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**ALASKA PENINSULA/BECHAROF
NATIONAL WILDLIFE REFUGE COMPLEX**

King Salmon, Alaska

ANNUAL NARRATIVE REPORT

Calendar Year 1993

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

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REVIEWS AND APPROVALS

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<u>Ronald E. Hood</u>	<u>3-16-95</u>	<u>Greg M. Co</u>	<u>12/22/95</u>
Refuge Manager	Date	Associate Manager Review	Date
<u>[Signature]</u>		<u>1/8/96</u>	
Regional Office Approval		Date	

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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 (Figure 1).



The Aleutian Mountain Range forms the backbone of the Alaska Peninsula. An un-named glacier on Mount Veniaminof's Pacific flank feeds the Kametolook River. 6/24/93 REH

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

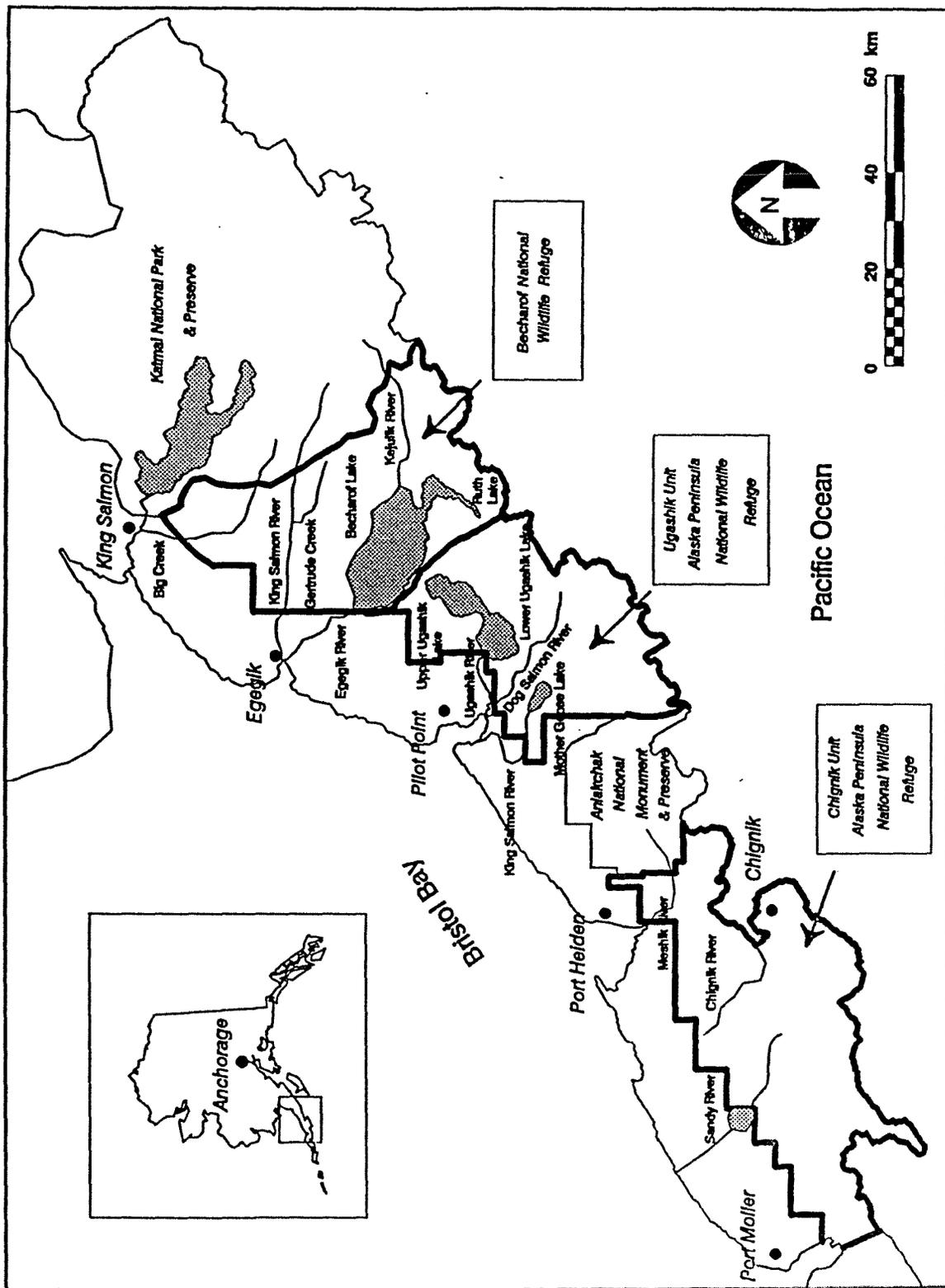


Figure 1. Location of the Alaska Peninsula and Becharof National Wildlife Refuges.

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 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 3000 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.



Cone Glacier breaches the rim of Mount Veniaminof's huge caldera.

8/9/93 REH

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

- Yantarni Bay (63,508 acres) lands finally became part of the Ugashik Unit, Alaska Peninsula National Wildlife Refuge (Section C.1.).
- 26,510 acres of Becharof Refuge and Alaska Peninsula Refuge, Ugashik Unit lost to State of Alaska; **NOT!** (Section C.1.).
- Regional Director Stieglitz approved final Public Use Management Plan (PUMP) culminating a year of intense planning activity (Section D.2.).
- Reconnaissance of potential off-road vehicle (ORV) habitat impact sites completed to augment PUMP planning (Section D.2.).
- Mt. Veniaminof eruption observed by staff (Section F.12.).
- Wintering waterfowl surveys conducted along both coasts of the Alaska Peninsula (Section G.3.).
- Aerial surveys reinforced the importance of the Naknek River over other local rivers for spring staging waterfowl (Section G.3.).

- A fall waterfowl migration survey was conducted for the first time in 1993 along the Naknek River (Section G.3.).
- A cooperative effort with the Point Reyes Bird Observatory was initiated to conduct counts for the Pacific Flyway spring shorebird survey (Section G.5.).
- Local Breeding Bird Surveys conducted under the Partners in Flight/Neotropical Migratory Bird Conservation Program (Section G.7.).
- Annual bear/stream surveys completed (Section G.8.).
- Moose surveys accomplished (Section G.8.).
- Subsistence caribou study conducted in Chignik Unit (Section G.8.).
- Emperor goose collar linked to Russia (Section G.16.).
- Numerous Environmental Education programs conducted in village schools (Section H.2.).
- 1994 Goose Calendar Contest winners announced (Section H.2.).
- Teacher Education Workshop held for Bristol Bay and Lake & Peninsula educators (Section H.3.).
- "Watchable Wildlife" viewing platform construction completed (Section H.11.).
- Special use permits issued for big game guide-outfitter use areas after an intense six months of numerous appeals, awards, law suit filings, etc. (Section H.21.).
- Big game guide-outfitter has special use permit for area AKP 06 revoked (Section H.21.).
- MW Terry and the Alaska Peninsula/Becharof Refuge Complex receive awards for Take Pride in America activities (Section H.22.).
- February cold spell caused maintenance headaches (Section I.3.).
- Two underground fuel tanks failed pressure test; three were removed; and one actually leaked (Section I.2.).
- Cessna 206 (N32PX) underwent a major overhaul; contract work continued into 1994 (Section I.4.).
- Body of missing Airman found by Complex staff (Section J.3.).
- Air Force announced plans to close King Salmon Air Station (Section J.3.).

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 Complex. The Bering Sea side enjoys more clear 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. Table 1 summarizes the year's weather.

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 through March - With January's normal temperatures, the Naknek River remained relatively safe for crossing during January and the beginning of February. The middle of February brought warmer than normal temperatures and the Naknek River began to free itself of its icy covering. Open water began at Naknek Lake's outlet and fishing for large rainbows was excellent. By the last week in February, a clear channel had opened downstream past the refuge headquarters to around Savanoski Point. Spring came early this year.

The upper Naknek river continued running ice free during March with ice remaining only on the lower portion between Paul's Creek and Martin Monsen Park, which went out on the 22nd of March. With the open water came the first swans on the 16th, followed by the arrival of ducks shortly after them.

March went out like a lion with wind gusts reaching 62 mph from the east on the 27th.

April through June - Warmer and drier weather than normal, with temperatures rising into the 70's by mid-May. We recorded 11 days in May and June of temperatures over 70 degrees.

July through September - Continued warmer than normal conditions but the wet weather returned by mid-August. The high temperature for the year, 84° F, occurred on the 10th of August. The first frost of the year was observed at King Salmon Creek on August 21st.

The dry weather during July provided excellent opportunities for boating and camping. It kept stream levels lower than normal. Access by boat to traditional hunting areas was a concern and difficult without a jet-unit.

The precipitation total for September of 4.53 inches, was 1.79 inches above normal and answered the question of access by boat to traditional hunting areas! The first trace of snow of the season was recorded on the September 16th with another trace on the 28th. The fall colors were beautiful but by months end most of the leaves had fallen and freezeup was not far away.

October through December - The year ended with warmer than normal temperatures. The Naknek River froze up between Rapids camp and the Air Force Base during December. The ice provided easy crossing for the caribou but few people ventured across. Snow was on the ground during most of December but the last week of the month brought warm temperatures and melting conditions. We all got a chance to practice the King Salmon shuffle on the resulting ice. By the end of December, the Naknek River was still running ice free below the base.

Table 1. 1993 Climatological Data - National Weather Service, King Salmon, Alaska.

Month	Temperature (degrees F)				Precipitation (inches)			Wind (mph)		Sky Cover ^a (day)			
	High	Low	Avg.	Norm.	Total	Norm.	Snow	Avg.	Peak	Clr	P	Cld.	Cld.
Jan	43	-36	15	13	1.48	1.04	30.6	12	52	10	2	19	
Feb	49	-41	23	15	0.35	0.81	5.5	11	41	6	6	16	
Mar	48	9	31	22	0.26	1.07	5.2	12	62	5	9	17	
Apr	57	21	41	31	0.50	1.05	1.8	11	54	2	6	22	
May	79	28	48	42	0.70	1.34	T	11	44	2	8	21	
Jun	76	36	53	50	0.50	1.58	T	11	44	1	9	20	
Jul	84	33	58	55	1.01	2.23		10	37	1	10	20	
Aug	80	35	56	54	3.21	2.95		10	46	1	7	23	
Sep	64	24	49	47	4.53	2.74	T	13	55	1	3	26	
Oct	57	15	38	32	1.98	1.89	2.0	8	38	1	7	23	
Nov	50	- 4	23	23	1.34	1.40	9.0	14	60	3	5	22	
Dec	44	- 5	25	12	2.15	1.37	28.4	10	52	3	4	24	
Totals					18.01	19.47	82.5			36	76	253	

^aSky cover: clr = 0 to 0.3 cloud cover; partly cloudy = 0.4 to 0.7 cloud cover; and cloudy = 0.8 to 1.0 cloud cover.

Weather Highlights of 1993:

Highest temperature.....84 on July 10th
 Lowest temperature.....-41 on February 1st
 Highest 24 hr rainfall.....0.96 inches on November 17-18th
 Total precipitation.....18.01 inches
 Highest 24 hr snowfall.....17.80 inches on January 26th
 Total snowfall.....82.50 inches
 Highest Sea-level pressure....30.65 on January 2nd
 Lowest Sea-level pressure.....28.46 on January 17th

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 (Figure 2) and the Ugashik and Chignik units of the Alaska Peninsula Refuge (Figure 3). The Ugashik and Chignik units contain nearly 3.0 million acres within refuge boundaries. 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.

Reconveyance of the Yantarni Bay area lands from the Afognak Village Corporation to the U.S. Fish and Wildlife Service reached a successful conclusion in 1993. Benchmark events included:

- The Deputy Regional Solicitor provided a "Preliminary Title Opinion" on the conveyance of the Yantarni Bay area lands (63,508 acres) for inclusion in the Ugashik Unit, Alaska Peninsula Refuge on February 1st. Refuge Manager (RM) Hood forwarded a "Certificate of Inspection and Possession" to Realty on the 19th.
- On August 9th, Chief of Reality Sharon Janis notified RM Hood that the Yantarni Bay lands are now officially part of the Alaska Peninsula National Wildlife Refuge -- 64,000 more acres added to the National Wildlife Refuge System! The Regional Solicitor signed the final title opinion and fee title passed to the Service.

Other land acquisition activities included:

- By letter dated August 4 1993, the Bureau of Land Management (BLM) provided notification that "Tentative Approval" for

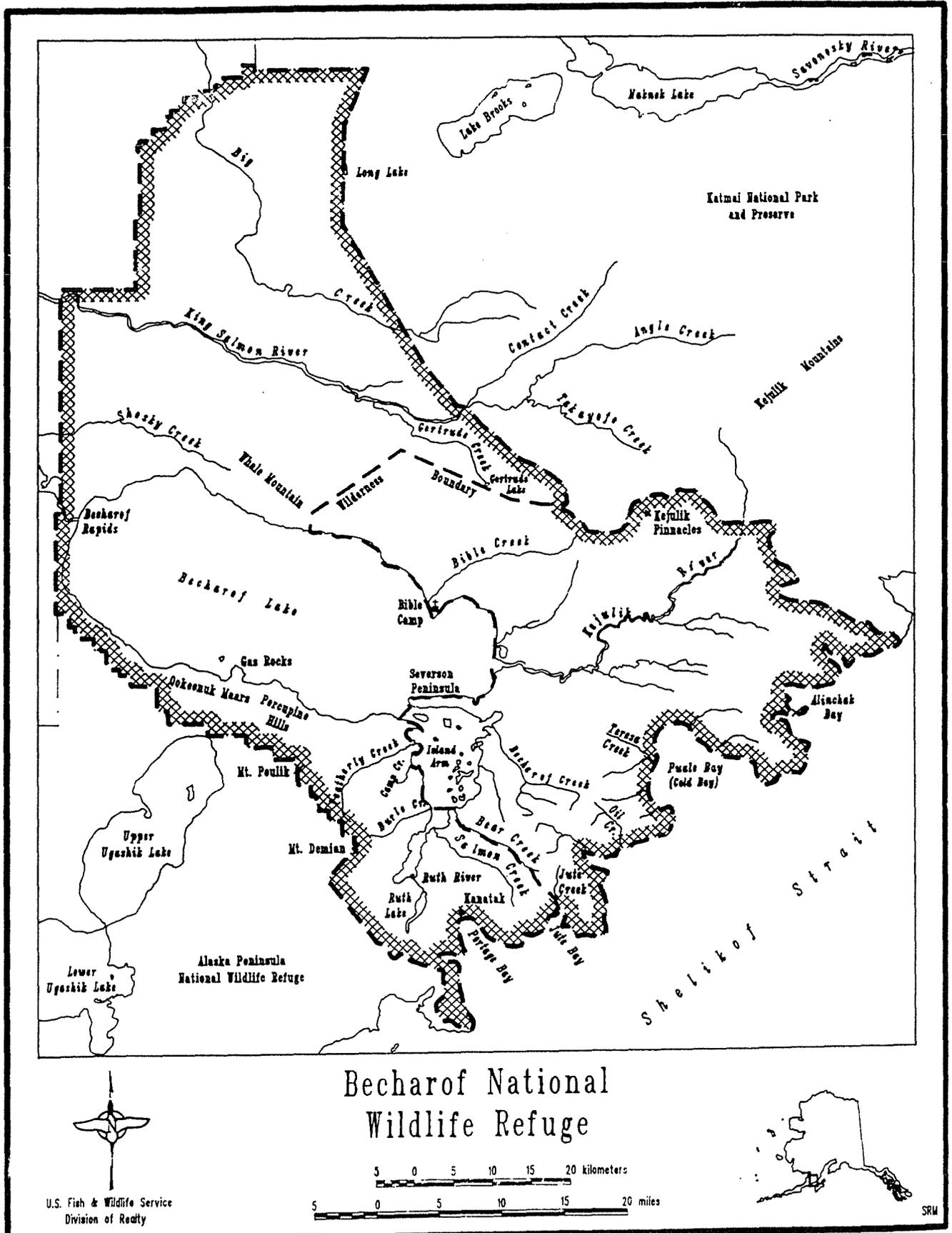


Figure 2. Becharof National Wildlife Refuge.

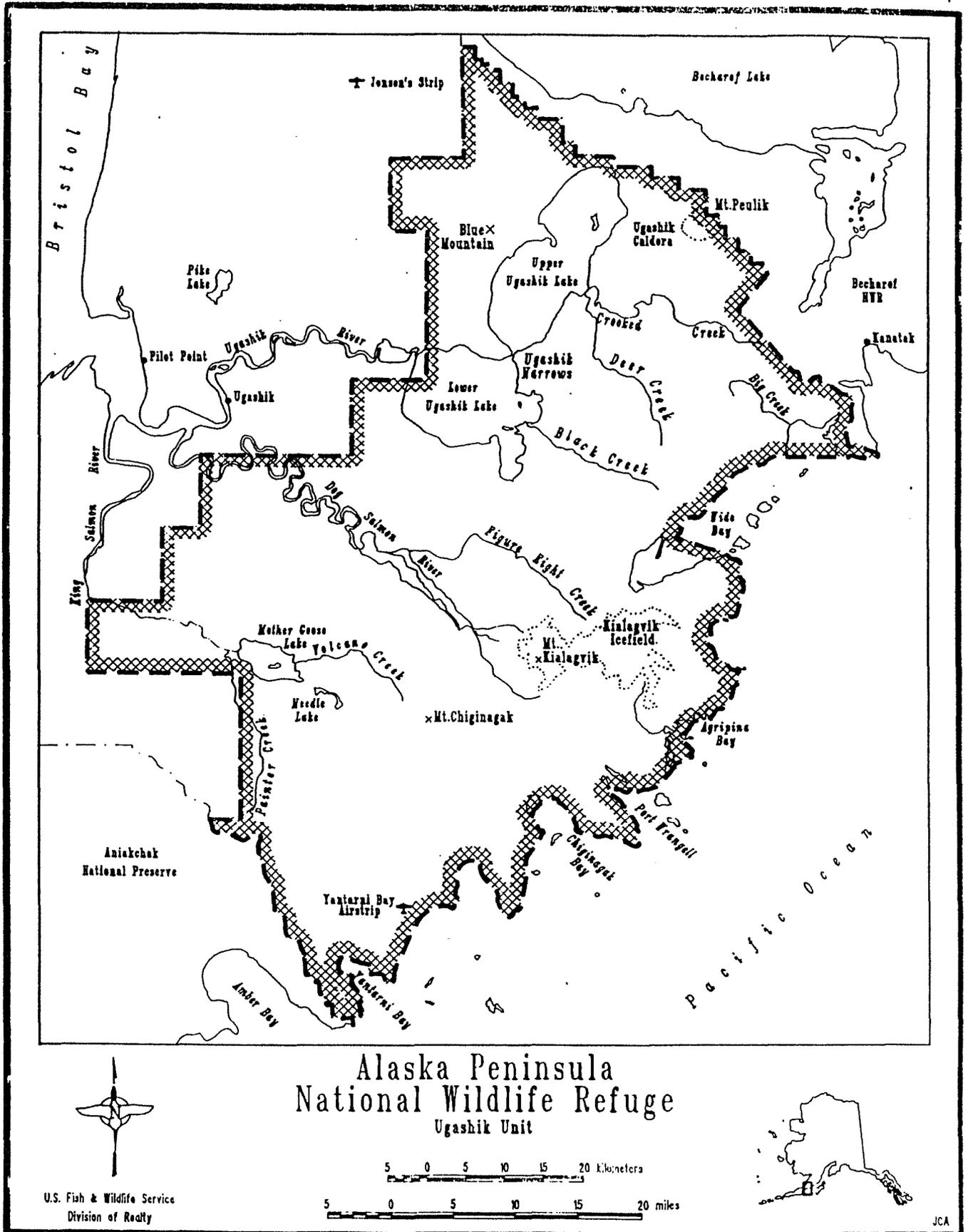


Figure 3. Alaska Peninsula National Wildlife Refuge.

