

ALASKA PENINSULA/BECHAROF
NATIONAL WILDLIFE REFUGE COMPLEX

King Salmon, Alaska

ANNUAL NARRATIVE REPORT

Calendar Year 1994

U.S. Department of the Interior
Fish and Wildlife Service
NATIONAL WILDLIFE REFUGE SYSTEM

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INTRODUCTION

The refuges within the Alaska Peninsula/Becharof National Wildlife Refuge Complex (Complex) were established by the Alaska National Interest Lands Conservation Act of 1980 (ANILCA). The Becharof Refuge contains approximately 1.2 million acres. Approximately 400,000 acres is designated the Becharof Wilderness. The Alaska Peninsula Refuge boundaries encompass about 4.3 million acres of land -- an area bigger than the State of Connecticut. Stretching for nearly 340 miles along the Alaska Peninsula, the refuge is subdivided into the Ugashik, Chignik, and Pavlof units. The Alaska Peninsula Unit of the Alaska Maritime Refuge includes all federally owned islands, sea stacks, columns, and rocks along the Pacific Coast of the Alaska Peninsula. Seal Cape (8,200 acres) is the only portion of the unit located on the mainland. The Becharof Refuge, the Ugashik and Chignik units, and Seal Cape are included in the Complex (Figures 1 - 3).



Mt. Chiginagak, Ugashik Unit, Alaska Peninsula NWR, viewed from Mother Goose Lake, is only one of the many spectacular views found on the Complex.

8/94, DAD

The purposes for the refuges in the Complex were established by ANILCA. Becharof Refuge purposes include: (i) to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, brown bears, salmon, migratory birds, the Alaska Peninsula caribou herd and marine birds and mammals; (ii) to fulfill international treaty obligations of the United States with respect to fish and wildlife and their habitats; (iii) to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and (iv) to insure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the refuge. [ANILCA 302(2)(B)] The Alaska Peninsula Refuge purposes add, "...brown bears, the Alaska Peninsula caribou herd, moose, sea otters and other marine mammals, shorebirds and other migratory birds, raptors, including bald eagles and peregrine falcons, and salmonids and other fish". [ANILCA 302(1)(B)] Species mentioned in the ANILCA specific to Seal Cape, Alaska Maritime Refuge include, "...marine mammals, marine birds and other

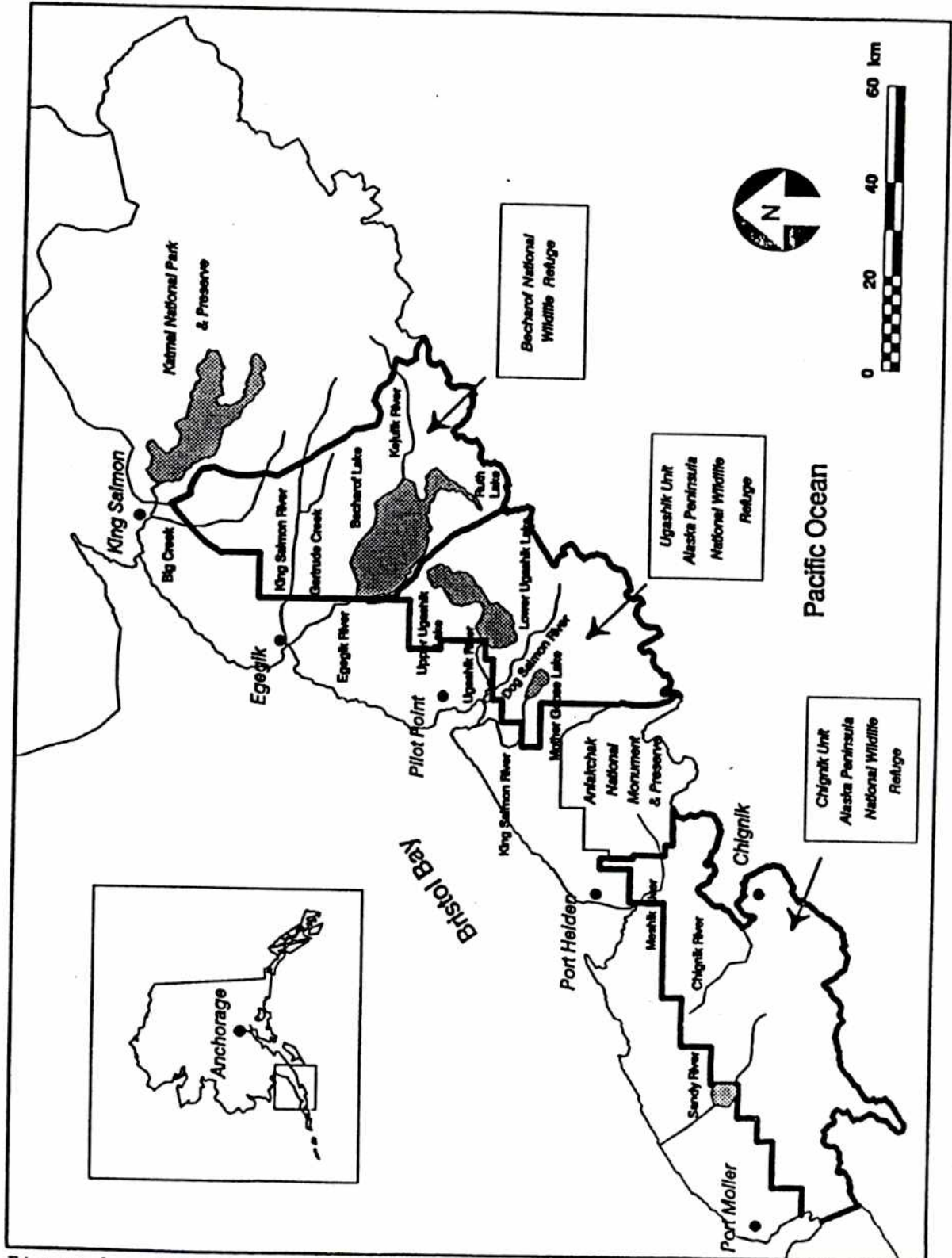


Figure 1. Location of the Alaska Peninsula and Becharof National Wildlife Refuges.

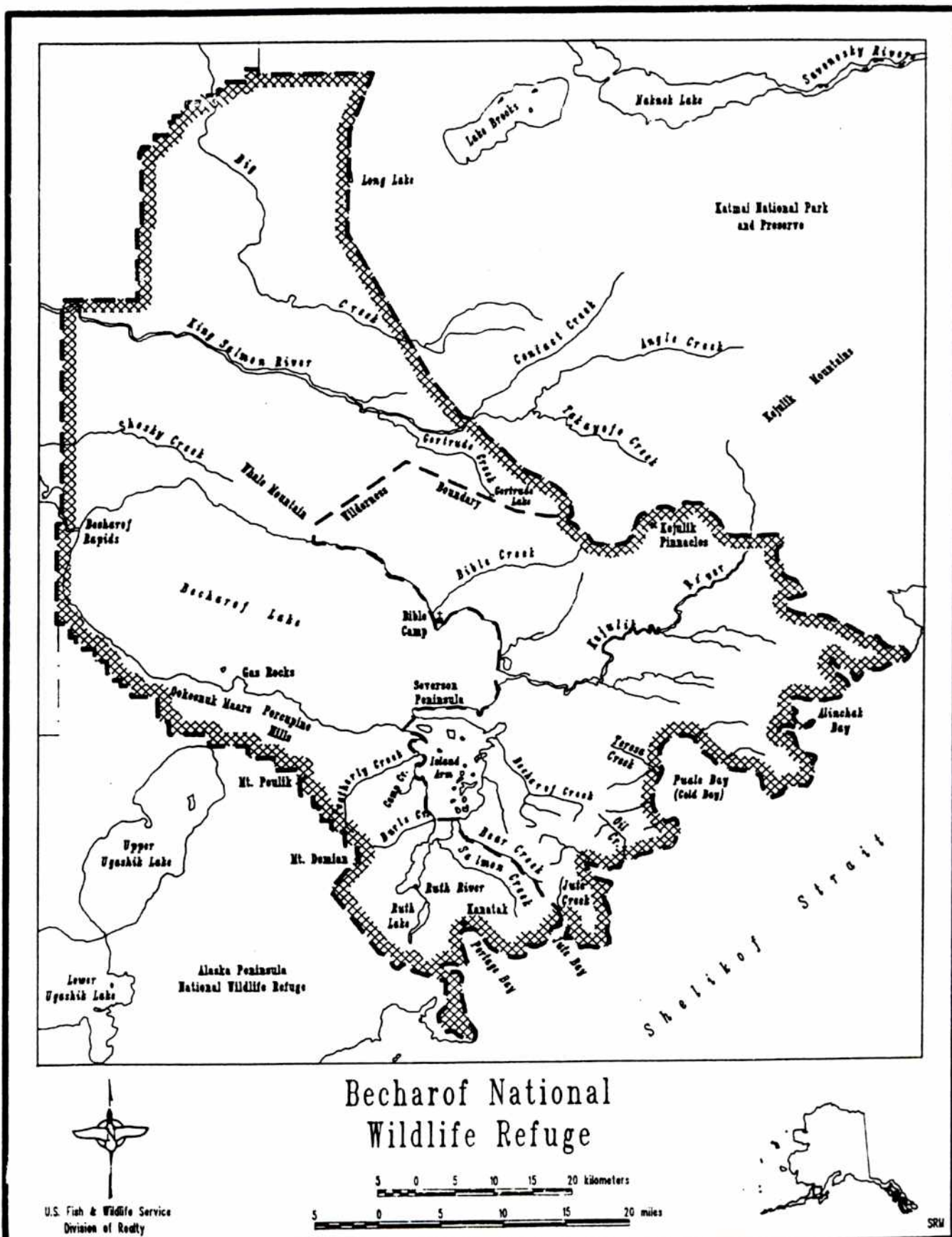


Figure 2. Becharof National Wildlife Refuge.

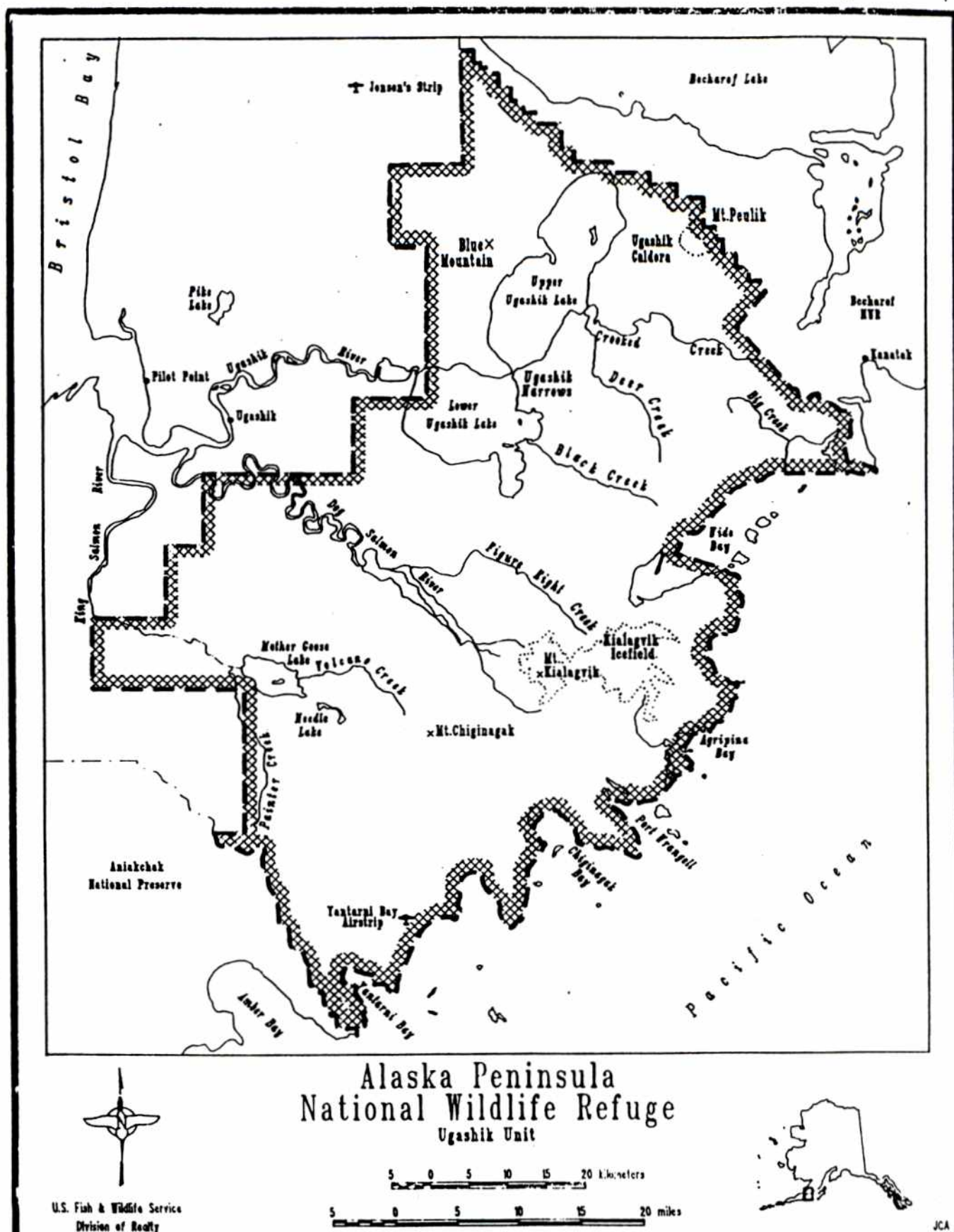


Figure 3. Alaska Peninsula National Wildlife Refuge.

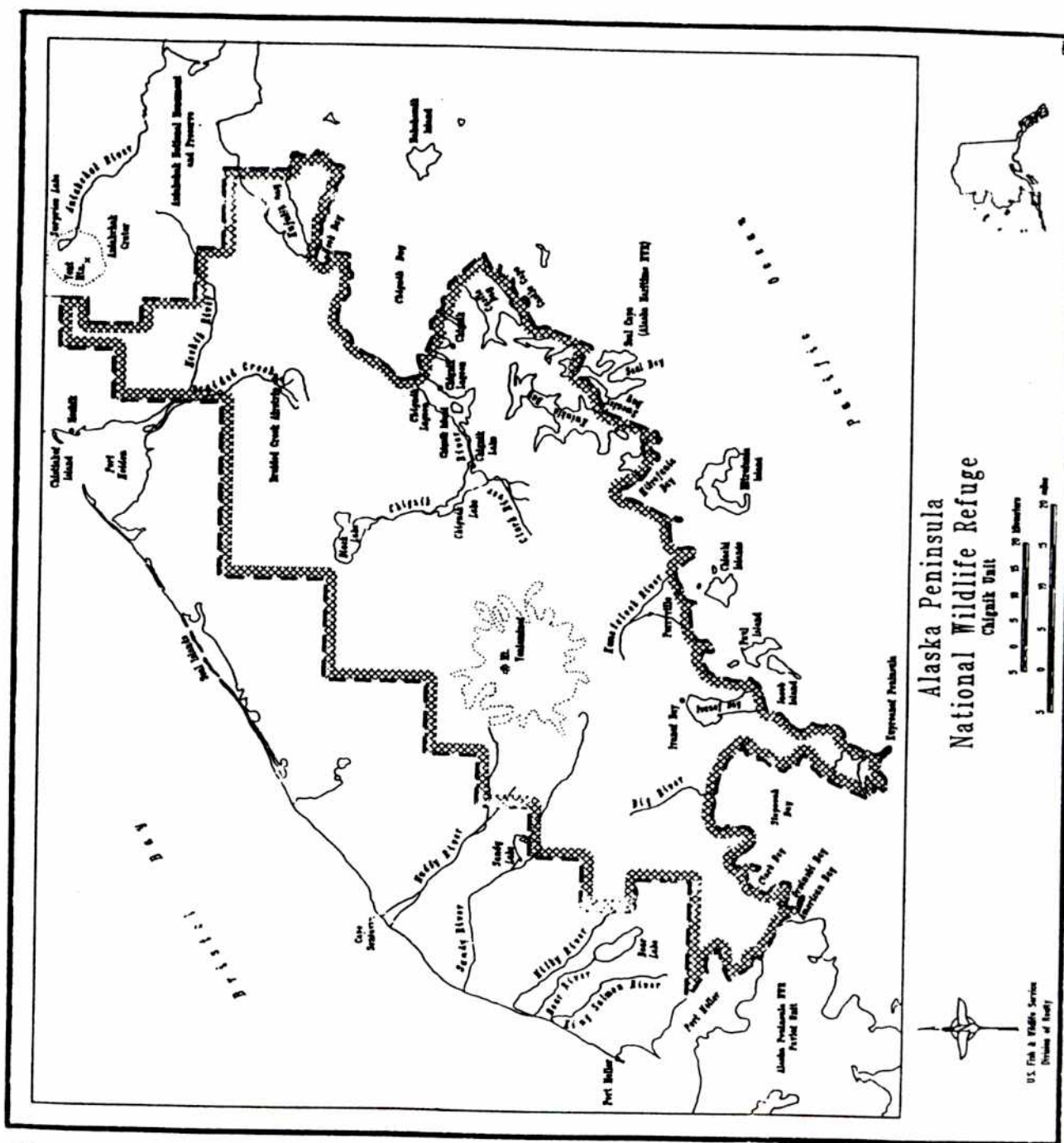


Figure 3 Continued.

migratory birds, the marine resource upon which they rely, bears, caribou, and other mammals". [ANILCA 303(1)(B)]

Becharof Lake, its tributary streams, the Ugashik lakes, Black Lake, King Salmon rivers (2), Dog Salmon River, Meshik River and Chignik River provides nursery habitat necessary for the five species of salmon that spawn in the Complex. A major component of the multi-million dollar salmon industry in Bristol Bay originate in Complex waters. Dolly varden, arctic grayling, rainbow trout and other fish are found in refuge streams.

The Complex's fauna includes a very large population of brown bears (estimated at over 3,000 bears). Moose inhabit the area in moderate numbers and over 15,000 caribou use Complex lands for calving, insect escape habitat, migration and wintering. Other animals found include wolves, foxes, wolverines, and lynx. Sea otter, sea lions and harbor seals inhabit the shorelines as do nesting bald eagles, peregrine falcons, and thousands of seabirds on the rocky sea cliffs of the Pacific coast (725 miles of shoreline). Nesting, migrating, and wintering waterfowl found on wetlands, lakes, and streams throughout the Complex include tundra swan, greater white-fronted goose, emperor goose, mallard, northern pintail, American wigeon, greater scaup, and harlequin duck.

The Complex is superimposed over the rugged Aleutian Mountain Range. This volcanic mountain range contains numerous peaks that rise above 6,000 feet elevation. This creates a Pacific coast that is rocky and heavily fjorded. The Complex contains numerous volcanoes known to have erupted since 1760. They are part of a chain of volcanoes that rim the Pacific Ocean known as the "Ring of Fire". Mt. Veniaminof in the Chignik Unit has been designated as a National Natural Landmark (800,000 acres).

The Alaska Peninsula is world famous for big game hunting. The Complex is sub-divided into 23 big game guide-outfitter use areas with 29 special use permits issued for conducting big game guiding activities within these areas. The Complex must manage a large, and often controversial, sport hunting program that balances the needs of unguided and guided sport hunters with the needs of subsistence users.

About 3,100 local residents live in 12 villages on or immediately adjacent to the Complex. The day-to-day human activities on the Complex, many of which have deep cultural traditions, pose issues and demands that require sensitive considerations and innovative approaches to refuge administration.

The Alaska Peninsula/Becharof Refuge Complex is an undisturbed continuum of sub-arctic ecosystems. A mission of the Complex is to preserve and maintain these systems in their original state, allowing for natural processes to continue with minimal disturbance. Management is responsible for protecting and enhancing fish and wildlife and habitat resources, and for assuring that objective and policies are met through program planning, evaluation, supervision and coordination.

A. HIGHLIGHTS

- ** All State selections for Alaska Peninsula/Becharof Complex (Complex) lands have been determined invalid and removed from the record (Section C.1.).
- ** Final Fishery Management Plan for the Complex is completed and Record of Decision (ROD) signed by Regional Director (Section D.2.).

