Dear reader:

Welcome to our annual report for 2011. The Kodiak National Wildlife Refuge was established in 1941, "… for the purpose of protecting the natural feeding and breeding ranges of the brown bear and other wildlife…" After 40 years, the Alaska National Lands Conservation Act added to this purpose by including other wildlife especially salmonids, marine mammals and migratory birds; fulfilling international treaty obligations; providing for subsistence; and maintaining water quality and quantity. We believe that we have been fulfilling this purpose. Brown bears, salmonids, marine mammals and migratory birds among other wildlife occupy the refuge in their natural diversity, and there are ample opportunities for subsistence users and the general public to stay in a cabin on the Refuge and to take or otherwise enjoy these creatures. This report details how we are fulfilling the purpose of the Refuge through our daily activities. Initially, I highlight some of the major accomplishments of the year and then our Comprehensive Conservation Plan provides the framework for our activities. I hope you enjoy reading it as much as I enjoyed compiling it.

Sincerely,
Gary Wheeler
Wildlife Refuge Manager

TOP ACCOMPLISHMENTS OF KODIAK REFUGE FOR 2011

Kodiak NWR hosted a short visit by Secretary of Interior Ken Salazar and Deputy Secretary David Hayes. They enjoyed viewing some of Kodiak's bear and salmon resources.

Replaced public use cabin at Uganik Island with a cabin that is much more roomy, safe and energy efficient than the old cabin. (10.6)

Worked with Engineering and contractors on successful completion of major renovation project on the Refuge Headquarters building and roof and roof of the maintenance shop. (16.8)

Installed initial Camp Island solar power system, providing electric power for refrigeration and computers and reducing our Carbon footprint. (16.8)

Initiated a mountain goat study on Kodiak Island under the leadership of McCrea Cobb. This is the first mountain goat at this Refuge. It is timely given the potential overpopulation by mountain goats on an island without significant mammalian predators. (3.4)

James Lawonn completed the fourth year of the Kittlitz's murrelet study which investigated the nesting ecology of this rare seabird that is a candidate for Federal listing. Individual pairs nest on scree slopes near the tops of mountains on southwest Kodiak Island. The Refuge received a National Fish and Wildlife Foundation grant for this study. (5.5)

Bill Leacock and graduate student Mat Sorum completed another year of the Karluk drainage bear resource use study. GPS collars recorded some interesting movements of female bears. As part of that study, fish entering the tributary streams to Karluk Lake were counted using video cameras. (1.2)

The Refuge worked with ADF&G and a private entity to initiate a Frazer Bear Cam at the visitor center. Visitors to the center enjoyed seeing bears in real time at the Dog Salmon River and were able to pan the camera to find bears.

We celebrated the 70th Birthday of the founding of the Refuge by showing historical and modern photos of the Refuge. (12.1)

The Refuge issued a permit to Karluk Wilderness Adventures (a subsidiary of Koniag Inc.) to conduct a bear viewing program at O'Malley Creek, Karluk Lake. Koniag is building a lodge on their property at Camp Island to house their guests. (10.2)

Rededicated the Madsen Bear statue to the bear hunting guides of Kodiak Island and installed new interpretive signs at the Visitor Center. (12.1)

The Refuge supported the DOI Secretary's youth hire initiative through the YCC program. An Alaska Native Science and Engineering Program woman minority college student was hired as crew leader. (12.8.g.)

We purchased and transported a new boat to Camp Island, a 17.5 foot Alumaweld Talon. (16.8)

An office was added to the Visitor Center by converting a storage closet into an office. This work was done under contract. (12.1)

Invasive plant species control was again a major program this year. An environmental assessment was written and a Finding of No Significant Impact approved which allowed the Refuge to once again use herbicides for invasive plant control. We applied control methods for orange hawkweed at Camp Island, Canada thistle at Garden Island and oxeye daisy at headquarters. We supported control of invasive plants by the Kodiak Soil and Water Conservation District on private lands adjacent to the refuge. (6.1)

We advocated for “Species of Concern” status for the Karluk River Chinook salmon before the Alaska Board of Fisheries given their inability to meet minimum biological escapements for the past four years. The species was given Species of Concern status. (7.1)

The Refuge received the final report of Climate Change in the Karluk Basin, a report of the workshop held on May 4-6, 2010. The report prepared under contract with USGS contained a prioritized list of projects recommended by knowledgeable scientists that should be funded to deal with climate change in the Karluk Basin. (1.7.b.)

