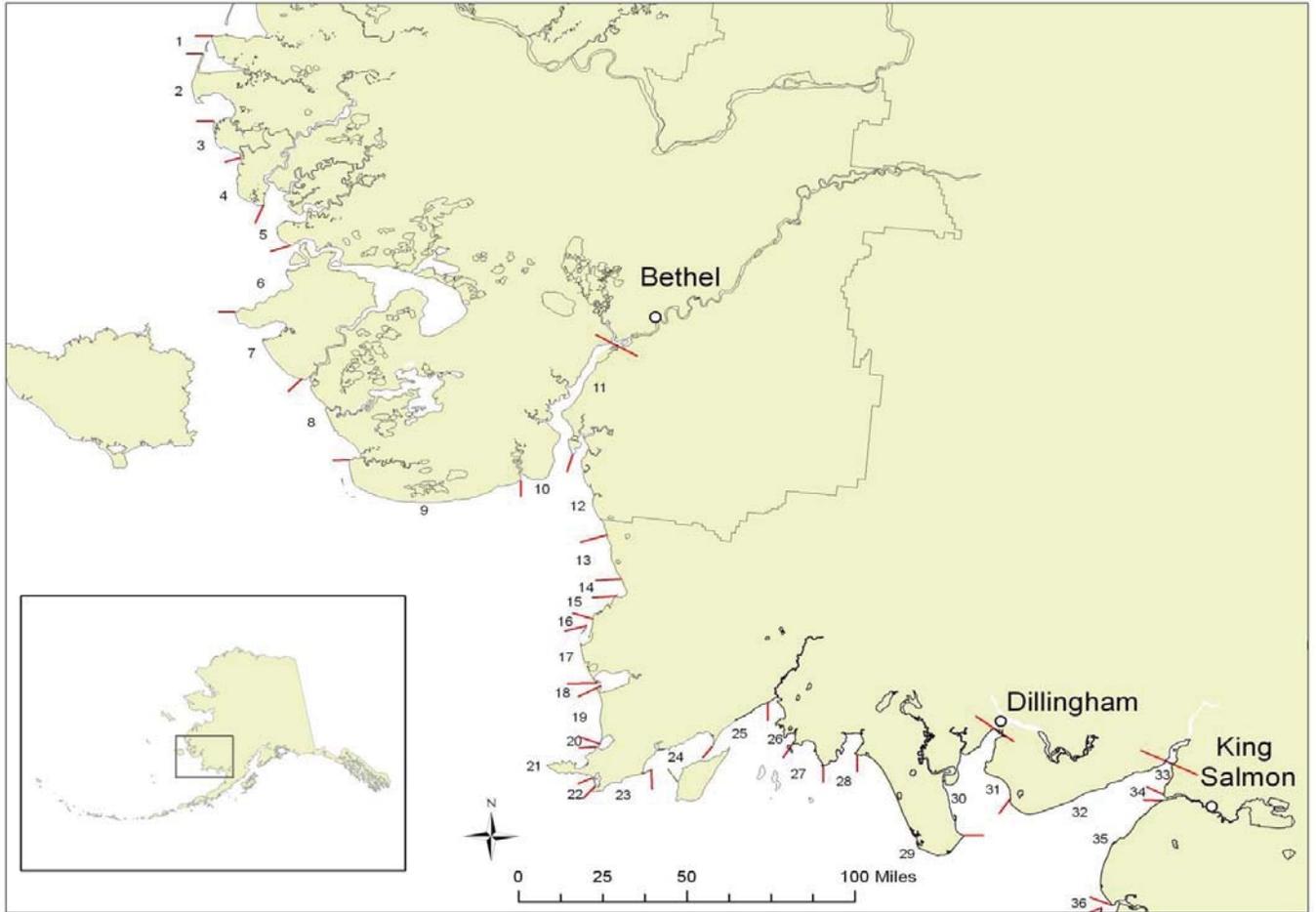


Figure 1. Emperor goose aerial survey segments 1-35, southwest Alaska.

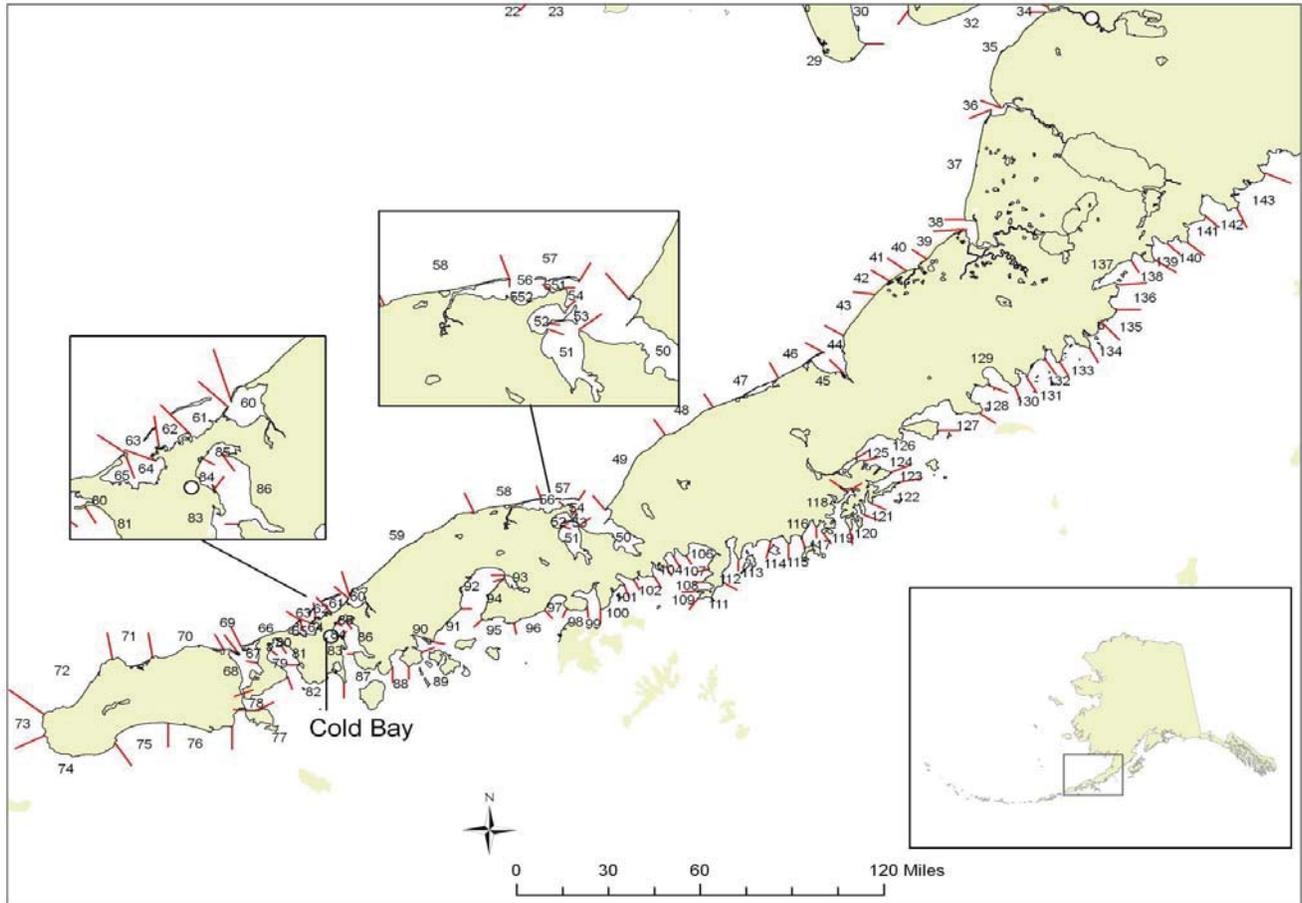


Figure 2. Emperor goose aerial survey segments 35-143, southwest Alaska.