- ** After six years of planning effort, the Public Use Management Plan was completed when the Regional Director signed the Finding of No Significant Impact (FONSI) and ROD on May 12, 1994 (Section D.2.).
- ** Seven umbrella compatibility determinations for categories of secondary activities managed by the Complex were compiled. All requirements of this cabalistic exercise were completed in June and July (Section D.4.).
- ** The Complex's Refuge Information Technicians (RITs) were made permanent and upgraded (Section E.1.).
- ** The Complex hosted Director Mollie Beattie and Regional Director Walt Stieglitz in early July (Section E.8.).
- ** The U.S. Board on Geographic Names approved the names of two Alaska Peninsula NWR volcanoes, Mount Kupreanof and Yantarni Volcano (Section F.1.).
- ** The MAPS/migration passerine banding station at Mother Goose Lake was successful beyond all expectations. Over 3,200 songbirds were banded. The cooperative effort with *Earthwatch* concluded with 25 volunteers participating, contributing \$18,750 toward the project (Section G.7.)!
- ** The conservation of Arctic nesting geese and goose calendar contest was highlighted in Environmental Education programs. Several local students were big winners in the 1995 contest. (Section H.2.).
- ** Refuge Manager (RM) Hood revoked special use permit No. AKP-02-93-16595 for big game guide-outfitter use area AKP 02, Alaska Peninsula National Wildlife Refuge (Section H.21.).
- ** The Complex hosted three Russian reserve managers, June 25 to July 1 (Section J.1.).

B. CLIMATIC CONDITIONS

1. General

The upper Alaska Peninsula is characterized by polar maritime climate with moderate temperatures, protracted cloud cover, frequent precipitation and high winds.

Large atmospheric differences between interior Alaska and the Pacific Ocean and Bering Sea are the dominate influences on weather. Pacific Ocean and Bering Sea winds with high moisture content blow frequently across the upper peninsula forming fog and clouds which develop into precipitation. High winds and turbulence are especially common near the rugged terrain. The heaviest precipitation occurs on the Pacific Ocean side of the Alaska Peninsula/Becharof Complex (Complex). The Bering Sea side enjoys clearer weather but lower average temperatures. From fall to spring, the skies are clear to partly cloudy 40 percent of the time. In summer, this occurs only 20 percent of the time. King Salmon averages 50 clear days per year.

Precipitation varies with elevation and distance from coasts. Less than 20 inches of precipitation falls annually on the western lowlands, while as much as 160 inches falls on the Pacific side of the Complex.

Temperatures are generally moderate throughout the year. Daily maximum temperatures may exceed the freezing mark in all months while daily minimum

temperatures drop below freezing on approximately one-half the days of the year. The King Salmon temperatures average 12° Fahrenheit (F) in December, the coldest month, and 54° F in July, the warmest month. Extremes range from -48 to 88° F.

Daily winds average 10 to 15 miles per hour (mph). However, most months have peak winds from 40 to 70 mph with the extreme being 94 mph.

At King Salmon the dangerous effects of wind chill can be dramatic. Interior Alaska is known for low winter temperatures and the Aleutian Islands for high winds; however, when climatic influences of each area meet on the upper Alaska Peninsula, the wind chill factor may exceed -120° F.

January - March: January started the year with widely fluctuating temperatures which kept the Naknek River ice unsafe for crossing most of the winter. The Naknek river froze completely, at headquarters on the 8th, when the temperature dropped to -24° F. Snow cover was good for wildlife surveys and snowmobiling during most of the month. The month ended with record high temperatures reaching 50° F on the 31st. Temperatures fluctuated between the high 40s and minus 20s in February and March, with the ice going out of the upper river on March 30th.

April - June: exhibited warmer and wetter weather than normal, temperatures reached the 70s by the end of June. The last snowfall for the season was recorded on May 4th. This wetter than normal condition, which started during this period, lasted through the end of the year.

July - September: continued with warmer and wetter than normal conditions. These conditions made for excellent recruitment in juvenile and adult mosquitos and whitesocks. The highest temperature for 1994 was 79° F recorded on July 31st. Temperatures dropped below freezing on the 28th, 29th and 30th of August, ending the gardening season in the King Salmon area.

The storm which occurred on September 19th and 20th brought wind gusts to 71 mph to the King Salmon area. Although we received very little precipitation in King Salmon from the storm, areas of the refuge received several inches of rain sending streams and rivers over their banks.

October - December: ended the year with cooler than normal temperatures. By mid-October most of the smaller ponds and lakes had frozen over and by the end of the month ice had begun forming on the Naknek River. The first measurable snowfall of the season occurred on October 18th. November continued with cold snowy weather, a total of 17.9 inches of snow fell during the month.

Freeze up occurred on the Naknek River at headquarters on November 22nd, when the temperature dropped to -13° F. Although the temperature fluctuated from very cold to near 40° F. during December, the Naknek River remained frozen and was safe for crossing by mid-month. December ended with warming temperatures which caused most of the snow to melt in the King Salmon area.

Table 01. Weather Highlights of 1994.

Highest temperature	79 degrees F	July 31
Lowest temperature	-26 degrees F	March 5
Highest 24 hr rainfall	1.74 inches	August 3-4
Total precipitation	26.35 inches	N/A
Highest 24 hr snowfall	8.2 inches	December 3-4
Total snowfall	69.9 inches	N/A
Highest Sea-level pressure	30.39	August 18
Lowest Sea-level pressure	28.33	November 2

C. LAND ACQUISITION

1. Fee Title

The Alaska Statehood Act and the Alaska Native Claims Settlement Act has had profound effects on Alaska Peninsula Refuge Complex (Complex) land status. Both pieces of legislation provided a legal means of transfer of lands under Federal trusteeship to State and Native ownership. The implementation of these acts continues to create a dynamic land status on the Complex due to selections, transfers and relinquishments by Natives, Native Corporations and the State of Alaska.

The Complex is divided into three management units: Becharof Refuge (1.2 million acres) (Figure 2) and the Ugashik (1.1 million acres) and Chignik (1.2 million acres) units of the Alaska Peninsula Refuge (Figure 3). Approximately 2.5 million acres are under Service jurisdiction at present. The remaining acreage has selected by or conveyed to 23 Native villages in three Native regions (Koniag, Aleut, and Bristol Bay), the State of Alaska, individual Native allotments and other private interests.

In August 1993, the Bureau of Land Management (BLM) provided notification that "Tentative Approval" for acquisition of 26,510 acres by State of Alaska on Becharof Refuge and Alaska Peninsula, Ugashik Unit lands was being approved. This land was being conveyed pursuant to Section 906(g) and (h) of the Alaska National Interest Lands Conservation Act (ANILCA). At the time, the issue was brought to the attention of Sharon Janis, Chief of Realty, by Refuge Manager (RM) Hood. She investigated and found that refuge lands were not available for selection on date of filing. As a result, BLM later vacated the decision. Subsequently, these "illegal" selections and the need to clear the record were forcefully brought to BLM's attention by both the Service and the Sierra Club. In August, 1994, one year later, we learned that all State selections have been determined to be invalid and removed from the record. Therefore, there are now no

remaining State selections on either the Alaska Peninsula Refuge or the Becharof Refuge.

2. Easements

The decision by the Ninth Circuit Court of Appeals in Shultz v. Dept. of the Army on Revised Statute (R.S.) 2477 right-of-ways had an immediate impact on the Complex. In early January we received a letter from the law firm of Burr, Pease & Kurtz on behalf of big game guide-outfitter Tracy Vrem asserting that certain off-road-vehicle (ORV) trails were actually roads. They asserted:

- 1) that these so-called "roads" were specifically built prior to the creation of the Refuge to support oil exploration, and that they are "established roads" within the meaning of 43 Code of Federal Regulations (CFR) Part 36.11(g)(1); 2) that these particular "roads" were preserved by Section 1110(a) of the Alaska National Interest Lands Conservation Act (ANILCA) for public and private rights of access when the Becharof Refuge was created in 1980; and 3) that these "roads" were established and preserved over unreserved public domain under the authority of R.S. 2477.

Working with Sharon Janis, Chief of Realty, RM Hood responded by letter that there was no such road system on either the Alaska Peninsula National Wildlife Refuge or the Becharof National Wildlife Refuge. The existing "road system" was originally created to provide access to oil exploration well sites (Great Basins No. 1 and No. 2, General Petroleum Corporation) to the west of the refuge boundary. The western end of this access route has been heavily utilized by recreational users from the Jensen air strip area and converted to off-road vehicle (ORV) trails. The Service's position is: 1) that this route is not an established road within the meaning of 43 CFR Part 36.11(g)(1); 2) the Service has never recognized this ORV trail as a "road" for public and private right of access to be preserved by Section 1110(a) of ANILCA; and 3) the Service does not agree that these ORV trails are "roads" established and preserved over unreserved public domain under the authority of R.S. 2477.

We learned that the State plans to assert R.S. 2477 rights for a winter postal route that ran from Kanatak Village along the southern shore of Becharof Lake to the Egegik River and then west to Egegik Village. It was used from 1922 to the 1940s. In 1927 the Alaska Road Commission designated the route No. 92 K. More to come when the State formally asserts its rights.

D. PLANNING

2. Management Plan

Fishery Management Plan. The King Salmon Fishery Resource Office (KSFRO) had the lead in developing a Fishery Management Plan (FMP) for the Alaska Peninsula/Becharof Refuge Complex (Complex). The KSFRO completed the final FMP and forwarded it to the Regional Office (RO) for approvals on December 5, 1993. The final FMP was received on August 12, 1994. The plan was approved by Regional Director Walt Stieglitz on June 21, 1994. Perseverance finally paid off -- the planning effort began way back in 1983.

Public Use Management Plan (PUMP). Work on this planning effort was initiated in 1989. Highlights of this year's activities included:

February - On the 1st, a formal briefing was held with State representatives on the final PUMP. This effort was spear-headed by Public Use Planner Helen Clough in an effort to keep the State aware of how their comments on the draft PUMP were treated. Attending were Sally Gibert, Tina Cuning, and Alice Iliff from the State, George Constantino, Jerry Stroebele, Leslie Kerr, Helen Clough, and Ronald Hood from the Service.

The final PUMP was sent to the printer on the 4th. They completed printing 1,500 copies on the 22nd. Refuge Planning mailed a notice of availability to the public and copies of the document to about 300 organizations and individuals. Requests for copies were rolling in at month's end.



Public Meeting at Egegik

3/15/95, JK

March - Much staff time and effort this month was spent conducting public meetings to discuss the final PUMP document in several communities. Purpose of the meetings included explaining and answering questions about the PUMP document, and gathering public verbal/written comments about the plan. The following meetings were held:

Chignik Bay -	3/8	5	attended
Chignik Lagoon -	3/9	6	attended
Chignik Lake -	3/10	11	attended
Port Heiden -	3/11	5	attended
South Naknek -	3/14	5	attended
Egegik -	3/15	7	attended
Naknek -	3/16	6	attended
Perryville -	3/30	17	attended
Pilot Point -	4/4	5	attended
Ivanof Bay -	Unable to conduct meeting due to weather; contacted via phone.		

All PUMP meetings were conducted using a team approach. Team members included Deputy Refuge Manager (DRM) Poetter (presenter) and Refuge Information Technicians (RIT) Kelly (recorder/facilitator), Lind and Knutsen (facilitators). DRM Poetter and RIT Kelly attended eight meetings. RIT Lind attended five meetings and RIT Knutsen attended three meetings.

May - The Decision Notice and Finding of No Significant Impact for the PUMP and Environmental Assessment was signed by Regional Director Walter O. Stieglitz on May 12, 1994. The decision notice was transmitted to the public in a "Dear Reader" letter signed by Refuge Manager (RM) Hood on May 20, 1994. There were 22 comments received on the final plan. Each responder was provided a letter that addressed the specific issues that their letter raised. Thus a planning effort that began in 1989 has reached a successful conclusion.

Bristol Bay/Kodiak Ecosystem Action Plan. The Bristol Bay/Kodiak Ecosystem Team held its organizational meeting on June 6th-8th as guest of Kodiak Refuge at Camp Island on Karluk Lake. Team members were Jay Bellinger, Kodiak Refuge; Fred Zeillemaker, Izembek Refuge; Aaron Archibeque, Togiak Refuge; Gary Wheeler, Ecological Services; Jim Larson, King Salmon Fishery Resource Office; and Ronald Hood, Alaska Peninsula/Becharof Refuge Complex. Jacke Barnes, Kodiak Refuge was the team's recorder and facilitator. Gary Wheeler was named team leader by consensus; in fact, all decisions were reached by consensus. The team added a member from Migratory Birds (Brad Andres) and asked the Regional Facilitation Team if a representative from Alaska Maritime Refuge, a major land holder, had been left out by oversight. A decision was later made not to include a representative from Alaska Maritime Refuge on the team. Draft goals and objectives for the ecosystem were identified. Finally, a tentative list of partners for the ecosystem was developed.

The Bristol Bay/Kodiak Ecosystem Team conducted a team building exercise on the north fork of the Goodnews River on Togiak Refuge on August 5th to 9th. Preparation for an Ecosystem Action Plan (EAP) workshop was conducted on the 10th and 11th in Dillingham. The draft plan was completed on the 23rd to 25th at the EAP workshop in Anchorage. In late October - early November, the team revised the draft EAP by a deadline of November 16th. This was the classic Service exercise of not enough time to do it right the first time; but plenty of time to do it over again, and again!

Museum Property Scope of Collections Statement. An updated Statement was prepared by Debra Corbett, Archaeologist, Resource Support, and transmitted to the Complex for review and signature. RM Hood reviewed, signed, and returned the document on October 24th.

Refuge Needs Information System (RNIS). The annual RNIS project update was completed by DRM Poetter and RM Hood on October 31st and CC-mailed to Region. The RNIS projects were closely coordinated with the Bristol Bay/Kodiak Ecosystem EAP action items.

3. Public Participation

See D.2. above.

4. Compliance with Environmental Mandates

See D.2. above.

Refuge Compatibility Lawsuit Compliance. The Complex completed all requirements of this cabalistic exercise in June and July. Seven umbrella compatibility determinations for categories of secondary activities managed

by the Complex were completed by mid-June. The "Secondary Activities Questionnaire" was completed and CC-mailed to RO on the July 8th. Notebooks were completed on the 15th and mailed to the RO. Twenty-one secondary activities were included under these determinations.

Regional Environmental Assessment Team (REAT). On September 26th to 28th, the REAT was in King Salmon conducting introductory briefing sessions on environmental compliance, safety, and energy. Team members included Art Wemmerus, Deputy Associate Manager - Staff, ARW representative; Linda White, Safety Officer; Charles Grant, Environmental Compliance Officer/Energy Coordinator; and Ron Britton, Fish and Wildlife Biologist, Division of Environmental Contaminants. Inspections of the administrative site were completed to alert us of problem areas in preparation for the U.S. Army Corps of Engineers assessment for environmental compliance scheduled for June 1995.

5. Research and Investigations

Further Investigation of Kanatak Village, Becharof National Wildlife Refuge. The objective of this study was to determine the magnitude and area extent of contamination from chemical artifacts of historic oil exploration activities that were staged at Kanatak Village.

The field portion of the Kanatak Village Contaminant Study was conducted June 27th - July 3rd. An interdisciplinary team of Sonce Devries, Environmental Contaminants Specialist; Chuck Ditters, Regional Archaeologist; Doug Vandegraft, Cartographic Technician; and Mark Geiger, Biological Science Technician, completed the field work. Using a back-hoe transported to the site by the Motor Vessel Polar Bear, 32 test pits were dug and sampled. Grab samples were taken from old bentonite stacks and an oil spill from five barrels [1920's era barrels had rusted through]. The samples were submitted to Patuxent in August for analysis. We were still waiting for results of the analysis at year's end.

E. ADMINISTRATION

1. Personnel

PERMANENT STAFF

1. Ronald E. Hood; Refuge Manager (RM); GS-485-13; 09/15/85; PFT
2. Rick Poetter; Deputy Refuge Manager (DRM); GS-485-11; 04/23/89; PFT
3. Janice Collins; Administrative Technician (AT); GS-303-06; 06/11/84; PFT
4. Laura Shawback; Office Automation Assistant (OAA); GS-326-04; 01/10/94; PPT
5. Bill Smoke; Airplane Pilot (AP); GS-2181-12; 05/16/93; PFT
6. Donna Dewhurst; Wildlife Biologist (WB); GS-485-11; 02/26/89; PFT
7. Angie Terrell-Wagner; Refuge Ranger (Public Use Specialist) (RR); GS-025-09; 12/29/91; PFT
8. Shirley Kelly; Refuge Information Technician (RIT); GS-1001-06; 09/08/91; PPT (local hire) on 10/30/94
9. John (Smiley) Knutsen; Refuge Information Technician; GS-1001-06; 09/08/91; PPT (local hire) on 10/30/94
10. Orville Lind; Refuge Information Technician; GS-1001-06; 09/08/91; PPT (local hire) on 10/30/94
11. Gary Terry; Maintenance Worker (MW); WG-4749-08; 07/31/88; PFT
12. Dwight (Moose) Mumma; Maintenance Helper (MH); WG-4749-04; 02/19/84; PFT

YOUTH CONSERVATION CORPS (YCC)

- 21. **Brian Keck**; Superior, Montana; 06/13 - 07/24; Maintenance Program
- 22. **Suzzy Terry**; King Salmon, Alaska; 06/13 - 08/05; Maintenance Program
- 23. **Amy Young**; Anchorage, Alaska; 06/13 - 08/05; Maintenance Program

RESOURCE APPRENTICESHIP PROGRAM FOR STUDENTS (RAPS)

- 24. **Kory Glick**; Naknek, Alaska; 06/13 - 08/19; Management Program



20.

16.

14. 5/24/94, DAD

A revised staffing plan for the Alaska Peninsula/Becharof Complex (Complex) was approved by Assistant Regional Director Rowan Gould on November 31, 1994. Technical changes reflecting pay grade/position title modifications required revision of the plan approved in December 1993 (Figure 4).

The permanent positions funded in 1994 required 8.8 full-time equivalents (FTE) (Table 2). The three RIT positions are local-hire and do not count against FTE ceilings. These positions were converted from intermittent term to permanent part-time in October. Again this year, a major disappointment was the canceling of the Subsistence Coordinator position at the eleventh hour by the Regional Office (RO). This decision was made after the Subsistence Program provided base funds for the much-needed position; but the Associate Manager decided that a Subsistence Coordinator position at Bethel was a higher priority.

King Salmon resident, Laura Shawback, began her new permanent position with us as Office Automation Assistant on January 10th. She is supervised by AT Collins and works part-time, seven hours per day (Monday-Friday).



17.

8/94, DAD

On February 22nd, OAA Shawback was presented with a \$50.00 Spot Award. Newly hired, she took over the duties of Administrative Technician for two weeks and did an outstanding job.

Table 2. Historic record of full-time equivalent allocation and use.