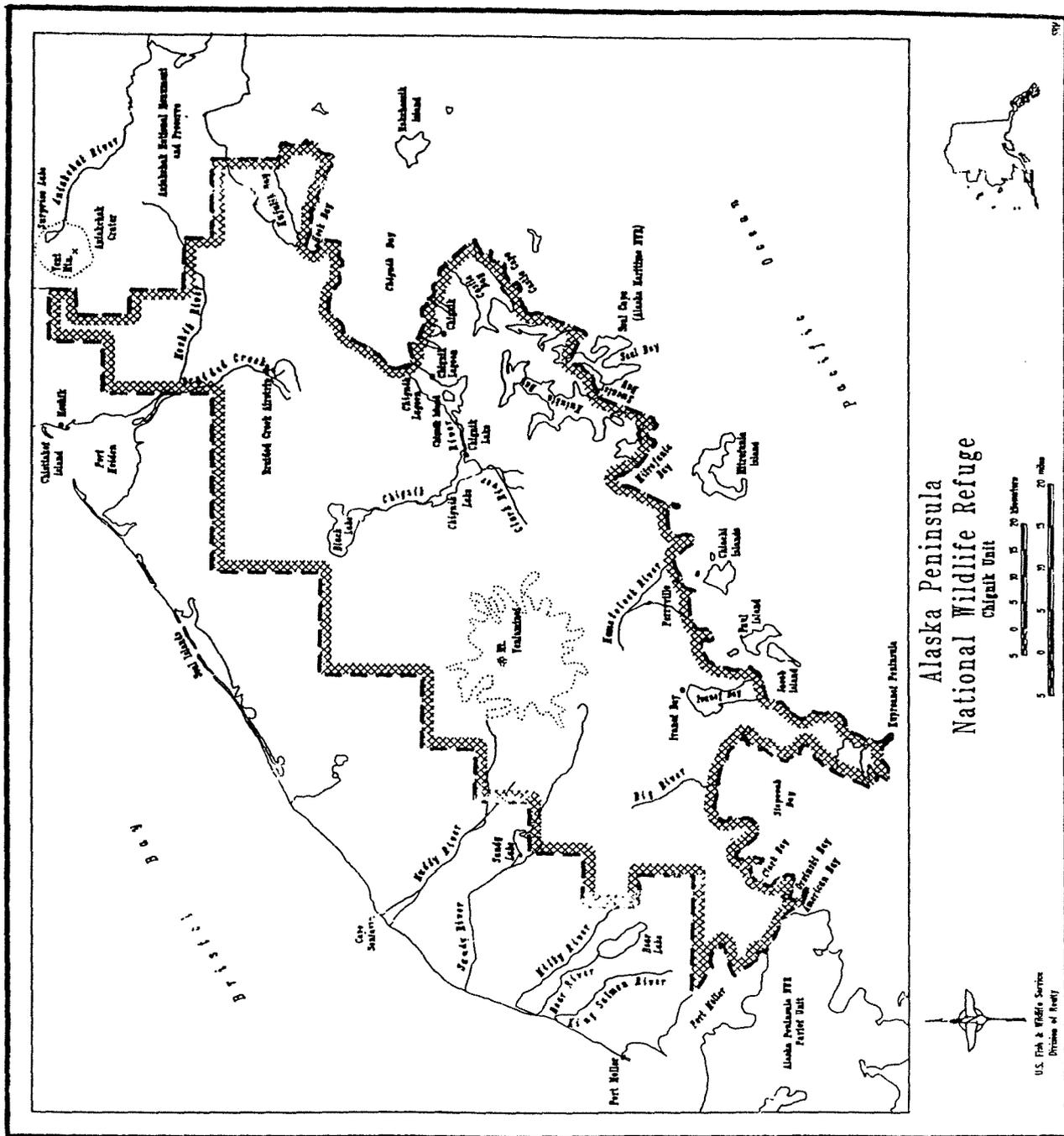


Figure 3 Continued.

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 Lands Conservation Act (ANILCA). This issue was brought to the attention of Sharon Janis, Chief of Realty, by RM Hood. She investigated and found significant technical errors. On the 17th, she notified us that BLM was vacating the decisions. On the 26th, we received notification from BLM that the earlier decisions were "vacated in their entirety." Refuge lands were not available for selection on date of filing!

- Representative Don Young introduced a bill (H.R. 1688), "The Alaska Peninsula Designation Act of 1993." We learned of the bill on October 14th when our comments were requested in preparation for a hearing on the bill. Since it was introduced on April 2nd, we were puzzled that someone had not figured out that we might have some interest in the bill.

D. PLANNING

2. Management Plan

Fishery Management Plan. The King Salmon Fishery Resource Office (KSFRO) has the lead in developing a Fishery Management Plan (FMP) for the Alaska Peninsula/Becharof Refuge Complex. This planning effort was initiated in 1984. A draft plan was submitted to the Regional Office in late 1991 for review comments. On May 20th, KSFRO Project Leader (PL) Jim Larson met with Refuge Manager (RM) Ronald Hood to discuss Complex review comments on the draft FMP (prepared in December 1991). The draft FMP had set in the Regional Office (RO) for over a year waiting for comments from the State.

The public draft FMP (covers Fiscal Years 1994 - 1998) for the Alaska Peninsula and Becharof refuges was received on July 9th. Public comments were received until August 13, 1993. Review comments were submitted by the Complex.

On October 13th, Public Use Planner (PUP) Helen Clough, KSFRO PL Larson, and RM Hood met to coordinate Public Use Management Plan and FMP issues. Revision of the draft FMP from public comments was also discussed. The KSFRO completed the final FMP and forwarded it to the RO for approvals on December 5th.

Public Use Management Plan (PUMP). 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 RO priorities have served to delay the production of a plan. However, significant progress was made this year. Highlights of this year's activities included:

January - On the 8th, Regional Director (RD) Walt Stieglitz was briefed on the draft PUMP by PUP Clough and RM Hood. In order to be able to conduct

public meetings on the Alaska Peninsula in March (before commercial fishing season preparation starts), approval for an expedited internal review was requested and received. The draft PUMP was completed and submitted for internal review on the 19th.

February - The "internal review" of the PUMP was completed on the 4th. On the 11th, RD Stieglitz and Assistant Regional Director (ARW) Rowan Gould were briefed on the review comments received on the draft PUMP. The major issue was the use of off road vehicles (ORVs) for subsistence activities. Helen had prepared an excellent briefing paper on the issue that was able, after some spirited discussion, to get everyone on the same page. A decision was made to have a preferred alternative that eliminated the use of ORVs except on frozen streams and non-vegetated uplands. This would require that new regulations be written. The entire Planning Section then produced a draft PUMP that was sent to the printer on the 18th.

March - Much staff time and effort was devoted to planning and presenting public meetings on the "Draft Public Use Management Plan." On the 11th and 12th, PUP Clough and Outdoor Recreation Planner (ORP) Bob Stevens from the RO were in King Salmon to update staff on the draft PUMP document, and to plan for upcoming public meetings scheduled for March and April. In attendance were Deputy Refuge Manager (DRM) Poetter, Refuge Ranger (RR) Terrell-Wagner and Refuge Information Technicians (RITs) Lind, Kelly and Knutsen.

In preparation for the PUMP public meetings, RIT staff spent much time this month explaining the PUMP document, answering questions and encouraging villagers to attend the public meetings. RIT Kelly encouraged public participation in the planning process as follows: 1) on the 9th and 22nd, Shirley spoke at an Egegik Improvement Corporation and Egegik Village Council meetings; 2) on the 8th and 12th, she went door to door in Egegik to discuss the PUMP process and to answer questions; and 3) on the 10th, she spoke by telephone with eight families in Pilot Point. RIT Knutsen encouraged public participation in the PUMP process: 1) on the 1st-2nd, Smiley attended the Tribal Council Conference in Dillingham and talked with many attenders; 2) on the 2nd, he attended a Paug-Vik Native Corporation meeting and spoke with several shareholders; and 3) on the 5th, 8th and 9th, he went door to door in Naknek talking with residents and encouraging them to attend the public meetings. RIT Lind made several house visits in Port Heiden and numerous phone calls to residents in the villages of Chignik Bay, Chignik Lake, Chignik Lagoon, Ivanof Bay and Perryville. The superb advertising efforts by the RIT staff was evidenced by the excellent turn-out and good public comments received at almost all of the public meetings. Following several of the meetings, the RITs spent time assisting village Elders in preparing written comments.

Public meetings to discuss the draft PUMP document and to gather public verbal and written comments were conducted in the following villages this month:

Egegik -	15th, 19 attended;	Port Heiden -	30th, 3 attended;
Pilot Point -	16th, 17 attended;	Ivanof Bay -	31st, 20 attended;
Perryville -	31st, 16 attended.		

April - Again this month, much staff time and effort month was spent conducting public meetings to discuss the draft PUMP. The following meetings were held:

Chignik Bay - 1st, 0 attended;	Chignik Lagoon - 10th, 10 attended;
Chignik Lake - 7th, 15 attended;	Anchorage - 21st, 7 attended;
Naknek - 8th, 13 attended;	Kodiak - 22nd, 3 attended.
South Naknek - 9th, 11 attended;	



RM Hood making a point at the Chignik Lagoon PUMP meeting.
4/10/93 JCK

All PUMP meetings were conducted using the "team method" concept. Team members involved in presenting meetings included: RM Hood, RR Terrell-Wagner, PUP Clough, and RITs Knutsen, Kelly, and Lind. RR Terrell-Wagner and RIT Kelly attended all 12 meetings, RM Hood attended all but two (Egegik and Pilot Point), RIT Knutsen attended eight and Lind attended two meetings. The outstanding efforts and dedication of the RIT staff resulted in excellent community participation.



PUMP meetings were conducted using the "team method" concept.
Angie Terrell-Wagner leads discussion at the Anchorage meeting.
4/21/93 OEL

June - A reconnaissance level habitat impact evaluation of selected sites subject to off-road vehicle (ORV) use on the Becharof Refuge and the Ugashik and Chignik units of the Alaska Peninsula Refuge was conducted the 22nd-24th. These sites were identified during the public workshops for the PUMP. The evaluation team consisted of PUP Clough, Vegetation Ecologist Dr. William Kirk, and RM Hood. A Bell 206 L1 helicopter (93TA) under contract to the Fish and Wildlife Service from TransAlaska and piloted by Ken Butters was used as a survey platform. Sites where impacts were detected were photo documented. Dr. Kirk prepared a technical report on his observations.



Bill Kirk and Helen Clough discuss ORV impacts on Pike's Ridge, north of King Salmon. This area is off refuge and was used as a worst case scenario. 6/23/94 REH

Deadline for comments on the draft PUMP document was the 30th. By month's end, 34 written comments had been received. One gentleman from New Jersey had submitted an additional 37 post cards containing gems of wisdom for us.

September - A meeting of the PUMP planning team was conducted on the 8th and 9th. The purpose of the meeting was to review all the public comments on the draft plan and formalize the preferred alternative for presentation to the Regional Director in October.

October - RD Stieglitz was briefed on the PUMP by PUP Clough and RM Hood on the 19th. The purposes of the briefing were to 1) review public comments on the draft PUMP; 2) review the planning team's recommendations for a final plan; and 3) agree on a final plan for public distribution. ARW Gould, Associate Manager (AM) George Constantino, and Chief of Planning (CP) Leslie Kerr attended the briefing. RD Stieglitz approved, with minor revisions, the planning team's recommendations for a final plan.

December - PUP Clough completed a draft final PUMP on the 3rd. It was circulated for internal review with a 31st deadline.

Station Facility Plan. This planning effort was initiated in June 1992. The plan is being written by Construction Coordinator (CC) Art Wemmerus and Landscape Architect (LA) Paul Schrooten. A draft plan was reviewed and thoroughly discussed on May 27th. Reviews and comments were provided by ARW Rowan Gould, Deputy Associate Manager - Staff and CC Art Wemmerus, and LA Schrooten from the RO; PL Larson and Fishery Biologist (FB) Jeff Adams from KSFR0; and RM Hood, DRM Poetter, Airplane Pilot (AP) Bill Smoke, Wildlife Biologist (WB) Donna Dewhurst, RR Terrell-Wagner, Maintenance Worker (MW) Gary Terry; Maintenance Helper (MH) Dwight Mumma, and Administrative Technician (AT) Janice Collins from the Complex. ARW Gould provided a reality check for staff by providing pragmatic planning goals. Everyone provided their input and a new alternative was developed. Art and Paul are preparing another draft for everyone's consideration. The revised plan had not been received at year's end.

Water Sample Site Plan. DRM Poetter completed a "Water Sample Site Plan" per Alaska Department of Environmental Conservation (ADEC) regulations.

3. Public Participation

See D.2. above.

4. Compliance with Environmental Mandates

See D.2. above.

5. Research and Investigations

Alaska Peninsula NR93 - "Brown Bear Studies at Black Lake" (74510-88-01). In 1988, a ten-year cooperative interagency study was initiated on brown bears in the Black Lake area of Alaska Peninsula Refuge. The project involves the National Park Service, the Fish and Wildlife Service, and the Alaska Department of Fish and Game as the lead agency. Each agency contributes approximately one-third of the necessary funding each year, along with personnel for assistance. See Section G.8. for data results.

E. ADMINISTRATION

1. Personnel

PERMANENT STAFF

1. Ronald E. Hood; Refuge Manager (RM); GS-485-12; 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. Bill Smoke; Airplane Pilot (AP); GS-2181-12; 05/16/93; PFT
5. Donna Dewhurst; Wildlife Biologist (WB); GS-485-11; 02/26/89; PFT
6. Angie Terrell-Wagner; Refuge Ranger (Public Use Specialist) (RR); GS-025-09; 12/29/91; PFT
7. Gary Terry; Maintenance Worker (MW); WG-4749-08; 07/31/88; PFT
8. Dwight (Moose) Mumma; Maintenance Helper (MH); WG-4749-04; 02/19/84; PFT
9. Helen Clough; Honorary Staff Member assigned to RO, stationed in King Salmon; Public Use Planner (PUP); GS-401-12; 09/01/93; PFT



Back Row: 1, 17, 9, 4, 2, 14, 18, 8, 13

Front Row: 23, 3, 6, 20, 22, 21, 7

06/22/93, CMJB

TEMPORARY STAFF

10. **Shirley Kelly**; Refuge Information Technician (RIT); GS-1001-06; 09/08/91, extended 09/05/93; Intermittent; Term (NTE 2 years)
11. **John (Smiley) Knutsen**; Refuge Information Technician; GS-1001-06; 09/08/91, extended 09/05/93; Intermittent; Term (NTE 2 years)
12. **Orville Lind**; Refuge Information Technician; GS-1001-06; 09/08/91, extended 09/05/93; Intermittent; Term (NTE 2 years)
13. **Kevin Boden**; Biological Technician (Subsistence Coordinator) (BT); GS-404-05; 03/01/93-11/29/93; Intermittent



Back Row: 10, 12; Front Row: 11, 6.
02/93, RDP

VOLUNTEER STAFF

14. Noreen Benjaminsen; Los Angeles, California; 06/01 - 09/25; (FT); Visitor Center
15. Susie Heyob; San Francisco, California; 04/19 - 06/01; (FT); Visitor Center
16. Angela Mehall; Columbus, Ohio; 03/15 - 06/05; (FT); Spring Waterfowl Survey
17. Laura Naas; San Diego, California; 06/01 - 09/05; (FT); Visitor Center
18. Zeke Peters; Amherst, Massachusetts; 05/19 - 08/19; (FT); Subsistence Study
19. Lisa Scharf; Maple Creek, California; 09/05 - 12/03; (FT); Fall Waterfowl Survey



Left to right: 16,13,15,18

5/20/93 DAD

YOUTH CONSERVATION CORPS (YCC)

- 20. Cheryl Gardner; King Salmon, Alaska; 06/07 - 08/06; Maintenance Program
- 21. Aaron Poetter; King Salmon, Alaska; 06/07 - 07/30; Maintenance Program
- 22. Dave Vernon; Naknek, Alaska; 06/07 - 07/30; Maintenance Program

RESOURCE APPRENTICESHIP PROGRAM FOR STUDENTS (RAPS)

- 23. Maria Pitka; Naknek, Alaska; 06/07 - 07/30; Management Program

A revised staffing plan for the Complex was approved by Regional Director Walter Stieglitz on October 7, 1993 (Figure 4). Technical changes reflecting pay grade/position title modifications were approved.

The positions funded in 1993 required 8.8 full-time equivalents (FTE). The three RIT positions are local-hire and do not count against FTE ceilings. The lower than projected FTE use is a reflection of the clerk-typist vacancy and the pilot position not being filled until May (Table 2). A major disappointment was the canceling of the Subsistence Coordinator position at the eleventh hour by the Regional Office. This decision was made after the Subsistence Program failed to provide base funds for the much-needed position.

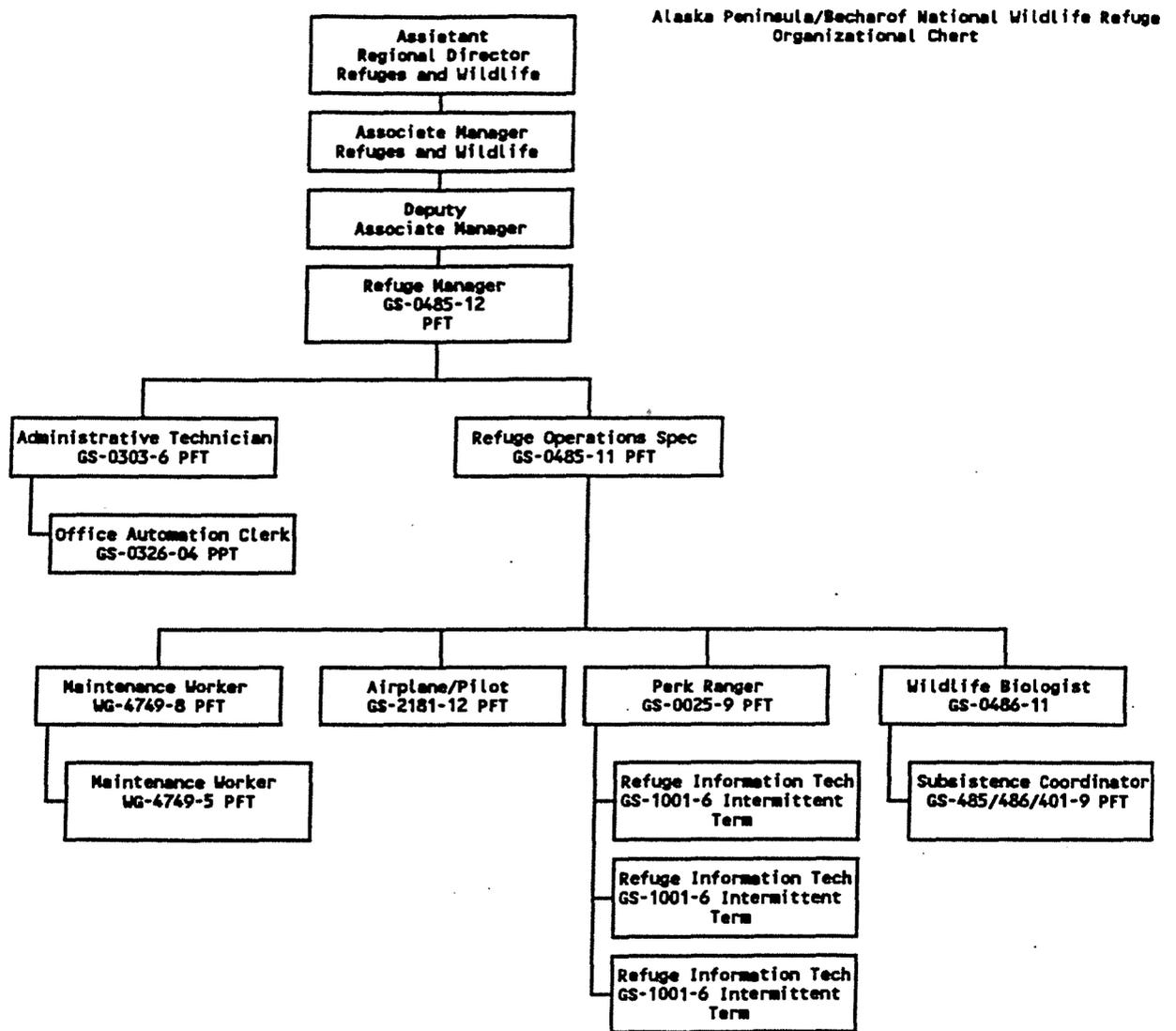


Figure 4. Staffing Plan, approved October, 1993

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

FISCAL YEAR	FULL-TIME EQUIVALENT	
	AUTHORIZED	TOTAL USED
93	8.8	8.01
92	8.8	8.32
91	9.3	8.26
90	9.0	7.93
89	9.0	6.68

In January, the selection of a permanent Subsistence Specialist was first approved; then disapproved, as we played an emotional yoyo game while the hard funding decisions were being made. Selection had progressed to the point that personnel had offered the position to the selectee and he/she had accepted. Personnel had to call back the next day and give the bad news to the selectee. After the position was postponed for this year, a proposal was submitted and approved to hire a temporary coordinator from the GS-404 Biological Technician series. Kevin Boden from Longmont, Colorado was selected and began work on March 1st. He had worked for the Complex last year as the Puale Bay field camp leader. On November 29th, Kevin was converted to intermittent status by his request (vacationing in December).