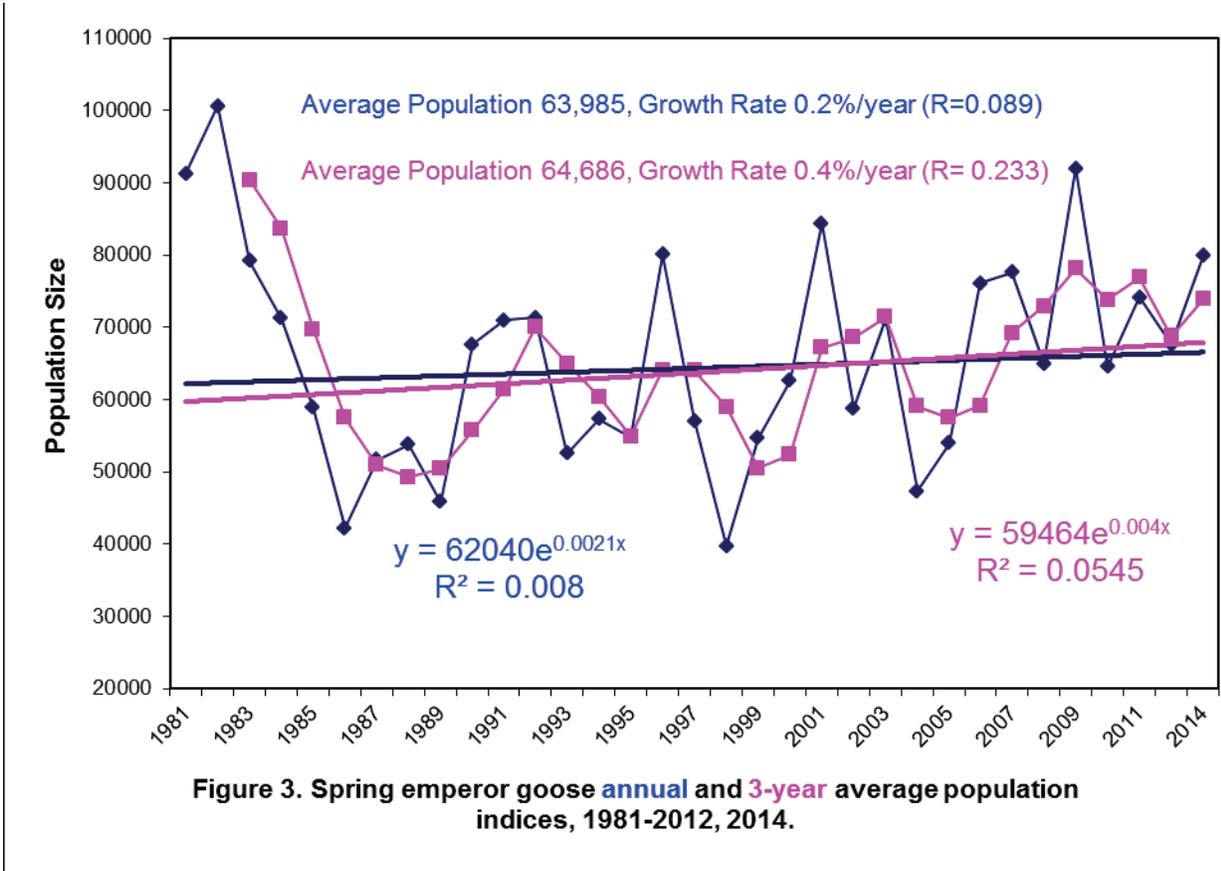


Figure 3. Spring emperor goose annual and 3-year average population indices, 1981-2012, 2014.

Table 1. Snow and ice conditions during spring emperor goose survey in southwest Alaska, 23 April 2014.

AREA	SNOW COVER ¹	MARINE ICE COVER ²
Kokechik Bay	NS	NS
Hooper Bay	NS	NS
Hazen Bay	NS	NS
Carter Bay	<5	0
Goodnews Bay	<5	0
Chagvan Bay	<5	0
Nanvak Bay	<5	0
Relative Phenology³	Very Early	Very Early

¹ Percent snow cover on near-shore freshwater marshes. NS= Not Surveyed.

² Percent of marine ice cover in estuary.

³ Subjective habitat conditions (early, average, late) based on ice and snow cover.

Table 2. Waterbird and mammal observations by segment, southwest Alaska, 23-29 April 2014.

Species	14	15	16	17	18	19	20	22	36	37	38	39	40	41	42	43
Bald Eagle (Ad)									2		1					
Beluga																
Black Brant							18422	2550			50					
Black-legged Kittiwake							2									
Black Scoter		2				20	8		53	332	12	289				
Canada Goose							250									
Common Eider											11					
Common Merganser		4														
Emperor Goose		20		6			778	10	2767	1	4966					
Greater Scaup	3	3	5		27		10	30	240	22	18					
Gray Whale										1		1				
Harlequin Duck												10				
King Eider						4			2	8						
Large Gull	132	32	268	42	181	76	692	633	436	340	850	32				
Long-tailed Duck	2	2	361	1		33	35			192		50				
Mallard									4	2	21					
Mew Gull	6	2	7	2	1	2			306	97	182	180				
Northern Pintail		10							26		20					
Pacific Loon										2						
Pelagic Cormorant					23											
Pigeon Guillemot																
Red-breasted Merganser			74	29	86	7	121	74	2	38	70	8				
Red-throated Loon				2		2			4	44	6					
Sea Otter									3	1	2					
Small Shorebird									500		1200					
Steller's Eider		79	80	50	316		3173	10								
Surf Scoter												2				
White-fronted Goose												10				
White-winged Scoter				1		128			17	112	2	21				

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Table 2 (continued). Waterbird and mammal observations by segment, southwest Alaska, 23-29 April 2014.

Species	44	45	46	47	48	49	50	51	52	53	551	552	56	57	58	59	
Arctic Tern													1	1			
Bald Eagle (Ad)	1					1	2	2				1		1			
Bald Eagle (Juv)			1							1	1			4			
Black Brant				50													
Black Scoter	214	1	637	190	15	2075			1				65	7001	2592	2804	239
Common Eider	10	350	6	2									3	90			
Common Raven				1	1												
Common Goldeneye														1			
Emperor Goose	4427	29851	8	14090						20	1739	4491	1175	1410			
Greater Scaup	115					10		15									
Gray Whale					2	5										1	
Harbor Seal		930		480		121								280	1	60	
King Eider	80					61											
Large Gull	440	196	237	2152	777	651	274	4	431	312	496	900	45	344	993	37	
Long-tailed Duck				2		400								1500		240	
Mew Gull	453	70	176	700	1270	670	500	1040		6	700					40	30
Northern Pintail	600	460		530					75								
Red-breasted Merganser	6		5			15							110		6	1	
Red-throated Loon			1														
Sea Otter		75					6	28		1				418	130	1	
Small Shorebird	500			1030			220					2000	40				
Steller's Eider	5			1600										810	125		
Steller's Sealion						2											
Walrus						1											
White-winged Scoter						559							34	815	1	47	

Table 2 (continued). Waterbird and mammal observations by segment, southwest Alaska, 23-29 April 2014.