We conducted inventory and monitoring projects such as the Terror Lake intensive aerial bear survey, the bear steam survey, the mountain goat survey, the feral reindeer survey, the deer winter survival survey and the nearshore and offshore bird surveys. (Goals 1, 2, 3 and 5)

We completed the Kodiak NWR Commercial Fisheries Support Facilities Management Plan and ensured delivery to our permittees. (11.3)

Refuge Information Technician Tonya Lee ensured completion of the spring and summer waterfowl harvest surveys among subsistence users. (8.2)

Provided public use cabins on Kodiak NWR for 1,440 public use days. (10.6)

The Refuge provided an opportunity for 143 volunteers to contribute over 17,000 hours to the refuge. More than 50 people assisted with biology project work, with 10 young college graduates working on research projects during the summer field season. Youth participation increased this year through the Kodiak Refuge Youth Leadership program and other opportunities such as the Crab Festival Parade, Junior Ranger program, MAPS, FUN, and Happy Trails programs. Thirty-three local residents between the ages of 11 and 25 contributed more than 700 hours towards Refuge programs. (15.8)

The Refuge Visitor Center hosted over 26,200 visits this year. (12.1)

There were a dozen dockings of cruise ships in Kodiak this year, and we provided at least 15 Interpretive Ranger talks and 2 formal “Road Scholar” talks during cruise ship visits. (12.8b)

Ensured education for all ages that Visitor Center programs provided:

- Supported the 16th year of salmon camp to educate Kodiak and village elementary students.
- Supported salmon adventure camp for Jr. High aged kids.
- Supported the YCC program for high school aged youth.
- Supported the high school state Envirothon outdoor education competition.

- Hosted a Kodiak trails day event where the trail to our MAPS station at our HQ site was improved.
- We supported Career Fair Day at the Kodiak High School by having a booth with Environmental Educator on site.
- Edited several Fish and Wildlife Journal articles about programs on the refuge. Articles about refuge activities were picked up by the *Fish and Wildlife Journal* and *Refuge Update* publications.
- The Refuge sponsored a float and costumed walker in the Crab Fest community parade on Memorial Day weekend.
- Ensured that the Visitor Center website was maintained. Articles were posted about volunteer projects and environmental education programs, and an events calendar was included. Lisa Hupp updated sections of the official website including a new avian section and bird list. (Goal 12)

Kodiak National Wildlife Refuge
Annual Work Plan/Accomplishment Report FY-2011

Purposes of Kodiak National Wildlife Refuge

On August 14, 1941, President Franklin D. Roosevelt signed Executive Order 8857 establishing Kodiak National Wildlife Refuge ". . . for the purpose of protecting the natural feeding and breeding ranges of the brown bears and other wildlife on Uganik and Kodiak Islands . . ."

Under the Alaska National Interests Lands Conservation Act, the purpose of Kodiak Refuge was expanded beyond that identified in the original establishing order. Section 303(5)(B) of ANILCA states: The purposes for which the Kodiak National Wildlife Refuge is established and shall be managed include:

> (i) to conserve fish and wildlife populations (and) habitats in their natural diversity including, but not limited to, Kodiak brown bears, salmonids, sea otters, sea lions and other marine mammals and migratory birds;
>
> (ii) to fulfill the international treaty obligations of the United States with respect to fish and wildlife and other 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 ensure, 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.

Refuge Vision Statement

The Kodiak Refuge staff has developed the following statement about what they believe the Refuge will be in the future given the mission of the Refuge System, the specific purposes of Kodiak Refuge, and other relevant Service mandates:

> *Brown bear, fish, and other wildlife populations will continue to thrive on the Kodiak National Wildlife Refuge in their natural diversity, living in pristine habitats. Refuge management will blend public and private partners in a dynamic alliance that fulfills the purposes and goals of Kodiak Refuge. The Refuge will provide a long and lasting legacy of resource stewardship for the enjoyment of current and future generations.*

Refuge Goals, Objectives, and Accomplishments

The Refuge vision statement and the Refuge purposes provide the framework for developing goals and objectives for managing the Refuge. Goals are broad statements of desired future conditions. Objectives are concise statements of what the Refuge wants to accomplish.

Objectives identified for one goal are often applicable to other goals. To avoid unnecessary duplication, each objective is listed only under the goal that represents the clearest connection. Objectives are numbered and organized in priority order under each goal.

GOAL 1: Increase our knowledge of fish and wildlife populations, their habitats, and their interrelationships. Subsequently, update the inventory and monitoring plan annually with a regional review and sign off by the Alaska Refuge Chief every five years.