Bill Smoke accepted the Complex's pilot position in May. He has over 8,500 hours of piloting experience; most is in Alaska in the Juneau area. Bill began his first week of duties on the 17th by spending a week in Anchorage attending an OAS ground school. Bill brings his wife and three children to King Salmon.

WB Dewhurst was nominated and accepted as the new uniform coordinator for Region 7, in May. She has previously filled a similar position in Region 5, so she comes with an experience base. Donna represented Region 7 at the national meeting of the uniform committee on September 1st-2nd in San Antonio, Texas.

During the staff meeting on August 17th, DRM Poetter presented RR Angie Terrell-Wagner with a Quality Performance Award of a Quality Step Increase. Angie earned the award and Level 5 performance rating for her exemplary efforts during the rating period. To obtain the award, she took the lead in conducting all of the PUMP public meetings in a "dynamite" and dynamic fashion; through her superior supervision of staff, conducted numerous environmental education programs in each of the local villages; coordinated and managed the developing King Salmon Inter-Agency Visitor Center; and for having a "can-do" spirit that sets an example for others to emulate.

September 1st, PUP Helen Clough officially became a resident of King Salmon after moving from Dillingham; following her husband's job as a Fish and

Wildlife Protection Officer. Helen is assigned to the Regional Office, Resource Support, Refuges and Wildlife, but has had an office in the Togiak NWR headquarters. We welcome Helen to the Alaska Peninsula/Becharof Refuge Complex office. Helen is not a stranger to this office since she has been the primary driving force in the development of our PUMP.

AT Collins and DRM Poetter were presented performance awards September 14th by RM Hood.

Summary of Complex Staff Training and Workshop Attendance

Safety training is described in the Safety Section below.

Due to budget constraints the region-wide RIT Workshop, usually held in Anchorage, was canceled this year. We felt that this was needed training; so RR Terrell-Wagner conducted our own RIT Workshop the week of February 1st-5th. Guest speakers included representatives from both the Complex and KSFRO staff: Chuck Hunt, RIT Supervisor at Yukon Delta Refuge; Wells Stevenson, Marine Fisheries Office in Anchorage; the National Park Service; and the Alaska Department of Fish and Game. Topics discussed included: 1993 Complex budget and projects, PUMP, law enforcement, guide/outfitter selection process, biological programs, KSFRO projects, marine mammals, Y-K Delta Goose Management Plan, spring waterfowl hunting policy, Migratory Bird Treaty Act amendment, use of steel shot, CPR certification, subsistence management issues, environmental education, etc.

March 17th, Regional Office staff consisting of Ecological Services- Deputy Assistant Regional Director Jon Nelson, Assistant Regional Director Robyn Thorson and Engineering's Chief of Design Davis Bales traveled to King Salmon to present a four-hour class on "Quality Improvement." Staff attending included: WB Dewhurst, RR Terrell-Wagner, RITs Kelly & Lind, BT Boden, AT Collins, and Volunteer Mehall. RM Hood, DRM Poetter, MW Terry, MH Mumma and RIT Knutsen attended Quality Improvement training in Anchorage on April 21st. AP Smoke attended the session held in Anchorage on October 20th.

On April 13-16th, the Complex and KSFRO staff attended a Barren Ground (Tundra) Survival course presented by Learn To Return (LTR) Training Systems of Anchorage. The two instructors traveled to King Salmon to conduct the training in an environment most commonly encountered by our staffs. The class involved 12 hours of classroom instruction and a three day/two night field exercise. Highlights of the field experience included: shelter construction (with only a 4'x 10' piece of plastic), fire starting techniques, pyrotechnic signaling, knot tying, improvising survival clothing, wilderness emergency medicine, and edible wild foods. Attending the worthwhile training were RM Hood, DRM Poetter, WB Dewhurst, RR Terrell-Wagner, RIT Knutsen, MW Terry and BT Boden.

September 20-24th, RR Terrell-Wagner, Volunteer Benjaminsen, and RITs Kelly, Knutsen and Lind attended the regional Environmental Education Workshop. This is the third annual workshop. Highlights included: sharing what each refuge is doing with environmental education and plans for the future; the environmental music concert; visiting the Imaginarium; etc.

In an effort to provide quality training, yet reduce travel costs, the station purchased a variety of training videos aimed at helping the employee become a more productive and satisfied staff member. The "bush" stations are very much familiar with the sociological problems encountered by their staffs. Living conditions are tough and anything we can do to educate and assist the employee, the better we all are! The videos were purchased from CareerTrack, Inc. and include workbooks. Titles included: How to Set and Achieve Goals, Professional Supervision Skills, How to Listen Powerfully, Self-Discipline and Emotional Control, Dealing With Conflict and Confrontation, How to Write and Conduct Effective Performance Appraisals, Speed Reading, Stress Management for Professionals, and Assertiveness Training for Professionals.

Refuge Manager Ronald Hood

February 23rd-25th - "Incorporating Universal Accessibility," in the Anchorage Regional Office. The course was sponsored by the Alaska Recreation and Parks Association. Information presented at the conference will be helpful in retrofitting the visitor center and building our "Watchable Wildlife" area to universally accessible standards.

April 26-28th - Interpersonal Skills presented by the American Management Association Dallas, Texas.

May 3rd-5th - American Management Association course, "Successfully Managing People." The training was conducted in Dallas, Texas .

Deputy Refuge Manager Rick Poetter

March 15-26th - 1993 Middle Level Management Development Program in Washington, D.C. (Phase I). He was the only Region 7, Refuges and Wildlife employee selected to attend.

May 10th-21st - Phase II of the program, a Developmental Assignment, was completed . The two week assignment required completing a project in a division outside of his own. He spent his time in the Regional Office working in Ecological Services, Habitat Conservation under Rosa Meehan, Chief. His assignment was to compile and "cookbook" all the various grant programs available to the Service in Alaska.

March 30th-April 3rd - Annual Law Enforcement refresher training in Marana, Arizona. Emphasis this year was on certifying everyone in pressure-point control tactics.

Administrative Technician Janice Collins

March 24-26th - "Advanced Small Purchasing," presented by Thomas Hardy Associates in Anchorage . The training was a good refresher.

April 28-29th - OAS Contracting Officer's Representatives and OAS-23 training in Anchorage .

May 14th - "Self-Esteem For Women" in Anchorage.

May 13-21 - Refuges and Wildlife Administrative Workshop held in Wasilla, Alaska. She also participated as an instructor on the topic of travel.

Airplane Pilot Bill Smoke

June 14th - Supercub (N9786P) training began on with OAS instructor Bart Stone coming out from Anchorage. Bill was the first to go through the Regions's new "module" system. On the 15th, while conducting training at Becharof Lake outlet strip (sandblow), a hard landing was made which resulted in a propeller strike in the sand. A replacement prop was flown out from King Salmon and the aircraft was flown to Anchorage by Bart. The aircraft was returned to service on the 25th but, due to instructor scheduling demands, training was not resumed until the 30th with instructor Stone. The incident was attributed to the instructor.

Completion of modules continued the first week of July with OAS Instructor Pilot Jeff Gustafson coming out to King Salmon. Low level and mountain flying techniques modules were worked on in the Station's super cub (N9786P).

More modules were completed on September 7 with the help of OAS Instructor Pilot Jeff Gustafson. PA-18 aircraft was borrowed from Katmai National Park to do modules for unprepared landing sites. A check-ride was completed in their C-206 on wheels, in preparation for the change from floats to wheels on our C-206 at the end of the month. Jeff's parting statement was just as valuable as the beach landings, "If everything doesn't feel right, don't land."

Wildlife Biologist Donna Dewhurst

March 15-16th - "dunker," or Submerged Aircraft Escape Training, in Anchorage on . The session was conducted by LTR Training Systems, and involved both lecture and simulation exercises in a local indoor pool.

March 30th-April 3rd - Annual Law Enforcement refresher training in Marana, Arizona.

April 27-28th - Cultural Diversity training in Anchorage .

May 14th - "Self-Esteem For Women" in Anchorage on .

Refuge Ranger Angie Terrell-Wagner

February 23rd-25th - "Incorporating Universal Accessibility," in the Anchorage Regional Office.

March 1st - Aircraft "Pinch Hitter" training in Anchorage. The course was taught by OAS staff. The ground school part of the course was scheduled for eight hours, but was condensed into four hours. Students were not able to complete the "hands on" portion of the course because the instructor could not locate teaching materials needed to use the flight simulator, and the plane was not operational. Flight time for Angie will have to be scheduled on a return trip to Anchorage or when our new pilot has a check ride in King Salmon.

April 27-28th - "Cultural Diversity" training in Anchorage.

August 31st - September 2nd - "Federal Regulations" and "Freedom of Information & Privacy Act" training in Anchorage. Jim Pinkerton of the Office of Policy and Directives Management in Washington, D.C. did an excellent job presenting the training materials.

November 15th-21st - National Association of Interpreters conference in Washington, D.C. Highlights of the week included session topics on developing puppet theaters, universal accessibility, time management, and observing the legislative process on Capitol Hill. It was a worthwhile week of learning what federal, state, local and private agencies are doing to serve the educational needs of their visitors.

Maintenance Worker Gary Terry

May 3rd-7th - Johnson/Evinrude outboard maintenance training . The Outboard Motor Corporation (OMC) puts on the course, which has been very beneficial to our operations.

Maintenance Helper Dwight "Moose" Mumma

March 9th-12th - a three-day "Safety Training" course presented by Occupational Safety and Health Administration staff. The training was held at Fort Richardson Army Base, near Anchorage. During the week, Regional Safety Officer Linda White, conducted a meeting on safety issues and problems. Safety officers from several Alaska refuges expressed needs for regional assistance and guidance on a variety of safety related issues.

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

May 11-13th - "New Employee Orientation" training in Anchorage.

Refuge Information Technician Orville Lind

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

2. Youth Programs

a. Youth Conservation Corps (YCC)

AT Collins served as the program coordinator, this year, 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. The first two weeks involved a significant amount of safety training described in Section E.6.

The program got into full swing in June. Three enrolles (two male, one female) were selected by random drawing from a 50:50 male/female composition of six applicants. Cheryl Gardner (King Salmon), Aaron Poetter (King Salmon) and Dave Vernon (Naknek) began their eight weeks of duties on the 7th. Dave and Aaron worked for an eight week period, until July 30th. Cheryl worked a week longer ending August 6th.

Major YCC projects accomplished in June included: trash pick-up on grounds and along fence lines; removed weeds and trimmed brush along fences; gravel leveled in parking area; attended seasonal safety training; cleaned all vehicles; waxed new Chevy pickup; applied topsoil and re-seeded low areas on compound lawn; removed old wooden walkways from Residence No. 1 to office building; scrapped and stained porches and decks at Residence Nos. 1, 26, 27, 28, 29 and bunkhouse; re-organized metal storage area behind warehouse; and assisted with installing new engine in KSFRO jet boat.

Projects accomplished in July included: constructed and stained bar stools for bunkhouse; warehouses cleaned and organized; cleaned, washed and waxed vehicles; laid carpet in Residence No. 10; scraped and painted guard rails of office parking lot and boat dock; painted bunkhouse and office outside window sills and door frames, and wooden walkways; assisted with cleaning and repairing outboard boat motors; and installed additional bumpers on boat dock.

The week of July 12th was spent working on Mother Goose Lake Administrative Cabin. Accomplishments included: installed sink and countertop; cut opening and installed window in second bedroom; shutter constructed and installed on the new window; varnished ceiling; lexan window installed in outhouse; propane lines run for cooking stove; floor hardener applied; picked up trash and empty fuel drums; constructed and stained new chairs; stained eaves and food cache; and constructed stand for fuel barrel and ran lines for furnace.

The Complex headquarters site receives a lot of compliments for looking sharp. The enrolles 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)

This year the Complex sought to fill one 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.

This is this station's second year involved with the RAPS program. Mariah Pitka, from the village of Naknek, was selected as this year's RAPS student. She began her program on the 7th. Her first week was spent in training described in the Section E.6. The second week was spent at Chena Hot Springs near Fairbanks, Alaska attending the Alaska Inter-Tribal Youth Practicum. Mariah's third week was spent assisting the biology department computerizing bird data and misc. duties. The fourth week she spent

collecting and tabulating public use data from the 1992 special use permits. Her fifth week centered around continuing work tabulating public use data from the 1992 special use permits. Her sixth week was spent assisting the maintenance and YCC program with putting the finishing touches on the remote administrative cabin on Mother Goose Lake. During her seventh week she was back assisting management with compiling information in the permit program. Her eighth and final week she worked with the public use department assisting at the visitor center with various projects.

Originally, Mariah was to work for ten weeks, but due to family needs she had to forgo the last two weeks of her program. Mariah was a good worker and her assistance was appreciated. Her last day of work was on July 30th.

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 the 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 for miscellaneous expenses.

Noreen Benjaminsen - A Service Volunteer, from Los Angeles, California, began work on the June 1st. Noreen assist with our Public Use Program by staffing the King Salmon Visitor Center. She was instrumental in establishing an Environmental Education Resource Lending Library. She headed back to California for new adventures on September 25th.

Susie Heyob - A Service Volunteer, from San Francisco, California, began work on April 19th. She staffed the King Salmon Visitor Center until June 1st. She was involved in a variety of public use programs, including developing a booth representing the visitor center in a community activity scheduled for late May. After June 1st, she continued to staff the visitor center, but as a paid National Park Service ranger.

Angela Mehall - A Service Volunteer, from Columbus, Ohio, entered on duty March 15th. She recently completed a bachelors degree in Wildlife Management from Ohio State University. Angela's duties were to monitor waterfowl staging along the Naknek River in the spring, including a migration watch for banded and radio-collared white-fronted geese. She departed King Salmon on June 5th.

Laura Naas - A Service Volunteer, from San Diego, California, began working on the June 1. Laura assisted with our Public Use Program and helped with several writing projects, including scripts for our new environmental education puppet show. Laura departed for Anchorage on September 5th.

Zeke Peters - A Service Volunteer, from Amherst, Massachusetts, arrived May 19th to work on a senior project/internship for Hampshire College. His

project consisted of examining the subsistence caribou hunting needs of the communities of Ivanof Bay and Perryville, and the relationship to State management practices and local caribou population status. Zeke had previously volunteered for the Complex during the summer of 1989. He departed King Salmon on August 19th, heading back to college in New Hampshire. Zeke will be writing up this summer's subsistence caribou study during the school year for a senior thesis.

Lisa Scharf - A Service Volunteer, from Maple Creek, California, began work on September 5th to document fall waterfowl migration on the Naknek River. Lisa also conducted a survey of local duck hunters to census species taken. She completed her tour on December 3rd.

5. Funding

Our initial funds advice for Fiscal Year (FY) 1993 was received on January 21st. 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 provides an overview of Complex funds.

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

FY	AKP	BCH	TOTAL
93	\$674.0	-----	\$674.0
92	\$686.0	-----	\$686.0
91	\$739.0	-----	\$739.0
90	\$352.0	\$314.0	\$666.0
89	\$368.0	\$335.0	\$703.0

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

FY	FIXED	OVHD	PROJ	SUBSIST	CHALCOS	CONTAM	SUBTOT
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
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

An austere base funding level was expected and received. Region 7 implemented cost reduction measures that had a double whammy on our biological program. First, the program was reduced to a custodial level with only \$5,000.00 in project funds being received (after appeal). Then our critically needed subsistence coordinator position was cut. Another appeal and late arriving subsistence funds allowed us to hire a temporary biotechnician (Section G.18.). Salary and PCS-move savings from the pilot position allowed us to redirect some funds to the biological program; so the year was not a complete loss (Section G.). Another major disappointment was the discontinuing of Exxon Valdez oil spill funds for sea bird colony assessment work at Puale Bay (Section G.5.). However, project and soft money from a number of sources came through for the visitor center, the RIT program and the environmental education program and provided the funding stimulus for a very busy year for our public use staff (Section H.). Funding was received for four small Maintenance Management System (MMS) projects (Section I.3.). Funds were expended to 0.7 percent of target amounts.

The Fiscal Year 1994 Work Plan request was submitted on October 1st. This submittal represented a team effort on the part of all Complex staff. Amid other high priority work, we dedicated several days to reviewing our fixed costs requirements, overhead needs, and Refuge Needs Information System (RNIS) projects. A team approach was taken on setting project priorities. We feel that a conservative, real world request resulted.

6. Safety

This station supports the Regional safety program and all aspects of keeping our Complex and facilities a safe place to live and work. No lost time accidents occurred this year although there were two minor injuries. 1) RR Terrell-Wagner received a soft tissue injury on the cheek while shooting the shotgun and rifle during Bear/Firearms Safety Training on June 8th. 2) On November 2, AP Smoke slipped on a patch of ice while pulling an airplane out of the hangar. He fell backwards, striking his elbow on the asphalt surface while trying to break his fall.

Quarterly Safety Committee and monthly staff safety meetings were held as required. The Safety Committee was made up of MH Mumma serving as

chairperson, RR Terrell-Wagner as member, and KSFRO Biologist Jeff Adams as secretary/member. This group provides an aggressive safety program for the Service in King Salmon. Monthly safety meeting topics covered included: hunter education, video Shoot, Don't Shoot; visual display terminal training; stress reduction; use of fire extinguishers, Christmas holiday safety precautions in the home, and preventing falls. The KSFRO sponsored the April monthly safety meeting regarding defensive driving, fulfilling part of our annual requirement for this type of training.

This year the station purchased thirteen "Safety Shorts" videos used as a part of the safety program. Titles included: The First Hunt, Boating Safety, Battling Fatigue, The Burden of Depression, Stress in the Workplace, Your Heart - An Owners Manual, First Aid Kits, Cutting Cancer Risks, Repetitive Strain Injuries, Know Your ABCs - Fire Extinguishers, Watch Your Back, Buckle Up For Safety, and Lost in the Ozone. If any other station wishes to borrow these, just give us a call, (907) 246-3339.

RefrigWear brand bib-trousers and hooded coats were purchased as Class D uniform clothing for use during extended outdoor work. Snowmobile or ATV law enforcement/public use patrols and wildlife surveys in freezing weather will be more comfortable and safer. Northern Outfitters, Inc. mittens and boots were also purchased. The boots are much better than "bunny boots" because they breath. You can immerse your foot in water, wear the boot wet and it will dry out even at temperatures near zero degrees Fahrenheit.

New Stearns floatation vests made of nomex were purchased to replace the nylon ones for all float operations with aircraft. The vests will do double duty as survival vests, you carry your survival equipment on your person at all times during flight operations. Each vest can be personalized but the following items were purchased: waterproof mini maglite, strobe light, waterproof fire striker, skyblazer flares, energy bars, windproof matches & waterproof container, aluminum foil, heat packs, fire starter material, wind & waterproof lighter, water dye, signal mirror, and emergency locator transmitter.

