ALASKA PENINSULA/BECHAROF NATIONAL WILDLIFE REFUGE COMPLEX

King Salmon, Alaska

ANNUAL NARRATIVE REPORT

Calendar Year 1995

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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Ronald E. Hood — Refuge Manager — 9/12/97 — Date

Gene M. — Associate Manager Review — 9/22/97 — Date

Regional Office Approval — 9/22/97 — 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 (Figures **1 - 3**).

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

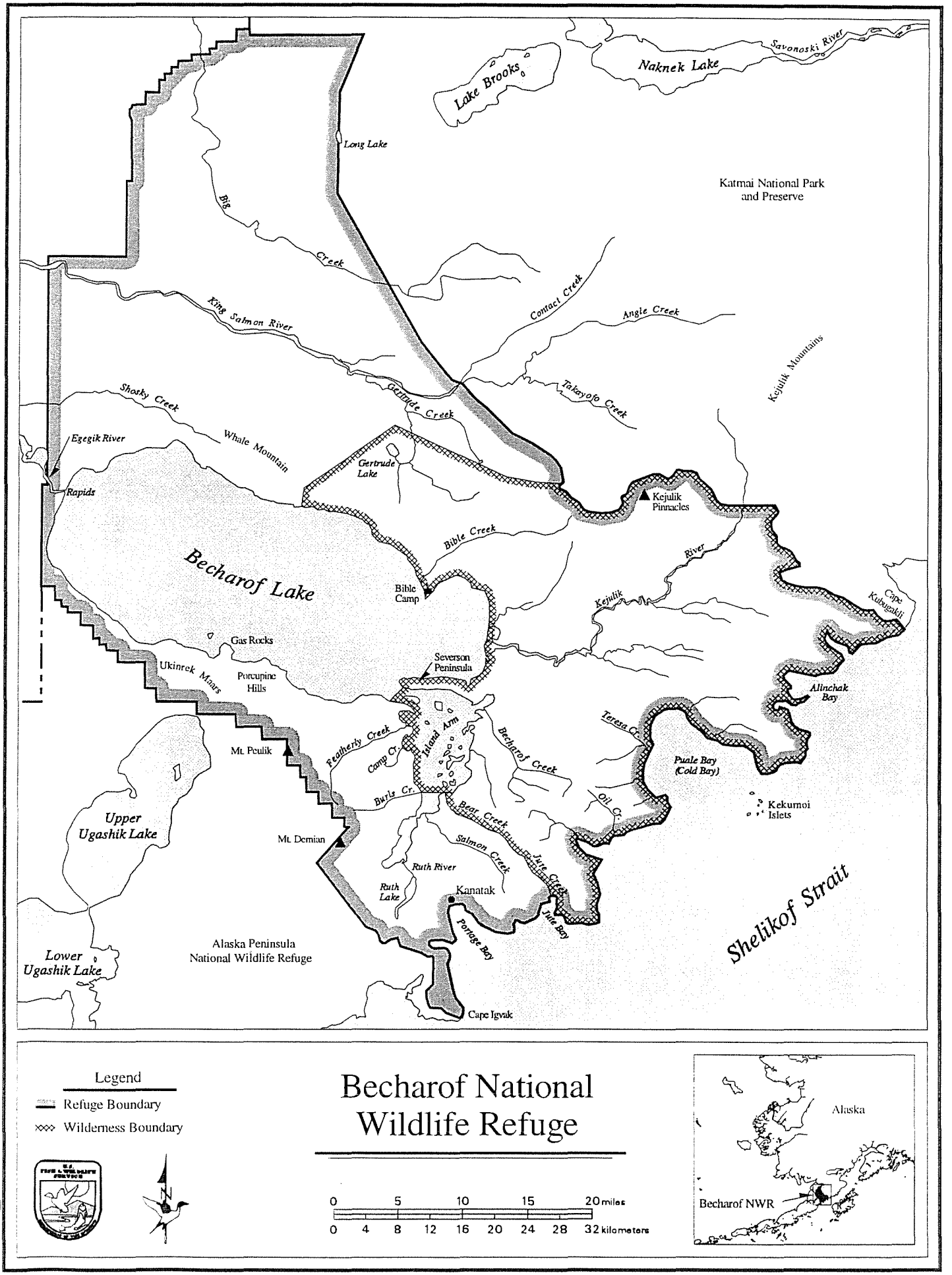


Figure 1. Becharof National Wildlife Refuge

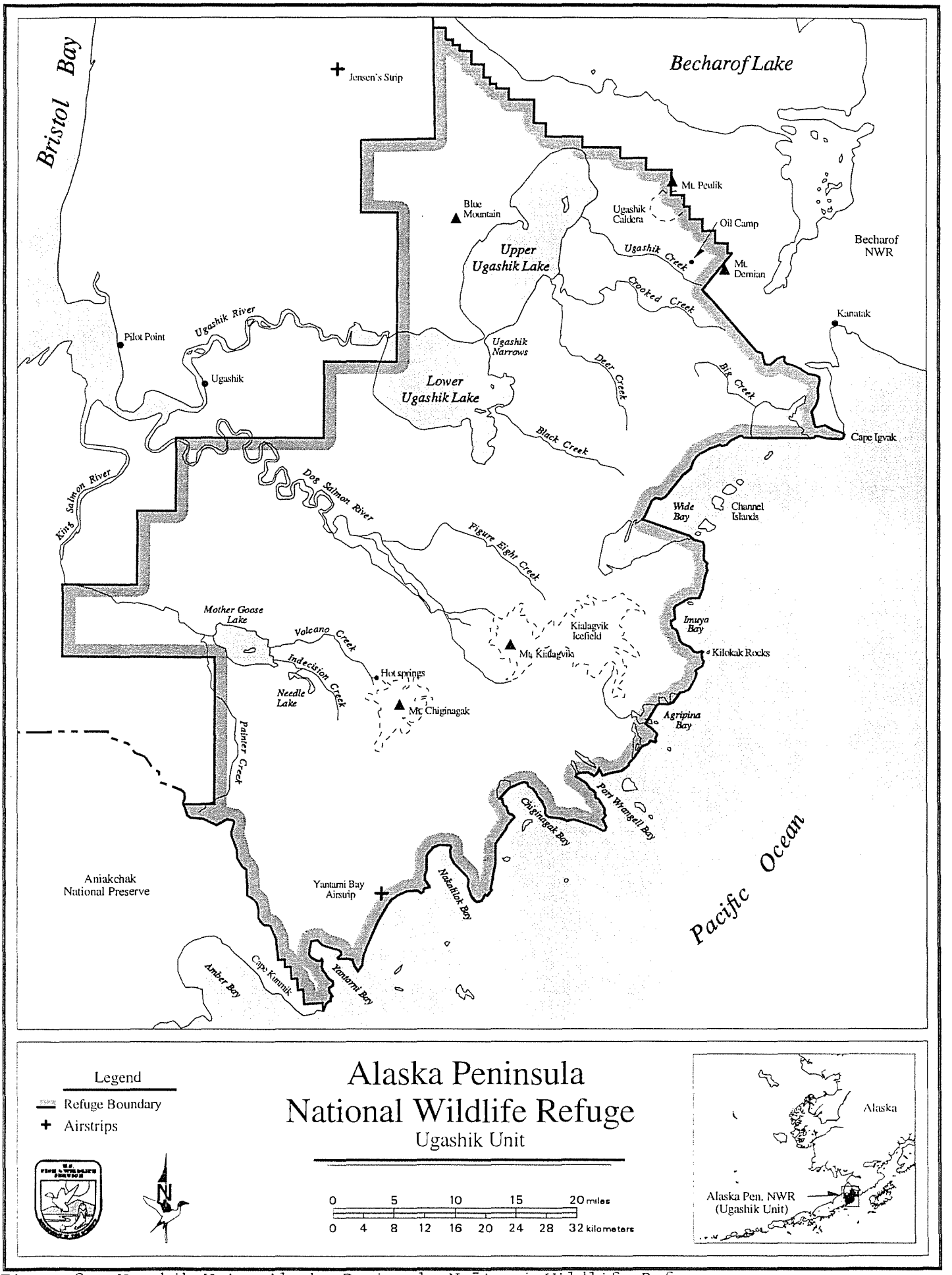


Figure 2. Ugashik Unit, Alaska Peninsula National Wildlife Refuge

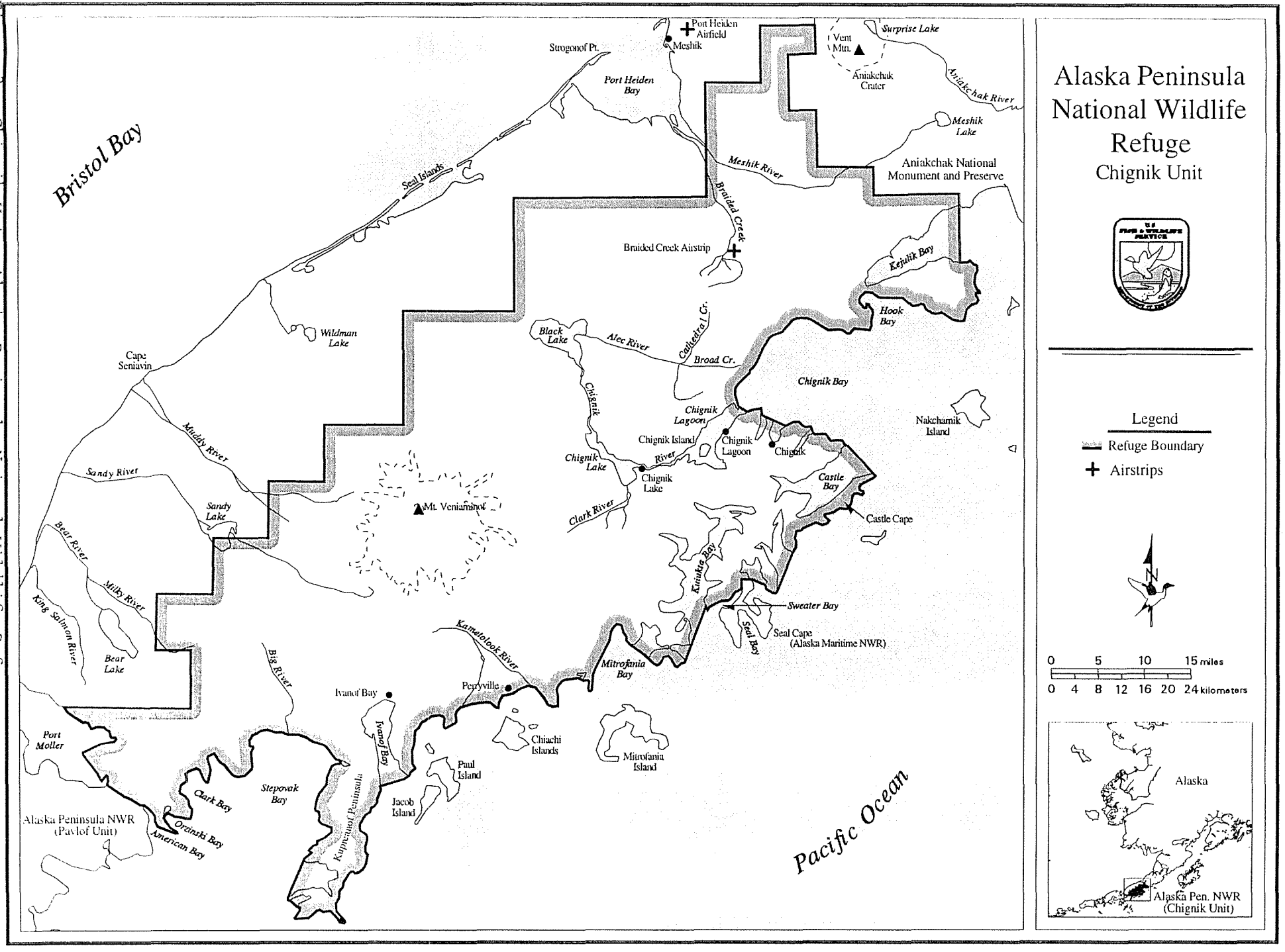
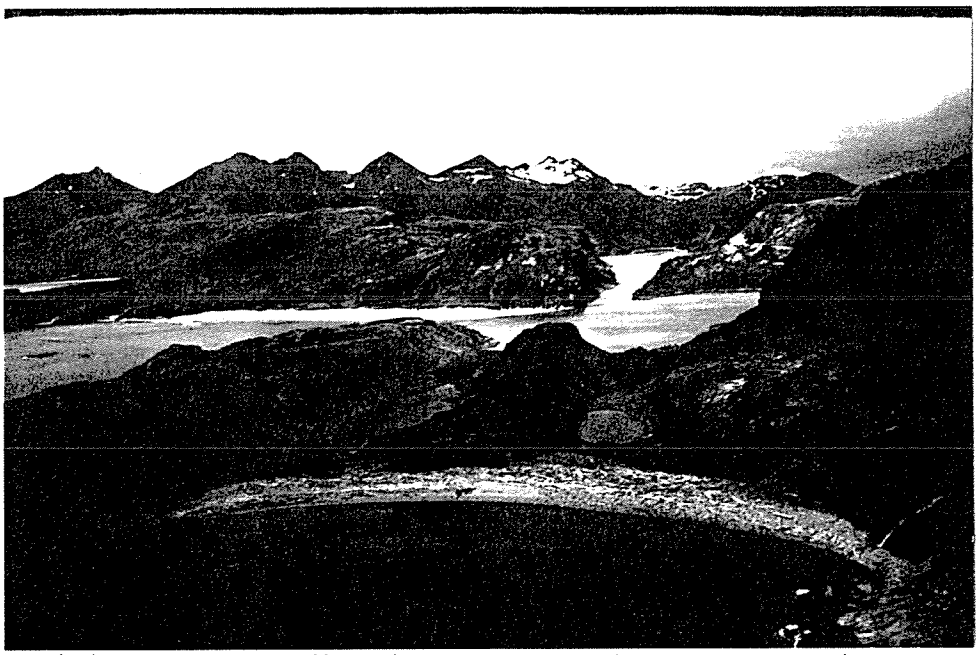


Figure 3. Chignik Unit, Alaska Peninsula National Wildlife Refuge

white-fronted goose, emperor goose, mallard, northern pintail, American wigeon, greater scaup, and harlequin duck.

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



Agripina Bay, Ugashik Unit, Alaska Peninsula NWR. 7/95, DAD

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

** T&M site adjudication still in question (Section C.1.).

** A significant drop in active mining claims occurred this year (Section C.3.).

** Draft public use regulations for the Alaska Peninsula/Becharof National Wildlife Refuge Complex were published and public hearings for the proposed Regulations were conducted (Section D.2.).

** The Bristol Bay/Kodiak Ecosystem Team sponsored a two-day partnership coordination workshop in King Salmon. A number of ecosystem projects resulted (Section D.6.).

** One word ... "SHUT-DOWN" (Section E.8.)!

** Mt. Veniaminof erupted (Section F.12.).

** First harlequin duck brood aerial surveys yielded 62 broods in the Becharof Lake Ecosystem (Section G.3.).

** Bald Eagle replicate survey completed (Section G.6.).

** The cooperative effort with *Earthwatch* concluded with 28 volunteers participating, contributing $21,000 toward the project (Section G.7.).

** A common redpoll banded at Mother Goose Lake on August 17, 1994 was recaptured March 7, 1995 in Soldotna, Alaska providing our first songbird band return (Section G.7.)!

** Neotropical migratory bird banding netted a new species (western wood-pewee) for southwestern Alaska and recaptured a golden-crowned sparrow from San Jose, California (Section G.7.).

** 5,007 birds of 30 species were banded during fall migration on the Alaska Peninsula (Section G.7.).

** Goose calendar contest local winners listed (Section H.2.).

** Visitor Center exhibits completed and re-dedication held (Section H.6.).

** New video of the two refuges produced (Section H.7.).

** Trespassers try to re-establish Village of Kanatak (Section H.17.).

** Big game guide use area AKP 02 awarded (Section H.21.).

** The Complex is taking positive action, through implementation of

Section 810 of ANILCA, to reduce the opportunity for conflict between non-guided clients of air taxi operators and subsistence users in the Island Arm area of Becharof Lake (Section H.23.).

** New 24-foot boat arrives and goes to work (Section I.2.).

** Linder Construction completed removal of underground fuel tanks; installation of above ground replacement tanks; and installation of above ground aviation/automobile gasoline tanks (Section I.2.).

** Universal accessibility projects completed (Section I.2.).

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.

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

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

January - March: January and February exhibited warmer temperatures, while

March was cooler than normal. Temperatures fluctuated from the minus teens to the high 40's during each month. Precipitation was below normal for the period. The high and low temperatures for the period both occurred during March with the temperature dipping to -18° F on the 15th and rising to 50° F on the 30th. The ice went out of the Naknek River upstream from the Complex office during the first week of March. The entire river refroze when the temperatures plummeted at mid-month. The warming temperatures at the end of March signaled the end of winter with the arrival of the first ducks and geese. The Naknek River ice broke up on the 30th with ice remaining only between Smelt Creek and Savanoski Point.

April - June: April and May exhibited warmer and wetter weather than normal. June's precipitation was 0.77 inches below normal. The last snowfall of the year occurred on June 2nd when a trace of snow fell at King Salmon. The low temperature for the period was 23° F on March 13th. The temperature dipped to 32° F, for the last time of the winter, on May 25th. The temperature reached 79° F on June 12th, this was the high temperature for the year in King Salmon. Peak wind gusts for the period reached 59 MPH from the South on April 25th. The conditions this spring were excellent for bug production, numbers seemed to be up and by June the only time enjoyed outdoors was when the wind was over 20 MPH.

July - September: Temperatures were warmer than normal during this period with precipitation near normal in July and September and 1.78 inches above normal in August. The high temperature of 78° F occurred on July 19th while the low of 32° F was on September 29th. The first frost, on September 29th, was over a month later than in 1994, extending the local gardening season several weeks this year.

King Salmon received over an inch of rain from a storm the 7th-9th of September. This same storm dumped much heavier amounts of rain on the refuges, sending many streams over their banks. The most notable flooding occurred on the Dog Salmon River with water rising more than three feet over it's banks for several days. One aircraft (on wheels) was stranded for several days on the Alaska Peninsula Refuge near the former Flynn/Kearns inholding. The water reached the bottom of the engine compartment but the owner was able to fly it out after several days of cleaning and waiting for the water to recede.

October - December: Temperatures were warm, cool, warm during this period. October began with a balmy 58° F on the 1st, temperatures dropped below 0° F for the first time of the season on November 9th. The Naknek River froze up by the end of November. The cold temperatures during the first week in December provided safe crossing and access to the subsistence moose hunting area up Big Creek on Becharof Refuge. The weather began warming on the 8th, reaching a daytime high of 45° F on the 28th. Between the 8th and the 31st, daytime high temperatures remained below freezing only 2 days.

Precipitation was well below normal during this period, November and December had 0.13 and 0.14 inches respectively. December's warm temperatures and lack of precipitation canceled all of our moose surveys and provided King Salmon with a brown Christmas.

Table 01. Weather Highlights of 1995.

Highest temperature	79° F.	June 12
Lowest temperature	-18° F.	March 15
Highest 24 hr rainfall	1.16 inches	August 27-28
Total precipitation	16.24 inches	N/A
Highest 24 hr snowfall	2.1 inches	November 17-18
Total snowfall	16.3 inches	N/A
Highest Sea-level pressure	30.59	March 21
Lowest Sea-level pressure	28.33	January 2

C. LAND ACQUISITION

1. Fee Title

Guild T&M Application. The saga of the 22-acre Bernard R. Guild Trade and Manufacturing Site (T&M) application, AA-8433, continued into its third decade. Mr. Guild initially filed his T&M site occupancy claim on July 16, 1973. On March 2, 1995, the Bureau of Land Management (BLM) issued a decision dismissing protests filed in December 1992 on this action. On April 5, 1995, the Becharof Corporation (Village of Egegik) filed an appeal to this decision. On April 28th, RM Hood learned that Sharon Janis, Chief of Realty had discovered a fatal flaw in Mr. Guild's application. He submitted a request that the Service act immediately to gain status as an intervenor and assure that the Interior Board of Land Appeals gets to act on this information.

On June 14th, Regional Director (RD) Dave Allen submitted a memorandum to the Regional Solicitor bringing attention to what the Service believed to be the fatal flaw in the Bureau of Land Management's (BLM) adjudication of the application. In brief, at the time of the filing of the "Notice of Location" [July 16, 1973] these lands were unappropriated and unreserved public lands. However, six months later, on September 20, 1973, the entire township was withdrawn, subject to valid existing rights, by Public Land Order (PLO) 5388 from all forms of appropriation. No improvements were

made on the T&M site by Mr. Guild until 1977. The Service argued that these "prove-up" efforts began well after the lands were withdrawn and that case law demonstrates that the filing of a notice of location for a T&M site alone does not create a segregative right in public lands; and that "the establishment of such rights [are] entirely dependent on the acts performed in occupying, possessing, and improving the lands ...." RD Allen asked that the Solicitors Office investigate the validity of the claim and that BLM initiate a new contest on this T&M Site if factually and legally appropriate. At year's end, we were still waiting for BLM to act on the RD's request.

Other. RM Hood submitted two nominations of strategic private land inholdings for possible purchase and donation to the Service by a nonprofit organization on April 24th. The site discussed above and a site at the Ugashik Narrows were submitted. On September 5th, Appraiser Celia Hall and Realty Specialist Steve Shuck, Division of Realty, arrived to conduct an appraisal of property located at the Ugashik Narrows, Ugashik Unit, Alaska Peninsula Refuge. The Complex provided transportation and other assistance to Steve and Celia. The site is our number one priority for acquisition. By year's end the appraisal had been completed. We are waiting for the Service to make an offer on the property. Funds for the proposed purchase will come from lapsed Land and Water Conservation Funds.

2. Easements

Nothing to report (NTR).

3. Other

Becharof Refuge. On October 4th, Warren Keogh, Realty, provided the Complex with a copy of the case abstract for AKAA 046168, placer mining claim, located on Whale Mountain, Becharof NWR [Section 5, **T24S**, R44W]. The case was closed on July 27, 1995, due to abandonment. Warren's investigation further revealed that a bazaar filing error had been made; the claim had actually been at **T24N** [tributary of George River in Kuskakwim Recording District]. Thus a threat to refuge resources that never existed has been removed.