1.1 Within two years of approval of this plan, complete a step-down plan to integrate and direct inventory and monitoring of plants, fish, and wildlife.

1.1.a. Draft wildlife protocols.

Drafted a 5-year ungulate management strategy document, which outlines monitoring and research priorities. [COBB]

The protocol for survey of brown bear abundance, referred to as the Intensive Aerial Survey or IAS, has been drafted. Drafting of the protocol pertaining to survey of bear stream use is on hold pending completion of analysis by Dr. Mark Udevitz of USGS/Alaska Science Center. [LEACOCK]

Larry VanDaele and William Leacock processing a captured sow. W.B. Leacock/USFWS

1.1.b. Complete introduction section.

Introduction section was deferred due to decision to use that time (i.e., two months) to assist with NRDA action on the Deepwater Horizon Oil Spill. [PYLE]

1.2 Collaborate with the Alaska Department of Fish & Game (ADF&G) when monitoring and conducting research on State of Alaska trust species within the Refuge.

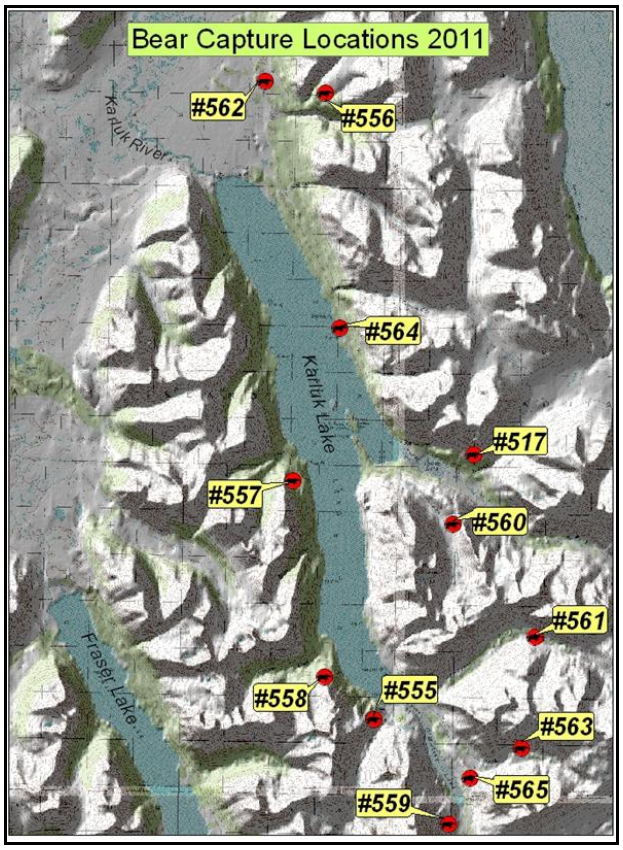
Collaborated with ADF&G on mountain goat summer population surveys. Consulted with ADF&G in development of a research plan focused on quantifying mountain goat resource selection patterns and improving population composition surveys. [COBB]

Collaborated with ADF&G on spring deer carcass survey. [COBB]

Cooperation has continued with ADF&G through collaborative work with the Brown Bear Working Group of the Northern Forum, Washington State University, the University of Idaho, Kodiak Brown Bear Trust, Kodiak Unified Bear Subcommittee (KUBS) and monitoring bear populations in the Refuge –Stream Surveys, Intensive Aerial Survey, the Southwest Kodiak Brown Bear Project, and numerous other efforts. [LEACOCK]

We continued our efforts with the Southwest Kodiak Brown Bear Study. Between June 5 and 9 we captured 13 brown bears (12 adult sows and 1 boar) and in the Karluk Lake basin. We fitted 12 adult females with GPS collars and subsequently tracked movements of collared bears through summer and fall. Site-specific data was collected at over 900 locations. [LEACOCK]