AMBU-Man Basic Torso and a CPR-baby were purchased for CPR training. Items purchased to make up emergency equipment for administrative cabins and field camps included: mast pants, trauma kit in orange case, MDI CPR microshield, UNI-Med Pac resuscitation first response kit, traction splint, seat belt cutter, extrication collar, nogg'n kit, Dyna Med immobilizer, V-Vac suction, and misc. smaller items. These kits were recommended by Refuges & Wildlife in the regional office.

On February 3rd, RR Terrell-Wagner instructed an eight hour Cardio-Pulmonary Resuscitation (CPR) course (American Red Cross, Basic Life Support) for the Complex and KSFRO staffs. All eight participants scored well on the practical and written tests, and are now certified for another year.

A Basic Watercraft Operator Certification Course was conducted by DRM/Instructor Poetter on May 6th and 7th. Permanent staff were targeted for the training. The new swimming pool in Naknek was utilized, providing an opportunity for all Complex and KSFRO staff to test and experience all types of floatation devices, from garbage bags to immersion suits. A

series of buoys were placed in the river and each student had an opportunity to experience the handling characteristics of a jet and propeller driven boat. Staff certified included: WB Dewhurst, MW Mumma, RR Terrell-Wagner, RIT Knutsen, and Volunteers Mehall and Heyob. As special guests from the regional office, Hydrologists John Trawicki and Steve Lyons also attended the course. On July 8th, River Rangers Cameron Stormes and Mark Rowland from the Togiak NWR, were certified by DRM Poetter.

In May, "lumbar support" braces were purchased for staff to use when lifting heavy objects. These devices should help further reduce back injuries.

MH Mumma discovered a Soldotna, Alaska based fire extinguisher servicing company (Peninsula Extinguisher Service) that travels to King Salmon/Naknek to service the local canneries. In June, he was able to work extensively with them, revamping our fire extinguishers. We have over 60 extinguishers in use. Most halon units were replaced with dry chemical ones, since halon is reported to cause degradation of the ozone layer of the atmosphere. Halon units were left in the hangar and one for computers because they do not leave residue on electronic circuits. This was the first time we have had our extinguishers professionally serviced.

On June 3rd and 5th, WB Dewhurst and Volunteer Peters taught American Heart Association - Adult Heartsaver/CPR courses to 20 summer hire volunteers and employees. The classes were held for personnel of the Complex, KSFR0 and the Quinmat Landing Hotel.

General orientation and safety training was conducted for all seasonal staff the week of June 7-11th. Training sessions included CPR certification, bear behavior/firearms safety, aircraft safety, sexual harassment training, and water safety/survival. Permanent staff completed bear behavior/firearms qualification training, watercraft operator certification training, and first aid training. Regional Equal Opportunity Specialist Tom Rush traveled to King Salmon to present the sexual harassment training. OAS Pilot Jim Scofield stopped in to conduct the aircraft safety training. First aid training was taught by Greg Chilcott, Bristol Bay Borough employee. All other training was instructed by Complex staff.

The Complex staff participated in Fire Prevention Week, October 3rd-9th. We received a fire prevention news bulletin to review and attended an open house, concerning fire extinguisher uses, at the fire department of the King Salmon Air Force Station.

This summer, MMS funding of \$1,000 was used to purchase polyethylene overpacks for 55-gallon drums of fuel. The overpacks were placed at each of the cabins and in the fuel shed on the compound to serve in the event a drum starts to leak. Absorbent pads were also purchased to clean-up any small fuel or oil spills.

7. Technical Assistance

Togiak NWR River Rangers Cameron Stormes and Mark Rowland traveled to King Salmon July 8-9th to obtain training/certification in Watercraft Operation and Bear Behavior/Firearms safety. DRM Poetter conducted the training and put them through the paces.

During the last two weeks of July, WB Dewhurst provided technical assistance to the National Park Service. She helped staff a two person field camp in the Aniakchak Caldera within the Aniakchak National Monument. The purpose of the camp was to conduct a re-vegetation study examining species diversity since the 1931 eruption.

On September 22nd MH Mumma spent several hours assisting the Alaska Department of Fish and Game in moving gravel. They needed to make some parking lot repairs and we provided neighborly assistance by loaning the use of the bobcat loader and an operator.

8. Other Items

ARW Rowan Gould and DAM Art Wemmerus conducted a station visit on May 25th to 27th. The King Salmon Visitor Center, the RIT program, and the I&E program were thoroughly reviewed. Rowan was able to visit with all staff. We visited the Yantarni air strip on Thursday and reviewed the issues/problems that the Complex will inherit when the land transfer is complete.



Rowan Gould, Art Wemmerus, Angie Terrell-Wagner,
and Bill Smoke pose for the required VIP photo at
the Yantarni air strip. 5/26/93 REH

On October 13th and November 15th, RIT Shirley Kelly traveled to Anchorage to participate as a member of a Quality Improvement Team created to recruit and retain Alaska Natives in the permanent FWS workforce. The team presented their preliminary findings and recommendations at the fall Project Leaders meeting. Shirley is starting her third year of work with the Service and was able to share her views and experiences with the other team members. The team will have a final "Action Plan" completed in late spring 1994.

RM Hood attended the Project Leaders Meeting in Anchorage November 16-18th. Assistants were not invited, for the second year, due to low budgets.

RM Hood attended the Big Game Commercial Services Board meeting on the December 1st-3rd. The Anchorage meeting provided an excellent opportunity to gain some insight into the industry's rule-making process, meet key players, and network with Alaska Peninsula guide-outfitters.

On December 6th, RM Hood provided a status report on the PUMP to the Bristol Bay Native Corporation Officers' and Directors' Workshop at the Anchorage Hilton Hotel.

F. HABITAT MANAGEMENT

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 values of the wilderness area are several fold. 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.

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.

The "Alaska Peninsula Wilderness Designation Act of 1991" was introduced by Representative Don Young. A hearing on H.R. 1219 was held on March 8th. This brought a flurry of requests for information from all sides. The bill provided for the designation of approximately 2.9 million acres of wilderness in the Aniakchak National Monument and Preserve and the Alaska Peninsula and Becharof National Wildlife Refuges. In addition, the legislation also would have authorized the acquisition of approximately 275,000 acres of selection rights of Koniag, Inc. Koniag would give up all subsurface oil and gas rights for "chits" that would give them oil and gas rights elsewhere. The bill was not passed.

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.



Mount Veniaminof began a series of minor eruptions in late July that continued through December.

7/30/93 RAS

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.

On July 30th, Mt. Veniaminof began a minor eruption. On August 3rd, AP Bill Smoke was in the area flying station aircraft Cessna 32PX. Observers included Volunteer Zeke Peters and Biological Technician Kevin Boden. They observed intermittent puffs of ash and rocks being thrown 500-1000 feet in the air. Smoke and ash reached 11,000 feet. The ash cloud, pushed by 10-12 mph winds from the south (at 9000 feet), was drifting to the north. Also, steam was venting from the east side of the cone at its base. The steam vent was estimated to be 10 feet in diameter, with an ice melt of 200-300 feet in the cap glacier around the vent. Intermittent activity continued for the remainder of the year.

G. WILDLIFE

3. Waterfowl

Wintering Waterfowl Surveys

In a cooperative effort with the Migratory Bird Management Division, two winter aerial waterfowl surveys were flown along both coast of the Alaska Peninsula. Area covered included coastline of the Alaska Peninsula/Becharof Refuge Complex, Izembek Refuge, the Alaska Peninsula Unit of Alaska Maritime Refuge and Aniakchak National Monument. Surveys were flown by Plot/Biologist Rod King using an amphibious Cessna 185 with observers WB Dewhurst and BT Boden on March 3rd-5th and 29-30th.

During the early March survey, 4,709 emperor geese, 2,258 black scoters, 1,089 Steller's eiders and 40 king eiders were documented using the Pacific coast of the Alaska Peninsula/Becharof Refuge Complex. Numbers remained relatively stable between the two wintering waterfowl surveys. However, a strong movement of birds was documented to have occurred between the late March survey and an aerial eider survey conducted on April 7-8th (by Pilot/Biologist Bill Larned), likely marking the beginning of spring migration. Most of the waterfowl documented wintering along the Pacific Coast of the Alaska Peninsula shifted over to the Bristol Bay side. April 8th survey numbers along the Pacific side dropped to 395 emperor geese, 708 black scoters and 235 Steller's eiders. Over the course of the spring, three additional aerial waterfowl surveys were conducted by the Regional Migratory Bird Division targeting eiders and emperor geese, but providing a very complete picture of spring staging and movement patterns along the peninsula.

Naknek River Spring Migration Watch

The 1993 annual spring waterfowl migration survey was conducted February 26th-May 19th along the Naknek River, by Volunteer Angela Mehall. The upper Naknek River opened February 25th and the lower portion opened by March 22nd. Ground surveys were implemented for the third consecutive year, in accordance with the 1991 survey model. Aerial surveys were implemented to determine waterfowl species composition, abundance, phenology, distribution, man-made or natural disturbances, and utilization of specific habitats. Additional aerial surveys were made on the Kvichak, Egegik and Ugashik rivers to determine if these variables are unique to the Naknek River or general characteristics of the Alaska Peninsula.

In 1993, Naknek River overall waterfowl numbers were considerably lower than 1992, but comparable to 1991. Ground surveys revealed shifting species composition and considerable variation in individual species' phenologies. Total waterfowl use of the river was 9113 birds (total of all species' highest abundance) of 22 species. Eurasian wigeon were encountered regularly in small numbers, thus changing their recorded status from "rare" to "uncommon" on the Alaska Peninsula. Numbers of northern pintails and greater white-fronted geese were the lowest since 1987 and 1983, respectively. The probable cause for the low 1993 abundances was the early opening of area ponds and lakes as well as rivers along the Alaska Peninsula, allowing waterfowl to stage away from the Naknek River. Low abundances were also observed on the Kvichak, Egegik and Ugashik rivers, with total counts of 2261, 451, and 509, respectively.

Naknek River Fall Migration Watch

A fall waterfowl migration survey was conducted (by Volunteer Lisa Scharf) for the first time in 1993 from August 23rd-November 20th along the Naknek River. Ground surveys were also conducted in accordance with the spring waterfowl migration survey model. Naknek River overall waterfowl numbers were considerably lower in the fall than in the spring and individual species abundance tended to fluctuate over a number of weeks rather than showing the rapid increase, distinct peak, and subsequent decrease characteristic of spring migration. Ground surveys revealed shifting species composition and considerable variation in individual species' phenologies. Total waterfowl use of the river was 5,066 birds of 24 species, as compared to the spring total of 9,113. Mallards, green-winged teal, greater scaup, and buffleheads were encountered in much higher numbers in the fall than in spring, while tundra swans, geese, northern pintails and red-breasted mergansers were far less abundant. A lesser snow goose was recorded on migration surveys of the Naknek River for the first time this fall.

The highest density staging areas on the Naknek River were between Big Creek and Paradise Point, and at the mouth of Paul's Creek. The Rapids Camp vicinity and upper Pike Lake were used heavily by diving ducks, but only rarely were dabbling ducks encountered upriver of the mouth of Big Creek. Boat traffic, floatplane landings and take-offs, and human presence along the shorelines were noted to disturb waterfowl. Hunting pressure was concentrated in the Grassy Point to Paradise Point area and affected American wigeon more than any other species. A waterfowl hunter survey,

implemented by Lisa, documented a harvest of 241 ducks, comprising 8 species taken by 16 hunters during a cumulative 98 days of hunting.

5. Shorebirds, Gulls, Terns and Allied Species

Bristol Bay Shorebird Counts

In a cooperative effort with the Point Reyes Bird Observatory, shorebird counts were coordinated by WB Dewhurst to collect data for the Pacific Flyway spring shorebird survey. Spring and fall 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 March 10th and was highlighted by: 2,268 dunlin, 2,157 western sandpipers, 415 short-billed dowitchers, 335 red-necked phalarope and 99 black-bellied plover. The fall survey was conducted on August 28th and was highlighted by: 620 short-billed dowitchers, 172 black-bellied plover, 156 lesser golden-plover and 87 dunlin. The fall survey was determined to have been conducted too late to catch the peak of sandpiper movement through the area. Plans for 1994 include conducting multiple fall surveys starting in late July, to better understand fall migration timing for shorebirds through the area.

7. Other Migratory Birds

Breeding Bird Surveys

In a cooperative effort with the Katmai National Park, WB Dewhurst and BT Boden worked with NPS Subsistence Coordinator Susan Savage to conduct local Breeding Bird Surveys (BBS). These were conducted under the Partners in Flight/Neotropical Migratory Bird Conservation Program. On June 7th, the first BBS was conducted in the King Salmon/Naknek area along local roads. The most commonly observed species were (in order) American robins, gray-cheeked thrushes, American tree and white-crowned sparrows. On June 9th, the second annual BBS was conducted in Katmai National Park on the road from Brooks Camp to the Valley of 10,000 Smokes. In Katmai, the most common species were (in order) Swainson's and varied thrushes, slate-colored juncos, and orange-crowned warblers.

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, *Earthwatch* agreed to sponsor a trial program during the summer of 1994 on the Ugashik Unit of the Alaska Peninsula Refuge. The program would involve 16-32 *Earthwatch* volunteers on two-week teams to assist with landbird monitoring. They would be based out of the Mother Goose Lake administrative cabin. Each volunteer would be paying *Earthwatch* \$750.00 apiece to participate in the program. This money would then be utilized to implement the program. Monitoring would consist of mist-netting and banding birds during breeding and fall migration, conducting breeding bird surveys and off-road point counts, conducting nest searching and monitoring, and doing related habitat analysis. This project

was also submitted under the Challenge Cost Sharing Program for matching government funding. If successful, this has high potential for being a long-term and new and exciting program for the Complex.

Christmas Bird Count

The 8th annual King Salmon-Naknek Christmas Bird Count took place on December 29th. 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 Complex lands, Alaska Peninsula Refuge coordinates this event. Six volunteers donated their Sunday to seek out birds from Lake Camp to Pederson Point.

The weather was good on count day and the Naknek River completely open. Fifteen different bird species were spotted with a new high count of 2,894 individuals. Species high counts were recorded for common mergansers (1,922), glaucous-winged gulls (110) and pine grosbeaks (124).

8. Game Mammals

Both the Alaska Peninsula and Becharof refuges are open to sport and subsistence hunting of game animals. 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, Alaska Peninsula Refuge was chosen at 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 overexploited 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. During these studies 344 bears were handled 489 times and 136 of the bears were shot by hunters. In the current study, 144 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, sub-adults made up 32-37% of the population, versus about 22% currently.

In an effort to evaluate the effectiveness of aerial bear/stream surveys, over 6,800 bears were documented on 39 replicate surveys from 1988 to 1992. A comparison of results from the past three decades has shown that the local population has increased and is currently comprised more of single bears. These findings paralleled other results documented independently. With careful control of the procedure, this technique appears to provide an efficient, relatively inexpensive way to detect major changes in the bear population.

Bear/Stream Surveys

The annual bear/stream surveys were conducted August 9-16th by WB Dewhurst and AP Smoke. Seventeen replicates were conducted over the survey area, using our Supercub N9786P. High counts were: Island Arm - 104; Ugashik Lakes - 49; Kejulik Valley - 41; and Bible Creek - 13. Counts for the Kejulik Valley and Bible Creek were below average, likely due to mis-timing of this year's surveys. Salmon spawn in the Kejulik River and Bible Creek earlier than the rest of Becharof Lake or the Ugashik Lakes, and this year's salmon run was one to two weeks early. Likely, the bear surveys were conducted too late to catch the peak of bear activity on these tributaries. Due to the shared (with Togiak NWR) nature of the Supercub, required advance scheduling of the plane made it difficult to be flexible with survey dates.

Moose

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. This year's survey results were as follows:

Dog Salmon River -

81: 25% Bulls (20% Yearlings, 40% Med, 40% large), 68% Cows, 7% calves
Park Boundary -

163: 21% Bulls (15% Yearlings, 32% Med, 51% large), 63% Cows, 16% calves
Kejulik Valley - conducted in December, after start of antler drop

161: 41% Bulls, 6% cows, 7% calves, 46% unidentified sex

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. During 1993, two complete and one partial surveys were conducted on November 23rd and December 15th and 23rd. Surveys were flown using the Complex's Cessna 206 and PA-18 by AP Smoke with observers: WB Dewhurst, Volunteer Scharf and MH Mumma. Sex and age composition of the area was determined during the November survey to include: 103 total consisting of 18% bulls (22% yearlings, 50% medium, 28% large), 58% cows and 24% calves. Later surveys did demonstrate moose movement from the hills down into the Big Creek drainage.

During the 1993 special subsistence moose hunt in GMU 9C (Big Creek area), the Complex issued 2 permits, with no successful hunters. Warm weather kept the Naknek River partially-open and unsafe for crossing for the entire month, otherwise more local residents might have participated.

Caribou

Residents of Perryville and Ivanof Bay, primarily Native Alaskans whose cash income is from commercial fishing, 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 Game Management Unit 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, 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 August 10th. The proposal further maintains the caribou in this "local area" are a "subherd 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 July 1st "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 Volunteer Zeke Peters and the Complex. Zeke was a fourth-year student at Hampshire College, Massachusetts; this project was his senior thesis. Working closely with WB Dewhurst and BT Boden, Zeke conducted the primary research this summer. Over the course of the 1993-1994 academic year at Hampshire College, Zeke will write his senior thesis, which will become the final report on the project. The immediate goals of this project were to determine: (1) is the new hunt sustainable in its present form; and (2) are there further regulation changes needed that would enhance the sustainable taking of caribou by local residents, in the Chignik Unit?

To obtain caribou harvest and subsistence usage information, interviews of hunters using the new season were attempted in Chignik Bay in late July-early August by Volunteer Peters and BT Boden. Overall, 32 persons, or groups of persons, were contacted during 12 days of interviewing. Of these, none stated they were hunting or had heard of anyone else hunting under the new hunt. Twenty-one of the 32 persons or groups contacted were residents of Chignik Bay, Chignik Lake, Chignik Lagoon, Perryville, or Ivanof Bay; 16 of these local residents were not aware of the new hunt or had incorrect information regarding the regulation. Once they were aware of the correct regulation for the new hunt, almost all these local residents said they would not be able to take advantage of it due to the difficult fishing season.

An aerial caribou population survey of the Pacific side of the Chignik unit was conducted simultaneously to the interviews to provide baseline information on the hunted population. Surveys were flown with the Katmai Park's PA-18, piloted by AP Smoke with Volunteer Peters and BT Boden as observers. No caribou were observed in the portion of the low area stratum that was surveyed. Seven caribou were observed in total, all in quadrants to the northeast of Seal Cape. Allowing for some possibility of bias, due to our inability to reach quadrants grouped in areas of poor weather, our results indicated a total population estimate of 107 caribou for the part of the study area east of Lookout Hill, with a standard error of 67 caribou. Overall, our estimate indicates a density of 0.09 caribou per mi² (0.23 caribou per km²) in the study area. The low stratum aerial survey was replicated in September by AP Smoke and BT Boden, with very comparable results.

16. Marking and Banding

An emperor goose neck collar recovered at Ivanof Bay by a local resident, was traced back to its Russian origins. The goose turned out to have been banded by members of the Eastern Palearctic Wetlands Research Center of Russia in the Anadyr lowlands (near the Nikitikha River) on August 16th, 1992. This was the first documented exchange of emperor geese between Russia and Alaska!

H. PUBLIC USE

1. General

The majority of public use currently occurring on 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 located on or near the 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: facilitating the exchange of information between the Complex and local villages; preparing and conducting environmental education and subsistence programs; acting as liaisons between villages and the Service; and assisting in other Complex programs as needed. The RITs work a nine month season (September - May), taking time off in the summer months to pursue commercial fishing activities.

On May 13th, RR Terrell-Wagner submitted a final draft of a "Great Trips" brochure highlighting a hiking route from Gertrude Lake to Bible Camp on Becharof Lake. Complex volunteers explored and mapped this proposed route the summer of 1992.