Alaska Peninsula Refuge. A significant drop in active mining claims occurred this year. This drop is attributed to tighter regulations and higher assessment fees. The politically correct term is "abandoned and void." All claims held by industry have been abandoned. The remaining 16 claims are held by two individuals under so-called "small miners certificates." All claims are on Braided Creek, a tributary to the Meshik River in the Chignik Unit. A summary follows:

1994 Active Lode Claims: 66 Active Placer Claims: 4 Total: 70 claims
1995 Active Lode Claims: 12 Active Placer Claims: 4 Total: 16 claims

D. PLANNING

1. Master Plan

NTR

2. Management Plan

Refuge Regulations. On January 19th, RM Hood and DRM Poetter met with Public Use Planner Helen Clough and Public Involvement Specialist Bob Stevens, in Anchorage, to review in-house comments on draft regulations to implement the Public Use Management Plan (PUMP) for the Alaska Peninsula/Becharof National Wildlife Refuge Complex (Complex). The proposed changes to 50 CFR 36.39 [refuge regulations] drew the most comment. We believe that the current regulation is unclear and can easily be challenged in court. However, most reviewers disagreed and recommended that we not make the proposed changes. A draft of proposed public use regulations were submitted to the Alaska Region, Office of the Solicitor for review. On February 23rd, Attorney Keith A. Goltz provided his evaluation to the Regional Director. In essence, his office concluded that: "Assuming an adequate administrative record, the DRAFT public use regulations for the [Alaska] Peninsula/Becharof National Wildlife Refuge Complex DO conform with the substantive requirements of current federal law."

Next, draft regulations to were submitted to the Director on May 5th. The proposed rule will allow the Fish and Wildlife Service to manage public uses by adopting regulations that address off-road vehicles, camping, and temporary facilities. These regulations will provide for continued public use of the Complex while protecting refuge resources and resolving conflicts between refuge users. The Washington Office forwarded the draft regulations to the Federal Register the week of July 10 for publication. They were published on July 17th (Volume 60, Number 136, pp. 36575-36580).

Public hearings for the "Public Use Regulations for the Alaska Peninsula/ Becharof National Wildlife Refuge Complex: Proposed Rule" (50 CFR Part 36) were conducted in Egegik on October 23rd and in Naknek on the 26th. The final public hearing was conducted in South Naknek on November 2nd. No substantive comments were received at any of the hearings. In addition to the hearings, seven letters commenting on the draft regulations were received. Again, no substantive comments were received. See Section D.3. for details.

Helen Clough drafted final regulations with only editorial corrections from the draft. They will forwarded to the Washington Office in January 1996. The draft final regulations follow.

The U.S. Fish and Wildlife Service amends Part 36 of Chapter I of Title 50 as follows:

PART 36 -- [AMENDED]

1. The authority citation for Part 36 continues to read as follows:

Authority: 16 U.S.C. 460(k) et seq., 668dd et seq., 742(a) et seq., 3101 et seq., and 44 U.S.C. 3501 et seq.

2. Section 36.39 is amended by adding paragraph (c)(1)-(4) as follows:

§36.39 Public Use * * * * *

(c) Alaska Peninsula/Becharof National Wildlife Refuge Complex.

(1) The Alaska Peninsula/Becharof National Wildlife Refuge Complex includes the Becharof National Wildlife Refuge, the Chignik and Ugashik Units of the Alaska Peninsula National Wildlife Refuge and the Seal Cape Area of the Alaska Maritime National Wildlife Refuge.

(2) Off-Road Vehicles.

(i) Off-road vehicles operated on the refuge complex under §36.12(a), §36.39(c)(2)(ii) or §36.39(c)(2)(iii) are limited to three or four-wheeled vehicles with a maximum gross weight of 650 pounds as listed by the manufacturer.

(ii) The following trails are designated for off-road vehicle use: Yantarni Bay Airstrip; Yantarni Bay Airstrip to beach trail; and Yantarni Bay Airstrip to oil well site trail. Maps of the above areas are available from the Refuge Manager.

(iii) Subject to the weight and size restrictions listed in (i) above, subsistence use of off-road vehicles, as authorized by 50 CFR 36.12 (a) is allowed throughout the Alaska Peninsula/Becharof National Wildlife Refuge Complex.

(3) Camping is permitted on the Alaska Peninsula/Becharof National Wildlife Refuge Complex subject to the following restrictions:

(i) No permanent improvements may be made to campsites without a special use permit. All materials brought on to the refuge complex must be removed upon cessation of camping unless authorized by a special use permit.

(ii) Other than reserved sites authorized by special use permits, camping at one location is limited to seven consecutive nights from August 1 through November 15 within 1/4 mile of the following waters: Becharof Lake in the Severson

Peninsula area (Island Arm); Becharof Lake Outlet; Ugashik Narrows; Big Creek; Gertrude Lake; and Gertrude Creek between Gertrude Lake and the King Salmon River. Maps of the above areas are available from the Refuge Manager.

(iii) Tent camps must be moved a minimum of one mile following each seven-night camping stay during the periods specified above. The above camping limits do not apply to subsistence users except at Big Creek where they apply to all refuge complex users.

(4) Temporary Facilities.

(i) New temporary facilities may be authorized on the Alaska Peninsula/Becharof National Wildlife Refuge Complex by special use permit only.

(ii) Except for administrative or subsistence purposes, new temporary facilities are prohibited within 1/4 mile of the Becharof Lake shoreline.

(iii) Except for administrative purposes, new temporary facilities are prohibited in the following areas: within 1/4 mile of the shorelines of Gertrude Lake and Long Lake; within 1/4 mile of the airstrip on the south side of the King Salmon river approximately 1/2 mile above the confluence of Gertrude Creek and the King Salmon River; within 1/4 mile of the shoreline of Upper and Lower Ugashik lakes; within 1/4 mile of the shoreline of Becharof Lake outlet; and within 1/4 mile of the shoreline of Big Creek. Maps of the above areas are available from the Refuge Manager.

Subsistence Management Regulations. In January, RM Hood worked closely with Subsistence Management staff to develop the "staff analyses" for seven (7) proposals for new Subsistence Management regulations. Five of these proposals would eliminate competition from sport hunters on part or all Federal lands in Game Management Units (GMUs) 9C and/or 9E for caribou and/or moose.

On February 3rd, RM Hood and DRM Poetter attended the Lower Bristol Bay Fish and Game Advisory Committee meeting in Egegik. Federal subsistence proposals were scheduled to be discussed. However, we discovered that the members had not received proposal booklets. Copies were made at the meeting and some discussion of the proposals conducted. However, the Committee decided to delay making any recommendations until they had time to study the proposals. They scheduled a telephone conference for the 13th.

The Naknek/Kvichak Fish and Game Advisory Committee met on February 7th in Naknek. RM Hood attended and provided staff support on Federal issues. The Committee reviewed and made recommendations on all Federal subsistence

regulation proposals affecting Game Management Units 9C and 9E. This was the first time the Committee has reviewed Federal proposals for input into the Bristol Bay Federal Subsistence Regional Council.

The Bristol Bay Subsistence Regional Advisory Council public meeting was held in the Bristol Bay Borough Assembly Hall, Naknek, Alaska on February 15th-16th. RM Hood represented the Complex and took an active part in the discussion of all proposals that impacted the Complex. A summary follows:

Proposal 23 - Close GMU 9C for Take of Caribou by non-eligible users -- Council accepted the proposal with modification: Naknek/Kvichak Fish and Game Committee recommendation of 1 caribou per month from 8/10 to 3/31; not more than one can be female; not to exceed 4 caribou in total; deleted closure to non-subsistence users.

Proposal 24 - Close GMU 9E for Take of Caribou by non-eligible users -- Council supported proposal with modification. 1) Closed most of Chignik Unit to take of caribou [A line from Seal Cape on Pacific side to Wildman Lake on Bristol Bay side was proposed. This closure was proposed by the Ivanof Bay Traditional Council. It closes all Federal lands south of the Chignik Lake/Black Lake area.] 2) The remainder of GMU 9E would follow the current subsistence regulation.

Proposals 25 & 26 - Close Severson Peninsula Area for Take of Caribou and Moose by non-eligible users -- Council rejected the proposal in favor of the Complex's option of using Section 810 of ANILCA to limit the number air taxi permits and clients in the Island Arm area of Becharof Lake.

Proposal 26B - Close Aniakchak Preserve for Take of Caribou and Moose by non-eligible users -- Council rejected proposal because of action taken on Proposal 24 for caribou and their finding that there were adequate moose numbers to meet subsistence needs.

Proposal 26C - Close Sandy River/Stepanof Flats for Take of Caribou and Moose by non-eligible users -- Council tabled proposal because of action taken on Proposal 24 for caribou and the statement by the Ivanof Bay Traditional Council that there were adequate moose numbers to meet subsistence needs.

Proposal 30 - Modify Moose Hunt In GMU 9C, Becharof Refuge -- Council accepted the August 20th opening (with Federal Permit) but rejected the elimination of the antlerless season.

Proposal 35 - Modify Beaver Trapping Regulation -- Council accepted proposal to standardize the take of beaver by firearm throughout Unit 9; but rejected increasing the limit from 40 to 50 beaver per season.

3. Public Participation

Section 1307, ANILCA Regulations. The Fish and Wildlife Service published proposed regulations to implement Section 1307 of the Alaska National Interest Lands Conservation Act (ANILCA) on April 25th. This action is necessary to establish the procedures for granting historical use, Native Corporation, and local preferences in the selection of commercial operators who provide visitor services other than hunting and fishing guiding on National Wildlife Refuge System lands in Alaska. This rulemaking will provide guidance in the solicitation, award, and renewal of Alaska visitor service authorizations. The material and directions for soliciting public comments finally reached us in late May. We have had telephone conversations, meetings, and a local mailing in support of the Regional effort.

Refuge Regulations. Draft regulations to implement the public use plan were published on July 17, 1995 with a 60 day public comment period. The public comment period was extended for another 45 days to allow additional review and comment by interested persons and groups.

The July 17, 1995 Federal Register notice said public hearings would be held in Chignik Bay, Chignik Lake, Chignik Lagoon, Egegik, Ivanof Bay, Naknek, Perryville, Pilot Point, Port Heiden, and South Naknek, Alaska. Informal public hearings were held in Egegik (October 23, 1995), Naknek (October 26, 1995), and South Naknek (November 2, 1995), Alaska. When leaders of both municipal and tribal governments in the other villages were contacted to arrange public hearings, they indicated that hearings were not necessary. Therefore, because these villages are all isolated and people from other communities would not likely attend public hearings, the hearings were not held.

Summary of Public Comments. Eleven people attended the Egegik hearing and one comment on the regulations was noted. Six people attended the Naknek hearing. Questions were asked about the regulations, but no comments about the regulations were received. Two people attended the South Naknek hearing and one comment on the regulations was noted.

Seven written comments were received; from the State of Alaska, one regional corporation, the Coalition to Protect Animals in Parks and Refuges and four individuals (one in Alaska and three out-of-state). One person met with Fish and Wildlife Service personnel to discuss the regulations.

The State of Alaska had no specific comments on the regulations. One person suggested re-writing the regulations in seventh grade English and translating them into Native languages. One person opposed the use of off-road vehicles, camping, and any temporary or permanent improvements within the refuge. The Coalition to Protect Animals in Parks and Refuges suggested there should be some areas where off-road vehicles not be allowed, and approved of off-road vehicle weight limits and confining general public off-road vehicle use to trails. The Native Corporation noted that the off-road vehicle weight restrictions would not apply to activities associated with exploration or development of their subsurface estate within the refuge. One person said that subsistence campers should be able to leave their camp foundation to be used year after year.

Most other comments did not address the regulations and were about other aspects of refuge management (for example, opposing sport hunting on refuges or requesting information about special use permits). The comment at the Egegik hearing suggested that off-road vehicle trailers be required to use low pressure tires. One person at the South Naknek hearing suggested that temporary facilities be prohibited throughout the refuge complex. The person meeting with Fish and Wildlife Service staff was concerned that the regulations not affect a road he is proposing to use within the refuge. He was assured that the regulations would have no effect on his proposal.

Based on public comments received the Fish and Wildlife Service proposes only one change from the proposed regulations. A typographical error appeared in subsection 36.39(c)(4)(iii). It stated that new temporary facilities are prohibited within 1/2 mile of the shoreline of Upper and Lower Ugashik lakes. It should have read 1/4 mile of the shoreline of Upper and Lower Ugashik lakes. The final rule reads 1/4 mile.

Other Activities. See Sections D.2. and D.6. for additional activities.

4. Compliance with Environmental Mandates

NTR

5. Research and Investigations

Alaska Peninsula NR92 - "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 involved the National Park Service, the Fish and Wildlife Service, and the Alaska Department of Fish and Game as the lead agency. Each agency contributed approximately one-third of the necessary funding each year, along with personnel for assistance. See Section G.8. for data results.

Nesting Ecology of Marbled Godwits on the Alaska Peninsula. Graduate student Angela Mehall-Niswander of Oregon State University initiated her Master's research project entitled "Nesting Ecology of Marbled Godwits on the Alaska Peninsula" during May of this year. Study sites included a spring staging area in the Cinder River Lagoon, along Bristol Bay and the known breeding areas between the Dog Salmon River and Mother Goose Lake. An attempt was made to capture staging marbled godwits at the Cinder River Lagoon in early May, without success due to a long, continuous stretch of high westerly winds and rain. The birds were plentiful, but access was restricted due to the weather and higher tides. Over 2,000 godwits were observed during the highest count with at least half being marbled godwits. During the nesting season, work concentrated on a large breeding colony in "Godwit Valley" just north of the Dog Salmon River. The first marbled godwit ever banded in Alaska was also color banded and fitted with a tail-mount radio-transmitter on 21 June in Godwit Valley. This was the only adult bird successfully captured. In addition, two downy chicks (2-4 days old) from the banded adult were located and examined in-hand/photographed

on the same day. These were the first flightless young ever documented in Alaska. Avian predation on the breeding godwits by both northern goshawks and bald eagles was documented at the study site. Plans for the 1996 field season include to intensify the study during the breeding season at Godwit Valley and attempt to capture and fit more godwits with transmitters.

6. Other

Habitat Committee. Two competing proposals for habitat mapping methods and techniques are being reviewed by the Committee. In January, RM Hood provided a critical review of these techniques pursuant to Committee Chair Tom Early's request. This was the only committee activity for the year.

Ecosystem Management. The FWS Bristol Bay/Kodiak Ecosystem Team hosted a two-day inter-agency/organization coordination workshop in King Salmon on April 12th & 13th. RM and Ecosystem Team Member Hood sent out invitations to over 40 potential partners. The Ecosystem Team has decided to spend its entire FY 95 budget of $50,000.00 on project(s) in the Becharof Lake drainage.

The Bristol Bay/Kodiak Ecosystem Team sponsored a two-day inter-agency/organization coordination workshop. The partnership workshop was held on April 12-13, 1995 at the Quinnat Landing Hotel in King Salmon. Letters of invitation were mailed to 50 potential participants. Thirty-two people attended. The workshop goal was to develop guidance for field activities in 1995 and beyond. Objectives of the workshop were (1) identify priority issues; (2) explore opportunities for cooperation; (3) establish partnerships; and (4) establish an "Action Team" of Service and non-Service members to develop a long term monitoring plan for the Becharof Lake drainage (Fiscal Year 1995 ecosystem project). The enthusiastic participation of attenders contributed to a successful workshop. The meeting objectives proved to be very ambitious; however, most were achieved. The Ecosystem Team thanks our facilitator, Helen Clough, for an outstanding job. She was key to the success of the meeting.

BECHAROF LAKE ECOSYSTEM PROJECTS -- FUNDED IN FY 1995

1) **Project:** Becharof Lake Drainage Navigability Research
Partners: Alaska Peninsula/Becharof Refuge Complex (Complex); Water Resources Branch, Division of Realty [Keith Bayha]
Funds: Ecosystem, $10,000; Refuge Complex, $1,476; Water Resources Branch, $18,942
Status: Draft report received 03/25/96 [confidential]
Comments: The opportunity for an innovative basin-wide review coupled with the recent Katie John court decision and the importance given to compiling a historic use data base [both written and oral] by the participants of the Spring Ecosystem meeting provided the rationale for funding this project. The project turned up a wealth of historic use data [both written and oral] and proved to be a much larger project than when initially conceived (209 pp. draft report). The basin-wide approach of this report is a prototype that tests the value and suitability of this methodology for Region 7 navigability

research. The drainage basin is subdivided into three subdrainage basins: Egegik River/Becharof Lake, King Salmon River, and Kejulik River. Main water bodies and their tributaries are analyzed. Their names, locations, hydrologic characteristics, impediments to travel, and waterway changes before, at, or since Alaska statehood are noted. General use, economic activity, travel and transportation, and sites of human occupation, commerce, or seasonal activity are detailed to the extent possible for each segment of the basin. Field work was done by Maggie Wilson and Warren Keogh.

2) **Project:** Becharof Lake Drainage Hydrologic Reconnaissance
Partners: King Salmon Fishery Resources Office (KSFRO); Refuge Complex; Water Resources Branch, Division of Realty [Keith Bayha]
Funds: Ecosystem, $2,600; KSFRO, $1,000; Water Resources Branch, $2872; Refuge Complex, in kind
Status: Final report: "Plan of Study: Hydrologic Investigation, Egegik River Watershed, Becharof National Wildlife Refuge" (8/25/95)
Comments: Provides the required background and funding needs to complete an investigation of the water balance of the Becharof Lake drainage. Should provide significant guidance for determining cost estimates for priority ecosystem projects. Field work done by Steven Lyons.

3) **Project:** Assessment of Jurassic Vertebrate Sites in the Lake Becharof Area
Partners: Refuge Complex; U.S. Geological Service, Reston, VA; Dept. of Zoology, Oregon State University, Corvallis, OR; Weber State University, Ogden, UT [Robert Weems and Robert B. Blodgett]
Funds: Ecosystem, $4,200; Refuge Complex, in kind; U.S.G.S., in kind; Oregon State Univ., in kind; Weber State Univ., in kind
Status: Data analysis in progress; draft report(s) will follow.
Comments: The Alaska Peninsula contains the most well developed succession of Jurassic age rocks known in North America. Due to its relative inaccessibility, many details of its faunal and lithologic character still remain poorly known. The emphasis of this project was to identify potential sites of vertebrate fossils in Upper Jurassic strata of the Naknek Formation. Vertebrate remains are of great interest since the Alaska Peninsula at the time was situated in a relatively high-latitude position; and presents the most northerly known Late Jurassic vertebrate faunas in the Northern Hemisphere. These Alaskan sites were probably cold temperature in climate, and should contain quite different, unknown faunas. As a result of this field project, and related museum based studies, we now have considerable vertebrate material for study. Fish remains collected during this project are the only fish remains from a Jurassic site this far north. Ancillary studies are also being conducted on the marine invertebrate seashells (by Blodgett, Oregon State University) associated with the marine vertebrates, and on the associated petrified wood (by Sidney Ash, Weber State University) from a number of sites. The hunt for Jurassic Park - North continues.

4) **Project:** Baseline Terrestrial Studies: Songbirds, Avian Predators,

Small Mammals and Vascular Plants [Harlequin duck added]
Partners: University of Alaska-Fairbanks; Shoemaker family; Refuge Complex [Donna Dewhurst]
Funds: Ecosystem, $19,000; Refuge Complex, $10,800; Contributed, $1,260
Status: Draft report in preparation
Comments: The capture of a western wood-pewee yielded the first record for that species in southwestern Alaska. Significant production area for harlequin ducks were discovered along the Becharof Lake tributaries, and documented using a new helicopter brood survey technique. Small mammal mark/recapture studies yielded baseline information and documented presence of four species (masked shrews, northern red-backed voles, meadow jumping mice, and common lemming). Breeding and fall migration studies of local landbird species yielded presence of 27 taxa, with a surprising breeding abundance of yellow warblers and savanna sparrows. Numerous boreal species were also found migrating through the area (blackpoll and yellow-rumped warblers, ruby-crowned and golden-crowned kinglets, brown creepers, and red-breasted nuthatches).

5) **Project:** Coho Salmon Survey of the Becharof System
Partners: King Salmon Fishery Resources Office; Alaska Dept. of Fish and Game, Commercial Fisheries Division [Richard Larson/Richard Russell]
Funds: Ecosystem, $2,000; KSFRO, $25,000; ADF&G, $5,000
Status: Regional Information Report No. 2A96-04, "Coho Salmon Escapement Counts in the Egegik District, Bristol Bay, Alaska 1995", by Richard B. Russell,
Comments: Adult coho salmon, *Oncorhynchus nerka*, entering the Becharof Lake escapement were counted from counting towers on the Egegik River from July 23 through August 30, 1995. A total of 7,470 adult cohos were enumerated. A total of 501 adult cohos, captured through beach seining operations, were sampled for age and length. The majority were age 2.1 Aerial surveys (funded with Ecosystem monies) of the Becharof Lake drainage yielded a count of 5,258 adult cohos in spawning areas.

6) **Project:** Becharof Lake Limnological Studies [See below]
Partners: King Salmon Fishery Resources Office; ADF&G, Commercial Fisheries Division and Sport Fisheries Division; Lake and Peninsula Borough; Univ. of Alaska-Fairbanks, Juneau Center, School of Fisheries and Ocean Sciences [Ole A. Mathison]
Funds: Ecosystem, see below; Lake and Peninsula Borough, $14,000; ADF&G, in kind; KSFRO, see below; University of Alaska, Juneau Center, $5,200; University of Alaska, in kind
Status: Interim report(s) JCSFOS 96-03, March 19, 1996; a comprehensive report is in preparation.
Comments: Contributes to the Becharof Lake Limnological study as listed below.

6.a) **Project:** Becharof Lake Limnological Field Sampling
Partners: King Salmon Fishery Resources Office; University of Alaska-

Juneau [Richard Larson/Ole Mathison]
Funds: Ecosystem, $2,000; KSFRO, $3,000; Univ. of Alaska, in kind
Status: Interim report JCSFOS 96-03, March 19, 1996
Comments: The 1995 field season was the fourth year of Becharof Lake limnological studies. KSFRO staff gathered water and plankton samples as a continuing part of the sampling effort. Zooplankton biomass is a key parameter that represents the availability of food for juvenile sockeye salmon in the nursery lake. Measurements of key chemical elements such as nitrogen, phosphorus, and silicon provide information on the parameters that apply directly to the production of food.