Species	60	61	62	63	64	65	66	67	68	80	81	82	83	84	85
Bald Eagle (Ad)			1								1				
Bald Eagle (Juv)				1											
Black Brant	2207	3777	3225	311	17750	5995	304	2700	967	3152	1	30	50		
Black-legged Kittiwake								7							
Black Scoter	236		10				124	2	10	10	53	40	4		
Brown Bear								1	1						
Common Eider									19						3
Common Loon											1	2			
Common Raven														2	
Emperor Goose	1317			45										10	
Greater Scaup	1459		8							15					
Harlequin Duck					5		51	8	30		2		5	7	65
Harbor Seal		60		5					2		2				4
Large Gull	205	78	54	46	3	1000	181	234	366	668	7	113	38	6	223
Long-tailed Duck									1						
Mallard	20	1	104							17					
Mew Gull		43	2			500		9	75	52			5	1	63
Northern Pintail		122	2												
Pelagic Cormorant							1							1	
Red-breasted Merganser	47	27							2	141					75
Sea Otter	194	137	70	11		40	2	88	228		20		1		6
Small Shorebird	2615		225										90		
Steller's Eider	3271	5528	65	60						6					
Tundra Swan			3												
White-winged Scoter	3						25		3					1	2

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Table 2 (continued). Waterbird and mammal observations by segment, southwest Alaska, 23-29 April 2014.

Species	88	90	91	92	93	97	99	101	102	103	104	105	106	107	112	113	114	115
Bald Eagle (Ad)	3		1	1		1	4		1			1	1			1		
Bald Eagle (Juv)								1								3	1	
Black Brant	4	733	20	66				30										
Black Scoter	18	2		7	28	6	13				65		12	10	35	26	23	30
Bufflehead	12	20					14								45			
Common Loon	3	1	3			5	20	1		1	5	1	8	9		4		
Common Raven					1													
Doublr-crested Cormorant					1			1				1	2			1		
Emperor Goose		15	10	149	15							15			190			
Common Goldeneye					2			2										
Greater Scaup							20							1				
Gray Whale																1		
Harlequin Duck	4	33		80	248	33	199	34	42		9	98	32	19	32		30	
Harbor Seal					21	2	6	60			2					2	1	
Large Gull	33	618	16	739	394	41	3	8	41	1	2	3	5	6	65	7	10	8
Long-tailed Duck						2	1	1										
Mallard					55		2											
Mew Gull	5	2		111	56	14	14	13	4				40	27	260	42	2	14
Pelagic Cormorant			3												1	23	6	2
Pigeon Guillemot														1		3	1	
Red-breasted Merganser	80	10	32		25		148	2	4		1			8	179	16		
Lesser Sandhill Crane		2																
Sea Otter	2		13	10														
Small Shorebird				6700	400								30					
Steller's Eider		6			2		20	2										
Steller's Sealion							1								1			
Surf Scoter						20												3
White-winged Scoter	22		2				4					3	4		15			

Table 2 (continued). Waterbird and mammal observations by segment, southwest Alaska, 23-29 April 2014.

Species	116	117	118	125	126	127	128	129	130	131	132	133	134	135	136	137	Survey Total
Arctic Tern																	2
Bald Eagle (A)		1	1	1	1	3			2	1		7	1	1	3	1	53
Bald Eagle (J)				1	1	1						1					18
Bald Eagle (N)																	Note
Black Brant				1700	3		80	26	39			21				325	64588
Black-legged Kittiwake												200					209
Black Scoter				275	157	65	5	45				33				92	19400
Brown Bear		1						1						1			5
Bufflehead												20	2				91
Canada Goose																	250
Common Eider																2	496
Common Loon			4	2	5	1	1	3				5	2	1		4	94
Common Merganser																	4
Common Murre	2		2														4
Common Raven					2		1	21			1					1	33
Double-crested Cormorant					5		2	1	2				1				17
Emperor Goose					185	75	369	311		270	45	25	80		1160	498	79883
Common Goldeneye				8		4		7									5
Greater Scaup				4			2					30				1	2279
Gray Whale					1	1					2				1		17
Harlequin Duck				77	6	77		26	55	3		135		29	30	74	1588
Harbor Seal		30	2	7		3	100	4				25				3	3170
Humpback Whale																	1
King Eider					25												186
Large Gull	15	45	74	3203	145	531	90	48	61	3	17	355	68	83	125	393	24264
Long-tailed Duck																	3405
Mallard				1													269
Mew Gull	300		2	368	8	206	1	125	12	50		294				26	11408
Northern Pintail																	2141
Pacific Loon																	2
Pelagic Cormorant			3	2								2				1	68
Pigeon Guillemot																	5
Red-breasted Merganser				195	17	4	11	26	2	2				1		39	2199
Red-throated Loon																	61
Lesser Sandhill Crane																	2
Sea Otter					16	13		6				1				3	1526
Small shorebird (spp)						10		1							8		18259
Steller's Eider								1	3								15212
Steller's Sealion																	5
Surf Scoter					8	40									8	21	108
Tundra Swan												2					7
Walrus																	1
White-fronted Goose																	10
White-winged Scoter			1	1	20	64	10	5			1					21	1985

Table 3. Spring emperor goose survey data, southwest Alaska, 1981-2012, 2014.

YEAR	TOTAL	% CHANGE	3-YR AVG.	% CHANGE	DATES	OBSERVERS	SURVEY AREA
1981	91267				4/23-4/27	R.King/R.Gill/J.Sarvis/C. Dau	Y-K Delta to Wide Bay
1982	100643	0.093			5/2-5/4	R.King/C.Dau/M.Reardon/ B. Reiswig	Kuskokwim Bay to Wide Bay
1983	79155	-0.271	90355		4/25-4/29	R.King/C.Dau/V.Berns/ J.Solberg	Kuskokwim Bay to Wide Bay
1984	71217	-0.111	83672	-0.074	4/26-5/4	R.King/C.Dau/V.Berns/ R.Arment	Kuskokwim Bay to Cape Douglas
1985	58833	-0.210	69735	-0.167	5/12-5/16	R.King/C.Dau	Kuskokwim Bay to Cape Chiniak
1986	42231	-0.393	57427	-0.176	5/4-5/7	"	Nelson Island to Cape Atushagvik
1987	51633	0.182	50899	-0.114	4/30-5/4	"	Hooper Bay to Puale Bay
1988	53784	0.040	49216	-0.033	5/2-5/6	"	Hooper Bay to Cape Chiniak
1989	45800	-0.174	50406	0.024	5/3-5/6	"	Hooper Bay to Portage Bay
1990	67581	0.322	55722	0.105	4/28-5/4	"	Hooper Bay to Portage Bay
1991	70972	0.048	61451	0.103	5/2-5/7	"	Hooper Bay to Puale Bay
1992	71319	0.005	69957	0.138	4/30-5/5	"	Hooper Bay to Cape Kubugakli
1993	52546	-0.357	64946	-0.072	4/30-5/5	"	Hooper Bay to Wide Bay
1994	57267	0.082	60377	-0.070	4/29, 5/2-6	"	Hooper Bay to Wide Bay
1995	54852	-0.044	54888	-0.091	5/3-5/6	"	Hooper Bay to Chignik Lagoon
1996	80034	0.315	64051	0.167	4/27-4/30	"	Hooper Bay to Puale Bay
1997	57059	-0.403	63982	-0.001	4/25-4/28	"	Hooper Bay to Wide Bay
1998	39749	-0.435	58947	-0.079	5/4-5/7	"	Hooper Bay to Wide Bay
1999	54600	0.272	50469	-0.144	4/27-5/1	"	Hooper Bay to Wide Bay
2000	62565	0.127	52305	0.036	4/28-5/3	E.Mallek/C.Dau	Hooper Bay to Chignik Lagoon
2001	84396	0.259	67187	0.285	4/29-5/4	"	Hooper Bay to Puale Bay
2002	58743	-0.437	68568	0.021	5/3-5/6	"	Kuskokwim Bay to Wide Bay
2003	71160	0.174	71433	0.042	4/29-5/3	"	Hooper Bay to Wide Bay
2004	47352	-0.503	59085	-0.173	4/30-5/3	"	Hooper Bay to Wide Bay
2005	53965	0.123	57492	-0.027	4/20-4/23	"	Kuskokwim Bay to Wide Bay
2006	76108	0.291	59142	0.029	4/27-5/2	"	Kuskokwim Bay to Wide Bay
2007	77541	0.018	69205	0.170	4/24-4/29	"	Kuskokwim Bay to Kuiukta Bay
2008	64944	-0.194	72864	0.053	4/29-4/30	"	Naknek to Bechevin Bay
2009	91948	0.294	78144	0.072	5/1-5/3	"	Kuskokwim Bay to Wide Bay
2010	64562	-0.424	73818	-0.055	4/27,5/1-5/2	"	Kuskokwim Bay to Canoe Bay
2011	74166	0.129	76892	0.042	4/27, 4/29-5/1	"	Kuskokwim Bay to Canoe Bay
2012	67588	-0.097	68772	-0.106	4/25-4/27	"	Kuskokwim Bay to Wide Bay
2013						No Survey	
2014	79883	0.182	73879	0.074	4/23-25,4/29	H.Wilson/C.Dau	Kuskokwim Bay to Wide Bay