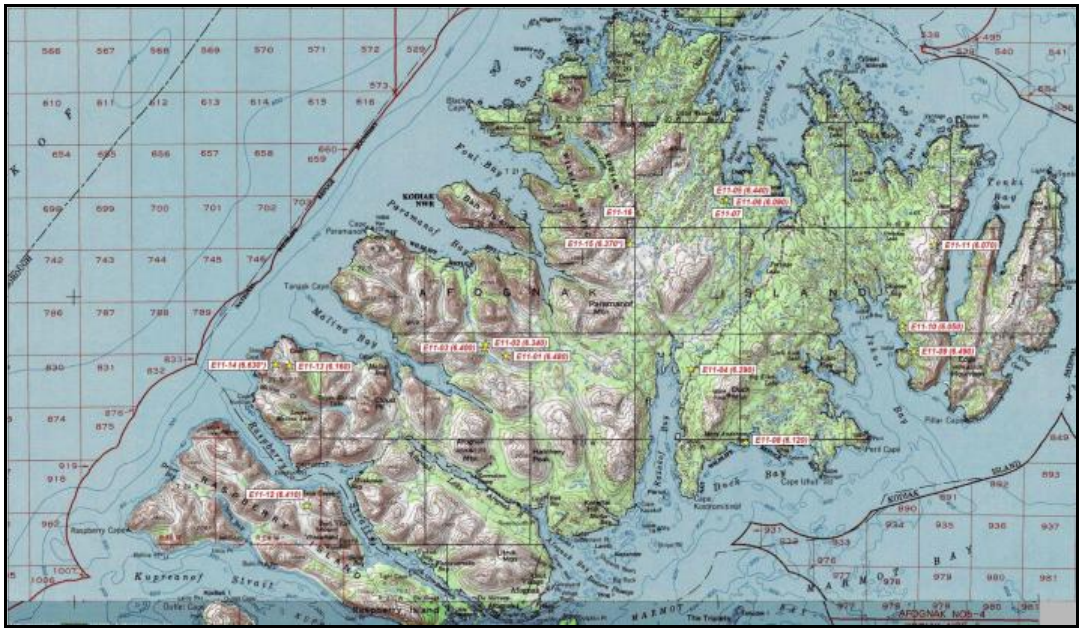
Close-up view of Bear #560 with her GPS collar. W.B. Leacock/USFWS



Bear capture locations within the Karluk Lake basin. W.B. Leacock/USFWS

Collaborated with ADF&G and Afognak Native Corporation on a successful elk capture project on Afognak Island June 9 – 15. We captured 14 adult cows and 1 adult bull. We fitted all cows with VHF radio collars. [LEACOCK]

Elk capture on Afognak Island. W.B. Leacock/USFWS



Elk capture locations on Afognak Island. Larry VanDaele/ADFG

Contributed to the Brown Bear Viewing Guide Training held by Kodiak College and KUBS. Provided a lecture on Kodiak Brown Bear research to the class. [LEACOCK]

We worked closely with ADF&G and Washington State University to carry out a study of Kodiak Brown Bear Diet based on stable isotopes and mercury signatures. A final report by WSU was submitted to the Refuge. [LEACOCK]

We contributed to the Northern Forum's Brown Bear Working Group's efforts throughout the year. [LEACOCK]

1.3 Curate wildlife study records using professional database-management standards and methods so data and reports may be readily accessed and understood by future Refuge biologists and others

1.3.a. Create Portable Document Files (pdf) of biological publications and final reports and archive these electronic documents on the refuge's network.

We continued to research the technical literature and to build an archive of scientific papers that variously address condition, dynamics, status, and interrelationships of Refuge resources. We continued to create pdf files of scientific papers and annual reports. We have constructed an EndNote bibliographic database of pertinent literature. [PYLE/COBB]

All data from the Southwest Kodiak Brown Bear Project was entered into ESRI ArcGIS and Excel databases. Data from the Upper Karluk River Hill Camp was entered into ESRI ArcGIS. [LEACOCK]

1.3.b. Create ArcGIS and Microsoft Access databases of current and historical spatial data pertaining to Kodiak.

Established spatial databases, and completed data entry and verification, for data collected in two studies, the Southwest Kodiak Brown Bear Project and the Upper Karluk River Bear Use. [LEACOCK]

1.4 In cooperation with ADF&G, monitor for fish, wildlife, and avian diseases that may affect the Kodiak ecosystem, including chronic wasting disease and West Nile virus.

Avian diseases were not studied directly in 2011, however, due to mortality events where several birds were found dead in the same location; carcasses were submitted to the National Wildlife Health Center in Madison Wisconsin for examination for cause of death. In June, three northwestern crows and one black-billed magpie were submitted and all tested negative for West Nile virus, had no significant bacterial infections, and did not have depressed brain cholinesterase levels, ruling out poisoning by organophosphate insecticides. All four birds submitted also tested negative for avian influenza viruses. In October, a northwestern crow, black-legged kittiwake, and glaucous-winged gull were submitted. In all three cases, no significant bacterial pathogens were isolated and cholinesterase levels were not depressed. Because blood at the sites of trauma was clotted, anticoagulant poisoning was not suspected. All three birds tested negative for avian influenza viruses. [CORCORAN]

1.5 In cooperation with ADF&G, other external partners, and other programs within the Service, monitor for aquatic invasive species such as green crab, mitten crab, Atlantic salmon, New Zealand mudsnails, crayfish, amphibians, and aquatic weeds. With these same partners, participate in the development and distribution of effective education and outreach materials.