FISCAL YEAR	FULL-TIME EQUIVALENT	
	AUTHORIZED	TOTAL USED
94	8.8	10.02
93	8.8	7.92
92	8.8	8.32
91	9.3	8.26
90	9.0	7.93

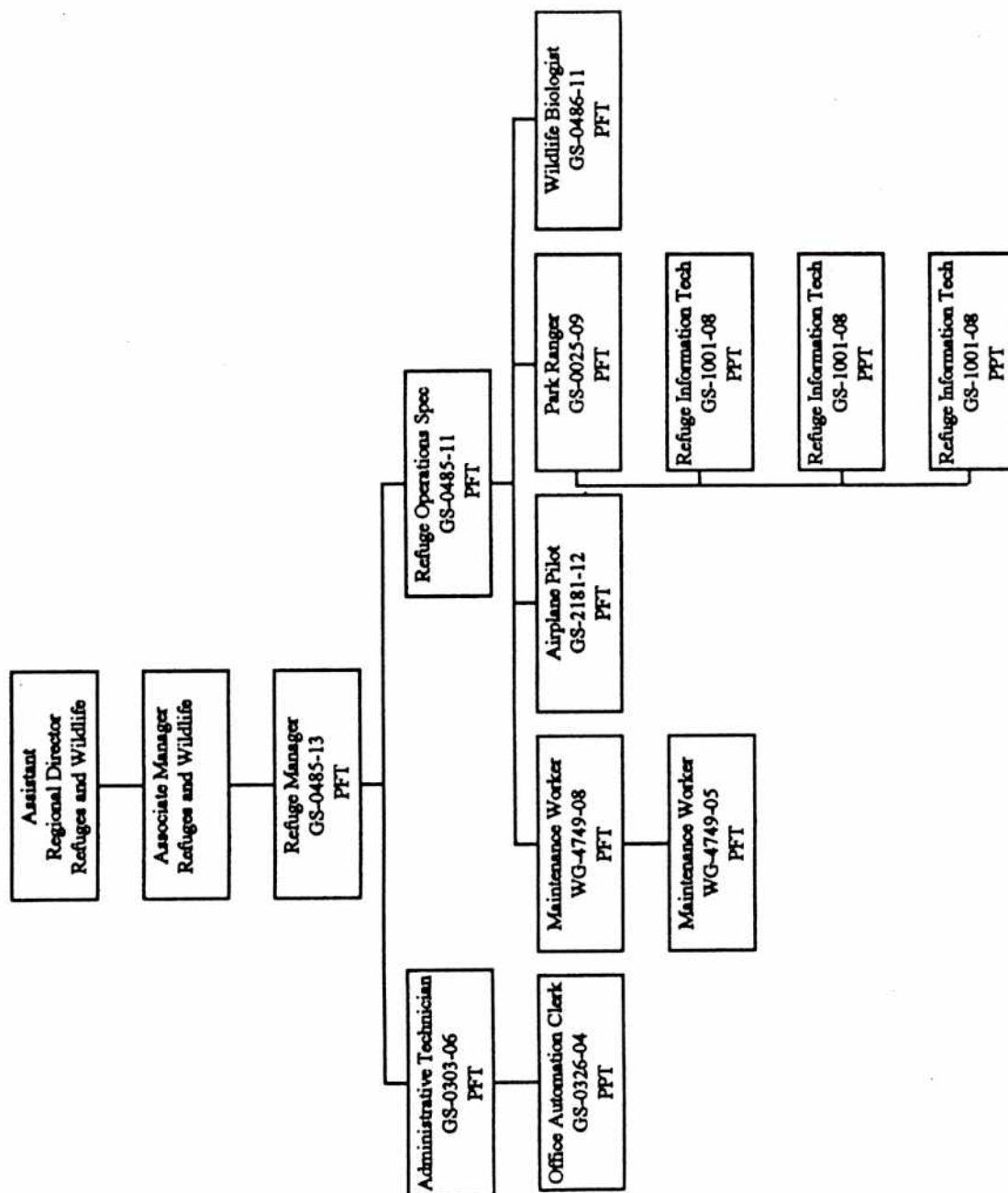


Figure 4. Staffing plan for Alaska Peninsula/Becharof National Wildlife Refuge Complex, approved November 16, 1994.

Kevin Boden returned from Longmont, Colorado on February 8th for a third year of seasonal work on the Complex. He volunteered until April 2nd. On that date we were able to get him back in pay status as a Biological Technician. His position was to be camp leader in charge of the Mother Goose Lake/EarthWatch field camp.

Effective April 4th, the refuge manager's position was upgraded to GS-13. It is this author's opinion that this action was warranted as far back as 1985; and should have occurred in 1992. But it only occurred because of Position Classification Specialist Silvia Brown's persistence and a change in Assistant Regional Director, Refuges and Wildlife (ARW).

Julie Melton, from Bellingham, Washington, began duties on April 18th. She served as assistant camp leader for the Mother Goose Lake project.

Recruitment and selection was made to fill a Refuge Ranger (GS-025-04) position to assist in staffing the King Salmon Visitor Center. Stefanie Admunson from Loveland, Colorado began work the first week of May and worked until the end of September.

On August 15th, Special Achievement Awards were presented to AT Janice Collins and OA Laura Shawback for 1993-1994 job performance.

On August 19th, RR Angie Terrell-Wagner and WB Donna Dewhurst were presented Special Achievement Awards for their Level 4 performance evaluations. WB Donna Dewhurst was also presented with a pin and certificate for 10 years of government service, all with the Fish and Wildlife Service (FWS) on National Wildlife refuges.

DRM Rick Poetter received a Special Achievement Award for 1993-1994 job performance on August 22nd. AP Bill Smoke also received a Level 4 performance evaluation and was presented with an Achievement Award on the 22nd.

BT Todd Eskelin, of Soldotna, Alaska, was hired on August 22nd to replace BT Boden at the Mother Goose Lake field camp.

Biological Technicians Melton and Eskelin departed King Salmon on September 29th and 30th, respectively, after concluding migration banding at Mother Goose Lake.

Refuge Ranger Stefanie Amundson had her last work day on September 27th. Stefanie will be attending school this winter.

Effective October 30th, RITs Shirley Kelly, Smiley Knutsen and Orville Lind were converted from temporary GS-06 to GS-08 permanent part-time seasonal status. The RIT position descriptions were re-written and re-classified to more accurately reflect the work that they perform. We are very pleased to add these three very talented people to our permanent staff.

Summary of Complex Staff Training and Workshop Attendance

RM Hood, DRM Poetter and WB Dewhurst attended the Biological Inventory and Monitoring Workshop in Anchorage on January 11th-13th. The new directions proposed were received well, shattering many old paradigms while laying groundwork for improved long term data collection on refuges.

We conducted our 2nd annual local RIT Workshop the week of February 7th-11th. Training topics included Environmental Education, CPR (cardio-pulmonary resuscitation) certification, Public Use Management Plan (PUMP) update, future of the RIT program, ethics and conduct, public contact program and aviation safety. In attendance were RITs Kelly, Knutsen and Lind.

On the 25th, RR Terrell-Wagner, MW Terry and MH Mumma attended a Mid-career Retirement Seminar in Anchorage.

BT Boden attended Wilderness - Emergency Medical Training taught by the Bristol Bay Borough in Naknek, February 12th-21st. Kevin earned state certification of "W-EMT I" which was a potential benefit in the field this summer.

February 14th-18th, AP Smoke and RIT Lind attended "Arctic Survival" training in Fairbanks. Both employees won the coveted "Polar Bear" award.

February 28th-March 4th, RM Hood, DRM Poetter and AP Smoke attended Compatibility Determination and National Environmental Conservation Act (NEPA) training held in Anchorage.

General orientation and safety training was conducted for all seasonal staff the week of June 13th-17th. Training sessions included CPR/First Aid certification, bear behavior/firearms safety, aircraft safety, sexual harassment training, and water safety/survival. Permanent staff completed annual bear defense firearms qualification training. Due to lack of adequate funding, Regional Equal Opportunity Specialist Tom Rush was unable to travel to King Salmon to present the sexual harassment training. A poor video was shown instead. Regional Aviation Training Manager Eric Akola was flown in to conduct the aircraft safety training on the 17th.

On September 12th-23rd, RITs Kelly, Knutsen and Lind attended an inter-agency "Interpretive Skills" class in Anchorage. The course highlighted communication skills, preparing and presenting educational walks and talks, visitor center operations, use of audiovisual equipment, and program evaluation.

On October 17th-21st, RR Angie Terrell-Wagner and RITs Kelly, Lind and Knutsen attended the fourth annual Region 7 Environmental Education Workshop in Anchorage. Highlight of the sessions was an afternoon spent with Joseph Cornell, an internationally recognized environmental educator.

DRM Poetter and RR Terrell-Wagner traveled to Fairbanks to attend Quality Improvement Program, Team Development Training. M. Lee Bowman, Ed.D. instructed the course November 2nd-4th at the Westmark Hotel.

RM Hood and DRM Poetter attended the Project Leader's Meeting December 12th-14th. The meeting tenor was very low key this year; but it was very beneficial having the assistants present.

Refuge Manager Ronald Hood

April 24th-29th - attended "Alaska Interagency Wilderness Training for Land Managers" held at the Kenai Princess Lodge in Cooper Landing.

May 16th-18th - attended Quality Improvement Program Team Development Training held in Anchorage. He was named as a member of the core team for the Bristol Bay/Kodiak ecosystem.

Deputy Refuge Manager Rick Poetter

February 23rd-27th - Law Enforcement Refresher training in Tucson, Arizona. It was another excellent series of training and it was especially nice to train with officers from Regions 1, 2 and 6.

April 20th-22nd - attended "Meeting the Needs of the Disabled: Program Accessibility" training held in Soldotna.

October 17th-21st - attended Supervision and Performance Management training. The training was put on by the FWS Office of Training and Education, Kearneysville, West Virginia, but held in Anchorage.

Administrative Technician Janice Collins

November 2nd-4th - traveled to Anchorage to attend Quality Improvement Program, Team Development Training. M. Lee Bowman, Ed.D. instructed the course at the Federal Building.

Office Automation Assistant Laura Shawback

March 1st-3rd - attended New Employee Orientation training in Anchorage.

March 4th-15th - worked in the Associate Manager's office for two weeks while awaiting the arrival of her baby girl. Erin Alexandra was born on March 17th, weighing in at a healthy 8 pounds 4 ounces and 20 1/2 inches in length.

Airplane Pilot Bill Smoke

March 14th-18th - Emergency Maneuver Training was attended. CP Aviation in Santa Paula, California provided the training in a Bellanca Decathlon.

Wildlife Biologist Donna Dewhurst

March 1st-5th - attended Law Enforcement Refresher training in Tucson, Arizona.

March 14th-25th - attended the first two weeks of Middle Level Management Development Program in Washington, D.C. A highlight included having Congressman Don Young as a guest speaker on environmental policy. Due to a busy year, she has been unable to complete the two-week 2nd phase of the training in which she works on a "special" assignment outside Refuges & Wildlife.

December 3rd-4th - attended a 16 hour refresher course on Advanced Cardiac Life Support. It was conducted by the American Heart Association in Naknek.

December 5th-7th - attended the annual Neotropical Migratory Bird Meeting in Anchorage. Her attendance was to help coordinate the Complex's efforts with the rest of the region.

Refuge Ranger Angie Terrell-Wagner

February 28th-March 17th - attended the Basic Refuge Management Academy in Charleston, S.C. This excellent training course had over 50 guest speakers including a guest appearance by Director Molly Beatty.

December 8th-10th - attended the annual Alaska Natural History Association Branch Manager's Workshop in Anchorage.

Refuge Information Technician Shirley Kelly

Refer to above section, "Summary of Complex Staff Training and Workshop Attendance." No other training was attended.

Refuge Information Technician John "Smiley" Knutsen

Refer to above section, "Summary of Complex Staff Training and Workshop Attendance." No other training was attended.

Refuge Information Technician Orville Lind

March 1st-3rd - attended New Employee Orientation training in Anchorage. Orville served as a member of a panel entitled, "Alaska Native Culture and Society." During this panel session, he gave a 20 minute presentation sharing his experiences and challenges working as a Refuge Information Technician.

Maintenance Worker Gary Terry

April 13th - attended training in Anchorage on control and eradication of Norwegian rats and roof rats on islands like Shemya and other potential bird nesting areas. Problems can occur when a vessel runs aground and its rodent cargo disembarks to establish itself and feed on indigenous wildlife.

April 18th-22nd - attended boiler and oil burner maintenance training in Anchorage. A lot of new information was presented that should result in energy and maintenance improvements on Complex boiler systems.

August 9th-12th - attended Leadership Support training in Anchorage. The course was presented by the Federal Training Center.

Maintenance Helper Dwight "Moose" Mumma

April 18th-22nd - attended boiler and oil burner maintenance training in Anchorage.

September 20th-24th - attended the U. S. Department of the Interior, Motorboat Operator Certification Instructors Course in Homer, Alaska. He will take over for DRM Poetter as the station's instructor.

2. Youth Programs

a. Youth Conservation Corps (YCC)

Recruitment and selection of YCC enrollees was completed on April 18th. A total of eight (8) applications were received (4 girls and 4 boys). A random drawing was held to select three applicants for the program. The first three applicants drawn were: Suzzy Terry, Anchorage, Alaska; Amy Young, Anchorage, Alaska and Brian Keck, Superior, Montana. Other applicants were from King Salmon, Alaska; Brigham City, Utah; and Bellingham, Washington.

AT Collins served as the program coordinator, with MH Mumma providing the day-to-day supervision and oversight supervision by MW Terry. An indoctrination was provided by MH Mumma and MW Terry. Program work rules, safety rules, program purposes, etc., were covered.



YCC Enrollees Amy and Suzzy working on maintenance project. 07/94, MAF

On June 13th, Suzzy Terry, Amy Young and Brian Keck began their eight week work program. Unfortunately, on July 25th, Enrollee Keck had to be dismissed under unfavorable terms. He was apprehended, by a surveillance video camera, rummaging through other enrollee's personal gear and stealing food items from the government lock-up area. No formal charges were filed. Kids!!

YCC educational training involved watching the following videos at the visitor center, on rainy days: Birth Of A Salmon; Alaska Gulf Coast; Bristol Bay Pride; Catch And Release; Grizzlies; YCC Introduction Video; Hiking and Camping In Alaskan Bear Country; Anti Drug Message; and In Celebration Of Americas Wildlife.

The first week of work involved a significant amount of safety training described in the training section above. Work projects

included: removed wooden-rail fence around the sewage system and re-constructed it along the entrance drive; mowed and trimmed lawns; scraped and painted the main entrance steps to the bunkhouse; reorganized and cleaned in warehouse Bldg. No. 5; painted the four new storage cabinets in warehouse Bldg. No. 5; painted the interior walls of the maintenance shop; cleaned and swept the aircraft hanger; organized wader storage area; assembled new metal cabinets for the office/warehouse Bldg. No. 4; and worked with staff in the office on various office related jobs.

The Complex headquarters site receives a lot of compliments for looking sharp. The enrollees worked very hard this summer and we are pleased with their accomplishments. The projects that they were involved in would have not have been accomplished without their assistance. The YCC program has been very beneficial to this Station.

b. Resource Apprenticeship Program for Students Program (RAPS)

For the 3rd consecutive year, the Complex hosted a RAPS position. RAPS is a program that affords opportunities to 11th and 12th grade students (primarily Alaska Natives) of low income families, around the state, to work for a federal resource agency. The students earn \$5.00/hour and have all room and board and travel costs paid for, if they are not local students. We do our best to recruit from the local villages.

For the second year in a row we were able to get a local Native student into the program. Kory Glick was this year's student. His program began on June 13th and ran through August 19th. DRM Poetter served as mentor and supervisor. Kory's duties involved: attending a week's worth of indoctrination/safety training; working on developing computer spreadsheets in compiling public use and biological data; preparing maps for management; serving as flag monitor; working with the maintenance and YCC staffs; conducting aerial subsistence surveys with the pilot; and other smaller odd duties. The 2nd-4th of August were spent in the Ukinrek Marrs field camp. He did good job for us.

4. Volunteer Programs

Our policy this year was to continue to pay the airfare of volunteers. We modified our policy in 1992. First year volunteers are provided transportation from Seattle, Washington. Returning volunteer's could be flown from anywhere in the U.S. A returning foreign volunteer's airfare is paid from the point they enter the U.S. This allows Lower 48 volunteers an equal opportunity to gain Alaska experience, without economic discrimination, but also places some of the burden on them. Each volunteer must commit to at least 12-weeks of full-time work to be eligible for these benefits. The Complex also provides their food, housing, and \$3.00/day stipend for miscellaneous expenses.

Brian MacGowan - A Service Volunteer, from South Bend, Indiana, entered on duty March 21st. He was a senior majoring in Wildlife Management at Ohio State University. Brian monitored waterfowl staging along the Naknek River during the spring. Brian departed King Salmon on May 30th, bound for Cold Bay, Alaska. Brian did a conscientious job conducting the spring Naknek River waterfowl surveys since March. He left us to volunteer for Izembek Refuge; banding songbirds and assisting with other wildlife surveys.

Allison Horovitz - A Service Volunteer, from New York, entered on duty June 1st. Allison helped staff the visitor center for us. She quit, on June 25th, after she found a paid position elsewhere in King Salmon. This put

us in a bind for the rest of the summer, since it was late in the year to get a replacement.

Michelle Lions - A Service Volunteer, from Tonawanda, New York began work on June 7th. She assisted in staffing the visitor center during the busiest time of year. Michelle left us on September 29th.

5. Funding

A preliminary funding target was provided on December 17, 1993; but our initial funds advice for Fiscal Year (FY) 1994 was not received until February 10th. Thus the pattern that began in FY 1987 has become the norm - our funding is always finalized around mid-fiscal year. Tables 3 to 5 provide an overview of Complex funds.

Table 3. Base funding history for Alaska Peninsula/Becharof Refuge Complex (in thousands).

FY	AKP	BCH	TOTAL
94	\$656.0	-----	\$656.0
93	\$674.0	-----	\$674.0
92	\$686.0	-----	\$686.0
91	\$739.0	-----	\$739.0
90	\$352.0	\$314.0	\$666.0

Table 4. Funding history for 1261 funds for Alaska Peninsula/Becharof National Wildlife Refuge Complex (in thousands) beginning in FY 1991.

FY	FIXED	OVRHD	PROJ	SUBSIST	CHALCOS	CONTAM	SUBTOT
94	\$334.0	\$45.0	\$103.0	\$19.0	\$25.0	\$67.0	\$593.0
93	\$352.0	\$51.0	\$117.0	\$22.0	\$8.0	----	\$550.0
92	\$291.0	\$48.0	\$ 99.0	\$14.0	---	\$46.0	\$498.0
91	\$299.5	\$37.5	\$160.0	----	---	----	\$497.0

Table 5. Funding history for 1262 and other miscellaneous funds for Alaska Peninsula/Becharof National Wildlife Refuge Complex (in thousands) beginning in FY 1991.

FY	1262				OILSPIL	QUART'S	GRAND
	FIXED	PROJ	MMS	SUBTOT	6320	8610	TOTAL
94	\$278.0	----	\$ 15.0	\$293.0	----	\$27.0	\$913.0
93	\$271.0	\$ 1.0	\$ 36.0	\$308.0	----	\$29.2	\$834.2
92	\$254.0	----	\$118.0	\$372.0	\$63.0	\$26.2	\$959.2
91	\$222.0	\$20.0	\$ 28.0	\$270.0	\$61.0	\$34.8	\$862.8

Funding for the Biological program continued at a low level again this year. However, through WB Dewhurst's initiative, funds for a neotropical bird project were received through a challenge grant (see Section G.). The public use/Refuge Information Technician program continued to be adequately funded. The Law enforcement effort received token funding (Section H.). For the first time, moneys collected through permit fees were returned to the station. A total of \$1,600 of 4960 funds were used for permit compliance patrols. Funding was received for three small Maintenance Management System (MMS) projects (Section I.3.). Operational funds (1260) were expended to 0.9 percent of target amounts.

RM Hood completed Fiscal Year (FY) 1995 work planning by submitting both fixed cost requirements and overhead cost requirements to the RO by CC-mail on September 28th. Inflation, salary creep, and directed cost cuts combine to make this effort more fanciful than real. Fixed costs are just that and have to be paid! The end result is a hidden tax on projects and a continued slide into the "do more with less" fantasy that currently passes for good management direction.

6. Safety

This station strongly supports the Regional safety program and all aspects of keeping our Complex and facilities a safe place to live and work. Another successful and safe field season demonstrates our commitment. An active safety committee, comprising MH Mumma as chairperson, RR Terrell-Wagner as a member, and KSFRD Biologist Jeff Adams as secretary/member, provides the foundation for an aggressive safety program.

8. Other Items

RM Hood, DRM Poetter and WB Dewhurst attended the Biological Inventory and Monitoring Workshop in Anchorage on January 11th-13th. The new directions proposed were received well, shattering many old paradigms while laying groundwork for improved long term data collection on refuges.

RM Hood attended the Naknek/Kvichak Fish & Game Advisory Committee meeting held in Bristol Bay Borough Assembly Chambers on the evening of April 5th. The call for proposals on the Bristol Bay finfish and related discussions dominated the meeting. Alaska Department of Fish and Game (ADF&G) Sport Fish Biologist Mac Minard advised the Board that ADF&G would author a proposal to open the Ugashik lakes system to grayling fishing. The proposal follows: the lake outlet would remain closed; the Narrows would open to catch-and-release fishing; while a limited take would be allowed in lake tributaries.

On April 6th, RM Hood submitted an issue paper for Secretary Babbitt on the local conflict among military hunters from the King Salmon Airport and Bristol Bay area subsistence hunters. The situation had been brought to the Secretary's attention by State Senator Jacko.

A review of the Complex's biological program was held on April 12-13th at the Complex's bunkhouse. Twelve persons, outside the Complex staff, participated including representatives from the Regional Office, Assistant Regional Director, Refuges & Wildlife Rowan Gould, Deputy Associate Manager Jerry Stroebele, Refuge Program Specialist Bob Bartels, Raptor Mgmt. Project Leader Phil Schempf, and Eco. Services Wildlife Biologist Mike North; KSFRD Project Leader Jim Larson; Togiak Refuge Wildlife Biologist Mike Hinkes; Katmai National Park, Subsistence Specialist Susan Savage; Coastal Biologist Buddy Goatcher; National Biological Survey Wildlife Biologist Tom Smith; and ADF&G, Sport Fish Biologist Dan Dunaway, and Wildlife Biologist Dick Sellers. Active discussions centered around the new ecosystem approach and the need to focus more on fish and small mammals.