ANNUAL REPORTS

Background

ANILCA established the Annual Reports as the way to bring regional subsistence uses and needs to the Secretaries' attention. The Secretaries delegated this responsibility to the Board. Section 805(c) deference includes matters brought forward in the Annual Report.

The Annual Report provides the Councils an opportunity to address the directors of each of the four Department of Interior agencies and the Department of Agriculture Forest Service in their capacity as members of the Federal Subsistence Board. The Board is required to discuss and reply to each issue in every Annual Report and to take action when within the Board's authority. In many cases, if the issue is outside of the Board's authority, the Board will provide information to the Council on how to contact personnel at the correct agency. As agency directors, the Board members have authority to implement most of the actions which would effect the changes recommended by the Councils, even those not covered in Section 805(c). The Councils are strongly encouraged to take advantage of this opportunity.

Report Content

Both Title VIII Section 805 and 50 CFR §100.11 (Subpart B of the regulations) describe what may be contained in an Annual Report from the councils to the Board. This description includes issues that are not generally addressed by the normal regulatory process:

- an identification of current and anticipated subsistence uses of fish and wildlife populations within the region;
- an evaluation of current and anticipated subsistence needs for fish and wildlife populations from the public lands within the region;
- a recommended strategy for the management of fish and wildlife populations within the region to accommodate such subsistence uses and needs related to the public lands; and
- recommendations concerning policies, standards, guidelines, and regulations to implement the strategy.

Please avoid filler or fluff language that does not specifically raise an issue of concern or information to the Board.

Report Clarity

In order for the Board to adequately respond to each Council's annual report, it is important for the annual report itself to state issues clearly.

- If addressing an existing Board policy, Councils should please state whether there is something unclear about the policy, if there is uncertainty about the reason for the policy, or if the Council needs information on how the policy is applied.
- Council members should discuss in detail at Council meetings the issues for the annual report and assist the Council Coordinator in understanding and stating the issues clearly.

- Council Coordinators and OSM staff should assist the Council members during the meeting in ensuring that the issue is stated clearly.

Thus, if the Councils can be clear about their issues of concern and ensure that the Council Coordinator is relaying them sufficiently, then the Board and OSM staff will endeavor to provide as concise and responsive of a reply as is possible.

Report Format

While no particular format is necessary for the Annual Reports, the report must clearly state the following for each item the Council wants the Board to address:

1. Numbering of the issues,
2. A description of each issue,
3. Whether the Council seeks Board action on the matter and, if so, what action the Council recommends, and
4. As much evidence or explanation as necessary to support the Council's request or statements relating to the item of interest.

**Department of the Interior
U. S. Fish and Wildlife Service**

Bristol Bay Subsistence Regional Advisory Council

CHARTER

1. **Committee's Official Designation.** The Council's official designation is the Bristol Bay Subsistence Regional Advisory Council (Council).
2. **Authority.** The Council is reestablished by virtue of the authority set out in the Alaska National Interest Lands Conservation Act (16 U.S.C. 3115 (1988)) Title VIII, and under the authority of the Secretary of the Interior, in furtherance of 16 U.S.C. 410hh-2. The Council is established in accordance with the provisions of the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C., Appendix 2.
3. **Objectives and Scope of Activities.** The objective of the Council is to provide a forum for the residents of the region with personal knowledge of local conditions and resource requirements to have a meaningful role in the subsistence management of fish and wildlife on Federal lands and waters in the region.
4. **Description of Duties.** The Council possesses the authority to perform the following duties:
 - a. Recommend the initiation of, review, and evaluate proposals for regulations, policies, management plans, and other matters relating to subsistence uses of fish and wildlife on public-lands-within the region.
 - b. Provide a forum for the expression of opinions and recommendations by persons interested in any matter related to the subsistence uses of fish and wildlife on public lands within the region.
 - c. Encourage local and regional participation in the decision making process affecting the taking of fish and wildlife on the public lands within the region for subsistence uses.
 - d. Prepare an annual report to the Secretary containing the following:
 - (1) An identification of current and anticipated subsistence uses of fish and wildlife populations within the region.
 - (2) An evaluation of current and anticipated subsistence needs for fish and wildlife populations within the region.

- (3) A recommended strategy for the management of fish and wildlife populations within the region to accommodate such subsistence uses and needs; and
 - (4) Recommendations concerning policies, standards, guidelines and regulations to implement the strategy.
 - e. Appoint three members to the Lake Clark National Park and three members to the Aniakchak National Monument Subsistence Resource Commissions, in accordance with Section 808 of the Alaska National Interest Lands Conservation Act (ANILCA).
 - f. Make recommendations on determinations of customary and traditional use of subsistence resources.
 - g. Make recommendations on determinations of rural status.
 - h. Provide recommendations on the establishment and membership of Federal local advisory committees.
- 5. Agency or Official to Whom the Council Reports.** The Council reports to the Federal Subsistence Board Chair, who is appointed by the Secretary of the Interior with the concurrence of the Secretary of Agriculture.
- 6. Support.** The U.S. Fish and Wildlife Service will provide administrative support for the activities of the Council through the Office of Subsistence Management.
- 7. Estimated Annual Operating Costs and Staff Years.** The annual operating costs associated with supporting the Council's functions are estimated to be \$135,000, including all direct and indirect expenses and 1.0 staff years.
- 8. Designated Federal Officer.** The DFO is the Subsistence Council Coordinator for the region or such other Federal employee as may be designated by the Assistant Regional Director - Subsistence, Region 7, U.S. Fish and Wildlife Service. The DFO is a full-time Federal employee appointed in accordance with Agency procedures. The DFO will:
- Approve or call all of the Council and subcommittee meetings;
 - Prepare and approve all meeting agendas;
 - Attend all Council and subcommittee meetings;
 - Adjourn any meeting when the DFO determines adjournment to be in the public interest; and
 - Chair meetings when directed to do so by the official to whom the advisory committee reports.

9. Estimated Number and Frequency of Meetings. The Council will meet 1-2 times per year, and at such times as designated by the Federal Subsistence Board Chair or the DFO.

10. Duration. Continuing.

11. Termination. The Council is subject to biennial review and will terminate 2 years from the date the charter is filed, unless prior to that date, the Charter is renewed in accordance with the provisions of Section 14 of the FACA. The Council will not meet or take any action without a valid current charter.