No funding or time allowed for monitoring in 2011. Outreach was conducted.

1.6 Strive to publish results from Refuge-sponsored research in peer-reviewed journals. Report routine fish and wildlife survey results regularly in publicly accessible reports.

Results from biological monitoring efforts and studies were reported in progress reports, contract reports, and memoranda. A total of seven news articles were collectively contributed by wildlife program staff (McCrea Cobb, Robin Corcoran, Bill Leacock, Bill Pyle) for publication in the Service's Fish and Wildlife Journal. [PYLE]

An exhaustive effort was made to reconcile a dispute regarding interpretation of results from the cooperative study of brown bear diet involving Washington State University, ADF&G, and the Refuge. Since the dispute could not be resolved a manuscript will not be submitted for publication consideration. The contract report will be submitted to ARLIS. [LEACOCK]

1.7 Contribute to implementation of the Service's strategic plan for responding to accelerated climate change.

1.7.a. Participate in meetings and conferences pertaining to climate change involving Refuge interests.

Participated in a planning workshop hosted by the Western Alaska Landscape Conservation Cooperative in April. [LEACOCK/PYLE]

1.7.b. Evaluate information needs pertaining to climate change assessment on the Refuge.

The Refuge and participants in the May 2010 workshop "Anticipating Climate Change Effects in the Karluk River Watershed" reviewed a draft report generated by the USGS Alaska Science Center. Delivery of the final report, a product of Refuge-USGS collaboration in a Quick Response Partnership, is expected in October 2011. [PYLE]

1.7.c. Collaboratively address identified priority information needs.

The Service's WAKLCC awarded three collaborating refuges a grant for implementing a project entitled "Moored All-season Vertical Temperature Arrays in Lakes on Kodiak, Togiak and Alaska Peninsula/Becharof NWRs". The primary goals of this project included: (1) establishment of baseline water temperature monitoring in six lakes including two lakes each on Kodiak NWR, Alaska Peninsula/Becharof NWRC, and Togiak NWR; (2) integration of USFWS data within an established NPS database; and (3) evaluation and dissemination of data and summary results on status and trend of lake temperature regimes in the WAKLCC. Consistent with protocol developed by the National Park Service (NPS), Kodiak Refuge established instrument arrays for long-term, all-season monitoring of lake temperature at Karluk Lake and Red Lake in September 2011. These two lakes provide rearing habitat to the largest populations of sockeye salmon in the Kodiak Archipelago. Water temperature will be recorded hourly at pre-determined intervals of water depth. In the future, array sites will be visited twice annually (early spring and fall) to deploy and retrieve additional temperature data loggers to record near-surface water temperatures, and to download data. Per cooperative agreement, data we acquire will be shared with the NPS and with the U.S. Geological Survey to facilitate evaluation of trend in water temperature at local and regional scales. [PYLE]

Water temperature monitoring array prior to deployment in Red Lake, Kodiak NWR. Bill Pyle/USFWS

GOAL 2: Ensure that Kodiak brown bears continue to flourish throughout the Refuge and congregate at traditional concentration areas and that this unique population continues into the foreseeable future.

To complement ADF&G objectives for brown bear populations, Refuge objectives include the following:

2.1 In cooperation with ADF&G, continue to use all available knowledge to monitor and evaluate trends in bear population size, composition, and mortality associated with recreation, subsistence, research, defense-of-life-or-property (DLP), and illegal kills.

We documented mortality on the Refuge, primarily via evaluation of ADF&G sealing records. We assessed trend in abundance in the Terror Lake area via the IAS procedure. We assessed trend in composition of the bears inhabiting southwest Kodiak Island via the survey of bear stream use.