A KTUU-TV (NBC, Channel 2, Anchorage) news team consisting of Reporter Lauri Yount and Videographer Barry Johnson were accompanied by DRM Poetter to the Ukinrek Maars field camp on Becharof Refuge July 12th-13th. They did a story on Dr. Michael Ort's (Northern Arizona University) volcanic research study of the Ukinrek Maars. A news release on June 2nd, by Public Affairs Specialist Connie Barclay on the study created a flurry of interest from the Third Estate. RM Hood was interviewed on the 3rd, by an Associated Press reporter. The article appeared in the Daily News on the 12th, and numerous other papers thereafter. The Channel 2 news report aired on the 23rd. It was a nicely done piece. See Section J.1. for details of the Ukinrek Maars study.



KTUU Videographer Barry Johnson collecting footage of Volcanologist Michael Ort conducting field research on the Ukinrek Maars of Becharof Refuge.

07/12/93, RDP

Public use inquiries continued to increase again this year. There were inquiries from 43 states and 8 foreign countries (Czechoslovakia, France, Germany, Holland, Israel, Saudi Arabia, Spain, and West Africa). Over 180 public use inquiries were answered during the year, (150 in 1992).

The development of the Public Use Management Plan, which will guide the future development of recreation on the Complex, neared completion with the help of PUP Clough (see Section D.2.).

2. Outdoor Classrooms (Education Programs) - Students

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

January - Much staff time and energy was spent month 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.

11th - RIT Lind visited Meshik School in Port Heiden and worked with 4th-6th graders (9 students) for two hours.

11th - RIT Knutsen visited a 1st grade (14 students) in Bristol Bay Consolidated School for 1.5 hours.

12th - RIT Lind visited Meshik School in Port Heiden and worked with 7th-11th graders (8 students) for 1.5 hours.

13th - RIT Knutsen visited a 1st grade (13 students) and 3rd grade (18 students) in the Bristol Bay school and for 3 hours.

15th - RIT Knutsen visited a 4th grade (17 students) in the Bristol Bay school for one hour.

15th - RIT Kelly visited the K-3rd grade (5 students) in Egegik for 2 hours.

19th - RIT Knutsen visited Kokhanok and spent the entire day working with all classes in the school. He spent 1.5 hours in three classes: K-3rd grade (32 students), Jr. High (12 students) and High School (8 students).

20th - RIT Lind visited Chignik Lagoon. He worked with the K-6th grade class (9 students) and the 7th-12th grade class (9 students) for 1.5 hours each.

21st - RIT Knutsen visited Newhalen and spent 4 hours working with K-3rd graders (32 students) and 4th-6th grade (24 students). Then on the 22nd, Smiley worked with the Jr. High (18 students) and High school (12 students).

21st - RIT Kelly visited Pilot Point and spent time with the following classes: K-2nd grade (7 students), 3rd-4th grades (7 students), and 5th-10th graders (6 students). She worked for one hour with each class. Then, on the 22nd, she again visited each of these three classes for 1.5 hours.

On the 6th, RR Terrell-Wagner and MH Mumma gave a 2 hour presentation on "Bears, Their Future Is Up To Us" to ten 5th graders at the Bristol Bay School. Program highlights included discussing bear habitat, biology, behavior, and current research being conducted in this area. MH Mumma shared his experiences capturing bears on the Alaska Peninsula and demonstrated the use of radio telemetry equipment. The students had the opportunity for a "hands on" experience using the telemetry equipment in an outdoor setting. The program tied in well with the book "Grizzly Cub" the class was studying for an upcoming "Battle of the Books" contest.

On the 20th, RIT Orville Lind traveled to the village of Chignik Lagoon to work with the school children on the goose calendar contest. He also gave a educational program to four adults entitled "Sea Otters." Orville shared information concerning biology and behavior of sea otters, and regulations regarding take and use of these marine mammals. His program lasted approximately 30 minutes.

February - Staff EE efforts again concentrated on educating students about declining populations of Arctic geese. On the 9th, RITs Lind and Knutsen traveled to the Perryville school. The RITs worked with K-6th grade (14 students) and Jr. & Senior High grades (16 students).

March - To encourage teachers to celebrate "National Wildlife Week" we sent information packets with educational materials on this years theme "Rain Forests - Help Save Their Layers of Life" to several schools. Information packets were sent out on the 3rd, to Chignik Bay, Chignik Lagoon, Chignik Lake, Egegik, Igiugig, Ivanof Bay, Kakhonak, Levelock, Naknek, Newhalen, Nondalton, Pedro Bay, Perryville, Pilot Point, Port Alsworth, Port Heiden and South Naknek schools. We also supplied the schools with Alaska specific materials developed by regional office Resource Support staff.

On the 20th, we were notified that the winners of the 1994 Western Alaska Goose Calendar Poster and Literature contest had been selected. This year over 1700 entries were received from 59 different villages. A total of 268 local students entered the poster contest and 55 entered the literature contest. Three students from our area were winners in this important conservation project.

Literature Contest: Category Grade 6 - 8

FIRST PLACE: Sarah Torzillo (8th grade) Bristol Bay School

THIRD PLACE: Brian Marshall (8th grade) Bristol Bay School

Literature Contest: Category Grade 3 - 5

SECOND PLACE: Anna Rose Tracey (4th grade) Nondalton School

May - Regional Resource Support staff returned the non-winning art and literature entries in the goose calendar contest this month. After reviewing the student's work, we decided to conduct 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:

First Place: Riel Anderson

Honorable Mention: Blanche Garnie, Grade 8

Poster Contest:

Honorable Mention: John Chilcott, Grade 2

Honorable Mention: Jacob Tibbe, Grade 3

Honorable Mention: Robert Jones, Grade 4

Honorable Mention: Roy Robertson, Grade 5

Honorable Mention: Jordon Heyano, Grade 6

Honorable Mention: Kristin Tolbert, Grade 6

Honorable Mention: Jennifer Melvin, Grade 6

RIT Knutsen presented the Bristol Bay students with the prizes and gifts they won during the annual School Awards Ceremony held the evening of the 26th. He was assisted by RR Terrell-Wagner.

Lake and Peninsula School District had the following winners:

Literature Contest:

Second Place: Yvonne Gabel, Grade 6 at Egegik School

Third Place: Kendra Shugak, Grade 9 at Dena'ina School

Honorable Mention: Julio Carrasquillo, grade 4 at Nondalton School

Honorable Mention: Cindy Gable, Grade 5 at Egegik School

Honorable Mention: Jaslyn Hornberger, grade 6 at Newhalen School

Honorable Mention: Nancy Anderson, grade 8 at Chignik Lagoon School

Poster Contest:

First Place: Jessica Poindexter, grade 4 (Meshik School)
 Second Place: Travis Olsen, grade 10 (Newhalen School)
 Third Place: Denise Reid, grade 9 (Meshik School)
 Fourth Place: Shaun Alexie, grade 4 (Nondalton School)
 Honorable Mention: Monique Skonberg, grade 4 (Chignik Bay School)
 Honorable Mention: Ross Grunert, grade 1 (Chignik Lagoon School)
 Honorable Mention: Clarence Erickson, grade 4 (Chignik Lake School)
 Honorable Mention: Jermain Jacko, grade 6 (Dena'ina School)
 Honorable Mention: Davin Abalama, grade 5 (Egegik School)
 Honorable Mention: Kevin Olympic, grade 6 (Igiugig School)
 Honorable Mention: Senafont Shugak III, grade 5 (Ivanof Bay School)
 Honorable Mention: Nils Nielsen, grade 3 (Kokhanok School)
 Honorable Mention: Clint Rawls, grade 10 (Kokhanok School)
 Honorable Mention: Juanita Matson, grade 4 (Meshik School)
 Honorable Mention: Chester Balluta, grade 11 (Newhalen School)
 Honorable Mention: Kristy Balluta, grade 4 (Nondalton School)
 Honorable Mention: Joanna Trefon, grade 5 (Nondalton School)
 Honorable Mention: Audrey O'Domin, grade 2 (Perryville School)
 Honorable Mention: Random Reamy, grade 1 (Pilot Point School)

On the 10th, an exhibit showing the student's award winning art and literature entries were put on display at the King Salmon Visitor Center. Entries not selected were returned to the schools for the community to enjoy.

August - On the 26th, Regional Education Coordinator Beverly Farfan traveled to King Salmon to assist RR Terrell-Wagner in presenting an Educator Workshop for teachers in the Bristol Bay and Lake & Peninsula School Districts (see Section H.3.).

October - Taking advantage of some nice fall weather and the presence of Arctic nesting geese migrating through the area, RIT staff were involved in presenting the following environmental education programs:

13th - RIT Lind visited Meshik School in Port Heiden and worked with 9-11th graders (5 students) for 2 hours.

26th - RIT Lind visited Meshik School in Port Heiden and worked with 1st-3rd graders (12 students) for 1.5 hours.

For both classes, Orville spent time talking about Arctic Nesting Geese (biology, habitat, food sources, migration etc) and then took the students on a field trip to observe approximately 200 Emperor Geese on the beach. Students really enjoyed plaster casting tracks of the geese and observing them feeding, and the younger students were excited to see a Gyrfalcon.

20th, 21st and 22nd - RIT Kelly visited the Egegik school and worked with 6 students for 2 hours each day. She discussed tundra habitat and involved the students using activities from "Alaska's Living Tundra" curricula and "Hug a Tree/Adopt a Tree" book. The children spent time both in the classroom and outdoors each day learning and doing activities related to the tundra environment.

November: Continuing to take advantage of nice weather and Arctic nesting geese migrating through the area, RIT staff presented the following EE programs:

1st - RIT Lind visited Meshik School in Port Heiden and worked with 5th-8th graders (10 students) for 2 hours.

2nd - RIT Lind visited Meshik School in Port Heiden and worked with Pre-school and Kindergarten (7 students) for 1.5 hours.

For both classes, Orville spent time talking about Arctic Nesting Geese (biology, habitat, food sources, migration etc) and took the students on a field trip to observe approximately 300 Emperor Geese.

16th - RIT Lind traveled to the Chignik Lake school and worked with 7th-12th graders (20 students) for one hour.

17th - RIT Lind visited the Chignik Lagoon school and worked with 7th-12th graders (10 students) for one hour. Orville spent time at both schools talking with the students about his job as an RIT. He spoke to the students about the Service mission to conserve wildlife and habitat, and explained our concern about declining populations of geese. He told the students about the upcoming calendar contest and our puppet show.

22nd - RIT Lind visited the Meshik school in Port Heiden and took the 1st-5th grades (6 students) on a wildlife viewing field trip.

5th, 12th and 19th (morning) - RIT Kelly visited the Egegik School and worked with 5th-7th graders (6 students) for 1/2 hour. She is continuing plot studies with the students using activities from the "Alaska's Living Tundra" curricula. She began working with these students in October and will continue through the school year next spring. Students will spend time both in the classroom and outdoors, learning and doing activities related to the tundra environment.

5th, 12th and 19th (afternoon) - RIT Kelly visited the Egegik School and worked with the K-4th graders (11 students) for 2 hours. She is working with students on activities in the "Teach About Geese" curricula, combining both science and art activities.

December - On the 3rd, RIT Lind traveled to the Pilot Point school and worked with the 1st-3rd graders (16 students) for 30 minutes discussing declining populations of geese. He also worked with 4th-11th graders (9 students) on a program "To Meet A Caribou" discussing biology, migration patterns, etc.

The last week of the month, RIT Kelly presented a week long EE class for students in Egegik. She used activities from several curricula ("Teach About Geese", "Alaska's Living Tundra", etc.) to instruct 12 students in grades 5th-8th. She met with the students each day for four hours. Topics of discussion included: bird biology and behavior, habitat, predator/prey relationships, etc. The week after Christmas was chosen to take advantage of the children's vacation.

The 1994 Western Alaska Goose calendars and contest rules for the 1995 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 Bay, Chignik Lagoon, Chignik Lake, Egegik, Igiugig, Ivanof Bay, Kakhonak, Levelock, Naknek, Newhalen, Nondalton, Pedro Bay, Perryville, Pilot Point, Port Alsworth, Port Heiden and South Naknek.

3. Outdoor Classrooms (Education Programs) - Teachers

On August 26th, Regional Education Coordinator Beverly Farfan traveled to King Salmon to assist RR Terrell-Wagner in presenting a Teacher Workshop.

This year the Bristol Bay and Lake & Peninsula school districts combined their teacher in-service training, so we took advantage of this opportune time to work with as many teachers as possible. On the 27th, Beverly, Angie and Volunteer Benjaminsen gave a 1.5 hour presentation to 24 elementary teachers and a 1.5 hour presentation to 4 secondary teachers. Topics highlighted in the workshop included: Complex EE programs and services available to teachers, thematic unit planning, and conducting and sharing small group activities. Considering all of the sessions available for teachers to attend, we were very happy with the turn-out.

We greatly expanded our Resource Lending Library this year. The lending library consists of several natural resource and educational books, video tapes and audio-visual materials, etc. Staff use these materials in preparing and presenting EE programs. The materials are also made available for loan to village teachers. Volunteer Benjaminsen was instrumental in researching, ordering and organizing the lending library.

6. Interpretive Exhibits/Demonstrations

The King Salmon Visitor Center is still in the early stages of development. Immediate needs of the facility include the development of exhibits and materials (brochures, handouts, etc.) highlighting the major themes and objectives of the participatory agencies. Necessary funding for exhibits has been secured and much staff time and effort will be spent this winter designing and fabricating the new exhibits. We are planning to have exhibits in place and functioning by mid-May 1994.

On the March 8th and 9th, a meeting was held with representatives from the four King Salmon Visitor Center participatory agencies to discuss the development of exhibits for the facility. As per the "Cooperative Agreement" that details how the visitor center is managed, the National Park Service is taking the lead on developing an "Exhibit Plan," with major input from the four agencies. In attendance at the meeting were DRM Poetter and RR Terrell-Wagner of the Complex, Superintendent Alan Eliason and Chief of Interpretation Mark Wagner from the National Park Service, Assistant Borough Manager Scott Janke of the Bristol Bay Borough and Borough Manager Glen Vernon of the Lake & Peninsula Borough. Also attending was Visual Information Specialist Keith Hoofnagle from the National Park Service Regional Office. Keith is writing the Exhibit Plan based on the primary themes identified by the four agencies. Once the exhibit plan is written and necessary funding secured, work will begin to implement the plan.

On November 10th, the master carpenter from Art Services North in Anchorage traveled to King Salmon to meet with Complex and NPS representatives concerning the new exhibits for the visitor center. Art Services North is the contractor fabricating the exhibits. The exhibit plan was reviewed, and required wall & floor measurements taken.

7. Other Interpretive Programs

Outreach programs presented this year included:

February - DRM Poetter and KSFRD Biologist Jeff Adams instructed a Hunter Education Course, in cooperation with the ADF&G, Hunter Education Program. The 10 hour course was held at the Bristol Bay School in Naknek the evenings of the 15th, 17th, 22nd, and 24th. A total of 4 students and 4 adults participated.

April - On the 8th, RR Terrell-Wagner and RITs Kelly & Knutsen talked with students at Chignik Lake school. Students learned about the mission of the Service, refuge purposes, federal subsistence program, and career opportunities including the RAPS, YCC and RIT programs. Two one-hour programs were given to 25 students, grades 6-12.

May - On the 22nd, RR Terrell-Wagner, RIT Knutsen and Volunteer Susie Heyob participated in a community event entitled, "Taste of Bristol Bay." Susie spearheaded an educational cakewalk designed to represent the King Salmon Visitor Center and the four agencies involved in this inter-agency project. Susie designed a cakewalk to provide the public with educational information about the four agencies in an entertaining manner. Twenty significant "features" from the region were chosen as subject "squares" to be used in the game. Categories included 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).

November - On the 5th, RR Terrell-Wagner participated in the Bristol Bay Tourism Conference and served as a member of a panel titled "Impressions of Local Tourism Opportunities and Local Needs". Approximately 35 local and statewide people attended the two day conference.

King Salmon Inter-Agency Visitor Center:

Administrative History:

The King Salmon 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, and the Alaska Department of Fish and Game.

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 6772 people using the facility during this second year, with ANHA sales of \$20,080.00.

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 King Salmon 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 the development of exhibits and materials highlighting major themes and objectives of the participatory agencies. Much time and effort will be spent in early 1994 designing and fabricating these exhibits planned to be in place and functioning by mid-May.

In 1993, visitors signing the guest register represented 42 states and 16 foreign countries. We were surprised 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. We responded to 181 public use inquiries during the year.

January - The center was open five days per week (Tuesday - Saturday) 12:30 p.m. to 4:30 p.m. Total visitation was 98. ANHA sales totaled \$15.00.

A "Film Festival" was held at the visitor center on the 9th and 16th. The National Geographic Film "Grizzlies" was shown on the 9th, with a total of six people attending. On the 16th, the National Geographic film "White Wolf" was viewed by 10 people.

February - The center was open five days per week (Tuesday - Saturday) from 12:30 p.m. to 4:30 p.m. The center was closed the week of the 16th-20th because of other work priorities and key staff taking personal leave. Total visitation was 37. ANHA sales totaled \$198.00.

March - The center was open five days per week (Tuesday - Saturday) from 12:30 p.m. to 4:30 p.m. The center was closed the week of the 12th-17th, because of other work priorities and key staff attending training. Total visitation for the month was 95. ANHA sales totaled \$529.77 (\$5.57 per visitor!).

April - The facility was open five days per week (Tuesday - Saturday) from 12:30 p.m. to 4:30 p.m. The center was closed approximately two weeks because of other work priorities, including conducting public meetings to discuss the PUMP document and the Spring Waterfowl Hunting policy; and staff attending numerous training classes. Total visitation was 122. ANHA sales totaled \$61.00.

On the 3rd, the visitor center facility was used to conduct a special program in celebration of "Alaska Archaeology Week." Local residents gave sessions in basket making, tool making and ivory carving. A total of 55 people attended the three-hour program, sponsored by the National Park Service.

May - The center celebrated its first year anniversary on the 11th! We have been very pleased with attendance at the visitor center (7225 during the first year with ANHA sales of \$18,522.00 (\$2.56/visitor).

The first two weeks of the month, the center was open five days per week (Tuesday - Saturday) from 12:30 p.m. to 4:30 p.m. The last two weeks it was open six days per week (closed on Monday) from 12:30 p.m. to 4:30 p.m. Total visitation was 279. ANHA sales totaled \$657.00.

On the 1st, local resident Heather Poetter began duties as the Assistant Branch Manager for the King Salmon Visitor Center and Katmai National Park ANHA Branches (see section H.18). Heather's duties included ordering sales materials, completing stock inventories and making bank deposits. She worked approximately 4 hours per week, or on a "as needed" basis.

June - The center was open every day 8:00 a.m. to 5:00 p.m. Total visitation was 1140. ANHA sales totaled \$2123.00.

July - The center was open every day 8:00 a.m. to 5:00 p.m. Total visitation was 2132. ANHA sales totaled \$5600.00.

August - The center was open every day 8:00 a.m. to 5:00 p.m. Total visitation was 1425. ANHA sales totaled \$4704.00 (3.30 per visitor).

September - The center continued to be open seven days per week 8:00 a.m. to 5:00 p.m. Total visitation was 809. ANHA sales totaled \$2801.00 (3.46 per visitor).

October - The center was open five days per week (Tuesday - Saturday) 10:00 a.m. to 4:30 p.m. Total visitation was 272. ANHA sales totaled \$879.00.

This month the visitor center was made more handicap accessible with the purchase of a wheel chair, walker and cane, the installation of a ramp at the front door, and a telephone system to assist the hearing impaired.

November - The center was open five days per week (Tuesday - Saturday) 12:00 p.m. to 4:30 p.m. Total visitation was 89. ANHA sales totaled \$391.00.

December - The center was open five days per week (Tuesday - Saturday) 12:30 p.m. to 4:30 p.m. (closed Christmas weekend). Total visitation was 276. 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. All ANHA items were discounted 15%. Sales were brisk, with a monthly total of \$3,095 (\$11.32/visitor).