12. Membership and Designation. The Council's membership is composed of representative members as follows:

Ten members who are knowledgeable and experienced in matters relating to subsistence uses of fish and wildlife and who are residents of the region represented by the Council. To ensure that each Council represents a diversity of interests, the Federal Subsistence Board in their nomination recommendations to the Secretary will strive to ensure that seven of the members (70 percent) represent subsistence interests within the region and three of the members (30 percent) represent commercial and sport interests within the region. The portion of membership representing commercial and sport interests must include, where possible, at least one representative from the sport community and one representative from the commercial community.

The Secretary of the Interior will appoint members based on the recommendations from the Federal Subsistence Board and with the concurrence of the Secretary of Agriculture.

Members will be appointed for 4-year terms. If no successor is appointed on or prior to the expiration of a member's term, then the incumbent member may continue to serve until the new appointment is made or 120 days past the expiration of term, whichever is sooner. A vacancy on the Council will be filled by an appointed alternate, if available, or in the same manner in which the original appointment was made. Members serve at the discretion of the Secretary.

Council members will elect a Chair, a Vice-Chair, and a Secretary for a 1-year term.

Members of the Council will serve without compensation. However, while away from their homes or regular places of business, Council and subcommittee members engaged in Council, or subcommittee business, approved by the DFO, may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in Government service under Section 5703 of Title 5 of the United States Code.

13. Ethics Responsibilities of Members. No Council or subcommittee member may participate in any specific party matter in which the member has a direct financial interest in a lease, license, permit, contract, claim, agreement, or related litigation with the

Department.

14. **Subcommittees.** Subject to the DFO's approval, subcommittees may be formed for the purposes of compiling information or conducting research. However, such subcommittees must act only under the direction of the DFO and must report their recommendations to the full Council for consideration. Subcommittees must not provide advice or work products directly to the Agency. The Council Chair, with the approval of the DFO, will appoint subcommittee members. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.
15. **Recordkeeping.** Records of the Council, and formally and informally established subcommittees of the Council, shall be handled in accordance with General Records Schedule 26, Item 2, or other approved Agency records disposition schedule. These records shall be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.

Secretary of the Interior

Date Signed

Date Filed



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Togiak National Wildlife Refuge

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INFORMATION BULLETIN - December 2014

The Roles of Alder and Salmon in Driving Aquatic Productivity Contact: Pat Walsh

In 2010, Togiak Refuge, the University of Illinois, the University of Washington, and ADF&G began a 4-year project to determine the relative role of salmon and alder in controlling productivity in lakes. Both salmon and alder contribute nutrients to lakes: Salmon contribute via decomposition of carcasses after spawning, and alder does so through nitrifying the soil, and by mobilizing soil nutrients which would otherwise be biologically inaccessible. This project will measure the contribution of nutrients from both sources by analyzing water samples from thirteen Refuge lakes collected over a four year period. The information that will come from this project will help salmon managers better understand the ecological consequences of harvest. Since 2010, we have installed water quality and quantity monitoring equipment at 13 lakes on Togiak Refuge. We monitored stream discharge in summer and fall at 26 streams entering the study lakes in order to estimate lake water budgets. We performed aerial sockeye salmon surveys at all study lakes and estimated run size in each. We completed the final round of sampling in summer 2013 and have begun analysis. A progress report is available.

Cooperative Salmon Escapement Monitoring Projects. Contact: Mark Lisac

In 2014 the Federal Subsistence Board cancelled the funding for the salmon escapement monitoring projects (weirs) on the Kanektok (KRW) and Middle Fork Goodnews (MFGRW) Rivers. ADFG and Coastal Villages Seafood provided the bulk of the funding to operate both projects although

counting for the coho salmon spawning season was cancelled due to the lack of Federal funding. Funding for 2015 is still up in the air.

On the Middle Fork Goodnews River, ADF&G has monitored Chinook, chum and sockeye salmon escapement since 1980. Escapement goals and management of the commercial fishery are based on salmon escapement at the weir. Togiak Refuge has worked with ADF&G since 1992 to include the coho salmon and Dolly Varden runs in the project operation. ADF&G funds the project operation. Togiak Refuge provided staff support; one intern from the Careers Discovery Internship Program (CDIP) for the MFGRW. The MFGRW was operated from 25 June to 1 September.

On the Kanektok River, ADF&G, Native Village of Kwinhagak, Coastal Villages and Togiak Refuge have worked cooperatively to monitor salmon and Dolly Varden runs since 2001. This project is currently funded by Coastal Villages Region Fund and ADF&G. Escapement goal ranges have not been established for the Kanektok River because the weir has not been operational for enough years. This weir began operation 27 June and operated until 15 August.

Preliminary escapement counts for the MFGRW and KRW thru mid-August 2014 are:

	Chinook	Sockeye	Chum	Coho	Pink	Dolly V.
MFGRW	750	41,496	11,506	na	9,287	6,369
KRW	3,594	256,969	18,586	na	25,718	46,040

<http://www.adfg.alaska.gov/static/applications/dfnewsrelease/496937848.pdf>

Arctic Char Population Inventory Contact: Mark Lisac

Togiak Refuge has developed a multi-year study to inventory Arctic char populations throughout the Refuge. This species is confirmed to occur in 27 lakes and are likely to be found in many more. In 2014 we visited eleven lakes and documented Arctic char in 9. We collected size and genetic information from 254 fish and provided the UAF museum with voucher specimens. If you have any first hand knowledge of small or unique Arctic char populations and would be willing to share that information please contact Mark Lisac at the Refuge office.

Mulchatna Caribou Contact: Andy Aderman

Togiak Refuge assisted ADF&G with telemetry monitoring flights, radiocollar deployment, satellite data acquisition, data entry and database management. A photocensus conducted July 1-2, 2014 estimated 26,000 caribou. A composition survey on October 14-15, 2014 estimated 30

calves and 35 bulls per 100 cows. The calf to cow ratio was also higher than all but two years since 1998. The bull to cow ratio was the highest recorded since 2000, and has been increasing steadily over the past 5 years (Neil Barten, ADF&G, personal communication).

Nushagak Peninsula Caribou Contact: Andy Aderman

In 2014, 14 of 18 (77.8%) radio-collared adults produced a calf while 3 of 4 (75%) radio-collared two-year olds were observed with a calf. A photocensus on June 30 found a minimum of 1,018 caribou on the Nushagak Peninsula. A similar effort on July 17 tallied 1,014 caribou. The July 2013 photocensus found a minimum of 926 caribou. For the 2014 fall hunt, 200 permits were made available and hunters reported harvesting 15 caribou (13 bulls and 2 cows). Permits issued for the fall hunt (Aug 1-Sep 30) are also valid for the winter hunt (Dec 1–Mar 31). An additional 200 permits were made available in November for the winter hunt. A composition survey on October 16, 2014 estimated 52.5 calves and 43.8 bulls per 100 cows. Ratios over the previous 5 years averaged 41.8 calves and 38.5 bulls per 100 cows.

Moose Contact: Andy Aderman

In 2014, 26 of 36 (72.2%) radio-collared adult cows produced 38 calves suggesting a production rate of 105.6 calves per 100 adult cows. Twinning rate was 46.2%. Two of 3 (66.7%) radio-collared two-year old cows each produced a single calf. Reported fall 2014 harvest in Unit 17A was 36 bulls by residents and 4 bulls by non-residents (Neil Barten, ADF&G, personal communication). Reported fall 2014 harvest in Unit 18-Goodnews River drainage and south was 14 bulls (Phillip Perry, ADF&G, personal communication). Population surveys in the Unit 17A and 18 portions of Togiak Refuge are planned for the 2014-2015 winter.