Documented brown bear mortality within the Refuge boundary (including Native-conveyed lands) during July 1, 2010 through June 30, 2011 was 118 bears. Twelve of those mortalities were natural deaths. There were no reported in Defense of Life and Property (DLPs) mortalities on Refuge lands. Hunter harvest on Refuge lands was 106 bears. A total of 41 bears were harvested on the Refuge during the fall of 2010, and 65 bears were harvested on Refuge lands during the spring of 2011. Five bears were reported harvested within the Karluk Lake basin, including 2 boars and 3 sows. Two collared Project sows were shot within the Karluk Lake basin during the fall 2010. One sow was not retrieved by the hunter.

Of the sport harvested bears 25 (24%) were females and 81 (76%) were males. Total skull size (width plus length) for sport harvested bears ranged from 19.06 inches for a sow harvested on Three Saints Bay to 28.56 inches for a boar harvested

at Seven Mile Beach. Six trophy-class boars (≥28 inch total skull measurement) were taken during the year. They were all taken from the SW corner of the Island (Red Lake River, Sturgeon River, Spiridon, Red Lake, and Seven Mile Beach) except for one shot on Uganik Bay. The largest sow taken was one from Karluk Lake with a total skull measurement of 24.81 inches.

Average skull size for all harvested bears was 24.91 inches. Skull width ranged from 12.25 inches for the sow harvested on Three Saints Bay to 17.50 inches for a boar harvested on Uganik Bay. Average skull length was 15.48 inches. Skull width ranged from 6.81 inches for the Three Saints Bay sow to 11.38 inches for a boar harvested at Red Lake. The skull width to skull length ratio ranged from 0.53 to 0.70.

SEX	AVE ESTIMATED AGE	AVE SKULL WIDTH	AVE SKULL LENGTH	AVE TOTAL SKULL SIZE	WIDTH:LENGTH
All sexes	9.0	9.5	15.5	24.91	0.61
Boars	8.0	9.8	16.0	25.7	0.61
Sows	14.8	8.5	13.9	22.4	0.61

We commend and thank John Crye and Larry VanDaele of ADF&G for their excellent record keeping and their continued cooperation, assistance, and sharing of mortality and harvest records. [LEACOCK]

2.2 In cooperation with ADF&G, maintain surveyed bear densities no lower than 10 percent below the lowest number within the following ranges: southeastern Kodiak and southwestern Kodiak 0.69–0.76 bears per square mile; northwestern Kodiak 0.64–0.72 bears per square mile. *Note: bear density objectives were revised by ADF&G in 2005 and the Refuge concurs with this revision, as reported below.*

Table 1. Estimated density and numbers of Kodiak brown bear in management subunits of the Kodiak Archipelago, Alaska, in 2005 (90% confidence intervals in parentheses). Subunits where ownership is comprised mainly of Refuge lands highlighted. Source: ADF&G.

Management Subunit	Area (km^2)	Density[a]	Independent Bears[b]	Total Bears[c]
Northern Islands	2,281	132 (33)	300 (175)	430 (108)
Northwest Kodiak Is.	2,983	224 (56)	668 (167)	908 (227)
Northeast Kodiak Is.	1,005	70 (18)	71 (18)	101 (25)
East Kodiak Is.	1,738	230 (46)	400 (80)	74 (149)
Southwest Kodiak Is.	3,498	219 (44)	765 (44)	1,094 (219)
Aliulik Peninsula, Kodiak Is.	837	208 (52)	174 (52)	249 (62)
Total	12,342	193 (42)	2,378 (519)	3,526 (790)

[a] Estimated density of independent bears per 1,000 km^2.

[b] Estimated number of independent bears (excludes dependent cubs).

[c] Estimated number of bears including dependent cubs and independent bears.

2.2.a. Monitor trend in bear population size.

We assessed trend in the abundance of brown bear in the Terror Lake survey area between 27 and 29 May. Analysis of survey data indicated that the bear density has remained stable since the last survey was conducted in 1997 (e.g., no statistically significant change). Estimated density was 222 independent bears per 1,000 km^2 in 2011, 228 independent bears per 1,000 km^2 in 1987, and 273 independent bears per 1,000 km^2 in 1997. [LEACOCK]

Surveying bear abundance, Terror Lake area, late May 2011. W.B. Leacock/USFWS

2.2.b. Monitor trend in use and composition of bears that utilize salmon-spawning streams of southwest Kodiak Island.