RM Hood attended the Naknek/Kvichak Fish and Game Advisory Committee meeting on May 2nd. A proposal to create a 6.0 million acre fish and game reserve around Lake Iliamna was discussed.

The RW-7 Policy Manual Revision work group met May 10th-13th in Anchorage. Team members include Daryle Lons, RO; Harvey Heffernan, Arctic Refuge; Ronald Hood, Alaska Peninsula/Becharof Refuge Complex; Dick Munoz, Kodiak Refuge; and Aaron Archibeque, Togiak Refuge. The team functioned in an outstanding manner. They were able to review all action items and reach consensus on all significant issues. Daryle has the lead in preparing a draft manual release.

On May 24th, RM Hood met with Hazel Nelson, President/Manager, Becharof Corporation (Village of Egegik). Implementation of the PUMP, the proposed closure of the Severson Peninsula to sport hunting, implementation of Section 1307 of Alaska National Interests Land Conservation Act (ANILCA), and other topics were discussed.

At the invitation of Hazel Nelson, Jeff Adams, King Salmon Fishery Resources Office, and RM Hood met with the Corporation membership at their annual meeting on June 18th. There were approximately 25 members present. Jeff discussed recently completed studies on Arctic grayling in the Island Arm area of Becharof Lake and rainbow trout in the King Salmon River drainage. He went on to describe work planned at the Egegik River outlet of Becharof Lake and at Featherly Creek during the up-coming field season. RM Hood discussed the Alaska Peninsula/Becharof Refuge Complex Public Use Management Plan and the Record of Decision signed on May 12, 1994. The final decision on off-road-vehicle (ORV) use and camping restrictions around Becharof Lake were noted. The issue of conflicts with sport hunters and, in particular, the proposed closure of Severson Peninsula were discussed. Ron advised them of our plans to monitor the area from July 15th to September 30th with aircraft overflights three days per week. He asked for their input on where and when the conflicts were occurring.

On July 8th, the Complex hosted Cam Tredennick, Division of Budget, Washington Office. Cam visited our Mother Goose Lake field camp and was lucky enough to get a flight over the Pacific side of the Complex. He was provided with a good overview of the logistics of running field camps in bush Alaska.

The Complex hosted Director Mollie Beattie and Regional Director Walt Stieglitz on July 11th. Weather delayed their arrival; but we were able to get them to the Mother Goose Lake field camp. The staff enjoyed visiting with Mollie at a potluck dinner that evening.

On July 13th, the Complex had several visitors. Davis Bales, Chief, Design, Division of Engineering, was finalizing plans for a MMS project; Steve Kovach, Wildlife Biologist, Subsistence Management, was working on a caribou subsistence issue; and ARW Rowan Gould and RM John Martin conducted a surprise inspection when their flight to the Pribilof Islands was diverted to King Salmon because of weather.

Assistant Secretary George Frampton met informally with National Park Service (NPS) and FWS staff at the Complex bunkhouse on July 25th. He was returning from visiting Brooks Camp in Katmai National Park and Preserve (NP&P) and spent his hour lay-over visiting with us.

On August 2nd-4th, RR Terrell-Wagner and RAPS student Kory Glick spent time observing and assisting researchers at Ukinrek Marrs on the south shore of Becharof Lake. Bureau of Land Management (BLM) Geologist Tina Neal, of the Alaska Volcano Observatory, and Dr. Michael Ort, of Northern Arizona University, have been studying the Ukinrek Maars eruption for the past two summers.

On September 1st, RR Angie Terrell-Wagner attended an inter-agency meeting with representatives from the National Park Service, Bristol Bay and Lake & Peninsula boroughs, several native organizations and other interested persons to discuss tourism, visitor services, and natural and cultural resources of the local area. A task force group was created to "form a partnership of local, borough, state and federal agencies, and organizations to communicate and to contribute to the cultural, natural and recreational values of the area." Angie now serves as a member of the task group.

On October 4th, DRM Poetter attended the Lower Bristol Bay Fish & Game Advisory Committee meeting held in Pilot Point. That evening RM Hood and DRM Poetter attended the Naknek-Kvichak Fish & Game Advisory Committee meeting held in Naknek. The decline in the Northern Alaska Peninsula Caribou Herd (NAPCH) and the State's closure of Unit 9C south of the Naknek River were thoroughly discussed.

RM Hood, on October 7th, provided draft language on a Congressional inquiry on behalf of Jeff Knauf. Mr. Knauf appears to be upset that we have NEPA, compatibility, and right-of-way permit procedures that have to be accomplished before we will allow him to build a road on the Becharof Refuge.

On October 14th, RM Hood responded to a Regional Office request to provide hunting and trapping public use information. They were responding to a request from the Humane Society for such information on all Alaska refuges. It took about 24 staff hours of work to provide the requested information.

The Naknek/Kvichak Fish and Game Advisory Committee met on the evening of November 1st. AP Smoke represented the Complex and provided a report on the Bristol Bay Federal Subsistence Council meeting held on October 18-19.

Realtor Bill Barnes visited King Salmon on October 25th-28th. Bill is on a temporary duty assignment with Division of Realty in the Regional Office. His home base is in the Aberdeen Wetland Acquisition Office, Aberdeen, South Dakota. His assignment, here, was to gather recent property sales information to update appraisals on the tracts of land the government owns for the four newer residences.

The Habitat Committee met in Anchorage at the RO November 15th-17th. RM Hood participated in this effort to gather committee input and refine the draft inventory/monitoring plans from the various subcommittees.

AT Collins was selected to serve on the "Budget and Finance Functional Review Team" in August. She attended the 2nd team meeting in Anchorage on November 29th-30th. A teleconference meeting was held on December 7th. It's a difficult task ahead of the team, but they plan to come up with some recommendations for the Quality Improvement Council and the Directorate.

WB Dewhurst represented Region 7 as the Uniform Coordinator for this year's Annual Uniform Committee Meeting in Nashville, Tennessee October 25th-27th. She also held several informational meetings on uniforms across the Region in December. Meetings were held at the Anchorage Regional Office (5th), Fairbanks Offices (8th), Kenai FRO Office (8th), Kenai Refuge (9th) and Alaska Maritime Refuge in Homer (9th). These meetings informed Service employees of the potential changes in the uniform program and requested individual feedback.

F. HABITAT MANAGEMENT

1. General

On November 4, 1995, the U.S. Board on Geographic Names notified the Alaska Peninsula/Becharof Complex (Complex) that it had approved the names Mount Kupreanof and Yantarni Volcano. Mount Kupreanof, elevation of 6,222 feet, is in the Chignik Unit, 11 miles southeast of Sandy Lake (sec. 19, T 48 S, R 67 W). Yantarni Volcano, elevation of 4,410 feet, is in the Ugashik Unit, 13 miles southeast of Mother Goose Lake (sec. 1 & 2, T 37 S, R 50 W). Both are located on the Alaska Peninsula Refuge.

6. Other Habitats

For four weeks in July and August, U.S. Geological Service (USGS) Geologist Tina Neal, of the Alaska Volcano Observatory, and Research Professor Michael Ort, of Northern Arizona University, studied the Ukinrek Maars volcano near Becharof Lake. The purpose of the study was to collect samples and correlate deposits and individual strata with recorded hydrovolcanic eruptive events at the Ukinrek Maars. The Ukinrek Maars erupted in 1977 and is the youngest volcano of its type in the world. Refuge Ranger (RR) Terrell-Wagner and Resource Apprenticeship Program for Students (RAPS) student Kory Glick spent time on August 2nd-4th observing and assisting.

12. Wilderness and Special Areas

Becharof Refuge. Approximately 400,000 acres or one third of the refuge was established under the Alaska Lands Act as the Becharof Wilderness. The area represents a variety of superlative pristine habitats with a complete compliment of plant and animal associations still intact. Wilderness designation insures that representative samples of these interdependent associations, some of which are unique, will be perpetuated for this and future generations to enjoy. The genetic diversity protected by the unit will serve as an invaluable source of data for scientific investigation and for potential future needs for fish and wildlife protection, restoration and enhancement. Because of the area's designation as wilderness, it will mean that the special wildlife/wildland association within will be the last place on the refuge subject to irreversible development.

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Excavations were used by geologists to gather information on the ash layers at the 1977 Ukinrek Maars eruption site. 8/94, TN

Three private inholdings are found within the wilderness area boundary. One of the inholdings (40 acres and 5 acres) is owned by registered guide, Philip Shoemaker, another is leased by him. He has built lodges on both. The third is a Native allotment, consisting of 160 acres.

An additional 347,000 acres (29 percent) of the refuge was recommended for wilderness designation in the November 1, 1988 Record of Decision for the Becharof National Wildlife Refuge Final Supplemental Environmental Impact Statement for the Wilderness Proposal of the Final Becharof Comprehensive Conservation Plan/Environmental Impact Statement/Wilderness Review. No Congressional action has been taken on this proposal to date.

Alaska Peninsula Refuge. At present, no refuge lands are designated wilderness. A Record of Decision signed November 1, 1988 for the Alaska Peninsula National Wildlife Refuge Final Supplemental Environmental Impact Statement for the Wilderness Proposal of the Final Alaska Peninsula Comprehensive Conservation Plan/Environmental Impact Statement/Wilderness Review recommended 640,000 acres for wilderness designation.

Mount Veniaminof National Natural Landmark. Mount Veniaminof was determined to be eligible for natural landmark status in 1967. It was registered in August 1970. This unique active volcano is located in the Chignik Unit of the Alaska Peninsula Refuge. It is located about 20 miles northeast of Port Moller (Bristol Bay side) and 20 miles west of Chignik (Pacific Ocean side) and approximately 450 miles southwest of Anchorage.

Named for Russian Orthodox priest Ivan Veniaminof, who studied Aleutian Chain cones early in the 19th Century, this 8,400-foot volcano is centered on the last wide lobe of the Alaska Peninsula. The climactic eruption that

formed the Veniaminof caldera occurred about 3,700 years ago. Mount Veniaminof is massive. The summit crater is about 5.2 miles in diameter and contains a 25-square mile cupped ice field -- the most extensive crater glacier in North America. It is the only known glacier on the continent with an active volcanic vent in its center. The volcano's base is over 30 miles in diameter. The Landmark's boundaries encompass over 800,000 acres.

G. WILDLIFE

3. Waterfowl

Bristol Bay Drainages Spring Migration Watch. A spring survey of staging waterfowl along the Naknek River of the Alaska Peninsula was conducted March 11th-May 14th. The 1994 survey continued annual aerial surveys initiated in 1983. For the fourth consecutive year, ground surveys were performed in conjunction with aerial surveys. Ground surveys documented composition, abundance, phenology and distribution for each species over time. Aerial surveys documented a snapshot of overall waterfowl abundance and distribution. Additional aerial surveys were conducted along the Kvichak, Ugashik, Egegik and Kejulik rivers for comparative purposes.

Naknek River waterfowl numbers for 1994 were comparable to the mean of counts through 1991-1993. Total waterfowl use of the Naknek River, defined as the sum of each species' peak abundance, was 15,724, an increase of 6,611 from the previous year. A total of 26 waterfowl species were observed during the 1994 survey, including rare sightings of a ring-necked duck and Steller's eider. Barrow's goldeneye and Eurasian wigeon were both observed in record numbers for the Naknek River; 17 and 52 respectively. Waterfowl abundances on the Kvichak, Ugashik, Egegik and Kejulik rivers were 4794, 923, 676 and 202, respectively. All of these totals were higher than the previous years except for the Kejulik River total, which was conducted for the first year.

Independent of the waterfowl survey, a study of disturbance to waterfowl, both natural and man-made, was conducted along the Naknek River. Jet aircraft were observed to cause a highest degree of disturbance to waterfowl. Jets made up only 3% of total disturbance, but caused the greatest number of waterfowl to flush.

5. Shorebirds, Gulls, Terns and Allied Species

Bristol Bay Shorebird Counts. In a cooperative effort for the Point Reyes Bird Observatory, shorebird counts were coordinated by Wildlife Biologist (WB) Dewhurst to collect data for the Pacific Flyway spring shorebird survey. Spring shorebird counts were conducted along the Bristol Bay coast from the mouth of the Naknek River to Pederson Point, and Rapids and Lake camps along the Naknek River. The spring survey was conducted on May 11th and was highlighted by: 1,276 western sandpipers, 305 red-necked phalarope, 86 short-billed dowitchers and 27 black-bellied plover. This year's count was conducted only one day later than in 1993, but the significantly lower counts indicates that we likely missed the peak of staging this year. Numerous sandpipers were sighted on the tundra headlands, hinting that our survey was late for this year's migration timing.

7. Other Migratory Birds

Neotropical Migratory Bird Program. In an effort to initiate monitoring of neotropical migratory landbirds, WB Dewhurst contacted *Earthwatch's Center for Field Research* for a cooperative project under the "Partners in Flight" program. *Earthwatch* is a non-profit organization that sponsors research

internationally by providing volunteer assistance and funding. In October 1993, *Earthwatch* agreed to sponsor a trial program during the summer of 1994 on the Ugashik Unit of the Alaska Peninsula Refuge. The Alaska Peninsula/Becharof Complex (Complex) then received a Challenge Cost-Share grant to match the *Earthwatch* funding. The program involved 25 *Earthwatch* volunteers on two-week teams to assist with landbird monitoring based out of the Mother Goose Lake cabin. Each volunteer paid the Complex (through *Earthwatch*) \$700-750.00 apiece to help sponsor the program, netting a total of \$18,300. Aside from the biological monitoring, the Mother Goose Lake Field Camp also served as a center for adult environmental education and interpretation (see Section H.7.). The program was judged to be a successful cooperative effort. Due to this success, *Earthwatch* committed to another year of funding - for the summer of 1995!



Earthwatch volunteers removing songbirds from mist net at Mother Goose Lake. 8/94, DAD

To prepare for the summer bird project, a training session for mist-netting and banding was held in King Salmon on May 9th-31st. Todd Eskelin (previously with the Alaska Bird Observatory) was sponsored by *Earthwatch* to conduct the training, assisted by Biological Technician (BT) Melton. Nets were run for 324 hours in the King Salmon area yielding 172 initial captures and 36 recaptures of 18 different species. Three inexperienced banders gained training.

At Mother Goose Lake, avian monitoring consisted of mist-netting and banding songbirds during breeding and fall migration, conducting off-road point counts, nest searching and monitoring, and doing related habitat analysis. Two stations were set up, each with ten mist-nets, under the Monitoring Avian Productivity and Survivorship (MAPS), one in lakeside cottonwoods and the second in willow/alder brush interspersed with upland meadows. The MAPS stations were run in coordination with the Institute for Bird Populations in Inverness, California as part of a national program to monitor breeding populations. The stations were run June 10th through August 13th. On August 12th the lakeside site was converted to fall migration banding, with three nets added to the array.

This first attempt for the research project was surprisingly successful with some of the highest bird capture rates (350+ birds/100 net hours) ever recorded in Alaska. Overall, 3,203 birds of 26 different species were banded; 1,152 during MAPS, 2,038 during fall migration, and 13 as miscellaneous banding, accounting for 21% of all birds banded in Alaska this year. Our efforts also topped the state for tree and violet-green swallows, American pipits, northern shrikes, yellow and Wilson's warblers, golden-crowned sparrows and pine grosbeaks. By far the most abundant species banded at Mother Goose Lake was the Wilson's warbler (1,293).



An adult, male Tennessee warbler captured in a mist net on September 16th. First record for southwestern Alaska.

9/16/94, DAD

Much new information was also learned from this initial effort about the species composition of the area and seasonal movement. The known breeding range for two species (alder flycatchers and pine grosbeaks) was extended approximately 100 miles southward. Several new species were documented in the area, but not banded: sharp-shinned hawk, golden-crowned kinglet, Townsend's solitaire, red-breasted nuthatch, dark-eyed junco, and Tennessee warbler. An adult, male Tennessee warbler was captured in a mist-net on September 16th, collected, and sent to the University of Alaska-Fairbanks museum for confirmation by Dan Gibson. This constituted the first Tennessee warbler record for southwestern Alaska. Fall migration through the Mother Goose area peaked in mid-August, but remained strong through the first week of September. By mid-September, only winter resident species (black-capped chickadees, common and hoary redpolls) were being captured.

Christmas Bird Count. The 9th annual King Salmon-Naknek Christmas Bird Count took place on December 31st. Local results were submitted to the National Audubon Society, which sponsors and publishes results in the ornithological journal American Birds. Even though the count is not held on refuge lands, the Complex staff (WB Dewhurst) coordinates this event. Four volunteers donated their Saturday to seek out birds from Lake Camp to Pederson Point.

The weather was good on count day and the Naknek River completely open. Seventeen different bird species were spotted totalling 1,471 individuals. Highlights included: Bohemian waxwings (8) being sighted for the first time, and new high counts being recorded for common redpolls (74).

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8. Game Mammals

Both the Alaska Peninsula and Becharof refuges are open to sport and subsistence hunting of game animals. A complete discussion of harvest is found in Section H.8. This section deals with the population biology of several large game mammals found on the refuges.

Brown Bear: Black Lake Bear study - Alaska Peninsula. The bear population at Black Lake in the Chignik Unit of the Alaska Peninsula Refuge was chosen as the study site to gather baseline data on brown bear population parameters. Earlier studies in this area provided an opportunity to compare characteristics of a heavily over-exploited population with those of the current population. Bears in the earlier study were tagged during 1970-1975, excluding 1973, by Alaska Department of Fish and Game (ADF&G). During these studies 344 bears were handled 502 times and 136 of the bears were shot by hunters. In the current study, 114 bears were captured a total of 147 times. Since 1988, over 2,240 telemetry locations of bears were recorded, with 13 adult sows monitored through the entire study period. Analysis of harvest statistics has shown a higher mean age for males in recent years as compared to the 1970's. During the 1970's, subadults made up 32-37% of the population, versus about 22% currently.

Survival rates were estimated for the various sex/age cohorts of bears. Current annual survival rates were estimated at 0.60 for cubs, 0.80 for yearlings, 0.96 for 2 years old and 0.87 for females \geq 3 years old. For sows \geq 3 years old, hunting accounted for 32% of the mortality.

Studies of productivity and reproductive parameters yielded much interesting information. The reproductive interval was estimated at 5.0

years, yet the mean age for sows producing their first litter was 6.3 years. Radio-collared sows weaned 16 litters at 2.5 years of age and 4 litters at 3.5 years of age. Mean litter size for 2-yr-old cubs was 1.96 ($n = 28$).

Barren-ground Caribou. The Alaska Peninsula caribou herd is subdivided into northern and southern herds. The southern herd remains south of Port Moller and ranges to Cold Bay, and is monitored by ADF&G, assisted by Izembek Refuge. The northern herd ranges from Port Moller northward to the Naknek River drainage, utilizing both the Alaska Peninsula and Becharof refuges. The northern herd is managed by ADF&G, assisted by Complex staff.

Historically, the size of the northern herd fluctuated widely with apparent peaks just prior to the turn of the century, and again in the early 1940's when the population was estimated at 20,000 caribou. The last population low occurred during the late 1940's with an estimated 2,000 caribou. Since that time the herd experienced steady growth until 1984 when the population peaked at 20,000. The population experienced a small decline in 1989, but started to increase again in 1992. ADF&G management objective for the herd has been to try for stability in the range of 15,000-20,000 animals. A photo census by ADF&G in June 1994 documented a low of 11,957 caribou with an estimated total herd size at 12,000 to 13,000. Based on this documented drop below the target herd size, ADF&G set caribou hunting restrictions in the Naknek drainage for the 1994/1995 hunting season.

Movement of the Northern Alaska Peninsula caribou herd has been concentrated between their calving grounds south of Port Heiden to their wintering grounds south of the Alagnak River. Approximately 90% or higher of this movement occurs off applicable Federal lands. Isolated pockets of caribou occur on Complex lands in association with the Aleutian Mountains, and are thought to be more sedentary in nature. Very little is known of the caribou population status and movement east of the Aleutian Mountain Range, along the Pacific Coastline.