The relationships of wolf and brown bear predation with moose population density and growth at Togiak National Wildlife Refuge and BLM Goodnews Block, Alaska Contact: Pat Walsh

In summer 2014, Togiak Refuge, the USFWS Conservation Genetics Lab, ADF&G, and BLM initiated a study to understand the effects of wolf and brown bear predation in regulating the population dynamics of moose on Togiak Refuge, BLM Goodnews Block, and adjacent areas. The study relies on radio telemetry and stable isotope analysis. Our approach will be to relate the predation impact by wolves and bears on moose at varying levels of moose population density. We will use existing population estimates for brown bears, and through the use of radio telemetry, we will estimate the number and composition of wolf packs on the Refuge. We will model wolf and bear predation on moose based on the quantity of wolves and bears and diet composition of both species determined through analysis of carbon and nitrogen stable isotopes occurring in bear and wolf hair. Hair will be collected from wolves when captured during radio collaring operations, and will be collected from brown bears using break-away hair snares. We plan to capture and radio wolves in March 2015. During July-August 2014, we deployed approximately 200 snares, and collected approximately 100 hair samples.

Walrus Contact: Michael Swaim

The number of Pacific walrus at haulout sites on Togiak Refuge was monitored annually

since 1985. Beginning in 2012, beaches at Cape Peirce and Hagemeister Island were monitored using Reconyx wildlife cameras that collected photos once per hour. Cameras were deployed at haulout sites on Cape Newenham in 2014.

Seabirds Contact: Michael Swaim

The abundance and reproductive success of black-legged kittiwakes, common murre, and pelagic cormorants was monitored annually at Cape Peirce from 1990-2014, and intermittently at Cape Newenham from 1990-2009. During this period, the estimated number of kittiwakes and murre at Cape Peirce decreased, while the number of pelagic cormorants remained relatively constant. From 1991-2009, the number of kittiwakes counted at Cape Newenham averaged 2,132 birds (range 1,676-2,424), the mean number of murre was 5,815 (range 4,964-6,790), and the mean number of cormorants was 15 birds (range = 5-30). The long-term productivity of kittiwakes, murre, and cormorants at Cape Peirce averaged 24%, 42%, and 53% respectively between 1990 and 2014.

Water Temperature Monitoring Contact: Michael Swaim

Stream temperature was monitored at 18 sites on 14 rivers in Togiak Refuge between 2001 and 2013. Temperature was recorded on an hourly basis using Onset TidbiT dataloggers and the data were successfully recovered from the field ~75% of the time. Over 1.8 million hourly temperature records have been collected, quality-graded, and entered into a relational database. Maximum daily mean temperature readings varied from 11.5—19.6° C between sites, with the Kukaktlim Lake outlet site being the warmest and the Weary River the coldest.

Quantifying River Discharge Contact: Mark Lisac

Togiak Refuge and the USFWS Water Resources Branch have worked cooperatively since 1999 to acquire baseline hydrologic data of the flow regime (magnitude, duration, timing, frequency, and rate of change) and water quality. A network of stream discharge gages collected stream flow data from 1999-2005 at 20 locations. A subset of five of these stations continued to collect data through fall 2009, after which three of the five stations were removed. We will continue indefinitely to monitor discharge in the Togiak and Kulukak Rivers. Each gage is instrumented with pressure sensors that measure water level every 15 minutes. Discharge measurements are made in the field 3 to 6 times a year. In 2014 satellite transmitters were added to the stream gages that allow remote monitoring of the equipment.

Education and Outreach Contact: Terry Fuller

Togiak Refuge has an active education and outreach program including the Migratory Bird Calendar; National Wildlife Refuge Week; career fairs; production of Bristol Bay Field Notes (a new episode airs every Friday morning at 8:50 am on KDLG); and numerous teacher requested classroom presentations in 12 villages in the Southwest Region, Lower Kuskokwim, Dillingham City school districts and the Dillingham 7th Day Adventist School. Field trips with area students

for the 2013-2014 school year included bird walks, animal tracks and ID, archery, salmon life cycles, aquatic resources and bear safety. The refuge website is also a valuable education tool and is available at <http://togiak.fws.gov>. Togiak Refuge has a very active Facebook page which disseminates information on a daily basis to a rapidly growing global audience. The Refuge held an open house on Saturday, September 27th at the Refuge Headquarters celebrating the 50th anniversary of the signing of the Wilderness Act; about 150 people participated. Also, the refuge partners with others to conduct three environmental education camps described below:

Cape Peirce Marine Science and Yup'ik Culture Camp Contact: Terry Fuller

July 2014 saw a return of the junior high Science camp to the Cape Peirce site, after a three year hiatus due to poor weather and funding cuts. Students at this camp were able to observe seabirds, marine mammals and learn how field studies are conducted, as well as learning about food webs and ecological relationships. Students and agency staff also learned about traditional Yup'ik uses of animals and plants and about Native survival skills. This camp is designed to help students gain a better understanding of the biological diversity of a marine ecosystem. It also strengthens their sense of stewardship for local natural resources. Other topics at this camp included tide pools, wilderness survival skills, archery, bear safety, Leave No Trace camping practices and careers with USFWS. Traditional councils and school districts from throughout western Bristol Bay are cooperators with this camp.

Southwest Alaska Science Academy Contact: Terry Fuller

This past July (2014), Togiak Refuge helped with the 13th year of a summer camp aimed at teaching middle and high school students about fisheries science and the importance of salmon to our ecosystem. Students were selected from the Bristol Bay region. During the camp students worked in the field alongside fisheries professionals. Cooperators with the refuge on this project included the Bristol Bay Economic Development Corporation, Bristol Bay Science and Research Institute, University of Alaska, University of Washington School of Fisheries, the Dillingham City and Southwest Region school districts, and the Alaska Department of Fish and Game. This year Togiak Staff were able to share with camp students about the following: identifying the different species of Pacific salmon at various stages in their development, the salmon life cycle, jobs associated with the fishing industry, salmon in art (fish taxidermy), wilderness survival skills and archery.

Summer Outdoor Skills and River Ecology Float Camp Contact: Terry Fuller

The 2014 Float Camp took place on the Ongivinuk River. At this camp, students learned about river ecosystems and how to enjoy them safely and responsibly while taking part in a float trip conducted on a refuge river. Students observed and learned about the many fish, wildlife and plant species found on the Ongivinuk. Rafting skills, water safety, different angling practices (Catch and Release), Leave No Trace camping practices and bear safety were topics during the trip. Students also participated in other outdoor activities such as animal tracking (plaster casting tracks) and wilderness survival skills. This camp helps students understand the biological diversity of riparian ecosystems and the importance of salmon as a nutrient source, while

developing a deeper sense of stewardship for local natural resources. Traditional councils and school districts from throughout western Bristol Bay are cooperators with this camp.

River Ranger Program Contact: Allen Miller

The Refuge River Ranger Program was conceived during the public use management planning process and was first implemented in 1991. The program serves many purposes. River Rangers are the main contact source for sport fishermen and local residents. Information distributed to the public includes Service policies, regulations, resource management practices, State sport fish regulations, bear safety, wilderness ethics, Leave-No-Trace camping, and information about private lands to prevent trespass. Rangers document public use occurring on the river along with the location and timing of activities, conflicts between users, and sport fish catch/harvest per unit effort. Rangers also assist Refuge and ADF&G staff at the Kanektok River weir, and assist Refuge staff with biological studies. In addition, Rangers patrol campsites for litter, monitor compliance of sport fishing guides, and offer assistance as needed. Quinhagak Resident

Charlie Roberts was hired for summer 2014 to work as a River Ranger on the Kanektok River with Refuge Information Technician (RIT) John Mark. Togiak Resident Keemuel Kenrud was hired as an intern through the Bristol Bay Economic Development Corporation and was assigned to the Togiak River to work with RIT Pete Abraham.