Surveys of bear stream use were conducted between July 14 and August 10 on the tributaries of Karluk Lake, the southwest network of streams, and the Dog Salmon River. Thirteen complete surveys were conducted on the Southwest network of streams (Southeast Creek, Red Lake River, Connecticut Creek, Pinnell Creek, Sturgeon River, and East Sturgeon River) compared to the long-term average of eight surveys per season. The number of bears counted per survey on the SW river network was more than last year's survey (64 bear/survey vs. 52 bear/survey), but lower than the long-term average (1985 to 2002) – 64 bears/survey vs. 90 bears/survey. Single bears represented a larger proportion of the population than the long-term average (58% vs. 46%), but was less than in 2010 (58% vs. 83%). Maternal bears comprised 14% of all bears counted this year

versus the long-term average of 18%. Cubs of the year (COY) made up 11% while older cubs comprised 16% versus the long-term averages of 12% and 25%, respectively. Family groups made up only 42% of all bears recorded versus the long-term average of 54%. This is considerably more than the proportion of family groups counted in 2010 (17%). [LEACOCK]

2.3 Increase frequency of bear density estimates to improve bear population–trend monitoring in areas of high public use or special management concern (e.g., Karluk Lake vicinity).

The Refuge, in cooperation with ADF&G, has regularly planned to complete surveys in two IAS areas per year by completing one IAS area immediately followed by completion of survey in another IAS area. This (consecutive area) approach has not worked because time available for survey, about a week, is inadequate to complete survey of two areas. Consequently, consistent accomplishment of objective 2.3 will require concurrent operation of surveys in two areas, which will require a minimum of two pilot/observer teams per area. [LEACOCK/PYLE]

2.4 Monitor and evaluate bear use, human use, and bear–human interactions at bear concentration areas that have established public use. Specifically study bear use, bear movements, and bear–human interactions in the O'Malley River area. Apply results to guide adaptive management in these bear concentration areas using an open planning process with ample opportunities for stakeholder involvement.

This bear obviously could not read or didn't care about the No Trespassing sign in Moser Bay. Corcoran/USFWS

2.4.a. Analyze data, interpret results, and report finding from study of bear use of the upper Karluk River during September-October of 2006-08.

Draft report completed. [LEACOCK]

2.5 Evaluate the management utility of the bear stream surveys using appropriate cross-comparisons with bear density survey data, climatic data, fish escapement data, and biological modeling efforts. Complete evaluation with assistance of Alaska Biological Science Center, U.S. Geological Survey, by 2007.

USGS evaluation in progress. [PYLE]

2.6 Investigate population size, movements, and habitat use of bears on Afognak Island. Develop a method for indexing trends in population size by 2008 and complete research on movements and habitat use four years after funding is obtained. [LEACOCK]

Accomplishment deferred due to work on other priorities and limited cooperative funding. [LEACOCK]

2.7 By 2006, complete assessment of the genetic diversity of the Kodiak brown bear so as to understand gene flow between the southern and northern Archipelago, the vulnerability of Kodiak brown bears to wildlife diseases, environmental stresses, and parameters of population viability.

Report completed in 2006. Publication manuscripts in development by USGS Alaska Science Center in cooperation with Refuge. [LEACOCK]

2.8 By 2010, develop and implement a method of monitoring the supply of berries suspected of being essential to the welfare of the Refuge's brown bear population.

No action was accomplished during FY-2011 due to a lack of staff and funding.

GOAL 3: Manage nonnative species to minimize impacts on native resources, while continuing to provide opportunities for harvest.

3.1 To facilitate population and habitat management, monitor—in collaboration with ADF&G—trends in summer distribution, size, and productivity of the mountain goat population on the Refuge. By 2008, initiate monitoring of trends in winter distribution of the mountain goat population.

3.1.a. Continue collaboration with ADF&G on assessment of trend in summer mountain goat population distribution, size, and productivity.

We completed an island-wide survey of mountain goats on Kodiak in July and August. We counted a total of 2,348 goats, for an island-wide population estimate of 2,400 to 2,600 animals. Evaluation of results indicated a trend of continued increase in the population segment inhabiting southern portions of Kodiak Island but relatively stable numbers in central and northern Kodiak Island. The continued increase in goats in sourthern Kodiak Island has become a substantial management concern. In response, the

ADF&G sought to increase harvest opportunity and harvest and, in 2009, instituted a registration permit as the primary harvest management regime. Concern about this same population segment prompted research action by the Refuge, as addressed under objective 3.4. [COBB/PYLE]

This was the first year of the mountain goat study on Kodiak Island. Cobb/USFWS

3.1.b. Monitor trend in management of hunter harvest of mountain goats.

ADF&G regularly updates the Refuge on harvest success by hunt area. [COBB] What is this harvest?