Aerial caribou surveys were conducted on the 20th, 22nd and 30th of June to census the Aleutian Range and Pacific Coast lowlands, coinciding with similar surveys conducted by ADF&G along Bristol Bay. The surveys were flown by Airplane Pilot (AP) Smoke in the Complex's Cessna 206 on floats with observers BT Boden and WB Dewhurst. The surveys covered Island Bay south to Yantarni Bay, Kujulik Bay, Hook Bay and inland to the Kejulik River Valley, Island Arm area of Becharof Lake, Ugashik lakes and Mother Goose Lake. In total, 1,467 caribou were counted including an estimated 90 calves, representing approximately 12% of the Northern Alaska Peninsula herd.

Moose. Moose did not become abundant on the Alaska Peninsula until the 1940's to 1950's. Range expansion from the Lake Clark/Lake Iliamna area boosted the Peninsula populations allowing for the first sport moose hunting in the mid-1950's. However, the Peninsula's population declined in the mid-1960's to the early 1970's, attributed to poor browse situations. Beginning in the early 1970's, ADF&G liberalized the moose hunting season to bring the population in line with the carrying capacity of the range. The liberalized seasons resulted in a composition disparity of many older animals with fewer younger animals. This was attributed to younger animals being more susceptible to the gun. As a result the population decline continued, compounded by loss of recruitment animals to predation by brown bear, especially on moose calves. In the late 1970's, ADF&G instituted trophy only (bulls with greater than a 50-inch antler spread or three brow tines) restrictions on hunter take. As a result, the percentage of cows was allowed to increase helping stabilize the population. In 1986, the management goal of 40 bulls per 100 cows was reached, and current efforts are to maintain the population at this level.

Management objectives set for moose on the Alaska Peninsula (Unit 9) by ADF&G include: 1) maintain existing densities in areas of moderate to high densities (0.5-2.5 moose/mi²); 2) increase low density populations to at least 0.5 moose/mi² by 1995; and 3) maintain sex ratios of at least 25 bulls:100 cows in medium-high density areas and 40 bulls:100 cows in low density areas (Sellers 1993).

Annual aerial moose surveys, by the Complex are conducted to supplement similar surveys done since 1981 by ADF&G. The Complex conducts surveys on Bible Creek and the Kejulik River on Becharof Refuge. Other area surveys are conducted by cooperating agencies (ADF&G, Katmai National Park) including those at the extreme northern boundary of Becharof Refuge, partially within Katmai National Park and the Dog Salmon River drainage on the Ugashik Unit, Alaska Peninsula Refuge. This year's survey results were as follows:

Dog Salmon River (ADF&G - 12/5/94)

93: 28% Bulls (31% Yearlings, 31% Med, 38% large), 55% Cows, 18% calves

Park Boundary (ADF&G - 11/8/94)

211: 32% Bulls (12% Yearlings, 43% Med, 44% large), 60% Cows, 8% calves

Mother Goose Lake (ADF&G - 11/27/94)

145: 22% Bulls (19% Yearlings, 28% Med, 53% large), 68% Cows, 10% calves

Kejulik Valley (FWS - 12/16/94)

223: 11% calves (other sex/age ratios not available due to antler drop)

In addition, initial moose surveys of the Mother Goose Lake drainage and the Blue Mountain/Ugashik lakes drainages were conducted on January 7th. Sex/age composition was not ascertainable due to antler drop during December. Totals were 63 moose from Mother Goose Lake and 59 moose around the Ugashik lakes and the Blue Mountains. The Blue Mountains area was resurveyed on November 28th, revealing 38 moose.

10. Other Resident Wildlife

Another result of establishing a new field camp, Mother Goose Lake, was the discovery of a new amphibian on the Complex (wood frogs). These frogs were documented on Kenai NWR and further east, but were not known to be on the Alaska Peninsula. Increased efforts will be made in 1995 to collect voucher specimens for confirmation.

11. Fisheries Resources

The following fisheries investigations were completed by the King Salmon Fisheries Resource Office (KSFRO) staff.

Egegik River Creel Survey and Salmon Escapement Enumeration. The Becharof Lake-Egegik River system is a major drainage of the Becharof National Wildlife Refuge and supports fish populations that sustain subsistence and sport fisheries in the river and commercial fisheries in Bristol Bay. These populations are also a major food source for brown bears, bald eagles and other predators/scavengers.

An area of this system that is important to subsistence and sport fishermen is at the outlet of the lake. Subsistence and sport fishermen primarily target coho salmon with incidental catches of the other species. In recent years residents of Egegik have expressed concern over apparently declining numbers of coho salmon and other species in the outlet area. These declines are associated with an observed increase in the numbers of fly-in

sport fishermen in the area. Therefore, in summer 1994 the KSFR0 began a two year study to enumerate coho and pink salmon escapement and to conduct sport and subsistence creel surveys.

Visual observation from a counting tower enumerated more than 10,000 coho salmon and more than 20,000 pink salmon. One hundred four coho salmon ranging from 470 to 670 mm mid-eye to fork length were captured by hook and line and beach seine. Scales were collected to estimate age composition. One hundred thirty-nine pink salmon were also captured. These fish ranged in length from 335 to 505 mm. No scales were collected for pink salmon.

Results from the creel surveys indicated that the area is predominantly used by guided fly-in sport fishermen during the coho salmon season. About a third of the visitors were subsistence users whom mostly participated in activities other than fishing or were in transit to areas along Becharof Lake. During coho salmon season one hundred eighty-seven subsistence and sport anglers fished for 702 hours, caught 419 coho salmon, and harvested 305. Comparison of these results with reports from refuge special use permits will assess the accuracy and usefulness of this reporting system.

Featherly Creek Creel Survey and Arctic Grayling and Dolly Varden Population Investigation. Featherly Creek is located in the northwestern portion of the Island Arm area of Becharof Lake in the Egegik River system of Becharof National Wildlife Refuge. Featherly Creek contains Arctic grayling and Dolly Varden, and is a major spawning tributary for sockeye salmon. Arctic grayling and Dolly Varden form the basis of a fly-in sport fishery. However, fishing guides report that in recent years the abundance and size of Arctic grayling has declined considerably so that the fishery now targets Dolly Varden. There is limited information concerning the status of these two stocks or the fishery. Therefore, in summer 1994 the KSFR0 began a two year study to determine the length and age compositions of these two populations and to conduct a creel survey of the sport fishery.

Two hundred six Arctic grayling and 900 Dolly Varden were captured by hook and line. Fork lengths for Arctic grayling ranged from 205 to 530; weights from 150 to 1,600 g. Scales were collected for age estimation. Fork lengths for Dolly Varden ranged from 240 to 715 mm; weights from 200 to 5,500 g. Sixty-three Dolly Varden were sacrificed for otoliths to estimate age composition.

Results from the creel survey indicate that the fishery is predominantly a July and August catch and release Dolly Varden fishery. Forty-three anglers fished for 215 hours and captured 236 Dolly Varden. Two Dolly Varden were harvested. Forty-seven Arctic grayling were captured. One Arctic grayling was harvested. Comparison of these results with reports from refuge special use permits will assess the accuracy and usefulness of this reporting system.

Investigation Of Coho Salmon Along The Southeastern Coast Of The Alaska Peninsula. Many streams of the rugged southeastern coast of the Alaska Peninsula support large runs of wild Pacific salmon. These salmon provide an important food base for the Alaskan brown bear, the bald eagle and other wildlife species. They also provide for unique wilderness sport fishing excursions and commercial saltwater fishing operations. Coho salmon provide for much of this activity, yet little is known about these stocks. In August, the KSFR0 began a two year study to increase our expertise and provide for better management of these salmon stocks. The streams of Chiginagak Bay, as a representative section of the area, were studied from August 28th to September 27th. Samples of length, weight, sex and scales were collected from 137 coho. As a side study, 131 Dolly Varden char were sampled for length and sex, tagged and released. From September 22nd to September 26th, a helicopter was used to survey coastal streams from Big

Creek of Wide Bay, South to the Yantarni River. Coho salmon escapement was enumerated in 29 streams, and 218 cohos were sampled from six of these streams for length, weight, sex and scales. In Fiscal Year 1995, sampling will continue and be extended through October.

16. Marking and Banding

A program of capturing and banding songbirds was initiated on the Complex this year in an effort to yield longterm information on neotropical migratory birds breeding on or migrating through the Alaska Peninsula. Banding totals were summarized in Section G-7 and in an unpublished progress report on file at the Complex headquarters (Dewhurst, Eskelin and Melton 1995).

18. Subsistence

Moose. Aerial moose surveys of the Big Creek drainage and (Western) Park Boundary portion of Becharof Refuge were initiated in December 1991 to monitor moose movement in the area during the December sport and subsistence hunting seasons. Aerial moose surveys were continued in January 1994 by AP Smoke and observer Maintenance Helper (MH) Mumma, alternating between the Refuge's and the Park Service's PA-18's. Most of the movement down from the hills appeared to have occurred during late December, with some evidence of reverse movement in mid-January, back into Katmai Park. The biggest thing we did learn is the intricate role the Park plays in providing a reservoir of unhunted animals that move in and out of the huntable portions of the refuge throughout the December/January hunting season.

During the fall/winter, one complete survey of the Big Creek/Granite peak area was conducted on November 30th. Surveys were flown using the Complex's Cessna 206 and PA-18 by AP Smoke with observers: WB Dewhurst and MH Mumma. Sex and age composition of the area was determined during the late November survey to include: 151 total consisting of 21% bulls (22% yearlings, 34% medium, 44% large), 67% cows and 18% calves. This survey represented a 46% increase over total moose sighted last year, but a 50% decrease in relative number of calves observed. Surveys of Big Creek and surrounding area are scheduled to be continued into January 1995.

During the 1994 special subsistence moose hunt in Game Management Unit (GMU) 9C (Big Creek area), the Complex issued 5 antlerless moose permits, with 1 hunter taking a cow.

Caribou. Residents of Perryville and Ivanof Bay, primarily Native Alaskans, submitted a proposal at the spring 1993 Alaska Board of Game meeting to open the State resident caribou hunting season early for subsistence needs on the Pacific side of the Aleutian Range over a large section of GMU 9E. The hunt proposal was subsequently approved, but was reduced to all Pacific drainages southwest of Seal Cape. The Federal Subsistence Board then mirrored this decision for federal lands. These regulation changes affected lands both adjacent to and within the Chignik Unit of the Alaska Peninsula Refuge. The proposal made unconfirmed assertions about the life history of the targeted caribou. According to the proposal, the caribou migrate out of the villages' traditional hunting area by the time the State resident hunting season opens on 10 August. The proposal further maintains the caribou in this "local area" are a "sub-herd of the larger Alaska Peninsula herd," instead of a localized population. For these reasons, the Ivanof Bay and Perryville residents proposed to open a bull-only season on 1 July "to harvest caribou for subsistence" without "travel[ing] far from [their] traditional hunting area."

Based on the need to examine this issue more closely, a cooperative study was initiated by Service Volunteer (SV) Zeke Peters and the Complex. SV

Peters was a fourth-year student at Hampshire College, Massachusetts; this project was his senior thesis. Working closely with WB Dewhurst and SV/BT Boden, SV Peters conducted the primary research during summer 1993 and concluded his thesis in May 1994. The following summary is an excerpt from the abstract of his thesis.

An aerial caribou population survey was conducted revealing a very low caribou density (0.23 caribou per km²) on the Pacific side of the Chignik unit. Attempts were made to interview hunters, but it was found that no one was using the new hunt season, possibly due to a difficult fishing season allowing local residents less free time to hunt. Historical research into caribou populations and distribution indicated that caribou may have been abundant in the hunt area in the past, and that those caribou may have been tied to the Southern Alaska Peninsula herd. Historical research into caribou harvest and use in the Pacific drainage of the Chignik Unit revealed that little quantitative information on local caribou harvest exists.

No immediate change in regulations was recommended by Peters due to the lack of caribou ecological and subsistence use information. The following recommendations were made: (1) a mark-recapture study to determine the origin of the local caribou; (2) annual door-to-door subsistence use surveys of the local communities to better understand caribou harvest and use patterns; and (3) a re-examination of caribou harvest tickets to determine caribou harvests by non-local hunters.

H. PUBLIC USE

1. General

The majority of public use currently occurring on Alaska Peninsula/Becharof Complex (Complex) lands involves subsistence and sport hunting of caribou, moose, and bear; fishing for Arctic grayling, burbot, dolly varden/Arctic char, rainbow trout, lake trout, northern pike, and five species of Pacific Salmon (king, sockeye, silver, coho and chum); trapping furbearing animals and gathering berries.

Complex resources are utilized by residents of 12 villages on or near refuge boundaries, primarily for subsistence uses. Other Alaska residents and out-of-state visitors commonly utilize Complex resources pursuing sport hunting and fishing activities.

Public demand for high quality outdoor and wildlife associated activities continues to increase. Requests for off-Complex programs also continues to increase. Expansion of our educational program has been possible with the addition of three Refuge Information Technicians (RITs) in September 1991.

The three RITs were hired to assist with subsistence, public use and environmental education (EE) programs on the Complex. Major duties of the RITs include: serving as liaisons and facilitating exchange of information between the Complex and local villages; preparing and conducting environmental education and subsistence programs; staffing the King Salmon Inter-Agency Visitor Center; and assisting in other public use programs as needed. The RITs work a nine month season (September-May), taking time off in the summer months to pursue commercial fishing activities. The RITs were originally hired in term appointments in September 1991, and were converted to permanent part-time positions effective October 30, 1994.

Public use inquiries continued to increase again this year. There were inquiries from 42 states and 14 foreign countries (Australia, Canada, England, Finland, Germany, Holland, India, Italy, Japan, New Zealand,

Spain, Sweden, Switzerland, and West Africa). Over 260 public use inquiries were answered during the year (180 in 1993).

The development of the Public Use Management Plan (PUMP), which will guide the future development of recreation on the Complex, was completed this year with the help of Public Use Planner (PUP) Clough (see Section D.2.).

2. Outdoor Classrooms (Education Programs) - Students

Environmental Education and Outreach. With the RIT program in place, staff time and talents were devoted to developing and presenting EE programs for adults and children in nearby villages. Towards the goal of providing quality education classes we presented the following EE and outreach programs this year:

January. Staff time was devoted to educating students about declining populations of Arctic nesting geese using the "Teach About Geese" curriculum, and promoting conservation of geese through the Western Alaska Goose Calendar Art and Literature contest. Programs given included:

3rd - RIT Knutsen visited the 6th grade class (19 students) in Bristol Bay School in Naknek for 1.5 hours.

4th - RIT Knutsen visited the 1st grade (20 students), 3rd grade (20 students) and 4th grade (20 students) classes in Bristol Bay School and worked with each class 1.5 hours.

5th and 11th - RIT Knutsen visited the 5th grade (13 students) in Bristol Bay School and worked with students for 2 hours each day.

7th and 21st - RIT Knutsen visited the 2nd grade (28 students) in Bristol Bay School and worked with students for 1.5 hours.

12th - RIT Knutsen visited the 3rd grade (20 students) in Bristol Bay School and worked with students for 1.5 hours.

14th and 21st - RIT Knutsen worked with 4th grade (20 students) class in Bristol Bay School for 1.5 hours each day.

18th - RIT Lind visited the pre-school & K grades (8 students), 1st-3rd (10 students), 4th-6th (12 students), 7th & 8th (7 students) and 9th-12th (10 students) at Chignik Lake School. He worked with each class for one hour.

19th - RIT Lind visited Chignik Lagoon school and worked with K-5th (5 students) and 6th-8th (6 students) for approximately 30 minutes each. He took the 9th-11th (8 students) on a field trip to observe Emperor geese. The class was able to view approximately 1,000 geese while learning about habitat, food sources, migration patterns, etc.

20th - RIT Knutsen visited the 1st-5th grade (21 students) classes in South Naknek and worked with the students for 2 hours.

20th - RIT Lind visited the Chignik Bay school and worked with K-4th (7 students), 5th-7th (6 students) and 8th-11th (8 students). He spent one hour in each classroom.

21st - RIT Lind visited the Perryville school and worked with K-1st (4 students), 2nd-4th (8 students), 5th & 6th (7 students) and 7th-11th (10 students). He spent 45 minutes in each class.

21st - RIT Lind visited the Ivanof Bay school and worked with K-10th (11 students) for one hour.

February. Staff EE efforts again concentrated on educating students about declining populations of Arctic nesting geese. Programs given in this educational effort included:

16th - RIT Lind visited the K-4th (10 students), 5th-8th (11 students), and 9th-11th (7 students) grade classes at the Meshik school in Port Heiden. He worked with each class for approximately one hour.

28th - RIT Knutsen visited the school in South Naknek and worked with the elementary classes (20 students) for 2 hours.

To encourage teachers to celebrate "National Wildlife Week," they were sent information packets with educational materials on the theme "Pollution: Let's Clean Up Our Act" to 17 schools in the Bristol Bay and Lake & Peninsula school districts. We also supplied the schools with a resource list of educational materials available from the Pollution Prevention Office in Anchorage.

March. Staff time and energy was spent educating students about declining populations of Arctic nesting geese using the "Teach About Geese" curriculum, and promoting conservation of geese through the Western Alaska Goose Calendar Art and Literature contest. Programs given included:

1st, 2nd and 3rd - RIT Kelly worked with the 5th-8th grade classes (11 students) at the Egegik School. She worked with the children a total of 6 hours.

16th - RIT Knutsen visited the elementary classes (20 students), at the South Naknek School. He worked with the students for approximately two hours.

April. Staff time was spent educating students about tundra plants and animals this month. Programs given in this educational effort include:

1st, 8th, 15th, 22nd and 29th - RIT Kelly worked with 5th-7th grade classes (6 students) at the Egegik School. Shirley began working with these students last October. She met with them each week to observe and study individual plots. Students spent time both in the classroom and outdoors learning about the tundra environment. Shirley worked with the children a total of five hours this month.

11th - RIT Lind visited the 4th-8th grade classes (11 students) at the Meshik School in Port Heiden. He worked with the students for approximately two hours, discussing caribou biology and behavior, and then took the students on a field trip to observe caribou.

Western Alaska Goose Calendar Poster and Literature Contest. April 20th, we were notified that winners of the 1995 Western Alaska Goose Calendar Poster and Literature contest had been selected. The contest continues to be very popular with over 1,800 entries from 56 different villages this year. A total of 271 local students entered the poster contest and 72 entered the literature contest. We are pleased that several students from our area were winners in this important conservation project. Winners from both school districts included:

Literature Contest: over-all winners

GRAND PRIZE: Kira Chilcott, grade 6 in Naknek

FIRST PLACE: Tamara Yagie, grade 2 in Perryville

SECOND PLACE: Ryan O'Domin, grade 2 in Perryville

Kira Chilcott's Grand Prize winning literary prose reads:

Spring

Precious geese have finally arrived
joy and excitement overcome me.

Summer

Geese will be leaving soon
the season is moving too quickly.

Fall

Geese are still here,
Slowly leaving for their southern home
Moving quickly away from winter.

Winter

Geese have all left.
I have an empty feeling in my heart
knowing that one day they may not return.