6.b) **Project:** Becharof Lake Bathymetric Field Sampling
Partners: King Salmon Fishery Resources Office; ADF&G, Sportsfish Division; University of Alaska-Fairbanks, Juneau Center [Richard Larson/Ole Mathison]
Funds: Ecosystem, [see 6.a.]; KSFRO, $3,000; ADF&G, in kind; Univ. of Alaska, in kind
Status: Interim report JCSFOS 96-03, March 19, 1996
Comments: A Bathymetric map is essential in calculating total lake volume. Lake volume, thermal regime, and flushing rate are key parameters in understanding the production of smolts in a sockeye salmon nursery lake. KSFRO completed Bathymetric sampling. Dr. Mathison completed data analysis and produced a map. Becharof Lake has a very complicated depth structure; especially along the fault zone that extends across the lake from Gas Rocks. The maximum depth found was over 180 meters.

6.c) **Project:** Becharof Lake Limnological Studies - Stable Isotope Ratios
Partners: University of Alaska-Fairbanks, Juneau Center [Ole Mathison]
Funds: Ecosystem, $2,600; Univ. of Alaska, in kind
Status: Interim report JCSFOS 96-03, March 19, 1996
Comments: The primary function of a salmon escapement is to provide eggs which can be fertilized and develop into returning adult salmon. A secondary function is to provide nutritional elements back into the lake system. The importance of this lake fertilization differ from one nursery lake to another. It can be measured by the stable isotope ratios for nitrogen and carbon in the tissue of the smolts. Smolt samples for 1993 and 1994 submitted for analyses. Preliminary results demonstrate that marine nitrogen, so important in other nursery lakes, is distinctly less important in Becharof Lake.

6.d) **Project:** Becharof Lake Limnological Studies - Coring of Lake Sediments
Partners: University of Alaska-Fairbanks, Juneau Center; Institute of Marine Sciences; KSFRO [Ole Mathison/Bruce Finny]
Funds: Ecosystem, $700; KSFRO, $1,000; Univ. of Alaska, in kind
Status: Preliminary sample analysis completed; more funding requested.
Comments: Dr. Finny sampled lake sediments for distribution of stable isotopes analysis for a paleoecological/paleoenvironmental study of the Becharof ecosystem. Dr. Finny has developed a new method for

reconstructing salmon escapements based on sediment N-15 paleo records. Combining this with standard paleolimnological tools, he is examining questions such as: 1) what is the long-term variability of salmon abundance and how is it related to climate and other paleoenvironmental changes; 2) how has large-scale commercial fishing impacted freshwater environments; and 3) how have changes in salmon escapement effected freshwater ecosystems? Dr. Finny has completed a preliminary data analysis on a few samples. The Becharof sediments indicate that carcass-derived nutrients are relatively minor (consistent with N-15 values of young sockeye). He has requested additional funding in 1996 to complete the analysis of samples taken this year.

Dr. Finny extracting samples from Becharof Lake core sample. 8/95, KSFRO

6.e) **Project:** Becharof Lake Limnological Studies - Lake Ice Cycle
Partners: University of Alaska-Fairbanks, Juneau Center; Alaska SAR Facility, Geophysical Institute [Ole Mathison/Greta Reynolds]
Funds: Ecosystem, $00; Univ. of Alaska, in kind
Status: Interim report JCSFOS 96-03, March 19, 1996

Comments: Data gathered since 1992 from the European Remote Sensing Satellite 1 (ERS 1) have been built into a data bank by the Geophysical Institute. This information will be used to determine a precise timing of freeze-up and break-up of Becharof Lake.

7) **Project:** Gas Seep and Spring Sampling in the Vicinity of Gas Rocks, South Shore, Becharof Lake
Partners: U.S Geological Survey, Alaska Volcano Observatory; Cascades Volcano Observatory; Univ. of Arizona [Tina Neal/Robert Symonds]
Funds: Ecosystem, $6,200; KSFRO, $1,000; U.S.G.S., in kind; U. of Arizona, in kind
Status: Draft report in preparation
Comments: Sampling of gas seeps in the project area completed and submitted for analyses. Dr. Symonds will complete data analysis and produce report.

Sampling natural gas seep at Gas Rocks. 7/95, KSFRO

E. ADMINISTRATION

1. Personnel

no staff photo

Mother Goose Lake field camp staff. 9/95, DAD

8. 24. 23. 18. 27.

21. 16.

Visitor Center Staff. 6/96, RDP

19. 17.

PERMANENT STAFF

1. **Ronald E. Hood**; Refuge Manager (RM); GS-485-13; 09/15/85; PFT
2. **Rick Poetter**; Deputy Refuge Manager (DRM); GS-485-12; 04/23/89; PFT
3. **Janice Collins**; Administrative Technician (AT); GS-303-06; 06/11/84-03/17/95; PFT
4. **Laura Shawback**; Administrative Technician; GS-303-05; 06/26/95; PFT
4. **Laura Shawback**; Office Automation Assistant (OAA); GS-326-05; 01/10/94-06/25/95; PPT
5. **Amy Riddle**; Office Automation Assistant (OAA); GS-326-04; 11/12/95; PPT
6. **Bill Smoke**; Airplane Pilot (AP); GS-2181-12; 05/16/93; PFT
7. **Donna Dewhurst**; Wildlife Biologist (WB); GS-486-11; 02/26/89; PFT
8. **Heather Moore**; Wildlife Biologist (Subsistence Issues); GS-486-05; 05/28/95; PFT
9. **Angie Terrell-Wagner**; Refuge Ranger (Public Use Specialist) (RR); GS-025-11; 12/29/91; PFT
10. **Shirley Kelly**; Refuge Information Technician (RIT) (local hire); GS-1001-08; 09/08/91; PPT
11. **John (Smiley) Knutsen**; Refuge Information Technician (local hire); GS-1001-08; 09/08/91; PPT
12. **Orville Lind**; Refuge Information Technician (local hire); GS-1001-08; 09/08/91; PPT
13. **Gary Terry**; Maintenance Worker (MW); WG-4749-08; 07/31/88; PFT
14. **Dwight (Moose) Mumma**; Maintenance Helper (MH); WG-4749-05; 02/19/84; PFT

TEMPORARY STAFF

15. **Toby Burke**; Biological Technician; GS-404-06; 05/14 - 09/07; Seasonal
16. **Todd Eskelin**; Biological Technician; GS-404-05; 04/16 - 11/26; Seasonal
17. **Cindy Girten**; Refuge Ranger; GS-025-05; 05/22 - 09/30; Local Hire, Seasonal
18. **Brian Johnson**; Biological Technician; GS-404-04; 05/14 - 10/20; Seasonal
19. **Heidi Smith**; Refuge Ranger; GS-025-05; 05/22 - 09/30; Local Hire, Seasonal

VOLUNTEER STAFF

20. **Jennifer Adelman**; Arlington, Massachusetts; 06/05 - 09/17; (FT); Visitor Center
21. **Fred Amidon**; Tamunig, Guam; 05/15 - 09/29; (FT); Neo-Tropical Bird Banding, Mother Goose Lake Project
22. **Wendy Crandall**; Tamunig, Guam; 07/25 - 08/08; (FT); Neo-Tropical Bird Banding, King Salmon Based
23. **Nancy Elliot**; Point Hope, Ontario, Canada; 05/15 - 09/26; (FT); Neo-Tropical Bird Banding, Mother Goose Lake Project
24. **Ingrid Harrald**; San Francisco, California; 05/15 - 10/08; (FT); Neo-Tropical Bird Banding, Mother Goose Lake Project
25. **Rocky Harrison & sons Tia & Tag Shoemaker**; Kejulik River Valley, (inside Becharof NWR), Alaska; 08/5 - 08/11; Neo-Tropical Bird Banding, Island Arm Project

26. **Angela Mehall-Niswander**; Corvallis, Oregon; 04/29 - 07/07; Marbled Godwit Project
27. **Pamela Wotherspoon**; Vancouver, British Columbia, Canada; 07/31 - 10/20;(FT); Neo-Tropical Bird Banding, Island Arm Project
28-56 **28 - Earthwatch Volunteers**; See Section E.4 for details; Neo-Tropical Bird Banding, Mother Goose Lake Project

YOUTH CONSERVATION CORPS (YCC)

57. **Becky Smoke**; Seattle, Washington; 07/10 - 09/01; Maintenance Projects
58. **Josh Vernon**; Naknek, Alaska; 06/12 - 08/18; Maintenance Projects

A revised staffing plan for the Complex was approved by Assistant Regional Director Glenn Elison on August 21, 1995. Technical changes reflecting pay grade/position title modifications required revision of the plan approved in 1994 (Figure 4).

The permanent positions funded in 1995 required 9.0 full-time equivalents (FTE) (Table 2). The three RIT positions are local-hire and do not count against FTE ceilings. These positions were converted from intermittent term to permanent part-time in October. Again this year, a major disappointment was the canceling of the Subsistence Coordinator position at the eleventh hour by the Regional Office (RO). This decision was made after the Subsistence Program provided base funds for the much-needed position; but the Associate Manager decided that a Subsistence Coordinator position at Bethel was a higher priority.

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

	FULL-TIME EQUIVALENT	
FISCAL YEAR	AUTHORIZED	TOTAL USED
95	9.0	12.06
94	8.8	10.02
93	8.8	7.92
92	8.8	8.32
91	9.3	8.26
90	9.0	7.93

Permanent Staff. WB Dewhurst and DRM Poetter attended the annual law enforcement refresher session on February 21st-26th in Tucson, Arizona. Getting to shoot M-14 rifles and participating in updated practical exercises were some of the highlights of this year's session.

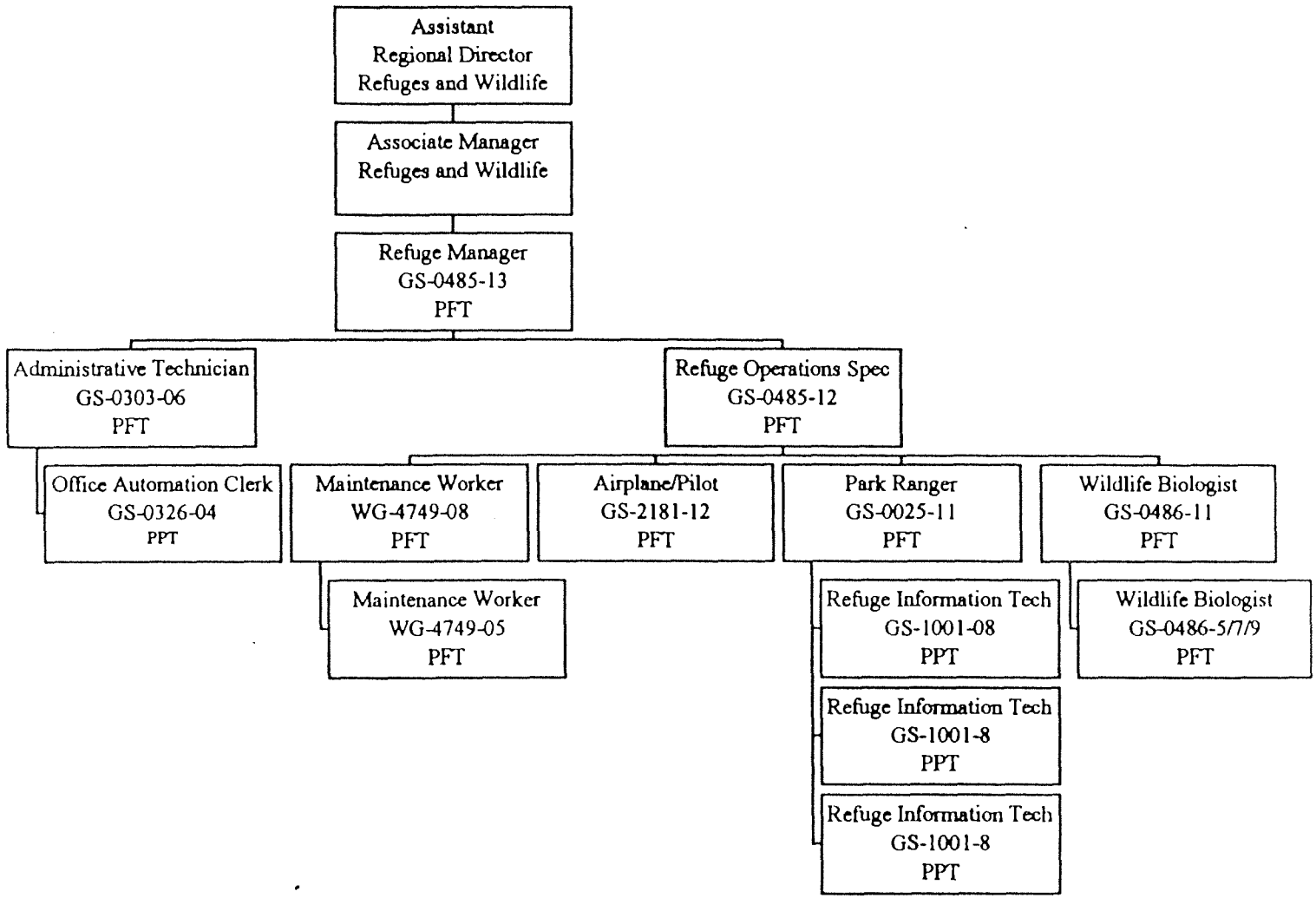


Figure 4. Staffing plan for Alaska Peninsula/Becharof National Wildlife Refuge Complex, approved August 9, 1995.

MW Terry, MH/Safety Officer Mumma, and RM Hood attended the Resource Conservation and Recovery Act (RCRA), Waste Management Regulations Course held in the RO on February 22nd-23rd. This sensitivity training was well presented and increased our appreciation of the implications of the Federal Insecticide, Fungicide and Rodenticide Act (FIFCA) of 1992. I highly recommend this course to all Service managers, their assistants, and/or safety officers.

WB Dewhurst and Coop-student Heather Moore attended American Heart Association - CPR Instructor training, in Naknek on February 27th-28th, sponsored by the Bristol Bay Health Corporation.

RM Hood, DRM Poetter, and RR Terrell-Wagner attended the Ecosystem Approach Seminar held at the Captain Cook Hotel in Anchorage on March 1st and 2nd.

WB Dewhurst and Coop. Student-Trainee Moore attended a training course in search & rescue coordination entitled, "Managing the Search Function." The course was instructed by Katmai National Park Superintendent Bill Pierce in King Salmon on March 6th-10th.

RO Endangered Species, Fish and Wildlife Biologist Teresa Woods and Ecological Services - Fairbanks, Wildlife Biologist Skip Ambrose traveled to King Salmon to present a training overview of the Endangered Species Act on April 19th. Complex and King Salmon Fishery Resource Office (KSFRO) staffs were present as well as representatives from Katmai National Park and Alaska Dept. of Fish & Game. An excellent session that was well presented.

In June, the following staff completed the self-instructional training course, "**AIDS: Some Workplace Basics**" -- Toby Burke, Todd Eskelin, Cindy Girten, Ronald Hood, Brian Johnson, Orville Lind, Heidi Smith, and Bill Smoke.

In the spirit of cooperation and saving of funds, Firearms Instructor and Izembek Refuge Manager Greg Siekaniec traveled to King Salmon on the 23rd to conduct sidearm re-qualification on August 24th. Refuge Officers Smoke, Dewhurst and Poetter were successfully re-qualified and Greg was able to tour our local area and sample some of its finest rainbow trout fishing.

RITs Lind, Kelly and Knutsen began their annual time off for commercial herring and salmon fishing on May 9th, 9th and 10th respectively. They returned back to work on September 11th. Beginning in September, RIT Kelly will be living in Naknek and will be reporting for work at the King Salmon Offices. Her son is attending high school locally so the family move here from Egegik, temporarily until he graduates in three years.

Several staff received their Level 4 performance awards in September. They included: DRM Poetter, AT Shawback, AP Smoke, RIT Lind, WB Dewhurst, RIT Knutsen, and RR Terrell-Wagner. RM Hood received a Level 5 award.

On October 4th, AP Smoke received a check ride from OAS Pilot Stone in Anchorage in Migratory Birds' Cessna 206 Amphibian. The purpose was to certify for amphibian use of a C-206 in case Bill needed to fly enforcement patrols requiring water landings, during the fall brown bear hunting season. Our C-206 had been put back on wheels.

DRM Poetter and WB Moore traveled to Dillingham via AP Bill Smoke in N32PX on October 10th to attend the Bristol Bay Subsistence Regional Advisory Council meetings that evening through the next day. DRM Poetter provided an update on the latest happenings on the Complex, to the Council. On the 11th, Bill picked up the Complex's contingent as well as two Katmai National Park staffers and returned to King Salmon.

Chief, CGS Winston Jacobson conducted a acquisition/property review on October 17th and 18th. Our last review was in 1990.

WB Dewhurst and WB Moore attended a 16-hr "Aeromedical Evacuation in Alaska" course sponsored by the Bristol Bay Borough October 27th-29th in Naknek.

The shutdown of the Federal government affected this office as it did most others. RM Hood reported to work as the only essential employee. All other staff were sent home at 10:00 a.m. on November 14th, after the Regional conference call with the Regional Director. All "non-essential" employees returned to work on the 20th when a continuing resolution, until December 15th, was agreed upon by Congress and the president.

AP Smoke traveled to San Diego to attend the OAS "Train the Trainer" course the week of November 13th. Due to the government shut down and furlough, the class was canceled and rescheduled for February 1996.

On November 6th-9th, we conducted our annual Refuge Information Technician Workshop. This yearly training provides an opportunity for the RITs to spend time with FWS, NPS and ADF&G staff learning about natural resources and recent activities. FWS training topics included 1995 accomplishments of our biological, subsistence, fisheries, public contact/use and maintenance programs. The RITs also completed a CPR refresher course and the classroom portion of the bear/firearms training. The National Park Service and ADF&G presented sessions about current resource issues they manage.

On midnight of December 15th, we began our second shut-down cycle due to our congressional politics. All staff, with the exception of RM Hood, were sent home through the end of the month.

Refuge Manager Ronald Hood

Attended the Endangered Species briefing held in the RO on February 24th.

Attended a OPM's Management Development Seminar in Aurora, Colorado March 20th-31st. The training was held at the Western Management

Development Center.

On May 24-25th, Ron and wife Shirley attended the retirement seminar in Anchorage.

Attended the "Tribal Self Governance Workshop, P.L. 93-638, held in the Regional Office on September 19-20, 1995. On the 27-28th, he attended training course, "Indian Self-Determination", presented by the Falmouth Institute in Anchorage.

Attended a Bristol Bay/Kodiak Ecosystem Team meeting in Anchorage on November 29th. Gary Wheeler was re-elected team leader. A summary of the Becharof Lake drainage ecosystem projects was presented to the team.

Attended the Ecological Stewardship Workshop, "Toward a Scientific and Social Framework for Ecologically Based Stewardship of Federal Lands and Waters," held in Tucson, Arizona on December 4th-15th. While the FWS was listed as a sponsor, the Service was conspicuous by our lack of participation [especially by Washington Office/Regional Offices]. And the workshop suffered due to the loss of input from our managers and biologists. Over 400 managers, scientists, and field biologists attended Jack Ward Thomas' brain child [Forest Service and Bureau of Land Management provided the bulk of attenders].

Deputy Refuge Manager Rick Poetter

Was presented his 20-year certificate and pin on February 6th by RM Hood.

On June 29th, Rick attended the Merit System Principles Workshop held at the Federal Building in Anchorage. The Office of Personnel Management sponsored the three hour session.

Attended training in Hazardous Waste and Used Oil Management in Anchorage on November 13th. The free training was sponsored by the Alaska Railroad Corporation as part of a settlement of violations alleged by an EPA complaint filed against the railroad.

Administrative Technician Janice Collins

Worked her last day at this station on March 17th. She took an advancement to the position of Administrative Assistant in the Subsistence Division of the Regional Office in Anchorage.

Administrative Technician Laura Shawback

A certificate of eligible candidates for the vacant Administrative Technician position was received on June 13th. Interviews were conducted, a selection made, and the certificate returned to the Regional Office the same day. Laura was notified she was selected for the position by Personnel on the 19th. She began her new duties,

officially, on the 26th.

Office Automation Assistant Amy Riddle

King Salmon resident, Amy Riddle, began her new permanent position with us as Office Automation Assistant on November 12th. She is supervised by AT Shawback and works part-time, eight hours per day (Monday-Thursday).

Airplane Pilot Bill Smoke

Attended Basic Federal Law Enforcement Training at the Federal Law Enforcement Training Center in Glynco, Georgia from January 9th - March 31st.

OAS pilot Howard Penland flew out to King Salmon on September 11th to give Bill check rides. These rides included low level, unprepared landing site and single engine land in the PA-18 and single engine sea in the C-206. A biennial flight review was included as well.

Attended the annual OAS ground school December 4th through the 8th. The training was held at Elmendorf AFB this year and was excellent training as usual.

Wildlife Biologist Donna Dewhurst

Acting in her capacity as Regional Uniform Coordinator, attended another National Uniform Committee Meeting on February 7th-9th in Albuquerque, New Mexico. A final draft of the new uniform policy was completed for review and plans were initiated to implement changes in uniform components.

Attended Basic Trauma Life Support (BTLS) training in Naknek on April 7th-9th, provided by the Southern Region Division of Emergency Medical Services.

Wildlife Biologist Heather Moore

Cooperative Education Student-Trainee Heather Moore entered on duty for the Complex on February 26th. She was attending Colorado College, but is from the Anchorage area. She conducted the spring waterfowl and shorebird migration monitoring along the major Alaska Peninsula drainages of Bristol Bay as her main project during her coop assignment. Heather was originally to complete her coop assignment at Izembek NWR, but in a late breaking decision she was redirected to our station. Upon successful completion of her coop assignment, she was appointed to fill our dearly needed 2nd biologist position concentrating on subsistence wildlife/habitat issues on May 28th.

Refuge Ranger Angie Terrell-Wagner

A desk audit of a redescribed position description was requested of

the GS-9 Refuge Ranger position on June 20th. Due to accretion of duties, we believed the position should have been rated at the GS-11 level. We wanted a professional opinion from the Personnel Office. Personnel agreed and on August 20th Angie was promoted to GS-11.

On November 27th-30th, Angie attended the National Interpreter's Conference in Orlando, Florida. As always, this is an excellent opportunity to learn new techniques, gather educational materials and network with many people from federal, state and local land management agencies.

Refuge Information Technician Shirley Kelly

Refer to above.

Refuge Information Technician John "Smiley" Knutsen

Refer to above.