Staff Changes

In March, Wildlife Biologist Michael Winfree left to pursue a Master of Science degree at the University of Alaska-Fairbanks. In June, Pilot Mike Hink resigned his position. In August, Deputy Refuge Manager Tevis Underwood accepted the same position at Kodiak National Wildlife Refuge. In August, Pilot Andy Flack transferred to the Togiak Refuge from Kanuti Refuge. In December, Supervisory Park Ranger/Visitor Services Program Manager Allen Miller accepted a new position as the Togiak Deputy Refuge Manager. During 2014, Togiak Refuge hosted Directorate Fellow Rachel Ruden, Career Development Intern Isaac Jackson, and Bristol Bay Economic Development Corporation Interns Mahlet Herrmann and Keemuel Kenrud.



United States Department of the Interior

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Agency Report to:

Bristol Bay Federal Subsistence Regional Advisory Council

Public Meeting, Dillingham, Alaska

October 28 - 29, 2014

Mammal Projects

Project: *Northern Alaska Peninsula Caribou Herd Composition Surveys (GMU 9)*

Composition surveys are generally not intended to estimate herd size but they provide important information regarding the age and sex composition of caribou herds. This information is used by managers to evaluate the status and trends of caribou herds. The Alaska Department of Fish & Game accomplished a composition survey of the Northern Alaska Peninsula Caribou Herd (NAPCH) during October 16–17, 2014. Sample size (2,295) and distribution of caribou were adequate to estimate herd composition during 2014. Estimated composition ratios were 34 calves:100 cows and 40 bulls:100 cows. The observed calf:cow ratio represents the highest estimated calf recruitment observed in the NAPCH since 2002 and shows continued improvement in early calf survival. Continued improvement in bull:cow ratios also suggests that late calf survival in this herd continues to improve. Bull:cow ratios in the NAPCH are now above ADF&G management objectives for this herd and increasing trends in these herd demographics suggest that limited bull-only subsistence harvests may be possible in the near future.

Project: *Moose Composition and Trend Surveys Summary (GMUs 9C & 9E) 2013–2014*

Poor weather and survey conditions (e.g., inadequate snow cover, high winds) frequently limit moose composition and trend-area surveys in GMU 9 and many areas are infrequently surveyed. During the 2013-2014 winter season, survey conditions were extremely poor throughout GMU 9 with little or no snow present for surveys. Consequently, no moose composition or trend-area surveys could be conducted during the 2013-2014 survey season. The Refuges plan to conduct both moose composition and trend-area surveys during the upcoming 2014-2015 winter survey season when

survey conditions are present.

Project: **Moose Reproduction and Survival Study**

The Refuge continues to study moose reproduction and survival on the Northern Alaska Peninsula. The primary objective of this study is to estimate annual twinning rates and calf survival. Twenty six cow moose with radio-collars are tracked regularly throughout the year. These radio-collared cows are easily identifiable by the large numbered tag attached to the collar. Because the proportion of cows giving birth to twins versus cows birthing single calves is influenced by nutrition, this study uses twinning rates of radio-collared moose as an indirect measure of the moose population's nutritional condition and overall health. Relatively high twinning rates in the study area suggest that habitat is not a primary factor limiting moose abundance. In addition, captured adult and yearling cow moose appeared to be in good to excellent body condition, further suggesting good nutritional condition among moose in the area.

Chronically low calf survival appears to be the principal factor limiting moose population growth on the Alaska Peninsula. Although the actual causes of calf mortalities cannot be identified without intensive and expensive calf monitoring projects, the timing of calf mortalities suggests that predation is probably the primary factor limiting calf survival within the study area. In addition, bears have also been documented as the cause of several mortality events including one cow and her three day old calf during 2014. Further, GPS location data show that radio-collared cows often move out into open tundra habitats to give birth which may be a predator avoidance strategy. Information gained from this study is valuable but there is still much we do not know. Because reproduction and survival often vary among years due to a variety of factors, it is important to monitor these demographics over multiple years to provide an adequate representation of population trends.

For more information on the Refuges' mammal programs, contact: Dom Watts, USFWS, Alaska Peninsula/Becharof NWR, PO Box 277, King Salmon, AK 99613. Phone: 907-246-1210; e-mail: dom_watts@fws.gov

Bird Projects

Project: **Puale Bay Seabird Monitoring**

Seabirds were monitored at Puale Bay on the Pacific coast of the Becharof National Wildlife Refuge (NWR) to estimate population size, breeding phenology, and reproductive success during the 2014 breeding season. The study focused on common murres (*Uria aalge*) and thick-billed murres (*U. lomvia*). The objectives of the monitoring program are to detect changes in population size and reproductive performance of these ledge-nesting seabirds over time and to compare these parameters with other colonies in Alaska. This baseline information can be used to detect changes in marine bird populations and to provide a basis for directing and assessing management actions. In this report we focus on comparisons between data collected in 1992, 2001 – 2003, 2010 and 2014 at Puale Bay. Data analysis is ongoing and a report will be available from the Refuge later this winter.

In addition to the seabird monitoring, camp staff also conducted three other studies.

- Beaches were walked every two weeks to search for dead seabirds. Data on baseline levels of seabird mortality can be useful in assessing the impacts of future oil spills.
- Intertidal monitoring of invertebrates and algae.

- Plant phenology was monitored over 12 weeks and quantitative plant data was collected at six plots

Reports for each of these studies are being completed and will be available from the Refuge this winter.

Project: **Testing Two Camera Models at Three Locations to Collect Shorebird Abundance with Regard to Tide and Season**

This work is a follow-up to work done in 2011 the Ecological Services branch of USFWS Region 7 (Alaska) which contributed to the *Bristol Bay Watershed Assessment* which was subsequently presented to the Environmental Protection Agency. This action was in response to a request from Bristol Bay Native organizations to assess the impact of heavy metal mining in the upper Kvichak and Nushagak drainages, especially to salmon resources and to species that were heavily dependent on Marine Derived Nutrients. One group that was identified was shorebirds. To better quantify shorebird use patterns along the Bristol Bay marine coast, the Alaska Peninsula/Becharof is continuing work started in 2013 by testing two different camera models to collecting shorebird abundance data with regard to tide and season.

Project: **Pilot Study: Establishing Baseline Owl Species Presence and Abundance, King Salmon, Alaska**

During the winter of 2014 staff from the Alaska Peninsula/Becharof NWR and Katmai National Park and Preserve collaborated to conduct road-based surveys of boreal forests owls from Lake Camp (Katmai National Park) to King Salmon. The final results will be presented in a progress report available from the PIs.

For more information on the Refuges' avian programs, contact: Susan Savage, USFWS, Alaska Peninsula/Becharof NWR, PO Box 277, King Salmon, AK 99613. Phone: 907-246-1205; e-mail: susan_savage@fws.gov

Visitor Services Programs

Project: **King Salmon Science and Culture Camp**

In 2013, we tried a new version of our Science and Culture Camp, held annually for high school students of Bristol Bay Borough and Lake and Peninsula Borough school districts. This trial was to work around our lack of funding. This year, our funding came through, but the school districts were struggling with their own budgets and couldn't afford transportation to the site on Becharof Lake, within the Refuge. We held our second King Salmon Science and Culture Camp, and it was a great experience for all concerned.

Twelve high school students earned two credits from the University of Alaska, Fairbanks. Twenty-one instructors and guest speakers participated, including 6 from US Fish and Wildlife Service and 5 from Katmai National Park. Subjects included commercial fishing (past and present), fish biology, volcanoes of the Alaska Peninsula, wildlife tracking (signs and radiotelemetry), navigation (maps and GPS), natural history sketching, plant ecology, fungi, the chemistry of making soap with animal fat, subsistence and technology, designated wilderness, bird biology, ethnobotany, photography, invasive plants, and careers in science and land management.