Literature Contest: grade category winners

First Place, (Grade 6-8) Mary Castleberry, grade 6 in Naknek
 First Place, (Grade 9-12) Jessica Watson, grade 11 in Naknek
 Second Place, (Grade 6-8) Lisa Johnson, grade 8 in Chignik Bay
 Third Place, (Grade 3-5) Carrie Harried, grade 4 in Nondalton
 Third Place, (Grade 9-12) Sarah Torzillo, grade 9 in Naknek

Poster Contest: over-all winner

SECOND PLACE: Woody Trefon, grade 1 in Nondalton

Poster Contest: grade category winners

First Place, (Grade 3-5) Ramon Christensen, grade 5 in Port Heiden
 First Place, (Grade 9-12) Kendra Shugak, grade 10 in Pedro Bay
 Second Place, (Grade 9-12) Keith Erickson, grade 12 in Perryville

Regional Resource Support staff returned the non-winning art and literature entries in the goose calendar contest in May. After reviewing the student's work, we conducted our own Complex-wide art and literature contest. We wanted to recognize and give credit to the many students who participated in this important project. Several staff members were involved in reviewing and judging the student's work. Bristol Bay School District had the following winners in our Refuge contest:

Literature Contest:

Honorable Mention, (Grade 6-8) Dorena Angasan, grade 8
 Honorable Mention, (Grade 6-8) Nate Cramer, grade 8
 Honorable Mention, (Grade 6-8) Elisa Egli, grade 8

Poster Contest:

Honorable Mention, (Grade K-2) Anthony Kohler, grade 2
 Honorable Mention, (Grade 3-5) Carrie Grindle, grade 4
 Honorable Mention, (Grade 3-5) Fred Zimin, grade 4
 Honorable Mention, (Grade 6-8) Kelsey Blush, grade 6
 Honorable Mention, (Grade 6-8) Sarah Stokes, grade 6
 Honorable Mention, (Grade 6-8) Sonya Zimin, grade 8

Lake and Peninsula School District had the following winners:

Literature Contest:

First Place, (Grade 6-8) Rebekah Bursell, grade 6 in Levelock
 Second Place, (Grade 9-12) Jeremy Matson, grade 9 in Port Heiden
 Third Place, (Grade 9-12) Shannon Skonberg, grade 12 in Chignik Bay
 Fourth Place, (Grade 3-5) Tiffany Alexie, grade 3 in Nondalton
 Honorable Mention, (Grade 6-8) Anya Ruth Furman, grade 7 in Egegik

Poster Contest:

First Place, (Grade 9-12) Joe Kalmakoff, grade 11 in Chignik Bay
 Second Place, (Grade 6-8) Rebekah Bursell, grade 6 in Levelock
 Third Place, (Grade 9-12) Ruel Carlson, grade 9 in Chignik Bay
 Fourth Place, (Grade 6-8) Tanya Kalmakoff, grade 6 in Chignik Lake
 Honorable Mention, (Grade 6-8) Senafont Shugak III, grade 6 in Ivanof Bay
 Honorable Mention, (Grade 9-12) Austin Shangin, grade 9 in Perryville
 Honorable Mention, (Grade 6-8) Robin Christensen, grade 7 in Port Heiden
 Honorable Mention, (Grade 6-8) Jermaine Sue Jacko, grade 7 in Pedro Bay
 Honorable Mention, (Grade 3-5) Irvin Pope, grade 4 in Nondalton
 Honorable Mention, (Grade 3-5) John Christensen, grade 5 in Port Heiden
 Honorable Mention, (Grade 3-5) Kirilana Scanlon, grade 5 in Chignik Bay
 Honorable Mention, (Grade 6-8) Tatiana Askoak, grade 7 in Iliamna
 Honorable Mention, (Grade 3-5) Corrina Pedersen, grade 5 Chignik Lagoon
 Honorable Mention, (Grade 3-5) Daniel Leonard, grade 5 in Egegik

Prizes and gifts for the Lake and Peninsula students were sent to each school. RIT Knutsen and Refuge Ranger (RR) Terrell-Wagner presented the Bristol Bay students with the prizes and gifts they won during a School Awards Ceremony held the evening of the 25th.



Local winners in the 1994 Goose Calendar Art and Literature Contest have their work displayed at the King Salmon Visitor Center.
5/94, DAD

Beginning on May 10th, an exhibit showing the student's award winning art and literature work was put on display at the King Salmon Inter-Agency Visitor Center. Entries not selected were returned to the schools for the community to enjoy.

May 13th, RR Terrell-Wagner gave a one hour program on Arctic nesting geese to ten 4th and 5th grade students from Perryville school. The students were very excited to learn that three children from their school had won prizes in the goose calendar contest. They enjoyed seeing the exhibit highlighting their winners.

October 7th, RIT Orville Lind visited the Meshik School in Port Heiden and worked with 11 students (grades K-3) and 6 students (grades 9-12). Orville spoke of his recent capture of an injured gyrfalcon and efforts by an Anchorage veterinarian to rehabilitate the bird. We are hoping to be able to release the bird back in the village next spring. Total instruction time was one hour.

On October 26th & 27th, RIT Lind visited Meshik School in Port Heiden and worked with 14 students (grades 4-12) highlighting declining populations of Arctic nesting geese and the role students play in helping with this resource concern. Both indoor and outdoor activities were used, including a field trip to observe Emperor geese on the beach. Total instruction time was 1.5 hours.

RR Terrell-Wagner updated the Complex's Environmental Education Plan on October 15th for use at the annual EE Workshop.

The week of November 14th-18th, RIT Kelly presented a series of EE classes for students at the school in Egegik. Topics she highlighted included the United States Fish and Wildlife Service (USFWS) mission, ecosystems and wilderness, Web of Life, etc. She worked with K-5th grade (8 students), 6th-7th (7 students) and 8th-12th grade (6 students) each day during the week for a total of 15 hours of instruction.

November 15th, RITs Lind and Knutsen participated in a 1.5 hour conference call regarding the upcoming 1996 goose calendar contest. Highlights of the call included discussions on the contest theme, new rules, judges, etc.

In December, staff time and energy was spent educating students about declining populations of Arctic nesting geese, using the "Teach about Geese" curriculum, and promoting conservation of geese through the Western Alaska Goose Calendar Art and Literature contest. Programs given included: 7th - RIT Lind worked with 26 students at the Perryville school. He spent a total of 3 hours teaching students in grades 3rd-12th.

12th - RIT Lind worked with 22 students at the Chignik Bay school, spending a total of 3 hours with grades K-12.

15th - RIT Knutsen worked with 12 students from the Levelock school for about 30 minutes. Smiley worked with students at the Visitor Center.

22nd - RIT Lind visited the Meshik school in Port Heiden and worked for 3.5 hours with 22 students in grades K-12th.

The 1995 Western Alaska Goose calendars and contest rules for the 1996 contest were distributed to schools throughout the Bristol Bay and Lake & Peninsula school districts, the week of the 13th. Calendars were sent to schools in Chignik Lagoon, Chignik Lake, Igiugig, Ivanof Bay, Kakhonak, Newhalen, Nondalton, Pedro Bay, Pilot Point and Port Alsworth. The RIT staff personally distributed calendars to students in Chignik Bay, Egegik, Levelock, Naknek, South Naknek, Perryville and Port Heiden.

3. Outdoor Classrooms (Education Programs) - Teachers

This year we had planned to conduct a "Teacher Education Workshop" for the Bristol Bay and Lake & Peninsula school districts during their combined teacher in-service training in late August. At the last minute the two districts decided to have an intensive one-topic workshop instead of offering a variety of sessions as they have done in the past. Since we were not able to participate, we are planning to conduct a workshop August 1995.

We continued to expand our Resource Lending Library this year. The Lending Library now consists of several excellent natural resource and educational books, video tapes and audio-visual materials, etc. Staff use these materials in preparing and presenting EE programs, and we have them available for loan to village teachers. We also use the educational video tapes extensively in the visitor center during the summer months.

6. Interpretive Exhibits/Demonstrations

The King Salmon Inter-Agency Visitor Center is still in the early stages of development. Facility needs include completing exhibits and developing informational/educational materials (brochures, handouts, etc.) highlighting major themes and objectives of the four participatory agencies. Necessary funding for exhibits has been secured, and much staff time and effort was spent this year designing and fabricating the new exhibits. Much of the work on writing scripts and searching for photos is being completed by RR Terrell-Wagner with assistance from Katmai National Park, Chief of Interpretation Mark Wagner. National Park Service, Regional Designer Keith Hoofnagle has taken the lead in working with Art Services North to produce the end products. This was complicated when Keith took one of the early retirement buy-out programs. He has been volunteering his

efforts for months. We are planning to have the exhibits in place and functioning in early 1995.

7. Other Interpretive and Outreach Programs

Alaska Marine Ferry System Interpretation. May 8th and 9th, RIT Lind presented educational programs on the Alaska Marine Ferry route from Homer to Dutch Harbor and return. As part of a Challenge Cost Share project of the Alaska Maritime Refuge, we had Complex staff riding the ferry on the section from Chignik Bay to Homer this summer. Orville gave three programs highlighting the history of the Chignik commercial fishery, conservation of Arctic nesting geese and an ivory carving demonstration using traditional tools and techniques.

June 6th and 7th and again on July 18th and 19th, RR Terrell-Wagner presented educational programs on the Alaska Marine Ferry route from Homer to Dutch Harbor and return. Angie gave programs highlighting the Alaska Peninsula and Becharof Refuges, and the conservation of Arctic nesting geese.

Refuge-specific video tape program. In late July, we were notified that the Director's Office had money available for our public use program. We obligated these funds to produce a professional video highlighting natural resources and recreational opportunities of the Complex. Professional file footage gathered in 1992 and additional footage taken in early September will be used to produce a 10-15 minute video tape. The film will be used at the King Salmon Inter-Agency Visitor Center and at various public and village meetings. It will also be available for sale through our Alaska Natural History Association (ANHA) branch.

EarthWatch partnership. In a cooperative effort with *Earthwatch*, the Mother Goose Lake Field Camp was initiated on June 6th with Biological Technicians (BT) Boden and Melton as resident staff. The purpose of the camp is to monitor Neo-Tropical bird populations through a mist netting and banding program using *Earthwatch* volunteers in addition to Complex staff. Volunteer teams consisting of 2 to 4 members spent two weeks each assisting in the banding project, a total of 25 volunteers participated during the 1994 field season. BT Boden left during August to attend school and National Park Service (NPS) Subsistence Specialist Susan Savage filled in to help with bird banding from the 13th-23rd until BT Eskelin could be hired. The successful field season at Mother Goose Lake ended on September 19th, a total of 3,191 birds of 25 different species were banded.

Other Outreach programs this year.

January - During RIT Lind's trip to village schools (18th-22nd), he made several home visits to inform villagers about his school programs and the Complex's PUMP document. He made home visits in five villages contacting a total of 29 people.

February - On the 21st, RR Terrell-Wagner participated in a "Career Fair" at the Bristol Bay school. A total of 30 students learned about the mission of the Fish & Wildlife Service, and the Youth Conservation Corps and Resource Apprenticeship Program for Students programs.

March - On the 25th, RR Terrell-Wagner participated in the "Regional Fisheries Conference" in Naknek. Angie, and Mark Wagner, Chief of Interpretation for Katmai National Park, staffed a booth representing the King Salmon Visitor Center, providing information and brochures to a total of 50 people. We also had a small

sampling of our ANHA educational materials for sale. ANHA sales totaled \$62.00.

April - Ten members of the Anchorage Audubon Society visited King Salmon for a field trip on the 29th-May 2nd. Wildlife Biologist (WB) Dewhurst and staff (BT's Boden and Melton, and Volunteer MacGowan) helped guide the group to all the birding hot spots, concentrating on staging waterfowl and shorebirds. The group managed to see 59 species during the trip, which was capped off with a potluck dinner and slide show at the Complex bunkhouse.

May - On the 21st, RR Terrell-Wagner, RR Admunson and RIT Knutsen participated in a community event entitled, "Taste of Bristol Bay." The four agencies representing the Visitor Center sponsored an educational cakewalk. The cakewalk was designed to provide participants with information about the four agencies in an entertaining educational manner. Twenty significant "features" from the region were chosen as subject "squares" to be used in the game. Categories include brown bears, caribou, moose, bald eagles, migratory birds, Big Creek, Becharof Lake, Valley of Ten Thousand Smokes, volcanoes, sport and commercial fishing, etc. In addition to winning a cake, each winner also received a free Salmon Resource poster and a fishing trip on the Naknek River. The fishing trip was provided by the Complex in celebration of National Fishing Week. (See Section H.9).

September - On the 1st, RR Terrell-Wagner attended an inter-agency meeting with representatives from the National Park Service, Bristol Bay and Lake & Peninsula Boroughs, several native organizations and other interested persons to discuss tourism, visitor services, and natural and cultural resources of the local area. A task force group was created to "form a partnership of local, borough, state and federal agencies, and organizations to communicate and to contribute to the cultural, natural and recreational values of the area." Angie now serves as a member of the task group.

On the morning of the 17th, RR Terrell-Wagner attended the Southwest Alaska Municipal Conference (SWAMC) session on promoting tourism in the local area.

October - On the 6th, RIT Lind attended a Local School Advisory Committee (LSAC) meeting in Port Heiden to share EE programs he plans to present in the Meshik school this year. RIT Kelly attended a LSAC meeting in Egegik on the 31st, to share her EE plans for the year.

On the 7th, RIT Lind attended a City Council meeting in Port Heiden to explain his role as an RIT and EE programs he is planning for this year.

On the 13th-15th, RITs Lind and Knutsen staffed a USFWS informational booth at the Alaska Federation of Natives (AFN) Conference in Anchorage. Conference activities were concentrated at the Egan Center, but since space was not available there, the booth was set-up at the Hilton Hotel. Very few people visited the booth because of the inconvenient location. We hope to have a better location next year.

November - On the 1st, RIT Lind attended a City Council meeting in Port Heiden to explain his role as an RIT and EE programs he is planning for this year.

King Salmon Inter-Agency Visitor Center (Visitor Center). The Visitor Center is currently operated as a joint inter-agency project with the U. S. Fish and Wildlife Service, National Park Service, the Bristol Bay Borough, and the Lake & Peninsula Borough. Other possible partners who have expressed an interest in joining this inter-agency project include the Bureau of Land Management (BLM), and the Alaska Department of Fish and Game (ADF&G).

The visitor center facility opened in May, 1992 and presently consists of a staffed information desk, an Alaska Natural History Association (ANHA) sales outlet, a ten seat audio-visual room where informational/educational videos are shown on a large screen television, an interactive video "Bear Quiz" program, a brochure rack advertising local services and facility information, and office space for staff. Thus far, attendance at the visitor center facility has been very good with a total of 8,458 people using the facility during this third year of operation (January 1st - December 31st), with ANHA sales of \$24,657.00.

The primary purpose of the visitor center is to provide information and orientation to visitors before they leave the King Salmon/Naknek communities for local areas administered by the Complex, NPS, and the two Boroughs. During the summer months the Visitor Center functions primarily as an information, orientation and trip planning center. During the off season (November through April) the facility functions as an environmental education center to provide both on and off-site programs for community school children. Educational programs can be extended to adults through workshops, seminars and other special programs.

Immediate needs of the visitor center facility include finishing exhibits and materials highlighting major themes and objectives of the participatory agencies. Much staff time and effort was spent this year designing and fabricating new exhibits which should be in place and functioning in early 1995 (see Section H.6).

Visitation Summary, January - December, 1994

Total visitation:	8,458
Total videos shown:	512
Total film viewers:	1,486
Total "Bear Safety" interactive viewers:	1,441
Total signing guest register:	518
Total Information Requests:	260

In 1994, visitors signing the guest register represented 42 states and 16 foreign countries. We were pleased to see the wide variety of foreign countries represented (Austria, Australia, Belgium, Brazil, Canada, Columbia, Costa Rica, England, Ethiopia, Germany, Guatemala, Italy, Japan, Mexico, Scotland and Switzerland). Approximately 20-25% of people using the center in the summer months are tourists visiting from foreign countries.

February - On the 23rd, a meeting was held with the four agencies who co-manage the King Salmon Visitor Center. In attendance were RR Terrell-Wagner, Mark Wagner representing the National Park Service, Scott Janke of the Bristol Bay Borough and Glen Vernon with the Lake & Peninsula Borough. Topics of discussion included 1993 visitation and ANHA sales, 1994 budget and staffing plan, and design/fabrication of the new exhibits.

May - The four agencies involved in managing the Visitor Center sponsored an educational cakewalk for a community-wide event "Taste of Bristol Bay," (see Section H.7, Interpretive and Outreach Programs).

Table 6. King Salmon Inter-Agency Visitor Center Visitation

MONTH	DAYS OPEN	HOURS OPEN	SPECIAL CLOSURES	VISITATION	ANHA SALES
January	Tue - Sat	1230-1630	New Year's Day	112	\$281.00 (\$2.50/visitor)
February	Tue - Sat	1230-1630	7th-13th (RIT Workshop)	49	\$310.00 (\$6.32/visitor)
March	Tue - Sat	1230-1630	1st-10th(???????)	54	\$606.00 (\$11.22/visitor)
April	Tue - Sat	1230-1630	None	111	\$552.00 (\$4.97/visitor)
May	Tue - Sat	1230-1630	None	286	\$1,029.00 (\$3.59/visitor)
June	Sun - Sat	0800-1700	None	1,555	\$2,987.00 (\$1.92/visitor)
July	Sun - Sat	0800-1700	None	2,914	\$7,109.00 (\$2.44/visitor)
August	Sun - Sat	0800-1700	None	1,625	\$4,338.00 (\$2.67/visitor)
September	Sun - Sat	0800-1700	None	1,302	\$5,306.00 (\$4.08/visitor)
October	Tue - Sat	1000-1630	14th-23rd (EE Workshop)	105	\$429.00 (\$4.08/visitor)
November	Tue - Sat	1230-1630	Veteran's Day & Thanksgiving	95	\$178.00 (\$1.87/visitor)
December	Tue - Sat	1230-1630	Christmas Weekend	250	\$1,532.00 (\$6.13/visitor)
TOTALS				8,458	\$24,657.00 (\$2.92/visitor)

June - On the 3rd, a meeting was held with the four agencies involved in the Visitor Center project. Attending the meeting were Refuge Manager (RM) Hood and RR Terrell-Wagner; Bill Pierce, new Superintendent of Katmai National Park; and Walt Wrede, new Lake & Peninsula Borough Manager. No representative from the Bristol Bay Borough was able to attend. The meeting agenda included getting acquainted with the new project players, summer staffing plans for the center and new exhibits planned for early fall. Each agency representative also signed a letter to MarkAir requesting permission and rent-credit to make the outside of the building more attractive and the inside universally accessible.

November - Staff time was spent making the Visitor Center restroom universally accessible including enlarging the door opening, replacing toilet and sink fixtures, and installing grab bars. New carpeting was also installed to alleviate the slippery floor safety hazard.

December - To encourage local residents to visit the center and to promote sales of ANHA educational and interpretive materials, we offered a "Holiday Sale" throughout the month (see Section H.18, Cooperating Associations).

8. Hunting

Hunting is a major category of public use on the Complex. Commercial guiding includes hunts for world-class trophy brown bear, caribou and moose. Some hunters take advantage of overlapping seasons to pursue all three species. Brown bear seasons occur on an 18 month rotation (spring hunt during even years and fall hunt in odd years).

King Salmon is the hub for commercial air service to access the Complex. Once a hunting party arrives in King Salmon, air taxi and charter services are available to most areas on the two refuges. King Salmon is the base of operation for numerous guide/lodge businesses operating on the Alaska Peninsula. Those hunters wishing to hire the services of a guide will generally find that fees can be costly and highly variable depending on the length of the hunt, amenities provided, area, and species of animal hunted. Commercial guide fees for caribou or moose hunts range from \$2,500 to \$3,500 and a brown bear hunt costs \$10,000 to \$15,000.

Individuals wishing to go hunting on their own will have to be more prepared, but can save money. According to state law, non-resident hunters are required to be "guided" on brown bear hunts. The fees set by ADF&G for resident and non-resident licenses and tags are listed in Table 7. Once the proper licenses and tags are obtained, the cost of an air charter can range from \$150 to \$625 for each hour of flight time. An average round-trip flight to a hunting location will take three or more hours.

Hunters are required to submit a "hunt report" to ADF&G at the close of the hunting season. The report includes information on harvest success. Due to the long hunting seasons, ADF&G lags behind one year in processing the harvest reports, thus hunter success in calendar year 1993 is shown in Tables 8 and 9.

Table 7. Alaska resident and non-resident license and tag fees for 1994

Type of License	Non-resident	Resident
Hunting	\$ 85.00	\$25.00
Hunting and sport fishing	\$135.00	\$55.00
Caribou tag	\$325.00	0
Moose tag	\$400.00	0
Brown bear tag	\$650.00	\$25.00

Table 8. Caribou and moose reported harvest for Alaska Peninsula Game Management Units (GMU) 9C and 9E, 1993-1994 (ADF&G data).^a

Species	Bulls	Cows	Unknown	Total
Caribou	1159	175	4	1338 ^b
Moose	147	2	0	149

^aHarvest reports include both Alaska Peninsula and Becharof refuges. (Reporting dates for caribou are from August 1992 to March 1993. Moose are for the 1993 season only.)

^bOther Alaska residents (not local) took 460 caribou, non-resident hunters took 290 caribou and local resident hunters reported 86 caribou taken (this number is considered to be very low as the majority of local subsistence hunters do not report their success to ADF&G.

Table 9. Brown bear harvest for the Alaska Peninsula, 1975-1994, GMUs 9C and 9E (ADF&G data).

Date ^b	Total Bears	Percent Boar	Mean Boar	Age Sow	Percent Harvest ^a Boar	Sow
1975-76	261	62	6	7	49	51
1977-78	311	64	6	7	45	55
1979-80	316	68	6	6	47	53
1981-82	339	59	6	6	47	53
1983-84	268	61	6	8	53	46
1985-86 ^c	263	64	7	8	60	37
1987-88 ^d	398	62	6	6	69	29
1988-89	347	66	-	-	66	34
1989-90	328	67	-	-	-	-
1991-92	350	66	-	-	-	-
1993-94	310	66	-	-	-	-

^aFigure represents bears 5 years of age or older.