Visitation Summary, January - December, 1993

Total visitation:	6772
Total films shown:	452
Total film viewers:	1108
Total "Bear Safety" video viewers:	1390
Total signing guest register:	510
Total Information Requests:	181
Total ANHA Sales:	\$20,080.00 (\$2.76/visitor)

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 6. 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.

Table 6. Alaska resident and non-resident license and tag fees for 1993.

Type of License	Non-resident	Resident
Hunting	\$ 85.00	25.00
Sport fishing and hunting	\$ 135.00	40.00
Caribou tag	\$ 325.00	0
Moose tag	\$ 400.00	0
Brown bear tag	\$ 500.00	25.00

Alaska resident license and tag fees nearly doubled in price effective January 1, 1993.

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 1992 is shown in Tables 7 and 8.

Table 7. Caribou and moose reported harvest for Alaska Peninsula Game Management Units (GMU) 9C and 9E, 1992-1993 (ADF&G data).^a

Species	Bulls	Cows	Unknown	Total
Caribou	788	94	3	885 ^b
Moose	139	1	0	140

^aHarvest reports include both Alaska Peninsula and Becharof refuges. (Reporting dates for caribou are from August 1991 to March 1992. Moose are for the 1992 season only.)

^bOther Alaska residents (not local) took 389 caribou, non-resident hunters took 372 caribou and local resident hunters reported 124 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 8. Brown bear harvest for the Alaska Peninsula, 1975-1993, GMUs 9C and 9E (ADF&G data).

Date ^b	Total Bears	Percent Boar	Mean Age		Percent Harvest ^a	
			Boar	Sow	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	-	-	-	-

^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 1985 was open, followed by a season in the spring of 1986. There was no other open season until the fall of 1987, 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 Arctic grayling, burbot, dolly varden/Arctic char, rainbow trout and five species of Pacific salmon (king, sockeye, silver, coho and chum). 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 remains in effect.

A total of 22 guides/lodges and transporters/air taxis offering fishing packages were "permitted" to operate on the Complex in 1993. 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 \$1500 to \$5000, depending on the length of stay and quality of amenities offered by the lodge.

To document the winter subsistence harvest of fish in the King Salmon and Egegik Rivers, RIT Kelly has been designated as a "creel clerk" for the ice fisheries that occur near the village of Egegik. The information she collects is to be used by the KSFRO.

This year's National Fishing Week activities were held on June 15th. In May, an educational cake walk for the "Taste of Bristol Bay Festival" was held and each youth winner was awarded a free fishing trip in honor of National Fishing Week. Eight of eleven winners were able to participate, which allowed room for the three YCC enrollees to participate. Ages ranged from 8 to 16. A total of five boats were massed from the Complex and staff. The activities involved a brief lecture on fishing ethics, an excellent shore lunch, and six hours of fishing for king salmon on the Naknek River. Several king's were hooked but none were landed. Staff participating included RM Hood, DRM Poetter, MW Terry, MH Mumma, BT Boden and Volunteer Heyob. Volunteer Susie Heyob was latter presented with an award (ivory carving) for her efforts in making the fishing event a success!

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 9. No records are available on ermine, fox, mink, or coyote.

Table 9. 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

^a No data available.

^b Indicative of increasing prices for short-hair furs.

^c All taken from Unit 9E.

On November 1st, a press release was written and distributed to local media regarding the upcoming trapping season and the Service's desire to prevent unnecessary bald eagle deaths resulting from some trapping methods currently used. Suggestions were given on how to reduce bird mortality, while at the same time increasing trapping success. The press release was printed in both the local paper and the Anchorage Times.

11. Wildlife Observation

In early January, the Complex was awarded \$7,800.00 under the Challenge Cost Share program to construct a "Watchable Wildlife" viewing area in partnership with the Bristol Bay Borough. With matching funds from the Borough, project monies totaled \$15,600.00.

Background information:

In an effort to promote quality wildlife experiences and increase wildlife viewing opportunities, the Complex and the Bristol Bay Borough worked in tandem to develop a "Watchable Wildlife" viewing area along the Naknek River, near its outlet into Bristol Bay (west of King Salmon). The viewing area is off refuge lands, with the Bristol Bay Borough holding title to the area.

The viewing area supports a diversity of watchable wildlife, including a wide variety of waterfowl, especially during spring migrations; raptors such as bald eagles, peregrine and gyrfalcons; marine mammals including beluga whales, and harbor seals; and to a lesser extent, fox, river otter, brown bear, caribou and moose.

A viewing platform was built on land above the Naknek River that offers expansive views of the river, Bristol Bay and surrounding tundra. The platform is 12 ft x 16 ft and elevated 4 feet above the ground. The

platform is handicap accessible, with a wooden boardwalk and ramp leading from the parking area. Several interpretive exhibits will be installed, in 1994, along the viewing area to educate visitors about wetlands, wildlife and waterfowl. Binoculars and spotting scopes will be available to use through a check-out system at the King Salmon Visitor Center.

The platform will be used in field activities with school groups to enhance refuge environmental education programs. This is the only "Watchable Wildlife" viewing facility in the King Salmon/Naknek area. This viewing area will be used by school groups, and local, state, national and international visitors. The project will enhance the opportunity to view, photograph, and understand wetlands and wildlife, and will increase public knowledge, appreciation and enjoyment of the natural world.

The Service acted as the lead agency in coordinating the development of the viewing area, including design and construction of the platform and all exhibits. The Service provided 50% of the total project cost to purchase building materials, educational equipment and exhibits.

The Bristol Bay Borough contributed 50% of the total project cost by providing construction materials and equipment (wood & gravel and front-end loader); labor needed to construct the viewing platform including a handicap accessible boardwalk and ramp; and approximately .6 acre for the actual building site.

The viewing platform and access ramp were completed in November. Target date for completing the interpretive signs for the viewing area is mid-May 1994.



A fresh dusting of snow blankets the newly constructed "Watchable Wildlife" viewing platform overlooking the Naknek River. 11/93 RDP

Summary of Challenge Cost Share Project:

RR Terrell-Wagner worked closely with the Bristol Bay Borough in developing a "Watchable Wildlife" area overlooking the mouth of the Naknek River near Bristol Bay. Funds for the project were received through the Challenge Cost-share Program. A suitable location was agreed upon and the Cooperative Agreement was signed in late January.

Construction of the platform began in September. Even with all of the rainy weather the platform was constructed in record time. Work continues into October on the parking area and boardwalk.

The construction was completed in December. Educational exhibits for the viewing area will be designed and fabricated this winter. We are planning a ceremony dedicating both the viewing area and the new exhibits for the King Salmon Visitor Center.

13. Camping

Camping for camping sake rarely occurs on the Complex. Camping is associated with hunting, fishing, backpacking, photography, etc. This year, two local King Salmon residents requested to establish camps, for more than 2 weeks, along Big Creek during September. The purposes for the camps were to base out of while hunting caribou and moose. Friends and relatives are invited in for party hunts, etc. Last year, only one of these two individuals requested and established a camp. These individuals were notified that in 1994 they would be required to obtain a special use permit for camps established over 14 days duration, as per Regional policy. The camps were removed, with appropriate site clean-up.



An increasing activity, represented here along Big Creek on Becharof NWR, is the establishment of long-term (2+ weeks) camps for hunting by residents.

09/11/93, RDP

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 (see Section H.21.), 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. He was issued a 5-year permit in July 1993, with renewal or termination scheduled for 1998.

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. Funding for adequate law enforcement effort is required.

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. Complex staff developed a draft Public Use Management Plan (PUMP) that includes a review and recommendations on 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 draft 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 should be signed in 1994. Promulgation of any regulations needed as a result of the ROD will take one or more years.

During the development of the final PUMP, the need for additional information on ORV impacts to Complex resources was identified (Section D.2.). Therefore, a reconnaissance level habitat impact evaluation of selected sites subject to ORV use on the Becharof Refuge and the Ugashik and Chignik units of the Alaska Peninsula Refuge was conducted on June 22 to 24, 1993 (Figure 5). The evaluation team consisted of PUP Helen Clough, Vegetation Ecologist Dr. William Kirk, and RM Ronald Hood. A Bell 206 L1 helicopter (93 TA) under contract to the Fish and Wildlife Service from TransAlaska piloted by Ken Butters was used as a survey platform. Sites where impacts were detected were photo documented. Dr. Kirk will prepare a technical report on his observations.

6/22 - Inspected Site 1 (Big Creek) and Site 2 (King Salmon River) on Becharof Refuge. Refer to Figure 5 for site locations.

Big Creek receives the heaviest ORV use of any access point on the Complex. When the creek is frozen it serves as an access corridor for recreational users from the King Salmon Airport (U.S. Air Force; 300 military personnel plus unknown number of users from other Alaska military bases and western lower 48 bases.). It is also used by subsistence users from King Salmon (pop. 389), Naknek (pop. 575), and South Naknek (pop. 136). No data on the amount of use has been collected. Causal observation by Complex staff is that the frozen stream is used primarily; with occasional side trips to high points to look for caribou. Key observation points have repeated use each winter.

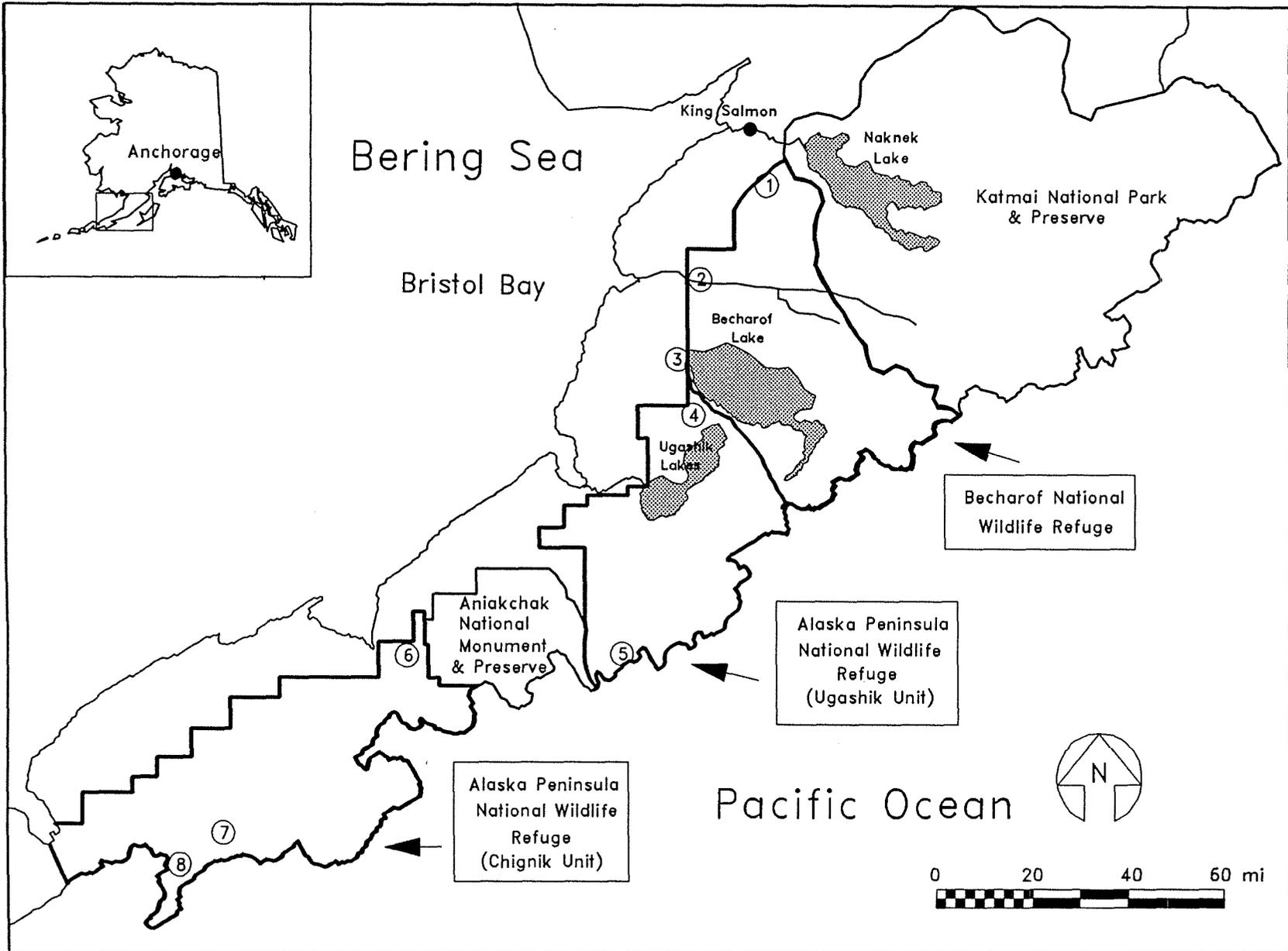
It was predicted that significant impacts would be observed. Approximately 10 river miles were inspected. The helicopter was flown at 200 feet along both sides of Big Creek. On-the-ground inspections were made at observed or suspected points of impact. Within the refuge boundary, no impacts were found. One impacted site was observed and documented about two miles north of the refuge boundary.

At Site 2, subsistence users access the area in the winter on frozen ground/lakes/sloughs/river from the village of Egegik (pop. 122). A cabin about two miles west of the refuge boundary serves as a base camp. An areal inspection by fixed-wing aircraft in the early spring 1993 by RM Hood revealed four-wheeler trails on the river ice, sand bars, and wetlands (between bluff banks of river) extending into the refuge. Both sides of the river were inspected for about five river miles. No impacts were found.

6/23 - Two known impact sites north of King Salmon along King Salmon Creek were inspected and documented. These "worse case" examples were recorded to illustrate potential impacts to Complex resources. Sites 3 (Egegik River/ Becharof Lake), 4 (Jensen Strip/oil well road), and 5 (Yantarni Strip/Surf Beach) were inspected.

At Site 3, a four-wheeler ORV trail was documented that extended for approximately three miles along Becharof Lake. The trail originated near the Egegik River and extended along the lake to the south on a bench above ordinary high water. A trail from an in-holder's cabin to the Egegik River was photographed. Use in this area comes from Egegik. The lake shore was inspected for impacts from the Egegik River to the south and southeast for

Figure 5. ORV trail observation sites.



approximately ten miles. No additional impacts were noted. The beach below ordinary high water was usable by ORV for about six or seven miles before a bluff bank with no beach was encountered.

In Section 36, Range 46 West, Township 26 South, the oil well drilling access road (circa 1960) was encountered. We followed it to the west to the Alaska Peninsula Refuge boundary (Site 4a). Photo documentation was made. A blown-out culvert in Section 10, R46W, T27S, stops access from the Jensen Strip area after about three miles access into the refuge. This road was used by a big game guide-outfitter (pick-up truck; under permit until 1993), recreational hunters from Jensen Strip (suspected, not documented), and subsistence hunters (four wheeler ORV) from both Egegik and Pilot Point (public meeting comments). A second oil well drilling access road (circa 1960) about one mile south was also documented (Site 4b). This road appears to be used to access the refuge by the same users as Site 4a. Again, it showed recent use for three or four miles into the refuge. No recent side trails were noted. The southern road joined the northern route just west of Gas Rocks. Much of it had been re-claimed by alder brush and was impassable.

Site 5 (Yantarni Strip/Surf Beach) had three locations of four-wheeler impacts. The first started at the oil well drill site, Koniag No. 1, and crossed the wetlands for three-fourth mile to an unnamed stream to the west. These impacts were known to have occurred during the spring bear season in May 1992. A second area of impact was noted at the mouth of a stream in Section 14, R49W, T38S. Four-wheeler tracks crossed a wetland area between the beach and the stream for about one-quarter mile. The third impact area was documented at Section 13, R49W, T38S. This was in a very sensitive sand dune area. Two four-wheelers were observed at the sport guide base camp at Yantarni Strip. Surf Beach was reported to be a popular use-area by subsistence hunters from the Chigniks (four-wheelers off loaded from fishing boats).

6/24 - Sites 6, 7, and 8 were inspected. At Site 6, southeast of Port Heiden (pop. 119), the west boundary was flown from Reindeer Creek to the Meshik River. Because of RM Hood's observations of impacts in wetlands east of the village, we expected this area to be heavily impacted. However, this was not found to be reality. One four-wheeler track was found just north of the refuge boundary in the Reindeer Creek area that went into the Aniakchak National Monument (reported it to the National Park Service). A second impact was found south of Birthday Creek where a large vehicle (tracked vehicle ?) traversed into the refuge (Section 5, R58W, T39S). The event appeared to be a single occurrence.

At Site 7, we flew a seventeen mile long transect along the north boundary of Perryville (pop. 108) and Ivanof Bay (pop. 35) village corporation lands. No impacts were found. This is an extremely rough area where the only access is up the stream beds of the Kametolook River and other unnamed rivers that originate from glaciers on the slopes of Mt. Veniaminof. These rivers have cobble and boulder covered beds (in refuge portions) that would receive ephemeral impacts from four-wheelers.

Site 8 is the base of the Kupreanof Peninsula. The Granville Portage and both east and west shores were inspected. No impacts were found. A four-wheeler trail was noted that led from Ivanof Bay across the Smokey Hollow

area into the Stepanof Flats area. The trail is on village corporation lands.

17. Law Enforcement

An informal survey form has been developed to record any public use field contacts. Anytime a plane is spotted from the air or people are contacted on the ground, the form is filled out providing information relating to access method, intended activity, date and time of contact, names of individuals and commercial operators providing services, etc. The public use information will be useful in a variety of ways as well as providing information for the collection of special use permit client use-day fees. The survey forms provide the staff with another tool to catch the cheaters and dishonest, as well as an opportunity to show "the flag" and let them know we are watching.

Patrols were conducted throughout the month of August to monitor caribou hunting activities. Concentrations of caribou north of Whale Mountain appeared to be attracting "land and shoot" type hunters.

September was moose hunting month. Most of the big game guide-outfitters took to the field under the new permit system. Permit compliance inspections/ contacts were the goal of the month for patrolling. River patrols up Big Creek were conducted on a couple week-ends. High use by locals was observed during the Labor Day weekend. Water levels were about a foot lower than normal and only those with jet-propelled boats could access the refuge. Two local hunters established tent camps that were left up for 20-30 days. Numerous friends and acquaintances were taken on hunts from these camps.

The September 1st opening of waterfowl hunting, prompted patrols of the Naknek River. Steel shot and licensing compliance of checked hunters is excellent. Two instances of boats powering into DRM Poetter's (and in October, RM Hood's) decoys and shooting them almost occurred. This isn't illegal, but is an indicator of illegal shooting while under power of the motor.

Three cases of not salvaging all edible meat were pursued. The cases involve one moose and two caribou hunters. Same day hunting is highly suspected of the caribou hunters but could not be verified. Due to lack of evidence, the hunters were each fined \$250 for removing the antlers from the field/kill site prior to all edible meat. The fine is the same amount for not salvaging all edible meat, but much easier to defend in court.

Anchorage based Special Agents Roger Parker and Stan Pruszenski were able to provide assistance during the latter part of Unit 9E moose season. They would have been in sooner, but got involved with the Hegemeister Island caribou roundup activities. Attempts to return for the bear season ran into a brick wall. OAS was the wall! They had both planes, they planned to bring out, in for 100 hour servicing. By the time the agents got them back, the bear season was nearly over.

The fall bear season lasted from October 7th-21st. The C-206 (32PX) was converted to wheels and returned to service early month. With the unseasonably warm weather, we needed to accomplish a day of patrol with

floats. Eric Akola, the new Regional Aviation Training Manager, provided us valuable assistance by bringing Togiak NWR's C-185 on floats over for use on the 9th.

This fall, the Hegemeister Island caribou roundup project, by Togiak NWR, kept our PA-18 busy, so we were unable to conduct any patrols into the short strips and beaches. The Katmai Park PA-18 was unavailable for our use, also. The new large wheels our C-206 gets us into a lot of places we couldn't go with it before, but there are still places we need the SuperCub.