Refuge Information Technician Orville Lind

February 27th - March 17th, RIT Lind attended the "Refuge Management Academy" training in Charleston, South Carolina. Orville was thrilled to be able to attend this very worthwhile and educational class.

Maintenance Worker Gary Terry

Refer to above.

Maintenance Helper Dwight "Moose" Mumma

In February, he attended a 15 hr. four-cycle engine repair class sponsored by the Naknek Campus, University of Alaska - Fairbanks.

2. Youth Programs

Youth Conservation Corps (YCC). Recruitment and selection of YCC enrollees was completed in April, only two applications were received. Joshua Vernon from Naknek and Becky Smoke from Seattle, Washington were hired. Fortunately, this year we were only wanting to have two positions. Joshua worked from June 12 - August 18. Becky started July 10 and worked through September 1. The enrollees' accomplishments for the month of June were as follows: orientation; safety training; an orientation flight of the Complex; cared for lawns; painted the gas pump base and safety barriers in front of the flammable storage bldg.; washed and waxed vehicles; cleaned and organized the warehouse Building No.5; assisted with shop clean up; assisted with the loading field camp gear into aircraft; reorganized the pipe/metal rack and storage area; and painted the shop work bench.

YCC Enrollees Josh and Becky at Mother Goose Lake ready for boating adventures.
08/95, DDM

Work projects for the month of July included: a day trip to Katmai National Park (Brooks Camp) along with the Visitor Center seasonal staff; mowed and trimmed lawns; washed and waxed vehicles; painted the propane bottle rack in the fuel storage bldg.; removed old shelving in Building No. 12, so that the KSFRO could use the building for storage of fishing nets and outboard boat motors; cleared brush and tall grass from around Residence Nos. 1, 9, 10, 11, and 12 so they could be painted; twice daily cleaned up trash in front of the Visitor Center; kept the shop clean; cleaned out the Complex's Lund jet boat; and defrosted and cleaned the freezer located in the office/warehouse.

During the week of July 10th, MW Mumma accompanied the enrollees to the Mother Goose field camp to learn about the bird banding operations and help upgrade some of the hiking trails to the study sites. Over 5 TONS! of gravel was carried in buckets and in a wheelbarrow and was layered throughout the trails. Due to bad weather conditions not much bird banding took place. A few shore birds were captured and the enrollees got to help process them with hands on experience.

Environmental and educational training included: First Aid Training (Becky only); YCC Orientation - video; Sexual Harassment - video; Take Pride In America - video; It could have been Prevented - video; Substance/Drug Abuse Policy - video; and a field trip to Katmai National Park (Brooks Camp).

3. Other Manpower Programs

NTR

4. Volunteer Programs

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

Jennifer Adelman - from Arlington, Massachusetts, worked at the King Salmon Inter-Agency Visitor Center from June 5th through September 17th. Her duties were to staff the Center providing information to visitors.

Fred Amidon - from Seneca Falls, New York, but traveled from Tamunig, Guam, worked from May 15th through September 29th. He worked as a Earthwatch volunteer facilitator, meeting their flights, conducting orientation, going for two weeks to the field camp with them, and getting them back on flights for home. He also served as a field camp staff, rotating between the Mother Goose Lake, Yantarni and Becharof Lake neo-tropical bird banding camps. Fred was given a $100 bonus, through Earthwatch, for their extra efforts coordinating logistics and training of the Earthwatch participants.

Nancy Elliot - from Point Hope, Ontario, Canada, worked from May 15th through September 26th. She also worked as a Earthwatch volunteer facilitator, meeting their flights, conducting orientation, going for two weeks to the field camp with them, and getting them back on flights for home. Nancy was given a $100 bonus, through Earthwatch, for her extra volunteer efforts.

Ingrid Harrald - from San Francisco, California, worked from May 15th through October 8th. She worked as a Earthwatch volunteer facilitator, meeting their flights, conducting orientation, going for two weeks to the field camp with them, and getting them back on flights for home. Ingrid was given a $100 bonus, through Earthwatch, for her extra volunteer efforts.

Pamela Wotherspoon - from Vancouver, British Columbia, Canada, came on board on July 31st to help out with fall migration bird banding at Becharof Lake during August and September. She filled in for one of the Island Arm study site employees, who will be going to start up the Yantarni Bay Camp, also conducting fall migration bird banding. She left on October 20th.

Earthwatch Volunteers. Earthwatch participants are not true volunteers, they have to pay $1,500.00 to Earthwatch to go on a two week adventure, plus pay for their transportation (in this case to King Salmon). They are signed up a FWS Volunteers, to account for their time contributed to the refuge.

Earthwatch Team VII at Mother Goose Lake. 9/95, DAD

The following is a listing of participants:

Team I, 06/05 - 06/21

Peggi Breuninger - Clementon, New Jersey
Thomas Higginson - The Plains, Virginia
Bob Pearce - McLeans Ridges, Australia
Wendy Pearce - McLeans Ridges, Australia

Team II, 06/19 - 07/05

Ms. Pat Fliakos - West Hartford, Connecticut
Dr. Olaf Golze - Orpington, London, United Kingdom
Amanda Laste - San Francisco, California
Gregory Payne - Winchester, Virginia

Team III, 07/03 - 07/19

Dean Darbe - Little Rock, Arkansas
Elizabeth Darbe - Little Rock, Arkansas
Dr. James Luce - Amarillo, Texas
Dr. Candace Myers - Amarillo, Texas

Team IV, 07/17 - 08/02

Jeannette Macrae - Hemel, Hempstead, United Kingdom
Peter Macrae - Hemel, Hempstead, United Kingdom
Michael McGrath - Campton, Kentucky
Makoto Ogawa - Toyonaka, Japan

Team V, 07/31 - 08/16
Petrina Borrer - Earlwood, New South Wales, Australia
Marion Davidson - Placitas, New Mexico
Barbara Levine - Roslyn, New York
Jane Martin - Cambridge, Massachusetts
Team VI, 08/14 - 08/30
Doreen Aquino - Carpinteria, California
Karen Baker - New Haven, Massachusetts
Dr. Robert Batdorf - Reading, Pennsylvania
Shirley Batdorf - Reading, Pennsylvania
Team VII, 08/28 - 09/13
Mary Augustiny - East Haddam, Connecticut
Muriel Horacek - La Canada, California
Andi Stephens - Pittsburgh, Pennsylvania
Chriss Stephens - Pittsburgh, Pennsylvania

Student Volunteers. Master's Graduate Student Angela Mehall-Niswander (Oregon State University) arrived on April 29th to start her field research on marbled godwit reproduction on the Alaska Peninsula. She completed her season of labors and departed King Salmon on July 7th.

5. Funding

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

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

RM Hood completed Fiscal Year (FY) 1995 work planning by submitting both fixed cost requirements and overhead cost requirements to the RO by CC-mail on September 28th. Despite a gloomy funding outlook, the Complex did well and had significant increases over the previous years.

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

FY	AKP	BCH	TOTAL
95	$717.0	-----	$717.0
94	$656.0	-----	$656.0
93	$674.0	-----	$674.0
92	$686.0	-----	$686.0
91	$739.0	-----	$739.0
90	$352.0	$314.0	$666.0

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

FY	FIXED	OVRHD	PROJ	SUBSIS	CHALCO	CONTAM	ECOSYS	SUBTOT
95	$464.0	----	$57.0	$68.0	$30.0	----	$50.0	$669.0
94	$334.0	$45.0	$103.0	$19.0	$25.0	$67.0	----	$593.0
93	$352.0	$51.0	$117.0	$22.0	$8.0	----	----	$550.0
92	$291.0	$48.0	$ 99.0	$14.0	---	$46.0	----	$498.0
91	$299.5	$37.5	$160.0	----	---	----	----	$497.0

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

	1262				OILSPIL	QUART'S	RECPTS	GRAND
FY	FIXED	PROJ	MMS	SUBTOT	6320	8610	4960	TOTAL
95	$287.0	----	$ 59.0	$346.0	----	$27.4	$8.9	$1051.3
94	$278.0	----	$ 15.0	$293.0	----	$27.0	----	$913.0
93	$271.0	$1.0	$ 36.0	$308.0	----	$29.2	----	$834.2
92	$254.0	----	$118.0	$372.0	$63.0	$26.2	----	$959.2
91	$222.0	20.0	$ 28.0	$270.0	$61.0	$34.8	----	$862.8

6. Safety

This station supports the Regional Safety program in keeping our facilities a safe place to live and work. No lost time accidents occurred this year although there were four minor injuries. 1) Volunteer Adleman was treated for leg and knee pain after a hiking\orientation trip to Katmai National Park on 6/16; 2) On 4/28 RIT Knutsen was bitten by a dog while conducting a door to door subsistence survey; 3) Volunteer Elliot was treated for a back strain injury on 5/3, caused by lifting field camp gear; and 3) WB Dewhurst was treated for a back strain injury on 8/3, caused by lifting office supplies.

Quarterly Safety Committee meetings and Quarterly Safety Inspections were conducted as required, except for the month of December when the Government was shutdown. The Safety Committee is made up of MW Mumma serving as chairperson and KSFRO Fishery Biologist Adams as secretary/member.

The Safety Committee and DRM Poetter worked to complete a Hazard Communication Program for the Complex, to comply with OSHA Hazard Communication standards.

The Complex is preparing for an eventual site inspection by OSHA. Work has been undertaken to meet the contaminants/practices standards. A Quality Improvement committee was put together to make recommendations and address safety issues to comply with OSHA regulations, dealing primarily with Warehouse Bldg. No. 5.

A lock-out tag-out system was installed in the maintenance shop Bldg. No. 6. The system is required by OSHA to prevent accidental energizing of electrical systems while someone is conducting maintenance on equipment.

Three information "Right to Know" centers for Material Safety Data Sheets (MSDS) for hazardous substances were received from the Regional Safety Office and were posted in the maintenance shop, fuel shed, and office's laboratory. All paints, oils, solvents, fuels and other miscellaneous items were updated. The office laboratory was cleaned and re-organized; chemicals were inventoried and a form was developed to monitor use/replacement of chemicals. MSDS stations were updated, made easy to find, and updated to reference specific MSDS by a color coded index.

Upon review of the Regional Fuel Storage Policy by the Safety Committee, the following were accomplished: A barrier was constructed to hold propane tanks, inventory was completed, and system was developed to monitor use and replacement of fuels/containers at headquarters and in the field. Hazardous warning labels were made available for all fuel containers. Contents, warning and emergency phone numbers have been posted on the outside of the fuel shed to assist fire or other emergency responders as to the contents of the building.

Fifteen watercraft training videos were received from the Regional Watercraft Safety Committee. Also, $750.00 were made available to each station to purchase equipment related to watercraft safety training.

Signalling devices (flares and smoke generators), flotation cushions, and rescue throw ropes were purchased with the funds.

New Type III floatation coats/vests, anti-exposure coveralls, immersion flotation suits were purchased to replace and up date our supplies for our watercraft operations. Aircraft (nomex) float/survival gear vests and required equipment and supplies to put in the vest pockets were also purchased to add to our inventory.

Monthly Safety meetings were presented each month, the following videos and topics were covered:

January - Two "Safety Shorts" videos entitled, **Safety In The Home** and **Horsing Around On The Job**.
February - **CPR**.
March - **HIV/Aids**.
July - Two "Safety Shorts" videos entitled, **Your Heart and Owners Manual** and **Exercise your Heart**.
August - **Heavy Weather Boating** and **Weather to go Boating**.
September - Two "Safety Shorts" videos entitled, **Cutting Cancer Risk** and **Colds and Flue**.
October/November - Two "Safety Shorts" videos entitled, **Defensive Driving Part 1** and **Battling Fatigue**.

February 25th, RR Terrell-Wagner instructed an 8 hr. "CPR For The Professional Rescuer" course, by the American Red Cross.

On April 4th, RR Terrell-Wagner instructed a Red Cross "CPR for the Professional Rescuers" class for the four staff members that did not attend the previous training class.

7. Technical Assistance

NTR

8. Other Items

RM Hood attended the Naknek/Kvichak Fish & Game Advisory Committee meeting in Naknek on January 4th. He brought the upcoming public meeting of the Bristol Bay Regional Advisory Council and the current subsistence regulation proposal review to their attention. Review of the proposals was placed on the agenda for their next meeting (February 8th).

Regional Director Dave Allen, accompanied by Assistant Regional Director Steve Rideout, visited King Salmon on the 25th for an all-employees meeting with Complex and KSFRO staff. We appreciate Dave's initiative and interest.

The 2nd Southwest Alaska Interagency Fisheries Meeting held at the Quinnat Hotel, in King Salmon, February 16th-17th. DRM Poetter represented the Complex at the meeting. On the 17th, Assistant Regional Director - Fisheries, Steve Rideout, and RM Hood, made presentations on the ecosystem approach to management.

On April 20th, a coordination/partnership meeting was held with NPS personnel in the Complex conference room. NPS Regional staff were in King Salmon visiting with Katmai NP&P staff on personnel/reorganization issues. NPS ARD-Administration, Marcia Blaszak, Personnel Officer, Debby Burton-Orton, and Katmai NP&P Superintendent Bill Pierce, KSFRO Project Leader Jim Larson, DRM Poetter, and RM Hood discussed personnel issues, opportunities, and National Performance Review changes at the field level.

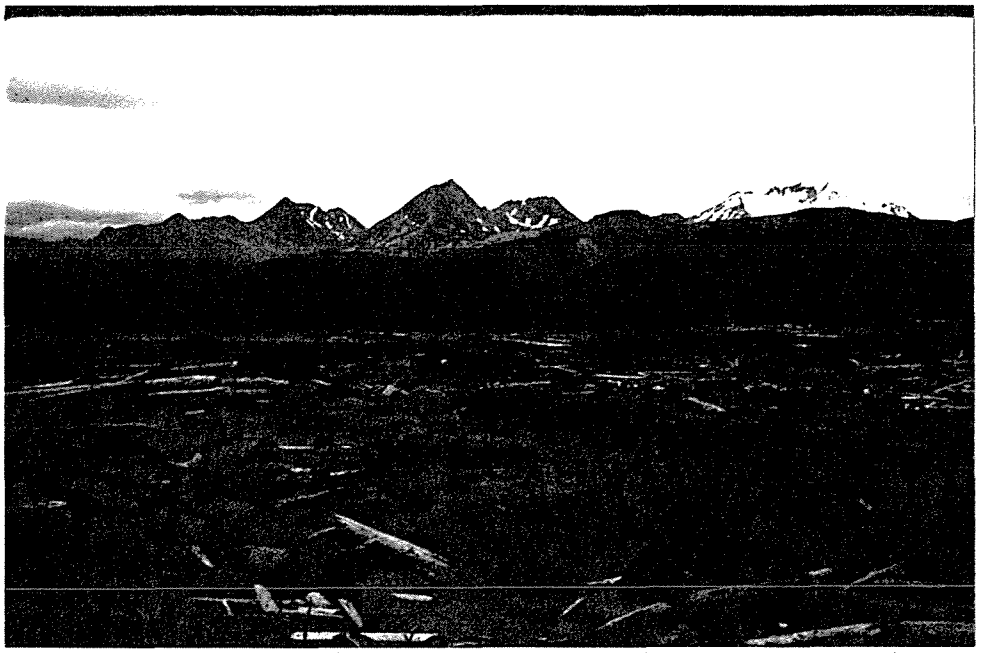
RM Hood supplied review comments to Katmai NP&P on a working draft of a supplement to their "Development Concept Plan" on May 15th.

On June 18th, we received an inquiry from Senator Ted Stevens about alleged closure of hunting on Becharof NWR; RM Hood submitted a draft response to Region on same date.

On August 18th-21st, Jerry Stroebele and Dave Patterson conducted a station visit. The King Salmon Inter-Agency Visitor Center, Becharof Lake Ecosystem studies, and the Mother Goose Lake MAPS/migration banding station for land birds were inspected. For the first time, Jerry was able to set foot on the Complex and confirm that it really exists. As a result of the visit, "On-the-Spot" awards were presented to WB Donna Dewhurst and RR Angie Terrell-Wagner for the excellent programs that each leads.

F. HABITAT MANAGEMENT

1. General



Yantarni Sound, Ugashik Unit, Alaska Peninsula NWR. 8/95, DAD

Russian Volunteer Elaina Mericheza, working with ROS Heather Johnson at Togiak Refuge, offered her services during March to confirm identification of vascular plant specimens in the Alaska Peninsula/Becharof Complex's herbarium. Ms. Mericheza ended up going through several hundred specimens and catching quite a few errors.

Becharof Lake Ecosystem Project. During the week of June 22nd-29th, USGS Paleontologist Robert Weems and Robert Blodgett conducted a reconnaissance of Upper Jurassic formations (Naknek formation) in the Island Arm area of Becharof Lake. An Alaska Helicopter N87TA was used on the 23rd-25th. They based out of Phil Shoemaker's lodge in the Kejulik River valley on the 26th-28th. They were excited about what they found; characterizing their finds as the finest expression of the Upper Jurassic found in North America. They plan to seek funds for detailed studies of the area. Thus another unknown value for the Complex is being revealed. We are looking forward to report on their findings.

2. Wetlands

NTR

3. Forests

NTR

4. Croplands

NTR

5. Grasslands

NTR

6. Other Habitats

NTR

7. Grazing

NTR

8. Haying

NTR

9. Fire Management

NTR

10. Pest Control

NTR

11. Water Rights

Becharof Lake Ecosystem Project. On the 22nd, Steve Lyons, Regional Hydrologist, met with RM Hood, DRM Poetter, and KSFRO Project Leader Jim Larson to scope and discuss the objectives, total number, and location of future hydrologic gaging stations. That afternoon, Steve and Jim flew a reconnaissance of the Becharof Lake drainage in Alaska Helicopter N87TA. Steve will draft a study plan for future hydrologic investigation of the Becharof Lake drainage basin.

12. Wilderness and Special Areas

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

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

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

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

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

Named for Russian Orthodox priest Ivan Veniaminof, who studied Aleutian

Chain cones early in the 19th Century, this 8,400-foot volcano is centered on the last wide lobe of the Alaska Peninsula. The climactic eruption that formed the Veniaminof caldera occurred about 3,700 years ago. Mount Veniaminof is massive. The summit crater is about 5.2 miles in diameter and contains a 25-square mile cupped ice field -- the most extensive crater glacier in North America. It is the only known glacier on the continent with an active volcanic vent in its center. The volcano's base is over 30 miles in diameter. The Landmark's boundaries encompass over 800,000 acres.

Low level eruptive activity that began almost two years ago continues at Mount Veniaminof. On November 15, residents of Perryville began hearing rumblings and booms, which continued through the early evening. They also observed minor ash emission (reported as "smoking" by observers), as well as an increase in steaming. Minor steam and ash emission was observed on the 30th.

13. WPA Easement Monitoring

NTR

G. WILDLIFE

1. Wildlife Diversity

NTR

2. Endangered and/or Threatened Species

NTR

3. Waterfowl

Bristol Bay Drainages Spring Migration Watch. Spring surveys of staging waterfowl along the Naknek River, Alaska Peninsula, were conducted from 1983 to 1995. From 1991 to 1995, ground-based surveys were used as the primary means of observation, performed in conjunction with aerial surveys. In 1995, surveys were conducted 6 March - 16 May by WB Moore. Ground surveys documented abundance, distribution and phenology of each species throughout the season, while aerial surveys provided a snapshot of the entire river at a given time. Additional aerial surveys were conducted along the Kvichak, Ugashik and Egegik Rivers to provide a more complete documentation of waterfowl on the Peninsula.

Naknek River waterfowl numbers for 1995 were comparable to those documented from 1991-1994. The sum of each species' peak abundance was 10,535, with the highest daily count being 6,508 birds on 27 April. Year-to-year variability is somewhat attributed to timing of spring thaws and the availability of open water. Twenty-five total waterfowl species were documented on the river in 1995, including rare sightings of 4 Steller's eiders, 2 emperor geese and 20 brant. Waterfowl abundances on the Kvichak, Ugashik and Egegik Rivers were 4041, 521 and 347 respectively. These rivers

have consistently supported less waterfowl in spring than the Naknek, but each may be more important to some species.

Independent of the waterfowl counts, disturbance to waterfowl using the Naknek River was assessed in 1994 and 1995. Boat traffic, military and civilian aircraft and human presence along the shorelines were documented as disturbances to waterfowl. Jet aircraft caused the greatest number of waterfowl to flush, but accounted for <5% of total incidents observed.

Harlequin Duck Surveys - Becharof Lake Ecosystem. A Bell 206 helicopter was chartered on July 27th and August 1st to attempt the first harlequin brood surveys of the mountain drainages in the Becharof Lake ecosystem. The survey area included all the drainages in Island Arm, the Kejulik Valley and Bible Creek areas. Surprisingly successful, 62 harlequin broods were documented as well as 44 merganser, 13 green-winged teal, 6 mallard, 5 scaup and 2 pintail broods.

4. Marsh and Water Birds

NTR

5. Shorebirds, Gulls, Terns and Allied Species

Bristol Bay Shorebird Surveys. In a cooperative effort for the Point Reyes Bird Observatory, shorebird counts were coordinated by WB Dewhurst to collect data for the Pacific Flyway spring shorebird survey. Spring shorebird counts were conducted along the Bristol Bay coast from the mouth of the Naknek River to Pederson Point, and Rapids and Lake Camps along the Naknek River. The spring survey was conducted on May 11th and was highlighted by: 388 western sandpipers and 49 short-billed dowitchers. This year's count was the lowest since surveys were started in 1992. An extremely early migration likely accounted for the low numbers.

In another cooperative effort, this time including the U.S. Forest Service, numerous national wildlife refuges, National Biological Survey and the University of Nevada, the spring migration of western sandpipers along the Pacific Flyway was monitored using radio telemetry. Mary Anne Bishop, Copper River Delta Institute and Nils Warnock, University of Nevada coordinated this effort which involved fitting 70 western sandpipers with radio transmitters at three locations (San Francisco Bay and Honey Lake, California; and Grays Harbor, Washington). Two sandpipers were relocated aerially in Bristol Bay by refuge staff. One sandpiper last heard at Grays Harbor on April 29th was relocated just northwest of Naknek on May 3rd. Our second relocation was a bird last heard in San Francisco Bay on May 4th and then relocated near Egegik on the 11th and near Clark's Point, south of Dillingham on the 15th. Current plans are to continue the cooperative monitoring effort in April/May of 1996.