^bBrown bear hunting season on the peninsula is on a rest-rotation schedule, e.g., the fall of 1993 was open, followed by a season in the spring of 1994. There will not be another open season until the fall of 1995, essentially an 18 month cycle.

^cIncludes seven bears of unknown age and/or sex. Drainages listed on harvest reports indicate 144 (55 percent) of the total harvest was taken either on Alaska Peninsula or Becharof refuges.

^dIncludes 12 bears of unknown age and/or sex.

9. Fishing

The rivers and lakes within the Alaska Peninsula/Becharof Refuge Complex provide world-class fishing opportunities. Game fish include five species of Pacific salmon (king, sockeye, silver, coho and chum), Arctic grayling, dolly varden/Arctic char, rainbow trout and burbot. In large lakes,

northern pike and lake trout are common. Flowing-water areas most often utilized for sport fishing include: King Salmon rivers (Becharof Refuge and Chignik Unit, Alaska Peninsula Refuge); Big, Featherly, Gertrude and Painter creeks; and Upper and Lower Ugashik lakes, including the Ugashik Narrows (Narrows). In 1981, the Alaska record Arctic grayling was caught in the Narrows.

Based on studies done by ADF&G, the State Board of Fisheries issued a regulation closing the Ugashik lakes' drainage to the taking of Arctic grayling in 1990. The study showed that the Arctic grayling stock at the Ugashik Narrows decreased significantly from 1,200 fish in 1988 to approximately 500 in 1989. The Narrows is a half mile stretch of stream connecting Upper and Lower Ugashik lakes. The closure remained in effect for this year.

A total of 22 guides/lodges offering fishing packages were "permitted" to operate on the Complex in 1994. Most operators promote "catch and release" angling for resident fish species. A variety of package programs that include lodging and air transportation to the fishing areas are available. These package deals range in price from \$1,500 to \$5,000, depending on the length of stay and quality of amenities offered by the lodge.

The celebration of National Fishing Week came late to the Complex this year. Normally activities (fishing trip for kids) are held in early June. The selected youths and Complex staff were not available in June, so we waited until the commercial fishing season was over in late summer. On August 24th, Maintenance Helper (MH) Mumma, Airplane Pilot (AP) Smoke and Deputy Refuge Manager (DRM) Poetter used government and personal boats to take two adults, two high school students and four grade school students 10 miles upstream on the Naknek River to fish for coho salmon and rainbow trout. A picnic lunch was prepared by MH Mumma, and the trip coordinated by RR Stefanie Amundson. A few fish were caught, and lots of fun was had by all.



Maintenance Worker Mumma assists young adults in developing angling skills during National Fishing Week activities.

8/24/94, RDP

10. Trapping

Historically, the trapping of fur bearing mammals was a full-time winter endeavor on the Alaska Peninsula. Today, trapping popularity is highly variable due to the price fluctuation of raw hides. Fox, mink, ermine and beaver are commonly trapped; and to a lesser extent, coyote, wolf, wolverine, lynx and land otter are caught. As a method of monitoring take, ADF&G requires a sealing tag on the untanned skin of wolverine, wolf, lynx, land otter and beaver. Data from the sealing records is listed in Table 10. No records are available on ermine, fox, mink, or coyote.

Table 10. Fur bearer harvest in GMUs 9C and 9E (ADF&G data).

Year (winter)	Number Harvested				
	Beaver	Otter	Lynx	Wolverine	Wolf
1984-85	--- ^a	24	4	14	14
1985-86	166	25	23	20	10
1986-87	240 ^b	112 ^b	27	22	10
1987-88	254 ^b	152 ^b	3	30	14
1988-89	57	53	4 ^c	36	23
1989-90	108	52	2	31	23
1990-91	91	31	2	23	12
1991-92	191	90	16	56	55
1992-93	150	47	22	17	13
1993-94	116	26	35	27	52

^aNo data available.

^bIndicative of increasing prices for short-hair furs.

^cAll taken from Unit 9E.



RIT Lind and school teacher Scott Seaton captured an injured immature bald eagle in the village of Chignik Lagoon.
1/94, FWS

11. Wildlife Observation

On January 19th, RIT Lind captured an injured immature bald eagle in the village of Chignik Lagoon. Eight high school students participated in the capture. Orville assisted students in writing a letter to the Anchorage vet rehabilitating the bird. Students learned the eagle is 2-3 years old and suffered a bruised wing. On April 28th and 29th, Dr. Scott and Greg Brooks from the clinic traveled out to release the bird in the village. The pair gave an excellent program on raptor rehabilitation to students in both Chignik Lake and Chignik Lagoon. After the program in Chignik Lagoon, the students went outside to witness the release of the healthy eagle. RIT Lind represented the Service during the programs and eagle release.

15. Off-Road Vehicles

The Alaska National Interest Lands Conservation Act (ANILCA) modified the way we manage off-road vehicles (ORVs) in Alaska. When a person is pursuing traditional activities on Complex lands (including wilderness) they may use snow machines, motorboats, airplanes and non-motorized surface transportation. When rural residents are involved in subsistence activities they may use snow machines, motorboats, off-road vehicles, and other means of surface transportation that have traditionally been used.

The issue of ORV use on Alaska Peninsula/Becharof Refuge Complex has three elements: 1) ORV use by big game guide-outfitters; 2) ORV use for recreation (primarily sport hunting); and 3) ORV use by subsistence users. Each element is discussed below.

Big Game Guide-Outfitters. When the Alaska Peninsula Refuge was established in 1980 (ANILCA), there were five (5) big game guide-outfitters that had established over 200 miles of ORV trails on refuge lands. These trails were found to be harmful and inappropriate because they result in habitat degradation due to plant destruction, soil compaction, and soil erosion. To reduce impacts on these guides' business, Complex managers established two policies: a) negotiation with each permittee to permit only the use of essential trails between camps; and b) cease permitting the activity when a guide use area changed hands. As a result of the competitive award of guide-outfitter areas in 1993, only one guide continues to have authorized use of ORVs. This use is limited to six (6) miles of ORV trail. Use by the last permittee will be eliminated when the current 5-year permit terminates.

Recreational ORV Users. This use was determined to be "not compatible" with refuge purposes by both the Alaska Peninsula Refuge Comprehensive Conservation Plan (CCP) and accompanying Record of Decision (ROD) and the Becharof Refuge CCP and ROD. This use was found to be harmful and inappropriate because it results in habitat degradation due to plant destruction, soil compaction, and soil erosion. One winter ORV access route over frozen Big Creek was found compatible in the Becharof Refuge CCP/ROD. Recreational ORV use of refuge lands is also prohibited by regulation (43 CFR 36). Development of the PUMP has resulted in clarification of the ORV use issue among recreational and subsistence users.

Subsistence ORV Users. Title Eight of ANILCA authorizes access to refuge lands by subsistence users by "traditional" methods. On the Alaska Peninsula, use of 3- and 4-wheeler ORVs was an established method of access when ANILCA passed. Therefore, this use has been judged to be traditional. Both refuge CCPs were silent on this issue. A Complex staff developed PUMP that included a review and recommendations on limiting ORV use by subsistence users. This traditional access cannot be limited without promulgation of new regulations with public hearings in the affected villages. Completion of the PUMP is an important step in defining the

issue and the need for regulations. A final PUMP was completed in December 1993 (see Section D.2.). The ROD was signed in 1994. Promulgation of any regulations needed as a result of the ROD will take one or more years. The process has been initiated.

17. Law Enforcement

Law Enforcement patrols for the spring brown bear season were flown on May 9th, 12th, 13th, 19th, 20th and 25th. Stan Pruszenski from Anchorage accompanied AP Smoke on the 19th and 20th. He was helpful in providing insight regarding innovative field contact procedures.

July patrols were flown around Becharof Lake on the 14th, 15th, 26th and 29th. These flights were primarily aimed at documenting public use activities in the area.

In response to local subsistence users pushing for closure of recreational hunting on portions of Becharof Refuge, Becharof Lake patrols were flown on 8 days during August. Two surveys per week were accomplished with very little activity noted, especially in the Island Arm area.

Our moose season was in September in Units 9C & 9E on the Complex. Caribou hunting is ongoing at that time also. Law enforcement patrols were flown by the staff on the 6th, 7th, 14th, 15th, 16th, 19th, 21st, 23rd and 26th. Flights on the 19th, 21st and 23rd were to investigate wanton waste reports, Alaska State trooper personnel accompanied AP Smoke on the 21st and 23rd. Unguided moose hunter activity was substantial around Becharof Lake's Island Arm area. Air taxis' provided the bulk of the access means.

During the September moose season we made an extra effort on some problem areas. Special Agent Stan Pruszenski spent the 9th-12th working the Becharof and Ugashik lakes area with DRM Poetter. They worked out of the Island Arm administrative cabin by inflatable boat and with law enforcement's Cessna 185 on floats. This year there was a substantial amount of activity taking place. The weather cooperated by providing low winds and a high number of hunters were contacted.

On October 24th, AP Smoke and DRM Poetter met in Anchorage with Special Assistant U.S. Attorney Carlene Faithful and Special Agent Stan Pruszenski to review the case against an Anchorage hunter who transported his caribou antlers from the kill site prior to salvaging all edible meat. The violation occurred on 09/24/93 near the upper reaches of Big Creek on Becharof Refuge. The district court jury trial was set for the 26th, but on the evening of the 24th, the attorneys from both sides met to review "new evidence that would cause the case to be dismissed." It turned out that the 1993 State hunting regulations synopsis, published for hunters, was not written clearly enough to indicate that a caribou hunter must remove the antlers last. It was written clearly for sheep and antler restricted hunts. The new synopsis is much clearer. A motion to dismiss the case was filed by the government. It was felt that due to the confusion in the synopsis a jury would be unlikely to convict.

River ice conditions and snow conditions were finally right for AP Smoke and DRM Poetter to conduct subsistence law enforcement patrols up the Big Creek drainages. On December 22nd, the Big Creek channel was followed and on the 29th the old "cat" trail that leads from King Salmon to Brooks Lake via the Becharof Refuge.

Table 11. Adjudicated Violations for 1994.

DATE OF OFFENSE	VIOLATION	FINE	RESIDENCE
05/18/94	Littering	\$100.0 0	Adak, Alaska
09/11/94	Transport Caribou Antlers Prior to All Edible Meat	\$250.0 0	W. Des Moines, Iowa
09/12/94	Transport Caribou Antlers Prior to All Edible Meat	\$250.0 0	Ft. Collins, Colorado

See Section H.21 for discussion regarding special use permit enforcement and violations.

Refuge User Accidents/Incidents

On August 16th, while returning from a refuge patrol, AP Bill Smoke observed a float plane on the beach of Buckey's Lake, 20 nautical miles southeast of King Salmon. Bill circled the site and observed several people working around the plane. He proceeded to King Salmon to drop off his passenger and freight. Bill arrived back at the site at 3 pm.



DRM Poetter (left) and AP Smoke on patrol in Brooks Hills area of Becharof Refuge. 12/29/94, PM

The plane was an amphibious De Havilland Beaver, N53084, owned by Lakeside Industries of Bellevue, Washington. A group of company employees had spent the 15th fishing on Big Creek and had experienced difficulties while the plane was an amphibious De Havilland Beaver, N53084, owned by Lakeside Industries of Bellevue, Washington. A group of company employees had spent the 15th fishing on Big Creek and had experienced difficulties while

departing, aborting the take off, the aircraft came to a stop on the north shore completely out of the water. Damage included two broken float struts and broken hydraulic lines. The only injury was a bruised pilot ego. Temporary repairs were made and it was flown out.

In early October, AP Bill Smoke was advised by a sport fish guide from the Yantarni Bay area that an aircraft incident had occurred on the beach of Yantarni Bay on September 20th. Investigation revealed that an unpermitted transporter, Clearwater Air, of Soldotna, Alaska had landed in soft sand and bent his prop. Repair parts were flown to the area by another unpermitted transporter and the aircraft was ferried to Soldotna on September 22nd. Bill talked with the owner of Clearwater Air and gave the option of receiving a citation or obtaining a special use permit and paying client fees. He chose to get a permit.

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18. Cooperating Associations

With the opening of the King Salmon Inter-Agency Visitor Center, a branch of the ANHA was established. This was the third year of operation for the visitor center and ANHA sales of educational and interpretive materials continues to be very good especially for a new ANHA branch. We were very happy with our sales which totaled \$24,657.00 for January - December.

To encourage local residents to visit the visitor center and to promote ANHA sales, we offered a "Holiday Sale" throughout the month of December. All ANHA items were discounted 15%. Sales were good with total of \$1,532 (\$11.32/visitor).

We currently offer 100+ book titles, an extensive map selection including topographic maps, Federal Aviation Administration (FAA) air charts, nautical charts, and numerous posters and notecards. We expanded our selection of materials in 1994, which helped to boost sales 35% above the 1993 figure. See Table 6 for a summary of monthly sales.

Local resident Heather Poetter began duties as the Assistant Branch Manager for the Visitor Center and Katmai National Park ANHA Branches in May 1993, and worked part-time until the middle of August. Heather also worked part-time during December to help us with our "Holiday Sale." Heather's duties included ordering sales materials, completing stock inventories and making bank deposits. She worked approximately 4 hours per week in the spring and summer months on an "as needed basis."

On December 8th-10th, RR Terrell-Wagner attended the annual ANHA Branch Manager's Workshop in Anchorage.

20. Cabins

It is the policy of the Service to allow the continued customary and traditional uses of existing cabins (constructed prior to December 2,

1980), provided that the uses are consistent with existing laws and regulations and are compatible with the purposes for which the refuge was established (ANILCA 304(d), 1303(b), 1315 and 1316). Service policy is to limit new cabins to those essential for the continuation of an "ongoing activity" or use allowed within the refuge (ANILCA 304(d), 1303(b)).

We currently maintain a database of all cabins located within the Complex exclusive of those on private inholdings. The database includes: 56 cabins listed by Complex Unit; Location by Township, Range and Section(s); a description of each structure in terms of construction material; square footage of floor space; and type of use pattern.

A notice letter regarding property removal was sent on November 15, 1993 to several past big-game guide-outfitter permit holders. It advised them that their cabins were no longer authorized since they no longer held special use permits. They were given until November 15, 1994 to complete clean up and removal of personal property. During 1994 the refuge received requests to permit cabins owned by Larry Hancock and John Swiss, these permits were issued. The remainder of the property owners failed to respond prior to November 15, 1994. The property which was left included:

- 1) A cabin at T26S, R39W, Sec. 35, in the Kejulik River valley, which had been used for big-game guiding by former governor Jay Hammond. This structure will be converted to an administrative/safety cabin until plans for final disposition can be made.
- 2) A tent platform site located at T30S, R42W, Sec. 7, at Cabin Creek which had been for big-game guiding by Mike Munsey. This site is in a deteriorated condition and will require a major cleanup effort.

Several new permits for cabins were issued in 1994.

- 1) The most notable was the permit for the Becharof Youth Camp in July. This permit had been in limbo for a number of years. It was quite a relief to refuge staff when the permitting process was completed.
- 2) A permit was issued in January to ADF&G for their commercial fisheries cabin on the Egegik River near the refuge boundary. There had been a question as to whether the cabin was located in or outside of the refuge boundary. Bureau of Indian Affairs completed some land surveys of the area and we discovered the cabin to be just within the boundary.
- 3) A permit was issued to Larry Hancock of Lower Ugashik Lake Lodge for cabins on Black Creek and Mumma Creek for sport fishing. These cabins had been purchased by Mr. Hancock from his cousin, who had been a big game guide in that area prior to the implementation of the guide-outfitter program.
- 4) A permit was issued to John Swiss for a cabin on Cub Lake. Mr. Swiss will use the cabin to conduct hunts off the refuge south of the lake.
- 5) A permit was issued to Bill Martin for his base camp at the Yantarni Airstrip. Mr. Martin had operated a commercial sport fishing camp at the southeast end of the strip for a number of years prior to the land being transferred back to the Service in 1993. Meetings were held early in 1994 to discuss plans to move his camp to a more suitable location. A location was chosen at the northwest end of the strip, and by August the move was completed. AP Smoke flew to the area on September 7th for an inspection.

On July 7th, AP Smoke and DRM Poetter flew to the administrative cabin on the lower Kejulik River to inspect the structure. River bank erosion had

begun to undercut the building. The inspection indicated that it was inevitable that the cabin would fall into the river. Government property was removed which included hand tools, utensils and an oil stove, and the cabin and outhouse were destroyed before someone tried to use it or it fell into the river and became a navigation hazard. Brown bears were continually forcing their way into the cabin because it was located on "their" trail along the river.



Kejulik River administrative cabin soon to fall into the river. Note the "bear access" hole in the rear.

07/07/94, RDP

21. Guides-Outfitters

A total of 33 special use permits were issued for commercial big game, sport fish guiding, and transporting activities occurring within the refuges (Table 12). Commercial big game permits issued in 1993 were five year permits and 28 are still valid.

In January, AP Smoke traveled to Juneau to review state hunt contracts at the Big Game Commercial Services Board. Phil Breuser and Kayleen Wirth were very helpful in providing work space and locating documents for review. Information gathered from review of these documents indicated that numerous special use permit violations had occurred during the 1993 season. Most were using assistants not listed on permits, and/or guiding more clients per species than authorized by their special use permits. By the end of January, letters had been written to all of the permit holders outlining the permit violations and informing them that we had designated 1993 as a "learning year" since it was the first year of the new guide-outfitter program.

Table 12. Special use permits for Big Game/Fish Guides/Outfitters and Transporters 1984-1994.

YEAR	BIG GAME GUIDING	FISH GUIDING	TRANSPORTER	TOTAL PERMITS
1994	28	21	12	61
1993	29	23	12	64
1992	23	14	13	50
1991	27	20	10	57
1990	27	24	9	60
1989	30	20	8	58
1988	36	19	6	61
1987	36	13	4	53
1986	30	8	4	42
1985	33	3	4	40

An investigation into alleged violations of special conditions to permit AKP 02 held by Richard Carlson which occurred during the 1993 season was conducted in early 1994. On April 15th, pursuant to the procedures described under 50 CFR Section 25.45(b), RM Hood revoked special use permit No. AKP02-93-16595 for big game guide-outfitter area AKP02, Alaska Peninsula National Wildlife Refuge. Pursuant to 50 CFR Subpart 25.45(c), Mr. Carlson had 30 days from the postmarked date of this final decision in which to file a written appeal to the Regional Director (RD). The appeal period ended on May 15th. An extension was requested and approved by the Regional Director, until June 6th. On July 8, 1994, RD Stieglitz issued a "statement of finding" that upheld RM Hood's Revocation of the special use permit of big game guide outfitter Richard Carlson for use area AKP02.

A total of 43 commercial guide-outfitter permittees recorded 2,944 client use days within the Complex last year. Fishing clients represented approximately 78 percent of the total clients and 63 percent of the total client use days.

A total of 21 big game guide-outfitter permittees were responsible for harvesting 41 brown bears, 30 moose and 63 caribou last year. Sows represented approximately 29 percent of the bear harvest, while no cow moose and no cow caribou were harvested.

A total of 22 fish guide-outfitter permittees were responsible for 15,957 fish being caught, of these, 1,313 were kept. Approximately 83 percent salmon, 17 percent arctic char, 0 percent arctic grayling and 0 percent rainbow trout made up the total reported harvest.

A total of 3 permittees were responsible for the harvest of approximately 27 game birds. Game bird harvest was incidental to big game hunting.

22. Take Pride in America/Alaska

The Complex has benefitted greatly from the "Take Pride" program, for several years. But unfortunately, the program was discontinued this year.

23. Subsistence

February - The Bristol Bay Subsistence Regional Advisory Council met in Dillingham on the 22nd-24th. RM Hood and RITs Knutsen and Lind represented the Complex. Among the agenda items were review and action on **PROPOSALS TO CHANGE SUBPART D (Regulations)**. These deliberations and development of recommendations for the Federal Subsistence Board were the major focus of the meeting. The Board did an extremely conscientious and excellent job of reviewing each proposal. Their demand for site-specific data and information reinforces our need for a subsistence biologist.