Back in August, one of the historic buildings in the abandoned village of Kanatak was burnt down. An investigation has not produced enough evidence to convict the commercial fishermen involved. Apparently, they had gone ashore, during a fishing closure period, travel up one of the stream valleys and killed a caribou out of season. They floated the kill down to the few remains of the village and discovered their skiff had drifted out to sea. Now in a "survival situation", because all boat members were ashore with no radio, they made camp in the old building. The next day, they split up to go in search of the missing skiff and the cabin burnt down. The smoke did bring another fishing vessel to their rescue, though. Our thanks to the Kodiak Refuge staff for conducting the initial investigation. One of the perpetrators had their Glock pistol destroyed in the fire. There was some justice served that day!

A \$100 littering citation was issued to a caribou/bear hunter who camped in the Dunes area of Becharof Refuge. A license check was conducted at his campsite one day in October. A revisit to the area, the day he departed, revealed numerous articles of trash left behind. One item even had his name on it.

18. Cooperating Associations

With the opening of the King Salmon Visitor Center, a branch of the Alaska Natural History Association (ANHA) was established. This was the second 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 \$20,080.00 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 brisk and we were very happy with the monthly total of \$3,095 (\$11.32/visitor).

We currently offer 100+ book titles, an extensive map selection including topographic maps, FAA air charts, nautical charts, and numerous posters & notecards. We expanded our selection of materials in 1993, which helped to boost sales 40% above the 1992 figure. A summary of monthly sales is as follows:

January:	\$ 222.00	(2.13/visitor)
February:	197.00	(5.33/visitor)
March:	530.00	(5.57/visitor)
April:	62.00	(2.00/visitor)
May:	587.00	(2.10/visitor)
June:	2,140.00	(1.88/visitor)
July:	5,472.00	(2.57/visitor)
August:	4,704.00	(3.30/visitor)
September:	2,801.00	(3.46/visitor)
October:	879.00	(3.23/visitor)
November:	391.00	(4.40/visitor)
December:	3,095.00	(11.23/visitor) Holiday Sale entire month
Total:	\$20,080.00	(3.40/visitor)

On May 1st, local resident Heather Poetter began duties as the Assistant Branch Manager for the King Salmon Visitor Center and Katmai National Park ANHA Branches. Heather's duties include ordering sales materials, completing stock inventories and making bank deposits. She worked approximately 4 hours per week in the summer months, and on a "as needed" basis in the fall and winter.

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)).

The Complex office currently maintains a database of all cabins located within the Complex exclusive of those on private inholdings. The database includes: 56 cabins by Complex Unit, 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.

The Complex issued one new cabin permit in 1993. A permit was issued in May to the Alaska Department of Fish and Game for the construction of a 14 ft. x 16 ft. cabin and fish weir in Orzinski Bay. The weir is used to improve management of the Orzinski Bay sockeye run which has received substantial commercial fishing pressure in recent years.

A property removal letter was sent on November 15 to several past permit holders advising them that their cabins were no longer authorized as they no longer held special use permits. They were given until November 15, 1994 to complete clean up and removal of personal property.

21. Guides-Outfitters

A total of 64 special use permits were issued for commercial big game, sport fish guiding, and transporting activities occurring within the refuges (Table 10).

Table 10. Special use permits issued for Big Game/Fish Guides/Outfitters and Transporters 1984-1993.

YEAR	BIG GAME GUIDING	FISH GUIDING	TRANSPORTER	TOTAL PERMITS
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
1984	33	2	0	35

A total of 32 commercial guide-outfitter permittees recorded approximately 831 total client use days within the Complex last year. Fishing clients represented approximately 66 percent of the total clients and 28 percent of the total client use days.

A total of 20 big game guide-outfitter permittees were responsible for harvesting 26 brown bears, 15 moose and 51 caribou last year. Sows represented approximately 23 percent of the bear harvest, while no cow moose and no cow caribou were harvested.

A total of 21 fish guide-outfitter permittees were responsible for 15,957 fish being caught with 1,313 being kept; thus the catch and release was 14,644 fish. Approximately 48 percent salmon, 39 percent arctic char, 10 percent arctic grayling and 3 percent rainbow trout made up the total reported catch.

Big Game Guide-Outfitter Program

The Alaska State Supreme Court ruled on October 21, 1988 (Owsichek vs. State of Alaska, Guide Licensing and Control Board) that exclusive guide areas were unconstitutional. After a multi-year moratorium, the Service took control and implemented a new policy on managing commercial big game guide-outfitting on National Wildlife Refuge System lands in Alaska (RW-26). The objectives of this program are:

- 1) to provide the public with high quality and safe recreational hunting opportunities;
- 2) to ensure commercial big game-outfitter services are compatible with refuge purposes;
- 3) to regulate commercial big game-outfitter services in a manner which does not significantly displace other public uses on refuges;
- 4) to provide equal opportunity to all qualified and interested individuals to compete for refuge special use permits;
- 5) to ensure consistency in the management of commercial big game-outfitter services on all Service lands in Alaska; and
- 6) to manage commercial big game-outfitter services on refuges as consistently as possible with other Federal agencies whenever agencies' policies/mandates allow.

The award of big game guide-outfitter areas was the hot item for 1993. Letters to winners and losers were mailed on January 11th. Personal contacts were made with most winners. However, there were a lot more losers than winners. And we heard from them! RM Hood spent much of the next two weeks on the telephone. All 17 winners accepted area awards. Appeals of big game guide-outfitter areas awards were received and heard by the Regional Director starting in February and not ending until August. When we received notice of an appeal, we immediately notified those affected. We reviewed the appeal letter and then provided a memorandum to the Regional Director (RD) with our recommendations. Frequently, we received only a few days notice of the hearing date and had to hustle to get everything done.

A summary of the results of implementing the Service's policy is found in Table 11.

Table 11. ALASKA PENINSULA/BECHAROF REFUGE COMPLEX -- SUMMARY OF GUIDE-OUTFITTER USE AREA AWARDS.

OVERALL STATISTICS

- A total of 27 Special Use Permits (SUPs) were planned to be issued in 21 use areas. Due to circumstances, 29 were issued.
- A total of 168 proposals were reviewed: 25 individuals submitted 61 proposals for Becharof Refuge areas; 49 individuals submitted 107 proposals for Alaska Peninsula Refuge areas.
- One proposal was rejected because it was clearly post marked on 10/16/92. A second was filed very late on 4/30/93; it was returned unopened.
- Three applicants were disqualified during review for supplying false information on their application. One was reinstated upon appeal while two successful applicants were disqualified during the appeal process.
- A total of 35 appeals were filed for 17 areas; 9 were successful.
- Four law suits have been filed to date.

Table 11 Continued. ALASKA PENINSULA/BECHAROF REFUGE COMPLEX -- SUMMARY OF GUIDE-OUTFITTER USE AREA AWARDS.

- After completion of all appeals, a total of 29 SUPs were issued to 21 guide-outfitters. Thirteen of 26 former SUP holders were successful applicants while 15 did not get an area. Eight of the successful applicants are new. Two applicants were awarded three areas; four were awarded two areas; and 15 were awarded one are

BECHAROF REFUGE

BCH 01 (sole use area)

- Awarded to Joseph Klutsch.
- 1 applicant.
- No appeals filed.

BCH 02 (sole use area)

- Awarded to Philip Shoemaker.
- 11 applicants.
- Appeal filed by Tracy Vrem on 5/6/93.
- Appeal filed by Chris Branham on 5/12/93.
- C. Branham's appeal denied by the Regional Director on 6/15/93.
- Appeal filed by Dennis Branham on 6/9/93.
- D. Branham's appeal denied by the Regional Director on 6/17/93.
- Civil Action filed on 9/21/93 - TRACY VREM, d/b/a/ TRACY VREM, REGISTERED GUIDE & OUTFITTER vs. UNITED STATES DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE; WALTER O. STIEGLITZ, REGIONAL DIRECTOR; DARYLE R. LONS, REFUGE PROGRAM SPECIALIST; RONALD E. HOOD, BECHAROF and ALASKA PENINSULA NATIONAL WILDLIFE REFUGE MANAGER.

BCH 03 (sole use area)

- Awarded Philip Shoemaker.
- 11 applicants.
- Appeal filed by Dennis Branham on 6/9/93.
- Regional Director wrote D. Branham on 6/17/93, provided information on several topics and requested notice on whether or not he wished to proceed with the appeal; no response from D. Branham.
- Appeal filed by Chris Branham on 6/22/93.
- C. Branham's appeal denied on 8/9/93.

BCH 04 (sole use area)

- Awarded to Tracy Vrem.
- 15 applicants (largest number for the Complex).
- Jack Myers filed a very late proposal on 4/30/93; returned unopened.
- Appeal filed by Dennis Branham on 4/19/93.
- D. Branham's appeal denied on 5/7/93.
- Appeal filed by Chris Branham on 5/12/93.
- C. Branham's appeal denied by the Regional Director on 6/15/93.
- Civil Action filed on 9/8/93 - JACK A. MYERS, d/b/a/ MYERS GUIDING SERVICE vs. UNITED STATES DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE; WALTER O. STIEGLITZ, REGIONAL DIRECTOR; DARYLE R. LONS, REFUGE PROGRAM SPECIALIST; RONALD E. HOOD, ALASKA PENINSULA NATIONAL WILDLIFE REFUGE MANAGER.

Table 11 Continued. ALASKA PENINSULA/BECHAROF REFUGE COMPLEX -- SUMMARY OF GUIDE-OUTFITTER USE AREA AWARDS.

BCH 05 (sole use area)

- Initial award to Windy Windel.
- 10 applicants.
- Appeal filed by John Gaudet on 5/11/93.
- Windel relinquished his interest in the area on 6/3/93.
- Gaudet notified on 6/17/93 by Regional Director that he has been awarded the area.
- Appeal filed by Chris Branham on 6/22/93.
- C. Branham's appeal denied on 8/9/93.

BCH 06 (sole use area)

- Awarded to Thomas Hundley.
- 13 applicants.
- Appeal filed by Jerry Meredith on 2/5/93.
- Meredith's appeal denied on 2/10/93.
- Appeal filed by Phil Shoemaker on 3/9/93.
- Shoemaker's appeal denied on 3/29/93.
- Appeal filed by Chris Branham on 6/22/93.
- C. Branham's appeal denied on 8/9/93.
- Civil Action filed on 4/19/93 - JERRY MEREDITH, d/b/a/ ALASKA WILDERNESS HUNTS vs. UNITED STATES DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE; WALTER O. STIEGLITZ, REGIONAL DIRECTOR; RONALD E. HOOD, BECHAROF NATIONAL WILDLIFE REFUGE MANAGER.

ALASKA PENINSULA REFUGE - UGASHIK UNIT

AKP 01 (joint use area - 2)

- Awarded to Gus Lamoureux and Andy Runyan.
- 9 applicants.
- Appeal filed by Tracy Vrem on 3/4/93.
- Appeal filed by Dennis Branham on 4/19/93.
- Vrem's appeal denied on 4/21/93.
- D. Branham's appeal denied on 5/7/93
- Appeal filed by Chris Branham on 5/12/93.
- C. Branham's appeal denied by the Regional Director on 6/15/93.
- Civil Action filed on 9/21/93 - TRACY VREM, d/b/a/ TRACY VREM, REGISTERED GUIDE & OUTFITTER vs. UNITED STATES DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE; WALTER O. STIEGLITZ, REGIONAL DIRECTOR; DARYLE R. LONS, REFUGE PROGRAM SPECIALIST; RONALD E. HOOD, BECHAROF and ALASKA PENINSULA NATIONAL WILDLIFE REFUGE MANAGER.

AKP 02 (sole use area)

- No initial award made.
- No. 1 rank (J. Hancock) was disqualified because of failure to report "nolo contendere" conviction of commercial fish violation. No. 2 rank (D. Carlson) was disqualified because of failure to report "administrative penalty" for SUP special conditions violation.
- 5 applicants; additional information has been requested from the three remaining candidates.
- Hancock appealed his disqualification on 3/12/93; appeal denied on 3/17/93.

Table 11 Continued. ALASKA PENINSULA/BECHAROF REFUGE COMPLEX -- SUMMARY OF GUIDE-OUTFITTER USE AREA AWARDS.

- Carlson appealed his disqualification; appeal sustained and determined eligible to compete by Regional Director.
- Panel evaluated the additional information provided by three applicants; Carlson notified on 5/18/93 that he was the successful applicant.

AKP 03 (joint use area - 2)

- Awarded to Brent Jones.
- Both Jones and No. 2 rank proposed large operations with many overlapping spike camps; only one permit awarded since the area can only support one of these operations.
- 8 applicants.
- Appeal filed by Butch Hautanen on 3/9/93.
- Regional Director disqualified Hautanen on 3/30/93 for failure to report a violation by an assistant that occurred on Togiak Refuge.
- No. 3 ranked applicant, Benny Kerns, notified that he was eligible to receive a special use permit because of Hautanen's disqualification.
- Hautanen appealed his disqualification on 6/4/93.
- Regional Director reinstated Hautanen on 6/8/93; verbal approval given to issue Hautanen a permit if Jones did not object. Jones provided letter of approval.
- Appeal filed by Dennis Branham on 6/9/93.
- D. Branham's appeal denied on 6/17/93.
- Appeal filed by Chris Branham on 6/22/93.
- Appeal filed by Benny Kerns on 7/8/93; apparently withdrawn.
- C. Branham's appeal denied on 8/9/93.

AKP 04 (sole use area)

- Awarded to Howard Flynn.
- 9 applicants.
- Appeal filed by John Swiss on 6/23/93.
- Swiss' appeal denied on 7/22/93.

AKP 05 (sole use area)

- Awarded to Brent Jones.
- 5 applicants.
- Appeal filed by Gary Munoz on 2/15/93.
- Munoz's appeal denied on 4/20/93.

AKP 06 (joint use area - 2)

- Awarded to Brent Jones and Rob Hunt (on appeal).
- 10 applicants.
- Appeal filed by Rob Hunt on 1/16/93.
- Regional Director finds in favor of Hunt on 2/10/93 and awards him a special use permit.
- Appeal filed by Ray McNutt on 3/9/93.
- McNutt's appeal denied on 3/12/93.
- As a result of an appeal filed by Joe Hendrick's on Arctic Refuge, Rob Hunt was suspected of supplying false statements in his proposal for AKP 06. RM Hood was directed to conduct an immediate investigation.
- Hunt notified on 7/30/93 by RM Hood of his intent to revoke his special use permit pursuant to 50 CFR 25.45(b).

Table 11 Continued. ALASKA PENINSULA/BECHAROF REFUGE COMPLEX -- SUMMARY OF GUIDE-OUTFITTER USE AREA AWARDS.

- Hunt's special use permit revoked by RM Hood on 8/19/93; appeal denied by Regional Director on 11/10/93.

AKP 07 (joint use area - 2)

- Awarded to Gary B. LaRose and Joe Hendricks.
- 14 applicants.
- Appeal filed by Ray McNutt on 2/16/93.
- McNutt's appeal denied on 3/12/93.

ALASKA PENINSULA REFUGE - CHIGNIK UNIT

AKP 08 (sole use area)

- Awarded to Joseph Klutsch.
- 6 applicants.
- Appeal filed by Jay King on 3/30/93.
- King's appeal denied on 4/23/93.
- Appeal filed by Chris Branham on 5/12/93.
- Appeal filed by Dennis Branham on 6/9/93.
- C. Branham's appeal denied by the Regional Director on 6/15/93.
- D. Branham's appeal denied by the Regional Director on 6/17/93.
- Civil Action filed on 9/9/93 - JAY M. KING, d/b/a/ KING GUIDING SERVICE ALASKA vs. UNITED STATES DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE; WALTER O. STIEGLITZ, REGIONAL DIRECTOR; DARYLE R. LONS, REFUGE PROGRAM SPECIALIST; RONALD E. HOOD, ALASKA PENINSULA NATIONAL WILDLIFE REFUGE MANAGER.

AKP 09 (sole use area)

- Awarded to Gary King, Jr..
- 7 applicants.
- No appeals filed.

AKP 10 (joint use area - 2)

- Awarded to Robert Cusack (vessel operation), Alec Pedersen (vessel operation), Jack Swiss (on appeal), and G. Rocky Keen (on appeal).
- 8 applicants.
- Appeal filed by Rocky Keen on 2/4/93.
- Appeal filed by Jack Swiss on 2/5/93.
- On 2/10/93, Regional Director found in favor of both Keen and Swiss due to unique situation. Swiss lost the use of ORVs that had been in use since establishment of refuge.

AKP 11 (sole use area)

- Awarded to Keith Johnson.
- 2 applicants.
- No appeals filed.

AKP 12 (joint use area - 2)

- Awarded to Keith Johnson and Robert Cusack (vessel operation).
- 7 applicants.
- No appeals filed.

Table 11 Continued. ALASKA PENINSULA/BECHAROF REFUGE COMPLEX -- SUMMARY OF GUIDE-OUTFITTER USE AREA AWARDS.

AKP 13 (sole use area)

- Initial award to Elinor Jones-Elg.
- 7 applicants.
- Appeal filed by Mel Gillis on 3/5/93.
- RM Hood notified Jones-Elg on 3/9/93 that she had been disqualified for failure to provide a complete client list
- Regional Director notified Gillis of area award on 3/12/93.

AKP 14 (sole use area)

- Awarded to Robert Cusack (vessel operation).
- 4 applicants.
- Appeal filed on 7/12/93 by Richard Lounsbury.
- Lounsbury's appeal denied on 8/9/93.

AKP 15 (sole use area)

- Initial award to Stephen Black.
- 6 applicants.
- Appeal filed by Mel Gillis on 3/5/93.
- Gillis' appeal sustained by Regional Director on 3/12/93; area awarded.
- Appeal filed by Warren Johnson on 5/14/93.
- Johnson's appeal sustained by Regional Director on 5/27/93; area awarded.
- Gillis appealed Johnson decision on 6/11/93.
- Regional Director finds in favor of Gillis on 8/19/93 and awards both Gillis and Johnson a special use permit.

In May, we had the dubious honor of being named in the first (of five) law suit resulting from the implementation of the Service's policy on the allocation of commercial big game guide-outfitter special use permits: **JERRY MEREDITH, d/b/a/ ALASKA WILDERNESS HUNTS vs. UNITED STATES DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE; WALTER O. STIEGLITZ, REGIONAL DIRECTOR; RONALD E. HOOD, BECHAROF NATIONAL WILDLIFE REFUGE MANAGER.** "First request for production" and "first interrogatories" were received. Mr. Meredith alleges that "None of the Service's RFP and selection policies were contained in regulations offered for public comment and duly adopted by the Service under the federal Administrative Procedure Act." In September, three more law suits were filed against the Service. These four, plus one from Arctic Refuge, have been joined. They are scheduled to be heard in February.

One appeal on Arctic Refuge had far reaching impacts. Because of false information found in the winning applicant's (Rob Hunt) proposal, he was disqualified by Regional Director (RD) Walt Stieglitz for ARC 06. On July 23rd, RM Hood was directed to investigate this applicant's proposals for AKP 06 and AKP 07. As a result of this investigation, RM Hood notified Mr. Hunt that his special use permit for area AKP 06 was being revoked following the procedures described in 50 CFR 25.45(b). He had 20 days to present a statement in opposition to the proposed action. Again, false information had been supplied that influenced the selection panel to award a higher score to the applicant than was deserved. On August 19th, Mr.

Hunt was notified of RM Hood's decision to revoke his special use permit for guide area AKP 06. Mr. Hunt's appeal on this decision was denied by RD Stieglitz on November 10th.

By the middle of May, most appeals had been settled and the process of obtaining updated file information and processing permits began. AP Smoke arrived the third week in May and was greeted with a mountain of applications to process. It was a bit overwhelming at first but by June most permits had been reviewed and processed.

Many telephone calls were made and letters sent to guides requesting information needed to complete their permits. Most guides were very cooperative and provided the needed forms and information quickly. For some, the story was quite different and the only thing that seemed to make them take notice was the coming of hunting season and the possibility of not receiving their special use permits by opening day. Four permits were issued on October 4th and one on the 5th; while one for AKP-15 was issued on October 8th, the day after brown bear season opened.