6. Raptors

Pacific Coast Bald Eagle Nesting. In an effort to follow-up on Exxon Valdez Oil Spill related wildlife monitoring, aerial bald eagle nesting surveys were conducted using a Bell 206 helicopter with methods paralleling those

used in 1989 and 1990. The first replicate survey was conducted on May 10th & 11th, along the Pacific Coast from Alinchak Bay to Yantarni Bay (including Alaska Maritime nearshore islands), to inventory nest construction and contents (eggs). The second replicate was conducted on July 22nd-25th to inventory fledgling young. WB Dewhurst acted as the primary observer with WB Moore and refuge volunteers used as the secondary observers. Eagle production appeared to be lower than last surveyed in 1990. From Cape Kubugakli to Cape Kunmik, 78 nests were surveyed in 1990, while only 65 where found this year. Nesting success also appeared lower with many nests abandoned and most others yielding only one fledgling despite multiple eggs laid.

7. Other Migratory Birds

Neotropical Migratory Bird Program. Mother Goose Lake - In an effort to initiate monitoring of neotropical migratory landbirds, WB Dewhurst contacted *Earthwatch's Center for Field Research* for a cooperative project under the "Partners in Flight" program. *Earthwatch* is a non-profit organization that sponsors research internationally by providing volunteer assistance and funding. In October 1993, *Earthwatch* agreed to sponsor a trial program during the summer of 1994 on the Ugashik Unit of the Alaska Peninsula Refuge. This program was successful in 1994 and continued into 1995, with matching funds provided through the Service's Challenge Cost Share program. In 1995, the program involved 28 *Earthwatch* volunteers on two-week teams of four to assist with landbird monitoring based out of the Mother Goose Lake cabin. Each volunteer paid the Complex (through *Earthwatch*) $750.00 apiece to help sponsor the program, for a total of

Earthwatch volunteers enjoying a brisk swim in Mother Goose Lake.
7/95, DAD

$21,000. Aside from the biological monitoring, the Mother Goose Lake Field Camp also served as a center for adult environmental education and interpretation making the program a successful cooperative effort. Due to this success, *Earthwatch* committed to another year of funding - for the summer of 1996!

To prepare for the summer bird project, a training session for mist-netting and banding was held in King Salmon on May 15th-30th. BT Eskelin acted as the lead instructor. Nets were run for 539 hours along Eskimo Creek and the Alaska Department of Fish & Game compound in the King Salmon. The training involved banding 222 birds of 19 taxa, including two new species (myrtle warblers and white-winged crossbills) banded in the area.

At Mother Goose Lake, avian monitoring consisted of mist-netting and banding songbirds during breeding and fall migration, conducting off-road point counts, nest searching and monitoring, and doing related habitat analysis. Three stations were run, each with ten mist-nets, under the Monitoring Avian Productivity and Survivorship (MAPS), in three different habitats each about a half mile apart. The MAPS stations were run incoordination with the Institute for Bird Populations in Inverness, California as part of a national program to monitor breeding populations. The stations were run June 10th through August 17th. On August 7th, the lakeside site was converted to fall migration banding, with three nets added to the array.

In 1995, the MAPS program at Mother Goose Lake banded 1,316 birds of 19 species, while fall migration banded 2,418 birds of 21 species. Breeding and fall migration densities of Wilson's warblers were the highest recorded in Alaska for both 1994 and 1995. These large numbers of Wilson's warblers contributed to very high catch rates during fall migration peaking at an incredible 1323 birds/100 net hours on August 16th, with setting a record high daily catch of 469 birds. Ninety-three birds of 13 species returned from the 1994 banding efforts, of which 91% were originally banded as AHY birds. This site fidelity rate of 6.4% based on the first year of returns was consistent with other findings in the state.

Becharof Lake Ecosystem - In the Island Arm portion of Becharof Lake (60 miles SE of King Salmon on Becharof NWR), we tried to start gathering ecosystem baseline data by running two banding stations during the breeding season (non-MAPS) and one fall migration station. Becharof Lake banding totals were 564 birds of 14 species during the breeding season and 1,178 birds of 22 species during migration. A western wood-pewee was captured and collected on 23 August at Becharof Lake, yielding a new species record for southwestern Alaska.

In addition numerous boreal forest breeders strayed over the tundra and were captured during fall migration including: brown creepers, golden-crowned kinglets, blackpoll warblers, red-breasted nuthatches and slate-colored juncos.

Yantarni Sound - To learn more about birds along the Pacific side of the Aleutian Mountain Range, we also ran a fall migration station at the Yantarni Sound Airstrip (105 miles S of King Salmon on Ugashik Unit of Alaska Peninsula NWR). At Yantarni, 1,377 birds of 19 species were banded

including two coastal species (song sparrows and winter wrens) not captured at the western peninsula sites. In addition, the Yantarni camp caught a golden-crowned sparrow on August 25th that was originally banded at the Coyote Creek Riparian Station in San Jose, California on December 10, 1994.

Western wood-pewee was captured at Becharof Lake, yielding a new species record for southwestern Alaska. 8/23/95, BJ

Overall, Wilson's warblers dominated the banding totals at 3,053 followed by 945 yellow warblers, 526 savannah sparrows, 485 hermit thrushes, 450 orange-crowned warblers, 420 common redpolls and 357 tree sparrows. Species diversity included 37 taxa, of which 68% were neotropical migrants.

Miscellaneous banding was also conducted at both Mother Goose and Becharof lakes using walk-in traps, a pull-trap and mist nets, banding an additional 230 birds. Additional species banded included: Bonaparte's, mew and glaucous-winged gulls; arctic terns; semi-palmated plovers; spotted, rock and least sandpipers; black turnstones, surfbirds; and black-billed magpies.

Christmas Bird Count. The 10th annual King Salmon-Naknek Christmas Bird Count took place on December 16th, 1995. Local results were submitted to the National Audubon Society, which sponsors and publishes results in the ornithological journal American Birds. Even though the count is not held on refuge lands, Complex WB Dewhurst coordinates this event. Eight volunteers donated their Saturday to seek out birds from Lake Camp to Pederson Point.

The weather was good on count day and the Naknek River completely open. Eighteen different bird species were spotted totalling 1,091 individuals. Highlights included: red-breasted nuthatches and spruce grouse being sighted for the first time, and record high counts being recorded for

oldsquaw (23) and mew gulls (28).

8. Game Mammals

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

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

Historically, the size of the northern herd has fluctuated widely. Apparent peaks were just prior to the turn of the century and again in the early 1940's, when the population was estimated at 20,000 caribou. The last population low occurred during the late 1940's, with an estimated 2,000 caribou. Thereafter, the herd demonstrated steady growth until 1984 when the population peaked again at 20,000. Since 1989, the northern herd population has declined slightly. ADF&G management objective is a population between 15,000-20,000 animals. Photo censuses by ADF&G in June 1994 and documented low populations of 12,000 animals. Based on these censuses, ADF&G placed emergency restrictions on caribou hunting in Game Management Unit 9(C) during 1994 and 1995, and again in November and December 1995. The emergency regulations reduced last winter's harvest by 60 percent, so that despite poor calf productions this summer, the herd remained stable in 1995 at 11,500.

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

Aerial caribou surveys were conducted on June 20th, 26th, July 5th and 11th 1995 along the Aleutian Mountain Range and Pacific Coast portions of the Complex. Surveys were flown in the Complex's Cessna 206 (N32PX) on floats by AP Smoke and WB Moore. Surveys were planned to coincide with a similar effort by ADF&G, concentrating along the Bristol Bay lowlands portion of the Peninsula. Unfortunately, poor weather conditions extended the survey period significantly and some animals may have been double-counted or missed. The Chignik Unit of the Alaska Peninsula Refuge was not surveyed due to time and weather constraints. Highest caribou concentrations were observed in Wide Bay and mountains surrounding the upper Dog Salmon River. Visual estimates yielded 1537 total caribou (95) calves, representing approximately 13% of the Northern Alaska Peninsula herd.

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

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

Aerial moose surveys have been scheduled to be conducted annually by the Complex to supplement similar surveys done since 1981 by ADF&G. The Complex has conducted surveys on Big Creek, Bible Creek and the Kejulik River on Becharof Refuge. Other area surveys are conducted by cooperating agencies (ADF&G, Katmai National Park) including those at the extreme northern boundary of Becharof Refuge, partially within Katmai National Park and the Dog Salmon River drainage on the Ugashik Unit, Alaska Peninsula Refuge. No winter surveys were conducted in 1995 by the Complex or ADF&G due to insufficient snow cover and poor flying conditions when there was good snow. Katmai National Park Subsistence Specialist Susan Savage conducted a survey at the Park/Refuge border on December 11th. Two hundred and seven total moose were observed including 34 bulls (24% yearlings, 47% medium, 29% large), 135 cows and 42 calves. The above indicates a sex ratio of 25 bulls:100 cows.

9. Marine Mammals

NTR

10. Other Resident Wildlife

NTR

11. Fisheries Resources

Egegik River Creel Survey. The Becharof Lake-Egegik River system is a major drainage of the Becharof National Wildlife Refuge and supports fish populations that sustain subsistence and sport fisheries in the river and

commercial fisheries in Bristol Bay. These populations are also a major food source for brown bears, bald eagles, and other predators/scavengers.

An area of this system that is important to subsistence and sport fishermen is the Egegik River at the outlet of the lake. In this area subsistence and sport fishermen use rods and reels and primarily target coho salmon. In recent years residents of Egegik have expressed concern over apparently declining numbers of coho salmon in the outlet area. These declines may be associated with an observed increase in the numbers of fly-in sport fishermen there. In response to these concerns, in 1994 and 1995 the King Salmon Fishery Resource Office (KSFRO) conducted a two year study to document effort, catch, and harvest of coho salmon at the outlet of the lake and describe the age structure of coho salmon harvested.

Results from 1994 and 1995 indicated that the area is predominantly used by guided fly-in sport fishermen. Effort ranged from 205 angler days in 1994 to 298 in 1995. Four hundred eighty-nine coho salmon were captured in 1994 with 325 (66%) of these fish harvested. During 1995, 694 coho salmon were captured with 502 (72%) harvested. Nearly 80% of the effort in both years was from guided anglers with approximately 8% from fishermen whom considered themselves subsistence users. The remainder of the effort was from unguided sport fishermen. A quarter of the effort resulted in zero catch, and 10% of the anglers captured the maximum daily bag limit of five coho salmon. Most of the harvested coho salmon in both years were age 2.1, having lived two years in freshwater and one in saltwater before returning to the river.

Although most of the captured fish were harvested, comparisons of the harvest at the outlet of the lake with the subsistence catch in the lower river and the commercial catch in Egegik Bay indicates that the harvest from angling is relatively small. During 1994 and 1995 the harvest of coho salmon by subsistence gill netters in the lower river was 850 and 700 fish, respectively. Additionally, 48,000 coho salmon were harvested in the commercial fishery in 1994 and 22,000 were harvested in 1995. The harvest of coho salmon by anglers at the outlet during 1994 and 1995 accounted for 38 and 71% of the subsistence gill net catch and 0.7 and 2.3% of the commercial catch. Although angling effort during the coho salmon season at the outlet of Becharof Lake has increased in recent years, the number of fish harvested would not have a negative effect on the population. This fishery will be monitored periodically to alert managers to any changes in its characteristics.

Featherly Creek Creel Survey and Arctic grayling and Dolly Varden Population Investigation. Featherly Creek is located in the northwestern portion of the Island Arm area of Becharof Lake in the Egegik River system of Becharof National Wildlife Refuge. Featherly Creek contains Arctic grayling and Dolly Varden char and is a major spawning tributary for sockeye salmon. Arctic grayling and Dolly Varden form the basis of a fly-in sport fishery. However, fishing guides report that in recent years the abundance and size of Arctic grayling has declined considerably so that the fishery now targets Dolly Varden. There is limited information concerning the status of these two stocks or the fishery. Therefore, in 1995 the KSFRO conducted the second of a three year study to determine the length and age compositions of these two populations. A creel survey of the sport fishery was conducted in

1994 and 1995.

Results from 1994 and 1995 indicated that the area is predominantly used by guided fly-in sport fishermen. Effort ranged from 43 angler days in 1994 to 122 in 1995. Sixty-eight Arctic grayling and 419 Dolly Varden were captured in 1994 with two (3%) Arctic grayling and 8 (2%) Dolly Varden harvested. During 1995, 104 Arctic grayling were captured with 1 (1%) harvested. During this same season, 1,347 Dolly Varden were captured with 8 (0.6%) harvested. The larger effort expended in 1995 appeared to be due to small returns of coho salmon in other sport fisheries that diverted effort from these fsiheies to Arctic grayling and Dolly Varden at Featherly Creek. None of the anglers interviewed considered themselves to be subsistence fishermen. Results from 1994 and 1995 indicated that the area is predominantly used by guided fly-in sport fishermen. Effort ranged from 43 angler days in 1994 to 122 in 1995. Sixty-eight Arctic grayling and 419 Dolly Varden were captured in 1994 with two (3%) Arctic grayling and 8 (2%) Dolly Varden harvested. During 1995, 104 Arctic grayling were captured with 1 (1%) harvested. During this same season, 1,347 Dolly Varden were captured with 8 (0.6%) harvested. The larger effort expended in 1995 appeared to be due to small returns of coho salmon in other sport fisheries that diverted effort from these fisheries to Arctic grayling and Dolly Varden at Featherly Creek. None of the anglers interviewed considered themselves to be subsistence fishermen.

During sampling in 1995 two hundred six Arctic grayling and 900 Dolly Varden were captured by hook and line. Fork lengths for Arctic grayling ranged from 202-491 mm; ages from 2-10 years. Fork lengths for Dolly Varden ranged from 240 to 715 mm; ages from 3-10 years. Pending the completion of the project in 1996, it appears that these populations are stable. With the relatively small effort and harvest of both species and both populations in apparent good health, there appear to be no concerns for the future of these stocks in Featherly Creek. However, the fishery should be monitored periodically to alert managers to any changes in its characteristics.

Investigation of Coho Salmon along the Pacific coast of the Alaska Peninsula. Many streams of the rugged Pacific coast of the Alaska Peninsula National Wildlife Refuge support large runs of wild Pacific salmon. These salmon provide an important food base for the Alaskan brown bear, the bald eagle, and other wildlife species. They also provide for unique wilderness sport fishing excursions and commercial saltwater fishing operations. Coho salmon provide for much of this activity, yet little is known about these stocks. In 1995, the KSFRO began a two year study to document the abundance of coho salmon in a representative stream near the Yantarni airstrip area.

Using area-under-the-curve methodology, over 100 coho salmon in Clear Creek were marked with Floy tags. The number of marked fish observed during foot surveys was used to estimate residence time of spawning fish. By comparing the number of marked and unmarked fish observed with the average residence time, 3,131 coho salmon were estimated to have spawned during the season. Observations indicated that movements of these fish were dependent upon higher water levels and most fish did not enter the spawning area until high water made passage around or over several beaver dams feasible. Area-under-the-curve methodology appears promising and will be used during the final

year of the study in 1996.

12. Wildlife Propogation and Stocking

NTR

13. Surplus Animal Disposal

NTR

14. Scientific Collection

NTR

15. Animal Control

NTR

16. Marking and Banding

A program of capturing and banding songbirds was initiated on the Complex during 1994 in an effort to yield longterm information on neotropical migratory birds breeding on or migrating through the Alaska Peninsula. To date, 10,506 birds of 50 species have been banded. A breakdown of banding totals were summarized in Section G.7 and in unpublished progress reports on file at the Complex headquarters (Dewhurst and Johnson 1996, Eskelin and Dewhurst 1996, and Moore 1996).

During 1995, approximately 8,500 birds (primarily songbirds) were captured, of those 7,342 (48 taxa) were banded with USFWS metal legbands. The remainder were released unbanded or experienced accidental mortality. Of those that died as the result of banding operations, all but 15 were destroyed with the remainder salvaged. One western wood-pewee and two pine grosbeaks were collected during the banding operations for confirmation of either species or sub-species identification by the University of Alaska-Fairbanks. Eighteen bird specimens (collected and/or salvaged) were ultimately transferred to the University of Alaska Museum in Fairbanks for addition to their collection.

Small Mammal studies were initiated at Mother Goose and Becharof Lakes in 1995. Animals were live trapped (Sherman traps), toe clipped and released. Total capture was 105 individuals consisting of five species: northern red-backed voles, masked and dusky shrews, meadow jumping mice and brown lemmings. Despite attempts at mark/recapture, mortality was high in the traps, primarily for shrews. Seventy small mammals were either salvaged or collected including 53 shrews, 13 voles, 3 jumping mice and 1 lemming. All specimens were donated to the University of Alaska Museum.

Angela Mehall-Niswander of Oregon State University conducted the first field season of her Master's research study of nesting marbled godwits on the peninsula. She was successful in only capturing one marbled godwit, which

she banded and fitted with a radio transmitter. Two hatching young were also captured and examined, but released unharmed. These birds constituted the first marbled godwits ever captured or handled in Alaska.

17. Disease Prevention and Control

NTR

18. Subsistence

Moose. A new subsistence antlered bull moose season opened on August 20th and ran through the 31st for Unit 9(C), Naknek River drainage from the south [State/Federal season overlaps during Sept. 1 -15]. Seven permits were issued and no moose were harvested. Primary access to the Becharof Refuge is via Big Creek from the Naknek River in the King Salmon area. Water conditions were moderately low and required a jet boat for access. Also, the moose just had not moved into the Big Creek Drainage by the end of August. No fly-in hunting was observed.

A subsistence moose hunt opened December 1st and ran through the 31st for Unit 9(C), that portion draining into Naknek River from the south. The hunt was for antlered bulls, although Federal registration permits were issued to allow the take of up to 5 antlerless moose. A total of eleven antlerless permits were issued and three cows were reported harvested to this office. At this writing the regional Subsistence office has received only two harvest reports, so final numbers are unavailable. At least one antlered bull was also taken. December 1995 averaged 9 degrees warmer than normal with only 0.14 inches of snowfall; frozen river conditions were marginal at best during the month and prevented access as did the lack of snow for snowmobiles. Primary access was via ATV on the frozen waterways and overland. Yet, this is the third year for this special season that closes the area to non-subsistence hunters and was the most participated in by local subsistence hunters.

Caribou. In a cooperative effort with the Alaska Department of Fish & Game, the Complex paid for 20 radio collars to be refurbished for use on caribou of the Northern Alaska Peninsula herd. On April 8th, WB Moore and BT Eskelin conducted an aerial survey with AP Smoke from Portage Bay to Wide Bay to scout for caribou on the Pacific side. This information was relayed to ADF&G Wildlife Biologist Dick Sellers, who intended to place five radio collars on Pacific side caribou in the cooperative effort. Weather prevented the attempt, but some collars were placed on caribou along the Bristol Bay side of the Aleutian Range.

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

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

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

Public use inquiries continued to increase again this year. There were inquiries from 45 states and 13 foreign countries (Africa, Australia, Canada, England, Germany, Italy, Japan, Korea, New Zealand, Norway, Poland, Spain and Switzerland). Over **323** public use inquiries were answered during the year (260 in 1994).

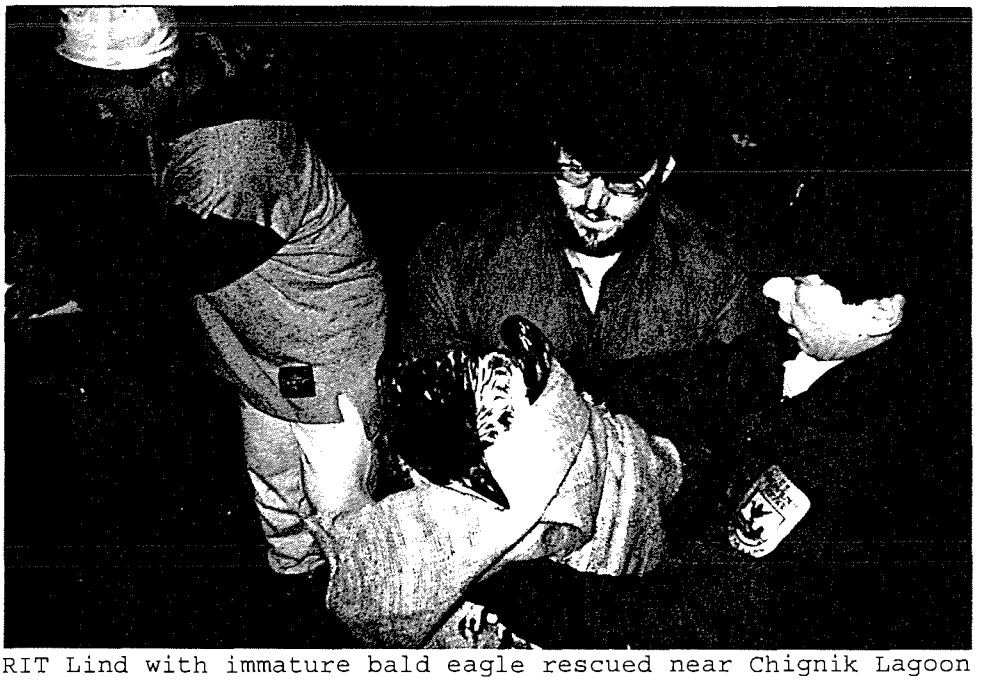
The development of public use regulations as identified in the Public Use Management Plan, were written this year with the help of PUP Clough (see Section D.2.).

2. Outdoor Classrooms - Students

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

January: Staff time was devoted to educating students about declining populations of Arctic nesting geese, using the "Teach about Geese" curriculum, and promoting conservation of geese through the Western Alaska Goose Calendar Art and Literature contest. Programs given included:
17th - RIT Knutsen worked with the 8th grade (17 students) at Bristol Bay school in Naknek for one hour.
18th - RIT Knutsen worked with the 3rd (25 students) and the 6th grade (16 students) at Bristol Bay school for two hours.
19th - RIT Lind worked with the K-6th (12 students) and 7th-12th (13 students) in Chignik Lagoon for one hour.