June - On the 15th, RR Angie Terrell-Wagner traveled to Anchorage to serve on a panel to nominate candidates for two positions on the Bristol Bay Regional Subsistence Advisory Council. Prior to going to Anchorage, Angie spent several evenings conducting reference and personal interviews of local applicants. Panel members included: Helga Ekon, Subsistence Office; Jeff Denton, BLM; and Lee Fink, NPS. Panel nominations were forwarded to the Federal Subsistence Board.

August - In response to local subsistence users pushing for closure of recreational hunting on portions of Becharof Refuge, patrols of Becharof Lake were flown on eight days during August. Two surveys per week were accomplished with very little activity noted, especially in the Island Arm area. September surveys will be flown three times per week and we observed increase usage from caribou and moose hunters.

October - RM Hood attended the Bristol Bay Subsistence Regional Advisory Council meeting held in Newhalen on the 18th and 19th. The meeting produced several actions that will have long-range impacts on the management of the Complex. After listening to RM Hood's presentation of the findings on the monitoring of Severson Peninsula, Island Arm, and the remainder of Becharof Lake (mid-July to early October), the Council voted to support the "Request for Reconsideration R-94-06." This proposal would close the Severson Peninsula to sport hunting. The data revealed that in 1994, only one sport hunting camp was found on the peninsula; however, there were 18 camps present during the sport moose season in the Island Arm area. A similar proposal for the Sandy River Pass to Stepanof Flats area in the Chignik Unit was discussed. Despite the lack of evidence that sport hunting even occurs in the area, the Council voted to submit a 1995 proposal to close the area. This was quickly followed by a vote to submit and support another 1995 proposal that would close the entire Aniakchak National Preserve to sport hunting for moose and caribou. Next, the Council discussed and approved submitting a proposal for a permit bull moose hunt in Unit 9C portion of Becharof Refuge for August 20 to 31, followed by a non-permit hunt September 1 to 15 (corresponds to State hunt). The last agenda item involving the Complex was a discussion on the Bristol Bay Native Association request for closure of Federal public lands in units 9C and 9E to non-subsistence hunting of caribou. The discussion focused on procedures since it was too late to impact sport hunting during the current hunting season. The Council voted to request that the Federal Subsistence Board implement emergency procedures that provides quicker action when the public requests action.

Effective **October 1st**, ADF&G Biologist Dick Sellers issued an emergency closure (No. 02-11-94) in Unit 9C on hunting caribou in the Smelt and Big Creek drainages south of the Naknek River. This includes part of Becharof Refuge. We issued a news release advising local residents that this

closure does not affect the Federal Subsistence Management Regulations for the Federal lands found in Becharof Refuge.

December - The month of December marks the winter subsistence antlerless moose season for the Big Creek area of Becharof Refuge. Good river ice and snow conditions allowed ample opportunities for locals to access the area via snowmachine and 4-wheelers. The snow was marginal (2-3 inches) for most of the lower elevation tundra areas, but good on the river corridor. A total of five permits were issued for the taking of antlerless moose. Only one hunter harvested a cow. Three did not fill their permits and the fourth took an antlered bull. This is the third year of this special subsistence hunt with the highest hunter activity. Table 13 details the animals harvested in the fall and December season on the refuge.

On December 7th, RIT Orville Lind traveled to Perryville to recruit and hire a new marine mammal tagger for the village. Orville was asked to select the tagger by the Marine Mammals office. Jerry Yagie is the new Perryville tagger.

In a cooperative effort with the local ADF&G biologist and Aniakchak National Monument and Preserve, the Complex agreed to utilize RIT Orville Lind in administering the subsistence permits for the October 1 - December 31, 1994 and May 10-25, 1995 Federal subsistence brown bear season for the villagers of Chignik Lake, Perryville and Ivanof Bay. Orville passes on information regarding the season, issues permits and seals bears that are taken. Information flyers and large maps, showing the lands open for the taking of subsistence brown bear, have been sent to each of the villages' post offices and key village council members were notified. Orville tagged a total of two bears taken in Chignik Lake during this subsistence hunt.

I. EQUIPMENT AND FACILITIES

2. Rehabilitation

Maintenance staff spent the last two weeks of March working on projects in the warehouse (Bldg. No. 5). Storage shelves were cleaned and organized. Plywood backing was added to the shelves and they were moved against the wall to make more space. A heavy duty galvanized storage rack for wood was constructed from the old fence piping. Several loads of trash and junk were hauled to the dump. Four eight foot storage cabinets were built and moved to the warehouse. Several days were spent moving items from the shop and organizing them in the new cabinets. Items included outboard motor parts; painting, plumbing, and electrical supplies; and vehicle tune up and repair parts.

Regional Engineer Rudy Berus and Landscape Architect Paul Schrooten visited the Complex on May 4th and 5th. Their visit was to assist in planning modifications to the Alaska Peninsula/Becharof Complex's (Complex) facilities to bring us into compliance with Section 504 of the Rehabilitation Act of 1973. A total of \$30,000 of Maintenance Management System (MMS) funding was been turned over to the Engineering office to complete the work. Another \$12,000 of MMS funding was held by the Complex for smaller projects to improve accessibility. All of the \$12,000 was spent, but only a portion of the \$30,000 was spent. Difficulty in getting local (or any) contractors to bid on the construction of the boardwalks and entrance rehabilitation. for the office and bunkhouse resulted in no awards. Bristol Bay Contractors bid an unprecedented \$60,000 to do the work. A fat hog was not cut here. They were rejected. Numerous staff members offered to do it for half that, but they were also turned down.

Table 13. 1994 - Harvest of Moose on Becharof National Wildlife Refuge within Unit 9C - Preliminary Data.

Fall Season	Bull	Cow	Tot.
Guided Sport Hunters	2	0	2
Unguided Sport Hunters	1	0	1
C & T Eligible	1	0	1
Subtotal	4	0	4
December Season			
Sport Hunters	0	0	0
¹ C & T Eligible	7	² 1	8
Total	11	1	12
Area Hunted			
Long Lake	2	0	2
Big Creek	4	1	5
Brooks Hill	5	0	5
Total	11	1	12

¹ Excellent ice conditions and fair to good snow conditions throughout December.

² Five (5) antlerless permits issued by Alaska Peninsula/Becharof Refuge Complex.

Work to convert the men's restroom, in the main office (Bldg. No. 4), to universally accessible standards was started in November by the maintenance staff. A new doorway was installed and the old entrance was walled off and made into a storage area for cleaning supplies. The urinal was removed and a new handicapped toilet and a faucet were installed. The mirror and paper towel were lowered to the appropriate levels.



Maintenance staff removing old septic system at Headquarters.
05/94, RDP

In May, the old office compound septic tanks were pumped dry and then removed by the maintenance staff. We were hooked up to the new community sewer system in 1993 so the septic system was no longer needed. The tanks were hauled away by Bristol Bay Contractors.

In August, a variety of shrubs were purchased from Alaska Greenhouse Inc. in Anchorage. Twenty-three shrubs were planted on the office compound.

In October, the sewer line at Residence No. 26 was dug up using the Case backhoe. Maintenance staff installed a more accessible clean-out on the southwest side of the house. Previously, it was very difficult to access the clean-out under the house. The other three new residences will get the same modifications made.

3. Major Maintenance

The sleeping areas of the bunkhouse received a fresh coat of paint in January. The shower stalls were re-caulked, and a sign designating MEN or WOMEN was installed on the door to the uni-sex showers. In January, oak expandable partitions were installed in the common bunking area of the bunkhouse. This created two more double-occupancy rooms with added privacy. The intended use is for volunteers or seasonal staff to live in when staying in the bunkhouse for extended periods of time.

July through September, the maintenance staff worked on the removal of the badly peeling, old paint from the four newer Complex houses (Residence Nos. 26, 27, 28 and 29). They were pressure water-sprayed, scraped and repainted with latex stains. We have been trying to get funding for vinyl siding and could not wait any longer.

The new Delta Two Stage Central Dust Collection System was installed in the shop by month's end. This required moving the wood cutting tables and saws around to new positions. The shop serves as a wood-working shop and

equipment maintenance shop. Dust has been a continual problem when working on equipment.

4. Equipment Utilization and Replacement

Items transferred from the King Salmon Air Force station were picked up and put in the warehouse in July. Bunkbeds, five bicycles, book racks, pool table, clothes dryer, bedroom dressers, and office supplies were received.

Two vehicles were transferred to the Complex from the King Salmon Air Force Station in August. A 1985 Dodge short-bed pickup truck was received and set up with a fuel tank to serve as a temporary means of refueling Complex aircraft. The other vehicle is a 1985 Chevy S-10 pickup with a utility-box bed. It will serve as a second maintenance vehicle. In November, work was completed on the Dodge pickup, used to carry aviation fuel. The engine was given a tune up, extensions were put on the fuel spout and vent, and the static grounding wire spool was installed.

Aircraft. On April 6th, Airplane Pilot (AP) Smoke arrived at Office of Aircraft Services (OAS) to pick up the Complex's Cessna 206 (N32PX) after refurbishment work which included: wing-tip extensions, new paint and interior, annual inspection, and bubble front side windows. It had that "far away" look; the farther away you were the better it looked! After two days of fixing up the new paint job AP Smoke departed from Anchorage on the 7th. During the flight to King Salmon, N32PX developed an excessive "nose up" condition that could not be trimmed out. With the elevator trim to the forward stop, the last 40 minutes made for pretty tired arms. On inspection of the trim systems, it was determined that the trim cables and chains were **improperly installed**, and were slipping and binding. Both the rudder and elevator trims were "out of rig" but only the elevator trim bound during the flight. On the 14th, after repairs, N32PX was test flown and made several flights, with no further problems the rest of the month.

In October, N32PX had the gear change from floats to wheels done in King Salmon for the first time ever. This provided a substantial savings in both time and money. N32PX was pulled from the river on October 7th and returned to service on wheels on the 13th. N32PX was delivered for 100 hour inspection in King Salmon on the 24th and returned on the 31st.

In May 1993, a new IO-550 Continental engine was installed in N32PX. Since that time it has been flown approximately 500 hours and performed well. During the past two 100 hour inspections, the cylinder compression has steadily declined to the point that OAS is in the process of purchasing new cylinders for a top overhaul. Although the new engine has run smooth and performed well, this premature engine wear is consistent with wear noted in nearly all other IO-550 engine installations to date.

5. Communications Systems

On the 24th, the fire designated Bell 206 helicopter and contracted radio technician Ted Collins arrived to conduct VHF/UHF radio system maintenance. New radio flatpacks and duplexer were installed in the Whale Mountain repeater. It and the Mother Goose repeater were tuned up. A new flatpack is needed for the Mother Goose repeater.

The local UHF telephone patch system has been disconnected for years and is needed for use by the maintenance and biological staffs in lieu of a cellular telephone. It could not be activated this year but is scheduled for the 1995 Spring visit by the radio technician.



N32PX after refurbishment; photo taken at Mother Goose Lake.
08/94, DAD

Another remote for the VHF/UHF is needed in the clerical office area. The only remotes are located in the office area of the refuge ranger, pilot and deputy manager and frequently during the busy summer months there is nobody to answer the radios. A new remote unit was provided to us by the Regional Office in August. This unit will be installed in 1995 when the radio technician visits again.

6. Computer Systems

Hardware purchases for the year included an Epson Stylus 800 ink-jet printer for the Visitor Center and a Panasonic 24-pin dot matrix printer for the biologist. A couple new mice were purchased to convert a few more computers to windows. A 14.4 variable rate modem was purchased for the Administrative Technician's computer for doing ccMail, etc.

Software purchases included: WordPerfect 5.2+ for windows upgrades; Lotus 1-2-3 Version 5 for windows upgrades; Lotus 1-2-3 Freelance for windows; latest version of Travel Manager; Microsoft Windows 3.1; and CorelDraw 5.0 for windows upgrade.

A new inter-connector system was also purchased and installed by Deputy Refuge Manager (DRM) Poetter in December. The "Coactive Connector" system utilizes parallel ports and phone wiring to link one computer to another in a series. Printers are assigned to a computer and can be shared by other computers linked in the system. File sharing is also possible. The system is much improved over the Logical Connectors we were using that were beginning to malfunction frequently.

7. Energy Conservation

New burner units were purchased for all the boiler systems of the Complex, including resident housing. Three of the Carlin E-Z-3 burner units were

received the first week of November. One unit was installed in the bunkhouse; the other was installed in the shop. All furnaces will be re-fitted with the new energy efficient burner units.

Electronic eyes were installed in the restrooms of the office building and bunkhouse. When one walks into the room the lights automatically come on. The time duration can be regulated. It will cut down on the lights being left on when not in use. This was also done for universal accessibility.

8. Other

On September 28th, AP Smoke flew the Complex's Cessna 206 to Anchorage and transferred several small quantities of hazardous materials to the Northwest EnviroServices. This company will ship them to the Lower 48 for neutralization or final disposal. The chemicals included: barium hydroxide, formaldehyde and carbon tetrachloride. Expenses paid to the company have totaled \$820.00. Pretty expensive for only 10 gallons of chemicals. Definitely, don't buy more than you plan on using because it costs more to get rid of than to buy!

J. OTHER ITEMS

1. Cooperative Programs

In a cooperative effort with the Alaska Department of Fish and Game's (ADF&G) Hunter Education Program, DRM Rick Poetter instructed a Hunter Education Course to nine youths and five adults. Refuge Information Technician (RIT) Lind and another local resident (Frank Schroeder) assisted with the course as "trainees" to obtain their certifications as instructors. The 10 hour course was held at the Bristol Bay School in Naknek the evenings of April 6th, 7th, 11th and 13th.

The Complex hosted three Russian reserve managers on June 25 to July 1. They included Dmitry Kovalev, Director, Wrangel Island Reserve; Sergey Shestakov, Chief of Conservation Staff, Laplandskiy Biosphere Reserve; and Igor Shpilenok, Director, "Bryanskiy Les" Reserve. Yana Beigulenko, from Moscow, served as interpreter. This visit was part of a U. S. Fish and Wildlife Service effort, in cooperation with the Department of Defense, to conduct an intensive refuge management training program for Russian reserve managers. The weather proved to be very cooperative and all objectives were met. The week's itinerary follows:

- June 25 - King Salmon. Arrive from Dillingham at 1:45 p.m. via PenAir. Tour King Salmon/Naknek area. RON (remain over night) King Salmon Joint Air Port (U.S. Air Force).
- June 26 - Ugashik Unit, Alaska Peninsula Refuge. Fly by OAS (Complex) aircraft to Mother Goose Lake (MGL). Band neotropical migrant birds at MGL station. Work with Earthwatch volunteers. RON Mother Goose Lake.
- June 27 - Ugashik Unit, Alaska Peninsula Refuge. Continue MAPS station bird banding. Return to King Salmon late in day. RON King Salmon Joint Air Port.
- June 28 - Katmai National Park and Preserve (Katmai NP&P). Fly by OAS National Park Service (NPS) aircraft to Brooks Camp. Tour bear viewing program guided by Katmai NP&P staff. Return to King Salmon late in day. RON King Salmon Joint Air Port.
- June 29 - Becharof Refuge. Fly by OAS (Complex) aircraft to Becharof Lake outlet. Participate in King Salmon Fishery Resource Office management project - resident and anadromous fish

- stocks. Return to King Salmon late in day. RON King Salmon Joint Air Port.
- June 30 - King Salmon Joint Air Port. Tour facility with Lt. Colonel William J. Heinen (Bill), Base Commander. Potluck dinner at the Complex's bunkhouse at 6:00 p.m. RON King Salmon Joint Air Port.
- July 01 - King Salmon Inter-Agency Visitor Center. Tour facility. Depart King Salmon at 12:00 noon via PenAir.

In a cooperative effort with the local ADF&G biologist and Aniakchak National Monument and Preserve, the Complex agreed to utilize RIT Lind in administering the subsistence permits for the May 10th-25th and October 1st-December 31st, 1994 Federal subsistence brown bear season for the villagers of Chignik Lake, Perryville and Ivanof Bay. Orville provided information regarding the season, issued permits and sealed any bears that were taken.

In cooperative efforts with King Salmon Fisheries Resource Office (FRO), National Biological Survey (NBS) and National Park Service, AP Smoke flew many flights during 1994 to support their missions. Flight time for these agencies totaled 87 hours with 51.5 hours flown for King Salmon FRO, 24 hours for NBS and 11.5 for NPS. Flights included stream surveys and field camp support for King Salmon FRO, bear telemetry tracking and field support for NBS and moose surveys and personnel transport for NPS. During November, AP Smoke flew a stream survey at Wide Bay for the King Salmon FRO. Moose surveys of the Alagnak River area were also flown for Katmai National Park. Katmai is pilotless at present, due to a transfer and a termination of their two pilots. Due to poor funding for the Complex, these missions were needed to give the pilot and plane a good number of flight hours.

2. Other Economic Uses

In addition to special use permits issued for cabins, guides, outfitters and transporters, two permits were issued for other uses (Table 14).

One additional permit was drafted for helicopter landing on the refuge to observe natural oil seeps in conjunction with Exxon Valdez oil spill litigation. The law firm requesting the permit chose not to complete the permitting process.

Table 14. Special use permits issued for other economic use and non-economic uses.

Year	<u>Other Economic Uses</u>			Sub Total	<u>Non-Economic Uses</u>			Sub Total	Total
	Oil/Gas	Mineral			Federal	State	Other		
1984	9	1		10	4	2	1	7	17
1985	5	1		6	3	2	0	5	11
1986	0	1		1	2	2	1	5	6
1987	1	1		2	4	1	0	5	7
1988	1	0		1	5	1	1	7	8
1989	0	1		1	4	1	0	5	6
1990	2	2		3	2	2	2	9	9
1991	2	0		2	3	0	4	7	9
1992	2	0		2	3	0	2	5	7
1993	0	0		0	1	2	1	4	4
1994	0	0		0	1	0	1	2	2

4. Credits

Without the efforts of the following people, this annual narrative would not be possible. Thanks and appreciation go to everyone.

Dewhurst	Sections F.12.; G.3., 5., 7., 8., 10., 16., 18.; and editing.
Hood	Introduction; Sections A.; C.; D.; E.5., and 8.; F.1. and 6.; H.15. and 21.; J.1. and 4.; K.; and editing.
KSFRO	Section G.11.
Mumma	Section E.6.
Poetter	Sections E.1., 2., 3., and 4.; H.17; I.; and editing.
Riddle	Table of Contents; typing, editing and compiling.
Smoke	Sections B.; H.20.; and J.2.
Terrell-Wagner	Sections H.1., 2., 3., 6., 7., 8., 9., 10., 11., 18., 22., and 23.

Photograph credits are listed in alphabetical order.

ART-W	Angie Terrell-Wagner	Complex Staff
DAD	Donna Dewhurst	Complex Staff
FWS	Unknown	Service
JK	John Knutsen	Complex Staff
MAF	Mary Faustini	KSFRO Staff
PM	Pete Montanelli	Volunteer
RDP	Rick Poetter	Complex Staff
TN	Tina Neal	USGS Staff

K. FEEDBACK

The completion of the Public Use Management Plan (PUMP) for the Alaska Peninsula/Becharof Refuge Complex (Complex) marked a significant event in the management of this Complex. This document was developed through a true team effort. This positive team effort must not be passed without recognizing the PUMP team.

Work on this planning effort was initiated in 1989. The Exxon Valdez oil spill, the almost total loss of Regional Office planning assistance, lack of Complex staff planning experience, extremely heavy field season work loads and changing Regional priorities served to delay the production of a plan. However, significant progress began in 1992 with Helen Clough, Public Use Planner (PUP), being assigned responsibility for leading the planning effort. A planning team was established that worked extremely hard to produce a viable plan. The Decision Notice and Finding of No Significant Impact for the Alaska Peninsula/Becharof National Wildlife Refuge Complex Public Use Management Plan and Environmental Assessment was signed by Regional Director Walter O. Stieglitz on May 12, 1994. Thus the planning effort that began in 1989 has reached a successful conclusion.

Team members included: Public Use Planner Helen Clough (team leader), from the Resource Support Planning Section; Fishery Biologist Jeff Adams, King Salmon Fishery Resource Office; and Refuge Manager Ronald Hood, Deputy Refuge Manager Rick Poetter, Wildlife Biologist Donna Dewhurst, Refuge Ranger Angie Terrell-Wagner, Refuge Information Technician (RIT) Shirley Kelly, RIT John Knutsen, RIT Orville Lind, Maintenance Worker Gary Terry, Maintenance Helper Dwight Mumma from the Complex. Administrative Assistant Janice Collins provided the needed administrative assistance to the team.

Well done, and thanks for your sincere effort to produce the best possible management plan!