On November 10th a letter was sent to all big game guide-outfitters reminding them of Special Condition No. 9, requiring them to send a copy of the State's "Hunt Record." The information obtained from these records revealed numerous permit violations ranging from failure to advise the refuge manager of personnel changes to guiding more than the permitted number of clients.

This year has been considered to be a learning year for the guides as well as Complex personnel. Investigations are continuing but in most cases where the violations involved misunderstanding of reporting requirements, letters were sent and copies attached to their files. AP Smoke will be meeting with all permit holders in early 1994 to discuss the reports, request their input in developing a simplified reporting form, and explaining the need for the required information.

22. Take Pride in America/Alaska

MW Gary Terry and the Complex received "Service Awards" from Secretary of the Interior Bruce Babbitt for past "Take Pride" activities. RM Hood presented the award to Gary and the Complex's award to DRM Poetter (representing our staff) at a meeting on July 20th. Secretary Babbitt's letter noted that the "Take Pride in America" program is being discontinued and that there will not be an award ceremony this year. We have benefitted greatly from the Take Pride program, it is unfortunate that it is being discontinued.

23. Subsistence

On the evening of the February 3rd, a public meeting was conducted in Naknek to discuss subsistence related issues including gathering comments on the 1993-94 subsistence regulations, etc. Bill Knauer and Dave Fisher from the Regional Subsistence Office in Anchorage conducted the meeting. Complex staff in attendance included: RM Hood, WB Dewhurst, RR Terrell-Wagner, and RITs Lind Kelly and Knutsen. A total of three subsistence users attended.

On the morning of February 4th, an inter-agency subsistence workshop was held in the bunkhouse. Bill Knauer and Dave Fisher conducted the 2 1/2 hour meeting. In attendance were refuge staff DRM Poetter, RR Terrell-Wagner, WB Dewhurst, RITs Lind, Knutsen and Kelly, and Susan Savage from the National Park Service.

Public meetings were held in the communities of Ivanof Bay and Perryville, on May 20th and 21st, to discuss the caribou subsistence study to be conducted by Volunteer Peters and BT Boden. Discussion centered around the new July caribou hunt for the Chignik Unit of the Complex, and possible need for a Federal subsistence hunt in the future. The meetings were conducted by WB Dewhurst, RIT Kelly, BT Boden and Volunteer Peters. A total of 7 people in Ivanof Bay and 17 in Perryville attended.

The first Bristol Bay Subsistence Advisory Council Meeting was held in Naknek on September 30th - October 1st. Regional subsistence staff attending included: Dick Marshall, Helga Eakon, Moses Dirks, Dave Fisher and Taylor Brelsford. Complex staff attending included: RM Hood, DRM Poetter, WB Dewhurst, SC Boden, and RITs Knutsen, Lind and Kelly. Regional issues discussed tended to center on disputes with Katmai National Park (red-fish fishing) with brief mentioning of subsistence caribou hunting seasons and moose antlerless seasons.

On November 16th, RIT Lind traveled to Chignik Lagoon to represent the Complex at the Chignik Advisory Committee meeting. Orville gave a brief presentation about the Service and his role as an RIT. He also let the audience know about the status of our PUMP document and EE programs we will be presenting this year.

During December, a special subsistence moose hunt was open in GMU 9C. This is the second year for the hunt and a federal permit was required for the taking of up to a total of five antlerless moose. We issued a total of 2 permits and no moose were harvested. Warm weather made the Naknek River unsafe for crossing for the month, otherwise more local residents may have participated in this hunt.

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, 1993 and May 10-25, 1994 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. No permits were issued during 1993.

I. EQUIPMENT AND FACILITIES

1. New Construction

Nothing to report.

2. Rehabilitation

In January, we were notified by the Division of Engineering to immediately cease utilization of two fueling systems. Two underground fuel tanks had failed pressure testing. The aviation fuel had to be pumped into a fuel tank borrowed from the military and then transported to the compound. The 1,000 gallon underground gasoline fuel tank on the compound also had to be pumped out. We utilized an old above ground tank for temporary storage of the fuel. Engineering handled most of the paperwork, logistics and financing of this effort.

September was underground fuel storage tank (UST) removal month. On the 7th, Tank/Energy Coordinator Charles Grant visited King Salmon to oversee the removal of three USTs by ALCAN, Inc. of Anchorage. D.R. Laxs Construction, of King Salmon, provided equipment and labor as a sub-contractor. The Regional Engineer decided that all UST associated with non-heating fuels should be removed; therefore, the 1,000 gallon avgas tank for the floatplane dock was also removed (had passed tightness test). Upon removal, soil samples revealed that the unleaded tank had actually leaked fuel from the piping system. Upon further digging to a depth of 12 feet, historic hydrocarbon contamination was re-discovered. Its source continues to be unknown. No other evidence of fuel contamination was found.

Results are: all three tanks have been removed; 220 cu. ft. of contaminated soil was piled up for remedial treatment once a contract is let; all holes have been back-filled with clean soil; and no new above ground tanks had been purchased by year's end.



Tank/Energy Coordinator Charles Grant and a contractor employee inspecting the removal of the 3,000 gallon UST at the hangar. 09/10/93, RDP

On July 9th, the headquarters sewer system was connected to the new King Salmon sewer system. This was cause for celebration for MW Terry and MH Mumma. The lift pumps on our old system were always failing -- it was not enjoyable crawling down into the manhole to fix them! We were expecting to have to pay a monthly fee to the Bristol Bay Borough for the new service; but the mayor vetoed the ordinance. Now that the headquarters site is hooked up to the new King Salmon sewer system, the old pumping station will be taken out of service. As part of this, the chain-link fence enclosing the sewer leach field, on Alaska Department of Fish & Game land, was removed in August.

Carpenter Harold Shipley (Division of Engineering) and MH Mumma worked on a fencing project August 16-25th. They removed and re-installed the chain-link fence along the headquarters site's east property line. The entire compound fencing has now been replaced under MMS funding.

3. Major Maintenance

In May, the interior work on Residence No. 9 was completed, including: painting walls, laying new linoleum in the entryway and kitchen, and installing new carpet in the living room and bedroom. New carpet was also installed in the front room in Residence Nos. 1 and 11.

The furnace at Residence No. 28 had to be repaired in February. Electrical power went out at 1:00 a.m. and stayed off for several hours, causing the boiler and pipes to freeze and break in several places. Once discovered, heaters were placed throughout the house due to outside ambient temperature of -25° F. MW Terry and MH Mumma worked around the clock to get the furnace back on line. Monitor heaters in Residence Nos. 10 and 11 had to be reset after the power outage.

MH Mumma spent the last week of February preparing and painting the stairways, 1st floor hallway, and two restrooms of the office building. The new paint and baseboard trim really spruced up these areas and demonstrated the need for more painting work.

In April, several areas in the bunkhouse were painted, including the kitchen, living room/lounge area, food storage room, hallways, and both restrooms and showers. Due to other work commitments and incoming seasonal staff, the sleeping areas will be painted next winter. The pilot's office was also painted before he arrived.

In July, an obstruction in the sewer line of Residence No. 27 had to be cleared after sewage failed to exit the house. It turned out that a face mask (dust protector) and some other harder object were causing the blockage, apparently left behind when it was constructed seven years ago. The objects finally caused enough blockage to require snaking and discovery.

In September, an additional 70 feet of 6-foot high cedar privacy fencing was added onto the existing fence at Residence No. 27. The adjoining property owner has constructed a two-story metal building to operate a cabinet makers shop. His parking area is adjacent to bedroom windows.

In November, a new janitorial contract was awarded to Jayne Hammond, T & J Services of King Salmon, for the next five years. The contract is for the cleaning of the Complex and KSFR0 offices and bunkhouse.

4. Equipment Utilization and Replacement

The new 1993 Chevrolet, 4x4, extended cab, full-size pickup was delivered by barge mid-May. This is a fine looking vehicle. It replaces the 1985 extended cab S-10 Chevrolet mini-pickup. The new truck "comfortably" seats five adults with the extra seating behind the main seat. It surprised us as to how much room there is. It has been fitted with a stylish rear window barrier and bed-liner. A lift gate for the new pickup was purchased, but has not been install to date.

An air operated bumper jack was purchased to replace the floor jack. The new unit lifts much higher and keeps the vehicle much more stable.

A new air circulation unit and replacement window cranks were installed in Residence No. 27 in July.

A commercial duty washer and a dryer were purchased and installed in the bunkhouse in August.

In September, we purchased a new plain paper fax machine. The old unit was purchased in 1989 during the oil spill and utilized roll paper.

A hopper/spreader for sand was purchased this year to help with vehicle traction on the compound drives and parking areas. Often, with temperatures varying above and below freezing, road surfaces become very slick. It is difficult to even stand up on most occasions. The spreader is designed to fit into the bed of a standard pickup but was mounted on a trailer, for convenience sake.

Aircraft

One of the National Park Service pilots experienced a prop-strike while taxiing the Complex's Cessna 206 (N32PX) on the beach at Brooks Camp in Katmai National Park, on April 7th. After investigation by the Office of Aircraft Services, a new propeller was installed and the plane flown back to King Salmon and ultimately Anchorage. While the engine was being checked by OAS, it was decided to replace it with a new IO-550 conversion. The IO-520 originally installed at the factory was rated at 300 horsepower (hp) for up to 5 minutes, then 285 hp continuous power. With the new IO-550 engine we can utilize full take-off power, 300 hp, continuously up to cruise altitude then set cruise power settings. The plane was finally returned to service, after installation of the new engine, on June 28th. Regional Aircraft Manager John Sarvis worked it out with OAS to install the new more powerful engine on a payment plan, rather than having the cash up front. With some budget savings here and there, we have since paid off the new engine. With this engine and new more efficient propeller we are provided an additional margin of safety as well as increased performance and economy.

We decided to do some refurbishment work to N32PX when funds became available. A list was of improvements was submitted to OAS in August. The

work included installation of GAR-AERO 8.50X10 wheels and tires and 8.50X6 nose fork and tire which was accomplished at the end of September during the gear change from floats to wheels. In mid-December, an OAS contract for refurbishment of Complex C-206 aircraft, N32PX was awarded to Aero Twin of Anchorage. Work was to begin as soon as possible with completion due 108 days after delivery to them. Work included installation of bubble windows, repair of a skin panel on the left side of fuselage where numerous holes exist from an old external speaker, repaint entire aircraft and floats, replace old green interior with brown utility interior, re-upholster seats in brown color to match interior, replace floor matting, and install Flint Aero tip tanks. The increased range provided by the new Flint tanks will enable us to effectively patrol to the southern boundary of the Complex while on floats. Although most items are cosmetic in nature, they are long overdue. The bubble windows will enhance visibility during surveys and other times, while the installation of the wing tip tanks will provide an additional 30 gallons of fuel as well as increase the allowable gross weight from 3600 to 3800 pounds while only adding 34 pounds to the empty weight. AP Smoke delivered N32PX to Aero Twin on December 21st.

5. Communications Systems

Regional Telecommunication Manager Tim Miller and contract radio technician Ted Collins, of Alaska Radio, made their third annual visit May 19 and 20th to conduct radio maintenance on the VHF and HF SSB radio systems of the Complex. Utilizing a Bell 206 Long Ranger helicopter, they were able to access the two VHF repeater sites and make necessary adjustments.

In July, we received delivery of a new HF Single Side-Band base station radio, an ICOM Mfg., Mdl. ICM700. This unit replaces one that was purchased last year, an SGC Mfg., Mdl. SG1700, which has failed to perform adequately. The new unit is performing much more satisfactory.

In association with the new HF radio, a new antenna was installed in July by Scott Romine of Surveyors Exchange in Anchorage. This was an MMS funded project to improve communications on the Complex. The old Barker-Williamson di-pole antenna was functional but was located a significant distance from the radio to cause significant loss of signal in the coax line. It also was not oriented in the proper direction. The new Barker-Williamson di-pole antenna required setting a new telephone pole near the office building to provide the proper orientation and to get the center of the antenna as close as possible to the radio. All is working well with improved communications already noted. The old antenna has been donated to the KSFRO for re-routing of the coax cable and their use. We were sharing the Complex's radio and it was inconvenient for both offices.

6. Computer Systems

Approximately \$6,000 were spent on computer hardware acquisitions this year. A 9600 baud rate modem upgrade was purchased for the administrative computer to allow improved use of E-Mail. DOS 6.0 upgrades were purchased for the bulk of the station's computers. The bulk of the money spent this year was for the purchase of two tower IBM compatible computers and one standard color monitor. The units are similar 486/66, with 16Mhz of ROM. One unit was purchased for the biological department to replace a Compaq

80286 portable. The other computer was purchased for the public use program to provide another machine for their daily use.

J. OTHER ITEMS

1. Cooperative Programs

RR Terrell-Wagner worked closely with the Bristol Bay Borough in developing a "Watchable Wildlife" area overlooking the mouth of the Naknek River, in Naknek, Alaska. Funds for the project were received through the Challenge Cost-share Program. The Cooperative Agreement was signed in late January. See Section H.11. for details.

In a cooperative effort with the Alaska Department of Fish and Games Hunter Education Program, DRM Poetter and FAO Biologist Jeff Adams instructed a Hunter Education Course to four students and four adults. The 10 hour course was held at the Bristol Bay Consolidated School in Naknek the evenings of February 15th, 17th, 22nd, and 24th.

In a cooperative effort on April 27-28th, RITs Shirley Kelly and Orville Lind attended Cultural Diversity training in Anchorage as panel members for the class. Orville served on a panel entitled, "Working with Alaska Native Colleagues and Employees." During this panel session, Orville gave a 15-minute oral presentation sharing his experiences working as an RIT. Shirley served on a panel entitled, "Traditional and Western Perspectives on Resource Management." Due to time constraints during this panel discussion, Shirley did not have the opportunity to give her oral presentation.

Spring shorebird surveys were conducted on May 10th and 11th, the second year of cooperation with the Point Reyes Bird Observatory. Observers were WB Dewhurst, BT Bodin, Volunteer Angela Mehall, and Katmai National Park staff - Subsistence Coordinator Susan Savage and Park Ranger Barbara O'donnell. Surveys were conducted at Rapids Camp, Lake Camp and along the three miles of coastline from the Naknek River mouth to Peterson Point. See Section G.5.

On June 3rd and 5th, WB Dewhurst and Complex Volunteer Zeke Peters taught American Red Cross Association - Adult Heartsaver/CPR courses for 20 Summer hire volunteers and employees. The classes were held for personnel of the Refuge Complex, King Salmon Fisheries Resources Office and the Quinнат Landing Hotel.

In a cooperative effort with the National Park Service, WB Dewhurst and BT Boden worked with their Subsistence Coordinator Susan Savage to conduct local Breeding Bird Surveys (BBS) in June. These were conducted under the "Partners in Flight/Neotropical Migratory Bird Conservation Program." On the 7th, the first BBS was conducted in the King Salmon/Naknek area along local roads. On the 9th, the second annual BBS was conducted in Katmai National Park on the road from Brooks Camp to the Valley of 10,000 Smokes. See Section G.5.

In a cooperative effort with the National Park Service (NPS) and Alaska Department of Fish and Game (ADF&G), a fall migration shorebird study was

conducted on August 28th along the shores of Bristol Bay from the mouth of the Naknek River to Pederson Point. The mudflats of Rapids Camp and Lake Camp were also surveyed. Observers included: WB Dewhurst, NPS Subsistence Specialist Susan Savage, and ADF&G Fishery Biologist Dick Russell.

2. Other Economic Uses

In addition to 77 special use permits issued for cabins, guides, outfitters and transporters, four permits were issued for other uses (Table 12). All of the four permits were issued for non-economic uses.

Table 12. Special use permits issued for other economic use and non-economic uses.

Year	<u>Other Economic Uses</u>			<u>Non-Economic Uses</u>			Sub Total	Total
	Oil/Gas	Mineral	Sub Total	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

One additional permit was drafted and sent for Sierra Nevada Mining and Engineering during July to allow helicopter landings in conjunction with mining assessment. The operation was canceled on September 2nd and the permit returned unused.

3. Items of Interest

On April 22nd, while conducting an aerial waterfowl survey of the Naknek River, WB Dewhurst and Volunteer Mehall assisted in confirming the sighting of the body of an Air Force man missing since October 1992. The body was initially sighted by a Peninsula Airways passenger on a bush flight departing over the river. Control tower staff requested that our survey aircraft attempt confirmation of the sighting. The body was found lying face down in marsh grass, about ten feet from the bank off the end of Runway No. 18. State Troopers helped the Air Force recover the body that night and confirmed identity as that of the missing Airman. He had walked away from a party, and fallen into the partially frozen Naknek River.

Regional Public Affairs Specialist Connie M.J. Barclay, visited King Salmon June 22nd-24th. She spent the first day talking with staff about the Public Affairs Office. She gave a very informative presentation on "Working Successfully with the Media." An aerial tour was provided to familiarize Connie with various aspects of the Complex.

Regional Aviation Manager John Sarvis and his Washington Office (WO) counterpart Gene Stephan paid a quick visit to King Salmon August 3rd.

November 9th, Bill Palmisano, Director, Alaska Fish and Wildlife Center, and Dave Stevens, on detail to National Biological Service (NBS) from the National Park Service, took an opportunity to visit with Complex staff to discuss the NBS and how its local office could help meet our biological research needs. Tom Smith is presently the local NBS biologist. He comes to NBS in King Salmon from Katmai National Park where he served as research biologist.

The Air Force has announced plans to pull its 300 people and two F-15 fighters out of King Salmon. The announcement was made by Lt. General Joseph Ralston on November 9, 1993. Plans are to turn the base over to the Alaska Air National Guard to maintain and keep it ready for training exercises and emergencies. Approximately 40 civilian and Air Guard personnel will be needed to maintain the facility. Time will tell how this action will affect the Complex and local fish and wildlife resources.

In November, the abandoned Kanatak Village was among those listed recently by BIA as a "tribe." The village has not had any residents since the early 1950s. The village was not listed in ANSCA; and therefore does not have a land entitlement. On the 8th, RM Hood responded to a letter from an individual concerned about "lost rights" of former residents. It appears that there is some interest in moving back to Kanatak. The village is located on the very remote Pacific coast of Becharof Refuge.

Aircraft Accidents - Non-Refuge

On September 19th a Piper PA-14, N4259H, operated by J.W. Smith of Rod and Gun Resources was substantially damaged while landing on a beach in Yantarni Bay. It sustained wing, fuselage, landing gear and propeller damage.

During the first week of October a PA-18 super cub, N82231 owned and operated by guide Tracy Vrem crashed on take off from his base camp strip located off the Complex. Vrem and his hunting client luckily escaped without injury, the aircraft was substantially damaged. Vrem stated that the cause of the crash may have been a stall close to the ground due to take off with frost on the wings.

On October 10th, while on patrol in the Kujulik Bay area AP Smoke and DRM Poetter stopped on a sand blow with N32PX at what appeared to be a hunting camp. Upon landing, it was noticed that the super cub N3256B, had apparently been involved in an accident; one wing bent up, one wing bent down, struts bent, windows broken and prop curled back. No one was around the area although the tent appeared to be in use. After returning to King Salmon AP Smoke contacted the FAA and NTSB. The owner was identified as a guide who had previously been permitted to hunt big-game in that area, but lost his permit after being convicted of a game violation. Further investigation indicated that he was hunting with a "friend" and that the aircraft had blown over in the wind. The gentleman "forgot" to tell the FAA that he was at the controls when the wind blew the aircraft over.

4. Credits

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

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

Photograph credits are listed in alphabetical order.

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JCK	Smiley Knutsen	Complex Staff
OEL	Orville Lind	Complex Staff
RAS	Richard Sellers	Ak. Dept. Fish and Game
RDP	Rick Poetter	Complex Staff
REH	Ronald Hood	Complex Staff
CMJB	Connie M.J. Barclay	Public Affairs, RO