20th - RIT Lind worked an hour with K (6 students), 1st-3rd (12 students), 4th-6th (10 students) and 7th-12th (18 students) in Chignik Lake.
20th - RIT Knutsen worked with 4th grade (23 students) at the Bristol Bay school for two hours.
25th - RIT Knutsen worked with the 8th grade (17 students) at the Bristol Bay school for one hour.
26th - RIT Knutsen worked with the 6th grade (16 students) at Bristol Bay school for two hours.
26th - RIT Lind worked with K-4th (14 students) for one hour and 5th-12th grades (13 students) for two hours in Pilot Point.
27th - RIT Knutsen worked with the 1st (27 students) and 5th grade (20 students) at the Bristol Bay School. He worked with each class for two hours.
30th - RIT Knutsen worked with the 11th and 12th grades (11 students) and 9th grade (16 students) at the Bristol Bay School. He worked with each class for two hours.
31st - RIT Knutsen worked an hour with the 9th (16 students) and 11th & 12th grades (11 students) at the Bristol Bay School.



RIT Lind with immature bald eagle rescued near Chignik Lagoon within Chignik Unit, Alaska Peninsula NWR. 1/19/95, FWS

On January 19th, 1995 RIT Orville Lind assisted Chignik Lagoon students rescue an immature Bald eagle on the beach. The bird was sent via air frieght to Dr. Scott at the Bird Learning Treatment Center (BLTC) in Anchorage. Students recorded the rescue on video for school records and shared the video with Dr. Scott and this office. Several of the students wrote letters to the BLTC asking how the eagle (GU-MA-GEK) was doing. The eagle survived with a bruise right wing and was healthy enough to release in mid-may. In correspondence with the BLTC and the Chignik Lagoon School, we

were able to have Dr. Scott and his assistant bring an owl and another eagle to show the students after the release of GU-MA-GEK on the beach where he was found. This release of the eagle was also recorded and shared with the BLTC.

March: Environmental education programs this month highlighted declining populations of geese and bears on the Alaska Peninsula. Programs given included:
1st - RIT Knutsen gave a program on "Bears of the Alaska Peninsula" to the 6th grade class from Bristol Bay School. A total of 20 students and 3 adults attended the two hour program at the Visitor Center.
2nd - RIT Knutsen traveled to South Naknek to work with students on the goose calendar contest. He gave a two hour program for 1st-6th grade (12 students) and two adults.
10th - RIT Knutsen gave a two hour program highlighting the goose calendar contest to the 2nd grade (17 students) at the Bristol Bay School.
15th - RIT Knutsen gave a program on "Bears of the Alaska Peninsula" to the 3rd grade class from Bristol Bay School. A total of 21 students and 3 adults attended the one hour program at the Visitor Center.
16th - RIT Knutsen gave a program on "Bears" to the 1st grade class from Bristol Bay School. A total of 26 students and 4 adults attended the one hour program at the Visitor Center.
21st - RIT Knutsen gave a bear program to the 2nd grade class from Bristol Bay School. A total of 17 students and 3 adults attended the one hour program at the Visitor Center.

The first week of the month, National Wildlife Week materials were sent to all schools in the Bristol Bay and Lake & Peninsula School districts. A total of 19 schools received the educational packets.

April: On the 20th, we were notified that the winners of the 1996 Western Alaska Goose Calendar Contest had been selected. We were pleased to learn that several of our local students (Bristol Bay and Lake & Peninsula School Districts) were winners in this important conservation effort. The contest continues to be very popular in our area, with **293** local students entering the poster contest and **84** entering the literature contest.

The following students won prizes in the Western Alaska contest:

Poster Contest: GRAND PRIZE WINNER
Jessica Poindexter, grade 6 in Port Alsworth (Lake & Peninsula School District)

Bristol Bay School District:

Literature Contest:
SECOND PLACE: Michael Hester, grade 8

Lake & Peninsula School District:

Poster Contest:
FIRST PLACE: Crystal Trefon, grade 2 in Nondalton
FIRST PLACE: Cheryl Trefon, grade 5 in Nondalton
THIRD PLACE: Janell Kakaruk, grade 6 in Nondalton

Local students who did not win in the Western Alaska contest were judged by Complex staff in a local contest. We wanted to recognize and give credit to the many students who participate in this important conservation project. The following students won prizes in the local Complex contest:

Bristol Bay School District:

Literature Contest:
THIRD PLACE: Lindsey Aspelund, grade 4

Poster Contest:
FOURTH PLACE: Megan Tibbetts, grade 5
Honorable Mention: John Durand, grade 6
Honorable Mention: Jessica Gardner, grade 8

Lake & Peninsula School District:

Literature Contest:
FIRST PLACE: Chandelle Alsworth, grade 5 in Port Alsworth
SECOND PLACE: Bonnie Apokedok, grade 5 in Levelock
FOURTH PLACE: Adena Shanigan, grade 5 in Pilot Point
Honorable Mention: Kristy Balluta, grade 6 in Nondalton

Poster Contest:
FIRST PLACE: Casey Kalmakoff, grade 10 in Ivanof Bay
SECOND PLACE: Donovan Tague, grade 7 in Perryville
THIRD PLACE: Jocelyn Reamey, grade 4 in Pilot Point
Honorable Mention: Elissa Lind, grade 3 in Chignik Lake
Honorable Mention: Irene Lind, grade 2 in Chignik Lake
Honorable Mention: Anya Furman, grade 8 in Egegik
Honorable Mention: Rebecca Leonard, grade 8 in Egegik
Honorable Mention: Tai Shoemaker, grade 7 in Fossil Point
Honorable Mention: Chevelle Searles, grade 6 in Igiugig
Honorable Mention: Aj Kalmakoff III, grade 8 in Ivanof Bay
Honorable Mention: Lynn Delkittie, grade 1 in Nondalton
Honorable Mention: Randy Kakaruk, grade 4 in Nondalton
Honorable Mention: Brittany Jensen, grade 3 in Pedro Bay
Honorable Mention: Polly Yagie, grade 6 in Perryville
Honorable Mention: Randon Reamey, grade 3 in Pilot Point
Honorable Mention: Jeremy Matson, grade 10 in Port Heiden
Honorable Mention: Larissa Christensen, grade 6 in Port Heiden

May: On the 10th, RIT Lind gave a three hour program for grades K-10th (21 students) at the Meshik School. Orville used the new Service developed curricula, "Seabirds of Alaska." The students really enjoyed using the learning materials in this new EE program.

All prizes and gifts for student winners in the 1996 Goose Calendar Art

and Literature Contest arrived and were distributed on the 15th. The Lake & Peninsula School student prizes were sent to their schools for the teachers to present. The Bristol Bay School winners were given their prizes by Complex staff at a school Awards Ceremony on the 24th.

Beginning on the 15th, an exhibit showing the student's award winning art and literature work was 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 10th, RR Smith and Volunteer Adleman presented an educational program on bears for a weekly children's hour at the King Salmon Library. A total of 18 children (ages 2-12) and four parents attended the 1.5 hour program.

October: On the 12th, RIT Lind took the students at Meshik School in Port Heiden on a field trip to observe Emperor Geese migrating through the village. He worked with 28 students for two hours.

On the 27th, RR Terrell-Wagner and RITs Kelly and Lind participated in a conference call to discuss the 1997 goose calendar contest. We were pleased to hear that the new theme selected ("Emperor, Our Regal Alaska Goose") was submitted by RIT Kelly.

November: Time was spent this month preparing for the upcoming 1997 goose calendar contest. Letters were written to teachers and calendars prepared for distribution to the students.

December: Staff time and energy was spent educating students about declining populations of Arctic nesting geese, using the "Teach about Geese" curriculum, and promoting conservation of geese through the Western Alaska Goose Calendar Art and Literature contest. Programs given included:
7th - RIT Lind gave a series of presentations promoting the goose calendar contest to the students at Meshik school in Port Heiden. He worked with K-12th grade (25 students) for a total of 3.5 hours.
18th - RIT Knutsen gave a series of presentations promoting the goose calendar contest at the Bristol Bay School. He worked with 1st grade (22 students) 2nd grade (14 students), 4th grade (24 students), 5th grade (25) students, 6th grade (23 students) and high school (35 students). He worked with each class 30 minutes. He also gave a 45 minute program on bears to the 4th grade class (24) students.

The 1996 Western Alaska Goose calendars and contest rules for the 1997 contest were distributed to all schools in the Bristol Bay and Lake & Peninsula School Districts, the week of the 13th.

3. Outdoor Classrooms - Teachers

This year we had planned to conduct a "Teacher Education Workshop" for the Bristol Bay and Lake & Peninsula School Districts during their teacher in-service training in late August. At the last minute the two districts decided to have an intensive one-topic workshop instead of offering a

variety of sessions as they have done in the past. Since we were not able to participate, we are planning to conduct a workshop August 1996.

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

4. Interpretive Foot Trails

NTR

5. Interpretive Tour Trails

NTR

6. Interpretive Exhibits/Demonstrations

The Complex's public use staff is responsible for daily management and operation of the King Salmon Inter-agency Visitor Center (Visitor Center). The Visitor Center is a cooperative effort of the U.S. Fish and Wildlife Service, National Park Service, Bristol Bay Borough, and Lake & Peninsula Borough. Other partners who have expressed an interest in joining this inter-agency project include the Bureau of Land Management, and the Department of Fish and Game.

The Visitor Center is managed under a "Cooperative Agreement" that details management responsibilities of the four agency partners. The Fish and Wildlife Service has the lead in providing "Personal Services" including daily operation and staffing the Visitor Center. The National Park Service has the lead in providing for "Non-personal Services" which includes exhibit design/fabrication, informational/educational brochure design and production, and design/production of the "Bear Facts" inter-agency newspaper. All four partners share equally the costs of renting the building and in setting policy for management of the Visitor Center.

The primary purpose of the Visitor Center is to provide information and educational services for adults and children about the natural resources and recreational opportunities on the Alaska Peninsula. During the summer months the Visitor Center functions as an information, orientation and trip planning center. During the winter (November through April) the facility continues to serve visitors and also functions as an environmental education center providing both on and off-site programs for community school children.

The Visitor Center serves a wide variety of people including local and state residents, U.S. citizens and many international visitors. In 1995, visitors signing the guest register represented 48 states and 21 foreign countries. Approximately 20 - 25% of the people using the center in the summer months are visitors from foreign countries.

RIT Smiley Knutsen installing wood exterior paneling on King Salmon Interagency Visitor Center. 4/95, FWS

May - After two years of work, exhibits for the Visitor Center were completed and installed in May. Designing and fabricating the exhibits was an intensive inter-agency effort. Keith Hoofnagle, Regional Interpretive Designer with the National Park Service had the lead in working with Art Services North to design/fabricate the exhibits. Most of the work on writing the text and searching for photos was done by RR Terrell-Wagner with assistance from Mark Wagner, Chief of Interpretation for Katmai National Park.

The new exhibits for the Visitor Center were installed the first week of May. Two staff members from Art Services North and numerous FWS and NPS employees worked to get the exhibits installed including Service employees Angie Terrell-Wagner, Gary Terry and Moose Mumma, and NPS employees Mark Wagner, Robin Leatherman, Richard Shermann, Rich Proctor and John Manka.

On the 13th, we celebrated our third year anniversary and dedicated our new exhibits with a Open House & Formal Ceremony at the Visitor Center. The open house was held 12:00 p.m. to 5:00 p.m. and the Dedication Ceremony was at 2:00 p.m. A total of 125 people visited throughout the day, and approximately 40 people attended the formal ceremony.

Refreshments including a cake were served and door prizes awarded, including fishing trips on the Naknek River and several books donated by the Alaska Natural History Association. We had a 15% sale on all ANHA items during the Open House. Sales were brisk, and we ended the day with a total of $680.00.

Many people were involved in getting the new exhibits designed, fabricated and installed. At the formal Dedication Ceremony we thanked the people who contributed the most in seeing this projected completed. Much thanks and appreciation goes to the following people: Keith Hoofnagle, retired NPS employee who donated many hours of his own time to design the exhibits; photographers who donated their talents including Mark Emery, Jim Gavin, Kennen Ward, Jon Nickels, Donna Dewhurst and Cnythia Kranich; people who

reviewed exhibit text including Tina Neal, Pat McClanahan, Susan Savage, Don Bill, Adelheid Herrmann, Steve Angasan, Mary Jane Neilsen, Norm Stadum, Liz Angaiak, Smiley Knutsen, Shirley Kelly and Orville Lind; and students of Pilot Point School who donated their ivory carvings. The Bristol Bay Historical Society and Museum loaned us several historic photographs and museum objects.

December - On the 1st, we installed a life size model of a nesting bald eagle with two chicks, part of an exhibit that will highlight success stories of the Endangered Species Act. On the 5th, we were notified that our new exhibits (installed in May) had won a "Bonnie-Best of the North Award" for exhibits/displays presented to us by the Advertising Federation of Alaska.

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. Though the visitor center was only open two weeks, (federal shut-down) ANHA sales totaled **$1,724.00** an average of 10.26/visitor.

We were very pleased with our visitation numbers and ANHA sales figures this year. Improvements inside and outside the building are helping us better serve more visitors. A summary of activities at the Visitor Center for calendar year 1995 includes:

Visitation Summary, January-December 1995

Total visitation:	13,166
Total films shown:	722
Total film viewers:	2,416
Total "Bear Safety" viewers:	862
Total signing guest register:	705
Total information requests:	323
Total ANHA Sales:	$33,958
Total ANHA Memberships:	42

Visitors signing the guest register represented 48 states and 21 foreign countries this year. We were pleased to see the wide variety of countries represented (Australia, Canada, China, Czech Republic, England, Estonia, France, Germany, Guam, Holland, India, Italy, Japan, Mexico, Pakistan, Paraguay, Philippines, Poland, Russia, Spain and Switzerland). Approximately 20-25% of people using the center in the summer months are tourists visiting from foreign countries.

Inter-active Information Kiosk. RR Angie Terrell-Wagner worked on developing a computer-driven interactive information system highlighting natural resources and recreational opportunities on the Alaska Peninsula. Funding has been made available through the challenge cost-share program. Our partners involved in helping design/fabricate the interactive program include the Bristol Bay and Lake & Peninsula Boroughs, Katmai National Park and Alaska Multi-media Productions. The inter-active program (includes written text, color slides, video footage and music stored on a compact

disk) consists of a computer-driven touch screen monitor that visitors will use to learn about the Alaska Peninsula.

On June 22nd, Angie traveled to Anchorage to meet with Alaska Multi-media Productions staff to begin developing the inter-active program. The finished product is due to be completed in 1996.

7. Other Interpretive and Outreach Programs

Alaska Marine Ferry System Interpretation. On October 17th-19th, RIT Orville Lind presented educational programs on the Alaska Marine Highway Ferry during its voyage from Kodiak to Sand Point. He worked with 44 students and 5 adults from the village of Old Harbor. Orville gave several presentations highlighting the Alaska Maritime and Alaska Peninsula/Becharof refuges and mission of the FWS; marine mammals, including biology, traditional uses and ivory carving and commercial fishing activities on the Pacific side. This is the second year we have worked with Alaska Maritime Refuge staff in presenting educational programs on the ferry system. Funding for us to participate comes from a variety of sources including the challenge cost-share program from the Alaska Maritime Refuge and the Old harbor School District.

Refuge-specific video tape program. Much staff time was spent this winter producing a video program about the natural resources and recreational opportunities on the Complex. The film highlights bears, caribou, resident and migratory birds, fish and seabird research, geologic resources and subsistence use. We worked closely with Marker Productions (a professional film company based in Florida) to get the 15 minute video tape produced. The film is shown at the King Salmon Visitor Center and at various public and village meetings. It is available for sale through our Alaska Natural History Association branch for $10.00. Funding for the film project came from the Washington Office.

National Wildlife Refuge Week. We conducted several outreach activities to celebrate "National Wildlife Refuge Week" in October. Due to personnel absences, we put off the celebration until the week of the 22nd. On the 23rd and 24th, Cooperative Education Student Brenda Eliason (from Togiak Refuge) and RIT Knutsen conducted presentations for the Bristol Bay elementary students in Naknek. They worked with a total of 184 students in grades pre-school through 5th. Many thanks to Brenda for coming to help us with this important celebration.

In addition, on October 28th, the staff held an "Open House" at the King Salmon Inter-agency Visitor Center. Activities included video programs highlighting several refuges in Alaska, refreshments, door prizes and a sale on all ANHA items. A total of 92 people attended the event with ANHA sales of $953.00. We were pleased with the level of participation especially since we were competing with two other big community events.

Other Outreach programs. On March 9th, RR Terrell-Wagner and NPS Chief of Interpretation Mark Wagner gave an inter-agency program on "Careers in Federal Land Management Agencies." A total of 75, 1st-3rd grade students attended the one hour program at the Bristol Bay School.

On May 6th, Cooperative Education Student Moore conducted a local bird walk for the public. A total of twelve people attended the educational walk.

A cooperative public outreach effort was held on International Migratory Bird Day (May 13th), with a bird walk and mist netting demonstration conducted by Katmai National Park Subsistence Specialist Susan Savage and BT Eskelin. In addition, a local bird count was conducted by teams to be incorporated into a new national effort, similar to Christmas Bird Counts.

On December 5th, RR Terrell-Wagner attended an inter-agency meeting in Anchorage with representatives from the Bristol Bay Native Association (BBNA), Bristol Bay and Lake & Peninsula Boroughs and other private organizations and interested persons to discuss tourism, visitor services, and natural & cultural resources of the Bristol Bay area. BBNA has taken the lead in forming a council to discuss and promote tourism in our region. Complex staff now serve on this new Bristol Bay Tourism Council.

8. Hunting

Hunting is a major 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.

Table 6. Alaska resident and non-resident license and tag fees for 1995.

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

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.

Hunters are required to submit a "hunt report" to Alaska Department of Fish and Game (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 1994 is shown in Tables 7 and 8.

Table 7. Caribou and moose reported harvest for Alaska Peninsula Game Management Units (GMU) 9C and 9E, 1994-1995 (ADF&G data).[a]

Species	Bulls	Cows	Unknown	Total
Caribou	478	91	4	573[b]
Moose	136	6	0	142

[a]Harvest reports include both Alaska Peninsula and Becharof refuges. (Reporting dates for caribou are from August 1994 to March 1995. Moose are for the 1994 season only.)

[b]Other Alaska residents (not local) took 240 caribou, non-resident hunters took 216 caribou and local resident hunters reported 108 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, 1975-1994, GMUs 9C and 9E (ADF&G data).

	Total	Percent	Mean Age		Percent Harvest[a]	
Date[b]	Bears	Boar	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	-	-	-	-
1993-94	310	66	-	-	-	-

[a]Figure represents bears 5 years of age or older.

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

[c]Includes 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.

[d]Includes 12 bears of unknown age and/or sex.

9. Fishing

The rivers and lakes within the Alaska Peninsula/Becharof Refuge Complex

provide world-class fishing opportunities. Game fish include five species of Pacific salmon (chinook, sockeye, coho, pink and chum), Arctic grayling, dolly varden/Arctic char, rainbow trout and burbot. In large lakes, northern pike and lake trout are common. Flowing-water areas most often utilized for sport fishing include: King Salmon rivers (Becharof Refuge and Chignik Unit, Alaska Peninsula Refuge); Big, Featherly, Gertrude and Painter creeks; and Upper and Lower Ugashik lakes, including the Ugashik Narrows (Narrows).

A total of 22 guides/lodges offering fishing packages were "permitted" to operate on the Complex in 1995. 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.

Village Elder Alma Anderson with her 34 pound King Salmon. 7/95, FWS

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 used by the KSFRO.

Each year we celebrate National Fishing Week a little later than others do, as selected youths and Complex staff are not usually available in June. On a warm and sunny July 18th, MH Mumma, MW Terry, DRM Poetter and RM Hood used the one government and several personal boats to take three adults (including one Village Elder), three high school students (two were YCC enrollees) and one grade school student upstream on the Naknek River to fish for king salmon. Volunteer Adleman coordinated the trip, and with the help of MW Mumma, prepared a picnic lunch for everyone. Several fish were hooked and a few were landed, and lots of fun was had by all. The highlight clearly was Village Elder Alma Anderson catching a 34 pound King Salmon -- her first sport fishing experience in a lifetime of commercial/subsistence netting. She advised RM Hood later that her son was going to have the fish mounted for her!

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	Number Harvested				
(winter)	Beaver	Otter	Lynx	Wolverine	Wolf
1984-85	--[a]	24	4	14	14
1985-86	166	25	23	20	10
1986-87	240[b]	112[b]	27	22	10
1987-88	254[b]	152[b]	3	30	14
1988-89	57	53	4[c]	36	23
1989-90	108	52	2	31	23
1990-91	91	31	2	23	12
1991-92	191	90	16	56	55
1992-93	150	47	22	17	13
1993-94	116	26	35	27	52
1994-95	89	49	36	30	11

[a]No data available.
[b]Indicative of increasing prices for short-hair furs.
[c]All taken from Unit 9E.

11. Wildlife Observation

NTR

12. Other Wildlife Oriented Recreation

NTR

13. Camping

NTR

14. Picnicking

NTR

15. Off-Road Vehicles

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

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

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

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 Public Use Management Plan (PUMP) [Record of Decision signed in May 1994] that included a review and recommendations on limiting ORV use by subsistence users. This traditional access cannot be limited without promulgation of new regulations with public hearings in the affected villages. Draft regulations published in 1995 included recommended limits. See Secton D.2. for details.

16. Other Non-Wildlife Oriented Recreation

NTR

17. Law Enforcement

Law Enforcement patrols were flown on August 14th, 18th, 21st, 24th and 26th. Activity for the August subsistence moose hunt on Big Creek was very low with very few boats entering the upper area of the creek. Becharof Lake patrols were flown in conjunction with other refuge flights, very little activity was noted in the Island Arm area.

September 8th, RM Hood and DRM Poetter piloted the new 24' V-hull boat (Refuge Runner), on its maiden voyage, from Naknek to the Egegik River and into and across Becharof Lake to the Island Arm administrative cabin site (see Section I for boat specifics). The journey took seven hours and went well. The boat was built this summer for the purpose of monitoring/patrolling on Becharof and Ugashik lakes, in particular Island Arm area, during the moose hunting season. Directed by the Federal Subsistence Board, the Complex restricted non-subsistence users, via Section 810 of ANILCA, from being dropped off in the Island Arm area by air taxi operators. DRM Poetter spent most of the month based at the Island Arm cabin operating the boat and flying other patrols with the various pilots. Three camps of non-subsistence users could be dropped off by C-Air and two by Branch River Air. The boat functioned very well and only C-Air utilized the area occupying one camp at Cabin Creek and two camps, together, at Otter Creek. The only other camp in the area was a camp of nonresidents dropped off by a King Salmon resident, for less than two days, near Becharof Creek. Air patrols augmented boat patrols and no subsistence activity could be found. The boat was piloted back to Naknek on September 22nd by DRM Poetter and MW Terry.