We hope to find sources of funding that will allow students to get out onto the Refuge next year. We are interested in finding partners who support hands-on science education with a regional cultural emphasis.

Project: **Youth Ambassadors/Refuge Information Technicians**

In years past, the Refuge had several Refuge Information Technicians who worked as liaisons between the USFWS and village communities. Budget challenges eliminated those positions. We are seeking to help fill the clear need for strong communication with local constituents by partnering with Bristol Bay Native Association.

With funding obtained from the USFWS, BBNA and the Refuge plan to hire up to three youth age 18-25 living in the villages of the Alaska Peninsula, and train them in communication and education techniques. The Youth Ambassadors will help foster active communication between the villages and refuge staff. Applications and details are available from Courtenay Gomez of BBNA; and from Orville Lind and Julia Pinnix of Alaska Peninsula and Becharof NWR.

For More information on the Refuges' Visitor Services Programs, contact Julia Pinnix, Visitor Services Manager, USFWS, Alaska Peninsula/Becharof NWR, PO Box 277, King Salmon, AK 99613. Phone: 907-246-1211; e-mail: julia_pinnix@fws.gov

Fall 2015 Regional Advisory Council Meeting Calendar

August–November 2015

Meeting dates and locations are subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Aug. 16	Aug. 17 WINDOW OPENS	Aug. 18	Aug. 19	Aug. 20	Aug. 21	Aug. 22
Aug. 23	Aug. 24	Aug. 25	Aug. 26	Aug. 27	Aug. 28	Aug. 29
Aug. 30	Aug. 31	Sept. 1	Sept. 2	Sept. 3	Sept. 4	Sept. 5
Sept. 6	Sept. 7 HOLIDAY	Sept. 8	Sept. 9	Sept. 10	Sept. 11	Sept. 12
Sept. 13	Sept. 14	Sept. 15	Sept. 16	Sept. 17	Sept. 18	Sept. 19
Sept. 20	Sept. 21	Sept. 22	Sept. 23	Sept. 24	Sept. 25 K/A—Adak	Sept. 26
Sept. 27	Sept. 28	Sept. 29	Sept. 30 <i>End of Fiscal Year</i>	Oct. 1	Oct. 2	Oct. 3
Oct. 4	Oct. 5	Oct. 6 NWA—Buckland (tent.)	Oct. 7 YKD—TBA	Oct. 8	Oct. 9	Oct. 10
Oct. 11	Oct. 12	Oct. 13 SE—Petersburg	Oct. 14 SP—Nome	Oct. 15	Oct. 16	Oct. 17
Oct. 18	Oct. 19	Oct. 20 SC - Seldovia	Oct. 21	Oct. 22	Oct. 23	Oct. 24
Oct. 25	Oct. 26	Oct. 27 BB - Dillingham	Oct. 28	Oct. 29 EI - Fairbanks	Oct. 30	Oct. 31
Nov. 1	Nov. 2	Nov. 3 WI - Kaltag	Nov. 4 NS—Kaktovik (tent.)	Nov. 5	Nov. 6 WINDOW CLOSSES	Nov. 7

Subsistence Regional Advisory Council Correspondence Policy

The Federal Subsistence Board (Board) recognizes the value of the Regional Advisory Councils' role in the Federal Subsistence Management Program. The Board realizes that the Councils must interact with fish and wildlife resource agencies, organizations, and the public as part of their official duties, and that this interaction may include correspondence. Since the beginning of the Federal Subsistence Program, Regional Advisory Councils have prepared correspondence to entities other than the Board. Informally, Councils were asked to provide drafts of correspondence to the Office of Subsistence Management (OSM) for review prior to mailing. Recently, the Board was asked to clarify its position regarding Council correspondence. This policy is intended to formalize guidance from the Board to the Regional Advisory Councils in preparing correspondence.

The Board is mindful of its obligation to provide the Regional Advisory Councils with clear operating guidelines and policies, and has approved the correspondence policy set out below. The intent of the Regional Advisory Council correspondence policy is to ensure that Councils are able to correspond appropriately with other entities. In addition, the correspondence policy will assist Councils in directing their concerns to others most effectively and forestall any breach of department policy.

The Alaska National Interest Lands Conservation Act, Title VIII required the creation of Alaska's Subsistence Regional Advisory Councils to serve as advisors to the Secretary of the Interior and the Secretary of Agriculture and to provide meaningful local participation in the management of fish and wildlife resources on Federal public lands. Within the framework of Title VIII and the Federal Advisory Committee Act, Congress assigned specific powers and duties to the Regional Advisory Councils. These are also reflected in the Councils' charters. (*Reference: ANILCA Title VIII §805, §808, and §810; Implementing regulations for Title VIII, 50 CFR 100 .11 and 36 CFR 242 .11; Implementing regulations for FACA, 41 CFR Part 102-3.70 and 3.75*)

The Secretaries of Interior and Agriculture created the Federal Subsistence Board and delegated to it the responsibility for managing fish and wildlife resources on Federal public lands. The Board was also given the duty of establishing rules and procedures for the operation of the Regional Advisory Councils. The Office of Subsistence Management was established within the Federal Subsistence Management Program's lead agency, the U.S. Fish and Wildlife Service, to administer the Program. (*Reference: 36 CFR Part 242 and 50 CFR Part 100 Subparts C and D*)

Policy

1. The subject matter of Council correspondence shall be limited to matters over which the Council has authority under §805(a)(3), §808, §810 of Title VIII, Subpart B §__.11(c) of regulation, and as described in the Council charters.
2. Councils may, and are encouraged to, correspond directly with the Board. The Councils are advisors to the Board.
3. Councils are urged to also make use of the annual report process to bring matters to the

Board's attention.

4. As a general rule, Councils discuss and agree upon proposed correspondence during a public meeting. Occasionally, a Council chair may be requested to write a letter when it is not feasible to wait until a public Council meeting. In such cases, the content of the letter shall be limited to the known position of the Council as discussed in previous Council meetings.
5. Except as noted in Items 6, 7, and 8 of this policy, Councils will transmit all correspondence to the Assistant Regional Director (ARD) of OSM for review prior to mailing. This includes, but is not limited to, letters of support, resolutions, letters offering comment or recommendations, and any other correspondence to any government agency or any tribal or private organization or individual.
 - a. Recognizing that such correspondence is the result of an official Council action and may be urgent, the ARD will respond in a timely manner.
 - b. Modifications identified as necessary by the ARD will be discussed with the Council chair. Councils will make the modifications before sending out the correspondence.
6. Councils may submit written comments requested by Federal land management agencies under ANILCA §810 or requested by regional Subsistence Resource Commissions (SRC) under §808 directly to the requesting agency. Section 808 correspondence includes comments and information solicited by the SRCs and notification of appointment by the Council to an SRC.
7. Councils may submit proposed regulatory changes or written comments regarding proposed regulatory changes affecting subsistence uses within their regions to the Alaska Board of Fisheries or the Alaska Board of Game directly. A copy of any comments or proposals will be forwarded to the ARD when the original is submitted.
8. Administrative correspondence such as letters of appreciation, requests for agency reports at Council meetings, and cover letters for meeting agendas will go through the Council's regional coordinator to the appropriate OSM division chief for review.
9. Councils will submit copies of all correspondence generated by and received by them to OSM to be filed in the administrative record system.
10. Except as noted in Items 6, 7, and 8, Councils or individual Council members acting on behalf of or as representative of the Council may not, through correspondence or any other means of communication, attempt to persuade any elected or appointed political officials, any government agency, or any tribal or private organization or individual to take a particular action on an issue. This does not prohibit Council members from acting in their capacity as private citizens or through other organizations with which they are affiliated.

Approved by the Federal Subsistence Board on June 15, 2004.



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