On September 1st-4th, Special Agent/Pilot Stan Pruszenski brought their PA-18 on floats to the Alaska Peninsula to conduct enforcement activities. He returned on the 9th with the C-185 on floats and left again on the 14th. He assisted DRM Poetter with patrolling the Becharof Lake area a couple days. On the 11th, he climbed aboard a Bell 206 helicopter piloted by FAA Inspector John Elgee. John, a special agent (Wally Soroka and Stan traded out mid-week) and another FAA inspector flew to as many guide camps, on the Peninsula, that had aircraft in use and conducted field inspections for air-

worthiness and document requirements. They were in the area through the 16th. Wally left on the 19th.

September 11th, we received a report from permitted (AKP 04) big game guide-outfitter Howard Flynn's Mother Goose Lake Lodge, that a hunter had killed a moose and removed the antlers but left behind edible meat. On the 13th, AP Bill Smoke and DRM Rick Poetter flew to the lodge, located within the Ugashik Unit, Alaska Peninsula Refuge, and interviewed the witnesses. The suspected hunters were camped on a small pond they could not access with the C-206 on floats. The pond was located 2 ½ miles NW of the outlet of Mother Goose Lake and 2 miles from the closest point of access from the King Salmon River. They flew to the administrative cabin on the SE end of Mother Goose Lake, borrowed the 18' boat and drove to the King Salmon River access point. They hiked into the camp and found two, of the four, nonresident (Ohio) hunters (one fishing and the other fleshing a moose cape) with two sets of moose antlers and one set of caribou antlers. They had portions of the reported moose kill and a caribou totaling about 100 lbs of meat. The moose hunter exclaimed that after relocating the meat from the kill, some 100-500 yards away, a bear got the rest of the meat. The other set of moose antlers was from a kill two days earlier in which the hunter left the entrails in the kill overnight and returned the next day, removed and relocated (200 yds) the meat, and packed back to camp the antlers and cape. When contacted at 3:30 p.m. by Bill and Rick, the hunter had not made any attempt to retrieve meat from the kill and the other two hunters were out hunting for more. Fish and Wildlife Protection Officer Gary Folger arrived in his PA-18 on floats and the information was turned over to him for prosecution in State courts. The last moose hunter was instructed to retrieve his moose meat and meet with Gary when they returned to King Salmon. On the 22nd, Bill seized two sets of moose antlers and associated capes, and one set of caribou antlers and cape when the hunters landed at Katmai Air's dock and at Peninsula Airways in King Salmon. (Gary was busy in court with the other cases so Bill stepped in to help.) The two moose and one caribou hunters were charged with removing antlers from the kill site before all edible meat. They were allowed to return home to Ohio and call the State Magistrate in Naknek on October 6th. All three hunters had lost all their meat to bears and spoilage. They were each fined $1,000 and forfeiture of all antlers and capes.

September 14th, AP Bill Smoke and DRM Rick Poetter were on patrol in the Boundary Lakes area at the northern end of the Ugashik Unit, Alaska Peninsula Refuge when they stopped in at a camp with two of four nonresident (Michigan) hunters present. The two in camp explained that they had flown from Michigan in a C-185 on floats and that the pilot (Dave), plane and other hunter (Kory) had flown into King Salmon that morning for supplies. Just as Bill and Rick were about to leave, here comes Dave in a very nice looking yellow on white C-185. When asked where Kory was, Dave said, "I dropped him off at the lake shore (Becharof Lake) and he is hunting his way back to camp". Bill asks, "What is he hunting for"? Dave says, "Moose". Bill and Rick say, "You better go find him and hope he hasn't killed one or you could be donating that airplane to the government". Dave hops into his plane and Bill and Rick follow in theirs. Dave lands on Becharof Lake and makes like he is trying to locate Kory. Fifteen minutes later he flies back to their campsite. Bill and Rick decide to see what he found and to explain

same day hunting laws. Dave exclaims that he mis-spoke and that he just dropped Kory off at the lakeshore so he could walk back to camp, "he knows better than to shoot a moose after flying on the same day!!" Bill and Rick leave and take another look in the area Dave had taken them. No Kory and no kill site! Where was Kory? Bill and Rick were about to leave when they spotted a hunter working on skinning out a moose a quarter mile from the lakeshore, but some three miles farther east of where they had been led. They landed and low and behold ... it's Kory! He exclaimed he did not shoot the moose that day. His license and tags were seized and Bill and Rick left to meet up with Fish and Wildlife Protection Officer Gary Folger at the Island Arm administrative cabin, where they were basing out of. Bill and Gary flew to King Salmon to get an arrest warrant and conduct some more investigating. Later that evening, all three returned to the campsite. It turned out that Kory had killed the moose the day before (and we suspect more) and had traveled to King Salmon that day to purchase the tags and license. To them, this was a much better crime to admit to. On the 15th, Rick greeted Dave and Kory, when they arrived in King Salmon, and seized the antlers and all the moose meat. On the 18th, Kory went before the State Magistrate in Naknek and was fined $500 and forfeiture of all meat and antlers. On October 2nd, Rick arranged with representatives of Saint Teresa's Catholic Church, at Mile 9, Alaska Peninsula Highway, to take receipt of the moose meat for distribution to the elders and needy families of the three local villages.

On September 20th, a complaint from Branch River Air noted that two nonresident (Florida and North Carolina) hunters, they had just transported to King Salmon, had left moose in field from two camps on one of the Boundary Lakes at the north end of the Ugashik Unit, Alaska Peninsula Refuge. AP Bill Smoke and Fish and Wildlife Protection Officer Gary Folger responded to Branch River's dock to look at the quantity of meat brought in by the hunters. They seized three moose legs, from what appeared to be a yearling moose. Bill and Gary flew to the area reported in the Complex's C-206 on floats, but were unable to find the kill site due to weather and erroneous GPS coordinates. They then interviewed the hunters at King Ko Inn and were given a disposable camera with pictures of their hunt and seized a set of 63" moose antlers. Tissue samples were taken from the antlers and meat, and sent to USFWS special agents in Anchorage along with the camera for film processing and analysis at the Federal Wildlife Forensic Lab. Interviews of the hunters were continued at 8 p.m. at the State offices. The hunter insisted that the antlers had come from a small bodied moose. On the 21st, Bill and Gary returned to reported kill area to look for the moose that the antlers had been removed from. While looking for the kill site they spotted another kill site that appeared to still have meat left on it. They landed and walked to the site. They found a dead cow moose and a partially salvaged bull moose with antlers removed. After photos and evidence gathering they departed. Another crime was discovered (see paragraph below). After circling the area some more, they located the kill site they were looking for originally. They landed at the lake where the air taxi had reported the hunters' camp to have been, and found three moose feet on the shore. They appeared to match the small legs seized earlier. Bill and Gary hiked 3/4 mile to the kill site and found a complete moose that had been skinned and then claimed by a bear. They photographed the animal and cut a bullet from the front shoulder, took tissue samples and

gathered other evidence left at the site. Upon turning the animal over, the wounds matched those described during the hunters' interview. Bill and Gary returned to King Salmon and found that the hunters had fled the state. FWS special agents in the Lower 48 are continuing the investigation.

September 22nd, AP Smoke seized a set of moose antlers at the Branch River Air docks that belonged to two nonresident (Utah) hunters camped in the Boundary Lakes area near where the dead cow and bull moose were located (mentioned in above paragraph). In an interview conducted by Fish and Wildlife Protection Officer Folger, the hunter admitted to not salvaging all the meat from the bull but claimed no knowledge of the cow. He said that he had shot 10 times from a long distance and that there had been two cows with the bull when he started shooting. The hunter was brought before the State Magistrate and fined $2500.00 and forfeited his antlers and meat for not removing all edible meat from moose. On October 2nd, DRM Poetter arranged with representatives of Saint Teresa's Catholic Church, at Mile 9, Alaska Peninsula Highway, to take receipt of 140 lbs. of moose meat to be distributed to the elders and needy families of the three local villages.

AP Bill Smoke and DRM Rick Poetter had a day off on September 29th and decided to take Rick's personal jet boat up Big Creek onto Becharof Refuge to do some subsistence caribou hunting. Having very high water levels, they were able to travel some 70 river miles to where the creek comes near Bucky's Lake. While sitting on a knoll watching for caribou, they heard several shots come for the north. They hiked around and finally spot two hunters. One was standing at the kill site of a cow caribou. They watch for a while. Soon, the hunter begins shooting at the calf that had been accompanying the cow. Two shots prone and one shot standing ... the calf drops. He walks some 250 yards to the calf and pokes it with his rifle then walks back to the cow. The other hunter joins him. Bill and Rick wait 20 minutes or so to observe and then make contact with the two hunters. The older one states that he has killed two animals during their hunt, one a cow and the other is a small bull, he thinks. The younger hunter says he killed the cow laying on the ground before them and states that he has a cow that he harvested, back at camp about 1/8 mile distant at the lake. They had been hunting for days, having been dropped off by an air taxi and were expecting to have been picked up that morning. The hunters were residents of Anchorage and the legal limit of caribou for the area was two animals. Bill and Rick ask, "Who is going to claim the other animal (calf) that was shot?" The younger hunter exclaims, "What other animal?" Bill and Rick describe, in detail, how they saw the younger hunter shoot and then poke the animal to see if it was dead. The hunter still says, "I don't know what your talking about"!! Bill and Rick take the younger hunter out to the dead calf, and **finally** the hunter admits he did shoot the calf but it was because he knew the calf couldn't survive on its own. He was very mad that the air taxi had not come when they were supposed to and blamed them for all his troubles. His license and harvest ticket was seized and he was told to bring all the calf meat to King Salmon and contact Rick when he arrived. The next morning the hunter meet Rick at Fish and Wildlife Protection Officer Gary Folger's office where he was issued a citation of taking a caribou in excess of the legal limit and the meat was turned over to Gary. He was allowed to leave King Salmon but phone in to the State Magistrate in Naknek where he was fined and forfeited the meat. As a note, these were

very nice guys, but it goes to show you people are capable of lying even when caught in the act.

Special Agent Stan Pruszenski flew in on October 9th to assist with fall brown bear hunting season enforcement on the Alaska Peninsula. He left for Anchorage on the 16th after a couple days of weather delays.

Law enforcement patrols were flown on October 11th and 13th in N32PX and the 12th and 17th in N278Z for the brown bear season. On the 13th, SA Pruszenski and DRM Poetter accompanied AP Smoke on a patrol to the south end of the Alaska Peninsula refuge. They were able to reach the north end of Port Moller but were unable to cross to the Pacific side due to low fog. Stops were made at five base camps and a number of camps were noted in and near the refuge. Most camps were not accessible with N32PX and many were marginal for a PA-18.

During the October brown bear season, several hunting camps were noted on the Complex that required float-plane access. The Complex's aircraft were all configured with wheels. Migratory Bird Management, Wildlife Biologist/Pilot Rod King was asked, while on his way through the area surveying waterfowl, to help us out by piloting his assigned amphibious configured C-206 to camps yet not field checked. Special Agent Stan Pruszenski and DRM Poetter accompanied Rod on October 14th, checking all the camps.

The State of Alaska, Department of Public Safety, Fish and Wildlife Protection (FWP) had their new Robinson R-22 on the Peninsula during bear season in October. FWP was able to access all bear camps with it, it proved to be a valuable and safe tool for accessing camps with marginal or unsafe landing areas.

Kanatak Village. Attempts are being made to re-establish the former village of Kanatak located on the Pacific Coast of Becharof Refuge at Portage Bay. In January, several different sources indicated that a small group of 4 or 5 individuals had been spending the winter at the old village site, which has only one dilapidated cabin remaining. The historical site has been selected by the Koniag Native Corporation under 14(h)(1) of ANCSA.

The group proclaimed themselves as the "Native Village of Kanatak Council" and filed with the Bureau of Indian Affairs for formal recognition.

On May 10th, a letter was sent to the "Native Village of Kanatak Council" to meet with the FWS and discuss mutual concerns. This was a polite way to say that they have been in trespass on the old village site the past winter and we need to talk. By month's end there were no responses. Articles in the Bristol Bay Times and the Anchorage Daily News identified that locals (Native and non-Native) were occupying the village with interest in re-establishing the Village of Kanatak within the Becharof NWR.

The Native Village of Kanatak trespass issue took an interesting turn in October. We received a copy of a letter dated October 11, 1995, from Mr. Albert D. Kahklen, Superintendent, Bureau of Indian Affairs, to President of the "Native Village Of Kanatak Council," that the Bureau of Indian Affairs

(BIA) ". . . does not recognize you as the President of Kanatak's tribal governing body, or even for that matter as a member of the tribe." RM Hood followed up on this information by writing the proclaimed president a certified letter advising him that construction, use, and occupation of a cabin at the Kanatak Village site by members of his group was in violation of Service regulations. He was ordered to cease his illegal construction, use, and occupation of any and all cabins at the Kanatak Village site. He was given thirty days from the receipt of the letter to vacate the subject cabin(s) and remove all personal property from Service lands. Follow-up on site visits and action were forthcoming (refer to 1996 Annual Narrative).

18. Cooperating Associations

With the opening of the King Salmon Inter-Agency Visitor Center, a branch of the Alaska Natural History Association (ANHA) was established in 1992. This was the fourth year of operation for the visitor center and ANHA sales of educational and interpretive materials continues to be very good especially for a fairly new ANHA branch. We were very happy with our sales which totaled **$33,958.00** for January - December. We sold a total of 42 ANHA memberships which is up considerably over 1994.

To encourage local residents to use the visitor center and to promote ANHA sales, we offered a "Holiday Sale" the first two weeks of December. ANHA members received a 25% discount and all others a 15% discount. Even though we were only open for two weeks (federal shutdown) our ANHA sales totaled **$1,724** ($10.26/visitor). We estimate a loss of sales totalling $1,500 to $2,000.00 because of the shutdown.

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 1995, which helped to boost sales **33%** above the 1994 figure.

Local resident Jennifer Church began duties as the Assistant Branch Manager for the Visitor Center and Katmai National Park ANHA Branches in May 1995, and worked part-time until the middle of August. Jenny's duties include ordering sales materials, completing stock inventories and making bank deposits. She worked approximately 4 hours per week on an "as needed basis."

19. Concessions

NTR

20. Cabins

It is the policy of the Service to allow the continued customary and traditional uses of existing cabins (constructed prior to December 2, 1980), provided that the uses are consistent with existing laws and regulations and are compatible with the purposes for which the refuge was established (ANILCA 304(d), 1303(b), 1315 and 1316). Service policy is to limit new cabins to those essential for the continuation of an "ongoing activity" or

use allowed within the refuge (ANILCA 304(d), 1303(b)).

We currently maintain a database of all cabins located within the Complex exclusive of those on private inholdings. The database includes: 49 cabins and tent platforms listed by Complex Unit; Location by Township, Range and Section(s); a description of each structure; and type of use pattern.

In 1995 three new permits were issued for cabins within the Refuge.

1. In May, John Durand was issued a permit for a tent platform located at T20S, R44W, Sec. 14 near Big Creek. This was the first permit issued under the Public Use Management Plan rules. The site is located 1/4 mile from the creek and is used for subsistence purposes.

2. In April, John Christensen was issued a permit for a cabin located at T40S, R58W, Sec. 27. This cabin was located in 1990 and posted as a trespass cabin in July of 1991. With the help of RIT Lind in Port Heiden, the owner was located and application was made for a PRE-ANILCA subsistence cabin permit. By years end Mr. Christensen has failed to return his signed permit.

3. In August, Jack Myers was issued a permit for a cabin located at T25S, R46W, Sec. 6. This cabin was thought to be located off refuge for many years. The cabin was constructed in 1967 and is situated very close to the refuge boundary. The cabin was used for a base for commercial hunting activities and subsistence uses for many years and is permitted as a subsistence cabin.

21. Guides-Outfitters

A total of 34 special use permits were issued for commercial big game, sport fish guiding, and transporting activities occurring within the refuges (Table 10). The first Eco-touring permit was issued this year. Commercial big game permits issued in 1993 were five year permits, there are currently 29 valid permits held by 21 different big game guides.

The Big-Game Guide-Outfitter ranking panel for use area AKP 02 met in the Anchorage Federal Building March 14th-17th. ARM Sue Schulmeister (Izembek NWR), ARM/P Paul Liedberg (Koyukuk/Nowitna NWRC) and DRM Poetter, with guidance and assistance from Regional Refuge Program Specialist Daryl Lons, spent 2 ½ days pouring over 15 prospectuses from 13 different guides for this one use area. The highest score was achieved by Mr. Dennis I. Branham of C.D.M., Inc. Branham Adventures.

On May 3rd, Messrs. Dennis and Chris Branham, successful applicant and runner-up for a special use permit for big game guiding in guide-outfitter use area AKP 02 on the Alaska Peninsula National Wildlife Refuge, were notified that they had been disqualified for failing to provide a complete client list. Additional information has been obtained that indicates that both applicants failed to provide a complete client list as required on Form H of the bid prospectus. Therefore, the Service was required to disqualify their proposals and rescind award. Brian L. Peterson received the next highest score and was notified on the 5th that he was next in line to be

awarded the unit. We requested that Mr. Peterson a letter to the refuge manager within 10 days of receipt of this letter indicating his intentions to accept the award of the permit. He accepted. The appeal by Dennis Branham was denied by Regional Director Allen on July 10th. Brian Peterson failed to provide necessary information to obtain his permit for hunting during the fall season. Mr. Peterson said that he didn't have sufficient time to book clients for the 1995 season and would provide FWS with required documents for the 1996 season.

In 1994, the Complex initiated consultation with concerned Native corporations on applications for special use permits that involved Native selected lands. We continued this effort in 1995 with consultation letters being mailed on the 11th. We advised the concerned Native corporations that Complex lands that the applicants have applied to use includes lands that have been selected by their corporation. Until those lands are conveyed, we are required to manage them as part of the refuge. That requirement is in section 22(I) of the Alaska Native Claims Settlement Act and in section 906(o)(2) of the Alaska National Interest Lands Conservation Act. Pursuant to Regional Policy RW-23, the views of these various Native corporations must be obtained before we can grant a permit for use of these lands. We received one letter of non-objection from the Aleut Corporation and have a letter of non-objection on file for the Koniag Corporation.

Table 10. Special use permits for Big Game/Fish Guides/Outfitters and Transporters 1986-1995.

YEAR	BIG GAME GUIDING	FISH GUIDING	TRANSPORTER	TOTAL PERMITS
1995	29	23	10	61
1994	28	21	12	61
1993	26	23	12	61
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

The first permit for Eco-Touring for the Complex was issued in June. Phil Shoemaker of Grizzly Skins of Alaska received a permit for bear viewing,

Bristol Bay Federal Subsistence Advisory Council and 11 members of the Traditional Council attended the Egegik meeting. Two main points have been agreed upon: 1) no clients will be dropped in the Severson Peninsula area; and 2) a total of five (5) parties can de dropped off south of Burls Creek/Bear Creek. This will represent a drop in air taxi clients of approximately 60 percent. We will monitor the area closely this fall to determine the effectiveness of this action.

RIT's Lind, Knutsen and Kelly spent more time in May conducting subsistence waterfowl harvest surveys in each household in the villages of Naknek, South Naknek, King Salmon, Egegik, Port Heiden, Chignik Bay, Chignik Lake, Chignik Lagoon, Perryville, Pilot Point and Ivanof Bay.

A new subsistence one antlered bull moose season opened on August 20th and ran through the 31st for Unit 9(C), Naknek River drainage from the south [State/Federal season overlaps during Sept. 1 -15]. A total of seven permits were issued and no moose were harvested. Primary access to the Becharof Refuge is via Big Creek from the Naknek River. Water conditions were moderately low and required a jet boat. Also, the moose just had not moved into the Big Creek Drainage by the end of August. No fly in hunting was observed.

RITs Lind, Kelly and Knutsen spent considerable time in September conducting subsistence waterfowl harvest surveys in each household in Naknek, South Naknek, King Salmon, Egegik, Port Heiden, Chignik Lake, Perryville and Ivanof Bay.

I. EQUIPMENT AND FACILITIES

1. New Construction

NTR

2. Rehabilitation

In January, new carpeting was installed in the hallways, administrative offices and the universally accessible restroom in Office Bldg. No. 4. The maintenance staff performed all of the work. Also, the linoleum in the kitchen of Bunkhouse Bldg.. No. 3 was pulled up and replaced.

A new garage door opener was installed at Residence No. 28 in February.

The foundation of Residence No. 1 did some shifting with seasonal changes in the weather. In March, several inside doors had to be removed and trimmed to make them functional again.

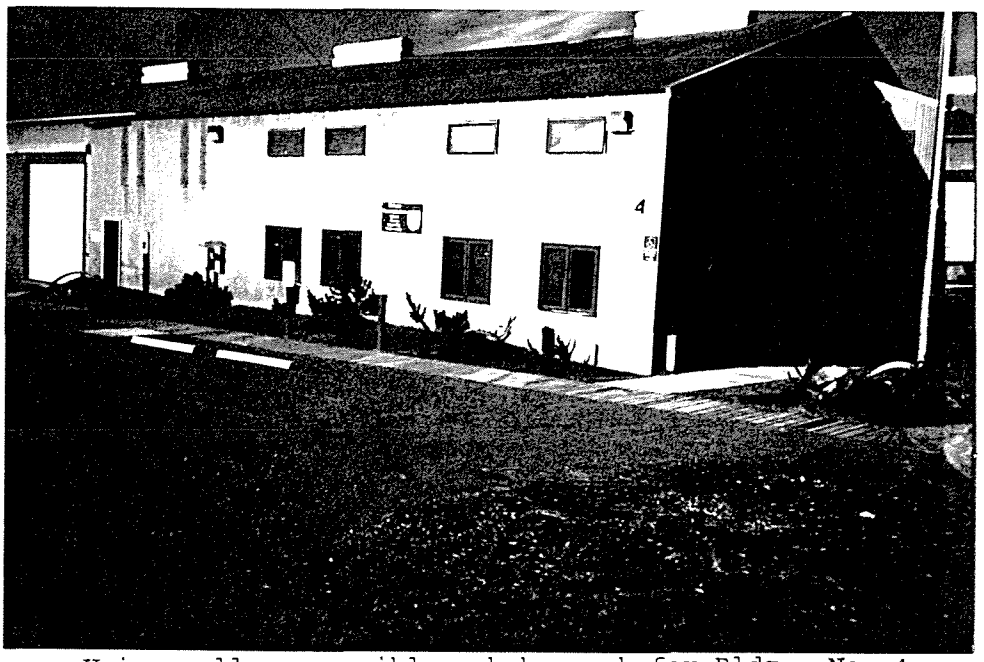
On May 9th, Acting Regional Engineer Davis Bales provided a requested inspection report on Residence No. 8. As anticipated, significant code and safety issues were found. Abandonment and demolition were recommended. We followed up with several requests to Region -- request for replacement funds from MMS; clearance for demolition under Section 106 of the National Historic Preservation Act; and DI-103A, "Certificate of Unserviceable

Property."

In May, MW Terry flew to the Island Arm administrative cabin to install an oil burner stove, and propane range, lights and refrigerator. He returned the next day. The cabin was to be used continuously during the summer for several different ecosystem funded projects and needed better facilities. New bunkbeds and mattresses were also set up in the cabin. Three-high bunks were replaced with two-high bunks with new mattresses which were all picked up excess from the closing of the King Salmon Air Force Station.

Universally Accessible. To conform to universally accessible standards, several projects were undertaken utilizing MMS funding and force account labor from the maintenance staff. Last December the restrooms were modified in Office Bldg. No. 4.

This calendar year's work began with the thresholds in the Office being replaced in January. By September, the old wooden walkway for the office, Building No.4, was removed and the new universally accessible walkway was started. Non-slip plastic gratings were installed at each outside door of the building as well as at the two major entrances of the Bunkhouse Bldg.. No.3. Ten foot sections of treated planking were constructed and put into



Universally accessible rehab. work for Bldg.. No. 4 (Office) - new board walk, thresholds, door knobs and parking area. 06/95, RDP

place and leveled. The boardwalk provides access to the office from the parking area. The parking lot was graded and the handicap parking area was compacted for easy off loading of wheelchairs. New recycled plastic yellow and blue (handicap) parking curbs and signs were installed to designate handicap and visitor in front of the office. Lever-type handicap door

handles were installed on all access doors to the office and bunkhouse.

Inside the Bunkhouse, the bathroom was universally accessible but there were steps leading up to all of the outside doors, denying access to the building. Construction was completed on the ramp and entrance, to the Bunkhouse in October. The ramps (2% grade) consisted of two 20 ft. and two 10 ft. wooden sections that can be disassembled if needed. Steps and railings were installed to complete the project. The ramp leads from the parking area to the south door. This was the only door that could be changed to allow it to swing inward and allow access inside for a person in a wheelchair to maneuver to open and get through it.

Storage Tanks. In March, we received five double-walled fuel storage tanks to hold heating oil. Four of them are 500 gallon for Residence Nos. 26, 27, 28 and 29, and one 1,000 gallon for the bunkhouse. These tanks were to replace underground tanks.

On May 11th, Bristol Bay Contractors delivered three new fire-rated above ground fuel tanks for the hangar (1,000 gallon) and boat-dock (1,000 gallon) aviation gas, and a 500 gallon unleaded gas tank for the compound.

On August 18th, RM Hood toured the Administrative Site with Dave Rein of Linder Construction to review all sites where underground fuel tanks are to be removed and replaced with above ground tanks. Also reviewed were sites where aviation gas and automobile tanks are to be installed. Linder Construction is an 8A contractor who submitted a bid and was awarded the contract for removal of seven 500 gallon underground heating oil fuel tanks and installation of the above ground tanks replacing them; plus the installation of two above ground 1000 gallon aviation gasoline tanks, one 500 gallon unleaded gasoline tank, and one 500 gallon diesel tank, for a mere $69,000. Work began on September 18th and continued at month's end. MW Terry served as ad hoc on-site inspector for the official contract inspector, Architect Harlan Anderson. Harlan made a site visit to make an inspection on the 26th.

Linder Construction completed its contract to remove five underground fuel tanks, install the above ground tanks replacing them, and install two above ground aviation gasoline tanks and one automobile gasoline tank. Work began on September 18th and ended on October 11th. Harland Anderson, Engineering, completed his final inspection on the 11th. There are several punch list items remaining to be corrected.

On October 5th, the remaining above ground fuel tanks were received; this included five 500 gallon fuel tanks, one 1000 gallon fuel tank, and one 500 gallon diesel tank. There were problems with the fiberglass cladding on several most of the tanks, including a three foot tear in the diesel tank cladding. As of this writing, replacement tanks are to be forthcoming from GSA, who the RO purchased them from. Now we have to come up with the funding to get these tanks installed and old tanks removed.

The Linder Construction fuel system installer spent November 20th and 21st finishing up on the installation of the two aviation and one unleaded

fueling systems. "Finishing up" isn't quite right though. What can be referred to as "primitive Pete" easily describes the work accomplished, in part. The tanks were grounded by inserting small bolts into large holes in the tanks skid plates. Paint was not chipped away, bolts were too small and not tight, and small solid copper wire was used. Unsatisfactory by all standards! When the staff tried the systems, the filter bowl in the unleaded system was cracked and leaked, and the nozzle threads were damaged when the technician removed it because it was a regular gasoline nozzle and would not fit into unleaded filler tubes on the vehicles. The hangar system filter bowl leaks and the pump leaks fuel when operated in near 0 degree weather. The pump of the river system also leaks during severe cold weather. These defects were reported to the RO (Engineering). Also, thanks to Engineering, the specified hose and nozzle for the dock aviation system is too massive to handle. It took 21 gallons of fuel to fill the hose and filter. The hose has an inside diameter of 1 ½ inches but the outside diameter is 3", with a nozzle that should be use to fill a supertanker.

Boat. When MMS funding was provided for the purchase of a deep-V hull boat to operate on Alaska's second largest lake, Becharof Lake, and other large bodies of water on the Complex RM Hood decided to do it right. In January, RM Hood and DRM Poetter traveled to Anchorage and attended the Boat Show. With no pre-conceived notions the looked at all possibilities aluminum, fiberglass, and rubber. For our conditions of rocky lakes and rivers, they decided on aluminum to be constructed per their specifications. They gathered as much information as possible and wrote a specifications list identifying precisely what was wanted. Note that all the aluminum boat dealers said, "You tell us what you want and we will build it."

On April 20th, the contract for construction of a 24 foot deep-V hull boat for the Complex was awarded to Koffler Boats of Eugene, Oregon. Construction Chief John Harris, with RO Engineering, was designated to serve as the Contracting Officer's Technical Representative for the project. The bid came in at $41,412.00, which included the boat, trailer and shipping to King Salmon. The Complex provided the 225 horsepower primary outboard motor with a 50 horsepower auxiliary, purchased under GSA contract for a total of $8,100.00. A definite bargain!

To continue with "doing it right," on June 13th-15th, DRM Poetter traveled to Eugene, Oregon with RO Chief of Construction John Harris (who was serving as Contracting Officer's Technical Representative) to conduct a mid-construction inspection of the 24' boat being built for the Complex. Koffler Boats, Inc. had the hull, pilothouse and cuddy assembled. Numerous items were discussed and decisions were made on several minor modifications, which made for a more useful product in the field.

On July 10th, DRM Poetter again traveled to Eugene, Oregon to conduct sea-trials of the boat, as was specified in the contract by the Complex. All went well after a few minor changes to the height the main engine was mounted. The boat was to arrive on the barge August 18th and immediately be put in service conducting patrol related work on Becharof Lake and perhaps the Ugashik lakes.

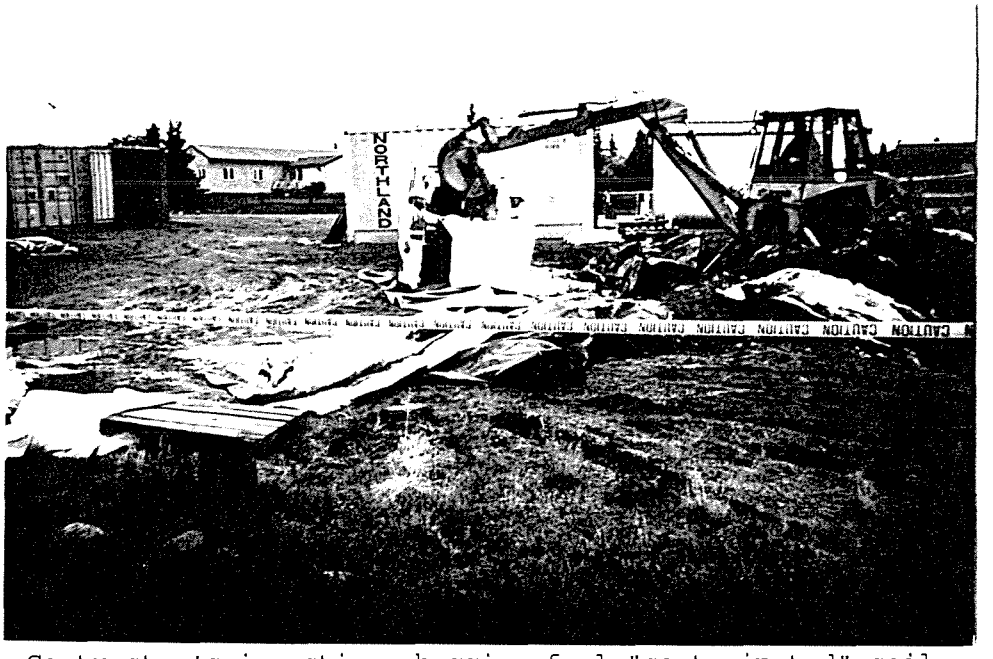
The barge lines delivered the newly constructed boat to Naknek on September 1st. The contract to construct the boat and trailer was awarded to Koffler Boats in Eugene, Oregon for $41,000.00 assembled and delivered in Naknek. It's a beauty. The outboard motors, depth finder, GPS and VHF radio added another $10,000.00 to the total price of $51,000.00. Most people who have seen it can't believe it was that inexpensive. The 225 h.p. main outboard propels it at 37 mph with the 100 gallon fuel tank full and all gear on board. The 50 hp kicker outboard moves it along at 8 mph through hazardous (to propellers) shallow and rocky areas. Both motors have separate controls and gauges and power tilt controls, all operated from the drivers seat. The captain's and mates chains provide a smooth hydraulic ride taking the pounding out of rough water situations. Trim tabs on the stern make it a breeze to keep the boat running level. Numerous storage lockers/areas provide ample space for gear. The hull is 1/4" thick and the sides 3/16" inch, designed for our rocky rivers and lakes. Once the boat was received, it was rapidly prepared for operation. The barge line that the builder had booked early with had over-booked so they passed the shipment onto another line that had a later arrival date of September 1, some 14 days later than planned. We had needed it earlier to work out any bugs, install safety equipment, etc. DRM Poetter and MW Terry worked frantically for three days to get the boat ready to take advantage of the tide timing and calm weather we were having. The following was

New 24' patrol/research boat "REFUGE RUNNER" on duty at the Island Arm administrative cabin on Becharof Lake. Loaded, cruise speed of 38 mph. 09/95, RDP

accomplished: final hookup and programming of the VHF radio; drilled and threaded two sets of 3/8 inch nipples and installed tubing to drain water from the 2' wide raised platform at the stern; constructed trailer bumpers to help load the boat back onto the trailer; changed lower unit fluids in the two motors; installed throw carpeting in the pilothouse (that turned

out to be very nice on the feet at night instead of the metal deck); sealed the porthole type windows in the cuddy (they were leaking water around the rubber seals; loaded immersion suits, life coats & vests, tool kit, first aid kit, maps/charts, etc.; installed 32" throw life-ring and rope; installed self-activating EPIRB; installed a fold-away table on the door of pilothouse for use inside or outside; and short provided test rides for the staff.

On November 7th during our information exchange (RIT) workshop, a staff contest was held to name the new 24' boat. By popular vote, AT Shawback's entry of "Refuge Runner" won. Her prize was a 2 ½" folding blade knife with the FWS emblem etched on the blade. There were over 60 names suggested.



Contractor's in action, bagging fuel "contaminated" soil for shipment by barge in the yellow container vans to Lower 48. 09/12/95, RDP

"Contaminated" Soil. On August 13th, RM Hood met with George Shedlock, Chugach Development Corporation, at the King Salmon Administrative Site to begin the process of removing two piles of fuel contaminated soil. Chugach has been awarded a contract of $213,000 for removal/disposal of the soil. This contaminated soil was stored on the compound in September 1993 when the underground automobile fuel tank was removed. It has taken two years for the Regional Engineering Office to solve this problem.

At last, on September 10th-16th, Chugach Development Corporation removed the two piles of fuel contaminated soil from the King Salmon Administrative Site. Testing revealed that the contaminating fuel was diesel; interesting, since the soil was under a buried automobile gasoline fuel tank. This contaminated soil had been stored on the Administrative Site in September 1993 when the underground automobile fuel tank was removed. The

soil was placed in super sacks; placed in 20 container vans; and shipped by barge to Seattle for final disposal. A full shipping container was reported to weigh over 50,000 pounds. The contract cost $213,000.00.

3. Major Maintenance

Maintenance completed in February on the Bunkhouse Bldg.. No. 3 consisted of:

-- Replace the shower head in the women's bathroom.
-- Repaired the broken kitchen counter drawers.
-- Hooked up timers to the washer and dryer.
-- Installed motion sensors for the lights in men's and women's restrooms.

The following items were completed in the Warehouse Bldg.. No. 5 in March:

-- Installed fire exits signs at three designated door exits.
-- Started removing stored items from the uncertified overhead storage area until a weight load can be determined.
-- Separated excess property items to be sold, transferred or taken to the dump.
-- Hauled two loads of trash to the dump using the Park Service's small dump truck.

The following items were completed in the warehouse, Bldg.. No. 5 in April:

-- Removed all government property from the overhead storage area.
-- Organized Government property items to be put up excess for sale.
-- Hauled trash items to the dump using the National Park Services dump truck.

In April, the boiler/furnace at Residence No. 26 was noticed smoking very black out the top of the stack. The burner would very briefly come on when reset and the furnace room was covered with a film of soot. The nozzle and electrodes were replaced and the air flow through the boiler grates were clogged with heavy soot which created a air flow problem causing an improper air mixture for a clean burn. The stack was removed from the top of the boiler so the unit could be cleaned. The stack was removed at the roof and cleaned out all the way down to the boiler. This was a extremely messy job. It is highly recommend that the stack and the inside of the top of the combustion chamber, where the fumes are released up the stack, be checked and cleaned annually. Two union seals also had to be replaced that started leaking after the boiler was down for a day.

The chain link fence in the front of Residence No. 8 was removed using the case bobcat loader in May. Twenty bobcat loader bucket loads of dirt were dumped and leveled over the area and was fertilized and planted. Several other areas throughout the yard were also filled in.

For the past year we have been having problems with the overhead garage door to the shop. After many attempts to adjust the door trying to get it to work right, we gave up and in July received a new, lighter weight, five section overhead door made by the Wayne Dalton Corp.

Time ran short last fall and the storage sheds at Residence Nos. 28 and 29 didn't get repainted. In August, the sheds were given the new paint job. Residence Nos. 3, 9, 10, 11 and 12 were pressure water sprayed and scraped in preparation for painting. They were all painted by month's end.

4. Equipment Utilization and Replacement

In March, an "Eagle Lift" tailgate was installed on the 1993 Chevy 4x4 pickup. The unit is an electric lift-gate that will help reduce chances of personal injuries during the loading/unloading of heavy items such as 55 gallon fuel drums. It turned out to be a significant back saver through the year.

A pool table, received on excess property from the closing of the King Salmon Air Force Station, was installed in the back room of the bunkhouse in April. The table was very heavy and required the Complex and Fisheries staff to maneuver it by hand through the building.

In May, the Complex purchased a new 18' Lund semi-vee hull boat for use at the Mother Goose Lake administrative cabin for various research projects. Due to its size and a new rule by Federal Aviation Administration restricting Part 135 external loads by our local air taxis, DRM Poetter and MW Terry drove the boat 60 miles up the King Salmon River onto Mother Goose Lake and to the administrative cabin. Before they could do that, RIT Knutsen offered to tow the boat and transport the crew 100 miles down the Bristol Bay Coastline to Pilot Point using his 32' gillnetter fishing boat. The FWS provided the fuel and wages. Leaving at 0800 hours from Naknek, the crew reached the cabin by 2330 hours with no problems. A 45 h.p. jet outboard motor was borrowed from the KSFRO to assist with negotiating a 1/4 mile stretch of class III rapids near the outlet of the lake. Due to extremely high water levels, the trip was a very enjoyable effort.

Aircraft. The Complex's Cessna 206, N32PX was flown to Anchorage for 100 hour inspection on May 16th and returned to King Salmon on the 22nd. After completing the inspection, OAS found the compression to be acceptable and decided not to change the cylinders as they had indicated earlier.

Floats were installed on N32PX in King Salmon this year, the aircraft was returned to service on May 24th.

After many months of negotiations and waiting, the Complex received a PA-18 Super Cub on June 5th. It was previously assigned to NPS at Glacier Bay, they are using a Cessna 185 for the summer and if it works for their operation, we will be assigned the PA-18 permanently.

The Complex's C-206 (N32PX) was flown to Anchorage for OAS to conduct a 100 hour inspection on July 20th. The plane was returned to King Salmon on the 26th. Katmai National Park Pilot Bruce Collins flew N32PX to Anchorage and we had use of their C-206 while N32PX was being worked on.

The Complex's PA-18, N278Z was down for minor maintenance for two weeks in

August. The usual local mechanic at Egli Air Haul couldn't seem to find time to work on it.

On October 3rd, AP Smoke flew Katmai National Park's Cessna 206 to Anchorage for gear change to wheels and to return it after borrowing it for 2 weeks while N32PX was getting a 100 hour inspection and gear change to wheels. On the 5th, AP Smoke flew N32PX back to King Salmon, on wheels. The gear change from floats to wheels was done in King Salmon in 1994 and although this arrangement worked for us, OAS requested to have the gear change performed in Anchorage this year.

The airplane dock was put on the river May 11th this year. It was pulled out of the river on September 28th. We pulled it at the end of the fiscal year due to predicted shortfalls in funding for October (FY 96). It turned out that weather conditions would have allowed the dock and floatplane to remain in service well into the month of November if we had needed it.

5. Communications Systems

On May 23rd-25th, the fire designated TransAlaska Bell 206 helicopter with RO Telecommunication Manager Tim Miller and contracted radio technician Ted Collins arrived to conduct VHF/UHF radio maintenance. New radio flatpack was installed in the Mother Goose repeater, the local VHF phone patch was re-connected, another remote station was installed in the clerical office and a new lead-acid battery was put in each of the two repeaters. We have been told new ni-cad batteries are needed costing approximately $5,000.00 per repeater.

6. Computer Systems

Four 386/25 IBM compatible desktop computers and color monitors were transferred from the subsistence office to replace 286 and AT computers in use by the maintenance staff and Visitor Center. Even though they were in "working order" when sent, one could not be made functional after arriving.

RM Hood was presented with a Pentium-100 computer and 15" color monitor via funding in the RO. The intent was to get all managers on-line with cc:Mail. This unit replaced a 386/SX model w/o a modem.

A Pentium-75 desktop computer and 15" color monitor were purchased for AT Shawback to facilitate doing the budget entries. This replaced a 386/33 that was given to AP Smoke to generate special use permits and spreadsheets.

The purchase of Lotus 1-2-3 R5, Lotus Approach R3, Lotus cc:Mail, Travel Manager 5.0 and Spry-Internet Office made up the primary changes in software for the year.

7. Energy Conservation

After a year of trying to get an electrician to install a purchased yard light for the common area of the office and bunkhouse, we gave up and had

the local electric cooperative come and install one of theirs. This effort has eliminated two lights on the Office Bldg.. No.4 and two lights on the Bunkhouse Bldg.. No.3. Now the parking area is illuminated providing security and light for walking at night from building to building on the main compound.

8. Other

NTR

J. OTHER ITEMS

1. Cooperative Programs

In a cooperating effort, on July 10th, Airplane Pilot (AP) Bill Smoke flew Alaska Department of Fish and Game (ADF&G) Biologist Lou Coggins to Lower Ugashik Lake to take temperature samples. Sampling was done at 2.5 meter increments down to 80 meters, ADF&G found that Lower Ugashik Lake was fairly warm and the temperature was quite stable.

On July 18th and 31st, AP Smoke made flights for National Biological Service (NBS). The flight on the 18th to Hallo Bay returned on account of weather at Hallo Bay. On the 31st AP Smoke transported two biologists and gear from Brooks Lake to Hammersly Lake in Katmai National Park.

AP Smoke flew on September 19th and 21st for Katmai National Park in conjunction with their search a missing hiker who was lost in the Valley of Ten Thousand Smokes when she was swept downstream while crossing one of the streams.

Jim Hummel, Katmai National Park's new Chief Ranger/Pilot arrived in King Salmon in late November. On the 27th, AP Smoke rode with him in supercub N9497R on an orientation flight to the Pacific side of the Park. It was a nice day and Jim was able to get a good look at the terrain in the area.

2. Other Economic Uses

In addition to special use permits issued for cabins, guides, outfitters and transporters, three permits were issued for other uses (Table 11). Two were for university research efforts and one was for helicopter access for Bureau of Land Management (BLM) cadastral survey efforts.

Table 11. Special use permits issued for other economic use and non-economic uses.

	Other Economic Uses		Sub	Non-Economic Uses			Sub	
Year	Oil/Gas	Mineral	Total	Federal	State	Other	Total	Total
1984	9	1	10	4	2	1	7	17
1985	5	1	6	3	2	0	5	11
1986	0	1	1	2	2	1	5	6
1987	1	1	2	4	1	0	5	7
1988	1	0	1	5	1	1	7	8
1989	0	1	1	4	1	0	5	6
1990	2	2	3	2	2	2	9	9
1991	2	0	2	3	0	4	7	9
1992	2	0	2	3	0	2	5	7
1993	0	0	0	1	2	1	4	4
1994	0	0	0	1	0	1	2	2
1995	0	0	0	1	0	2	3	3

3. Items of Interest

NTR

4. Credits

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

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

Photograph credits are listed in alphabetical order.

BJ	Brian Johnson	Complex Staff
DAD	Donna Dewhurst	Complex Staff
DDM	Dwight Mumma	Complex Staff
FWS	Unknown	Service
KSFRO	King Salmon Fishery Resources Office	Service
RDP	Rick Poetter	Complex Staff

K. FEEDBACK

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