3.2 Design and implement studies to evaluate habitat use and preference of deer on Kodiak Island to facilitate understanding of deer influence on the condition of winter range habitat.

No action was accomplished during FY-2011 due to a lack of staff and funding.

3.3 Develop methods, in partnership with ADF&G, to monitor deer population trends on Kodiak Island to facilitate harvest and habitat management.

3.3.a. Monitor trend deer harvest via cooperation with ADF&G on its hunter harvest survey.

We continued to collaborate with ADF&G to include a question about deer harvests levels on Federal lands. ADF&G summarized the results from the hunter harvest surveys per contract agreement with the Refuge. Results from analysis of 2010 - 2011 hunter harvest data indicated that harvest on federal Refuge lands accounted for about 41% of the harvest in the archipelago (1,676 of 4,046 deer), which is consistent with the previous 4-year average of 39%. [COBB/PYLE]

3.3.b. Continue to survey trend in deer overwinter mortality until the method is replaced with another a more direct, accurate, and informative method of population trend assessment.

In collaboration with ADF&G, we conducted deer carcass surveys at 3 study sites: Olga Bay, Chief Cove, and Sitkalitak Straight. Overall, we found fewer carcasses than during the 2010 survey (29 carcasses) and 2009 survey (20 carcasses). A report submitted to the Refuge Manager included discussion of options for improving the statistical rigor of this indirect survey of overwinter mortality, as well as recommendations on potential method for direct assessment and monitoring of trend in deer abundance. [COBB]

3.4 By 2010, evaluate and report habitat use and preference of mountain goats to improve understanding of goat influence on habitat conditions.

We developed a comprehensive study plan to address mountain goat resource selection patterns on Kodiak. As a part of this study plan, we initiated a pilot study this summer aimed at quantifying mountain goat diets and feeding site selection across 3 study sites. Between May and August, we attempted to collect goat pellet samples for

Mountain goats on the Hepburn Peninsula, summer 2011. Refuge biologists and volunteers collected goat pellet samples and surveyed vegetation at feeding sites to determine diets and feeding site selection. Adia Sovie/USFWS

microhistological analysis and to conduct vegetation surveys at feeding sites and random locations. As a result, we collected 200 fecal samples and sampled almost 300 vegetation transects. We mailed fecal samples to Washington State University's Wildlife Nutrition Lab to determine plant composition. We entered data from vegetation surveys into a MS Access database, and we have started statistical analyses of these data. [COBB]

3.5 In cooperation with ADF&G, annually monitor trends in distribution, size, and composition of the elk population on Afognak Island. Maintain the sample of marked animals to enable this population monitoring by assisting with funding and logistics related to animal-capture operations.

ADF&G deployed additional VHF telemetry collars on elk at Afognak. ADF&G's late summer surveys of elk abundance were incomplete because of inclement weather and dispersed herds. [COBB]

3.6 By 2012, develop an objective understanding of the effect of deer on supply of berry-producing shrubs of primary importance to brown bears of Kodiak Island.

No action was accomplished during FY-2011 due to a lack of staff and funding.

3.7 Assess trends in reindeer population abundances and productivity

A total of 315 reindeer were counted during surveys conducted in early July. We saw relatively few calves (10/100 does). Another survey conducted by the State in mid July produced an estimate of 335 reindeer. Given the focused scope of survey coverage and limited distribution of reindeer, we concluded that at least 90% of the population was observed in these surveys. [COBB]

A herd of reindeer southwest of the Ayakulik River, Kodiak. Reindeer were surveyed twice in 2011. McCrea Cobb/USFWS

GOAL 4: Continue to improve understanding and management of furbearing and ongame mammals that use Kodiak Refuge.

4.1 By 2007, in cooperation with the Region 7 (Alaska) Marine Mammals Management Office, develop and implement a sea otter survey to annually index population trends. Provide staff support for periodic, Archipelago-wide surveys conducted by Marine Mammals Management Office staff.

We have continued to be in close communication with MMM regarding sea otter survey design on Kodiak. Plans to evaluate the survey redesign during summer 2011 were cancelled because of funding shortages. Since then, we have been in contact with MMM and hope to reschedule surveys for summer 2012. [COBB/PYLE]

4.2 In cooperation with the Region 7 Marine Mammals Management Office, expand communication on sea otters with the Alaska Sea Otter Commission, village councils, and others.

We serve as the liaison between MMM and Kodiak's village concerning sea otter tagging. [COBB/LEE]

4.3 In cooperation with ADF&G, develop a method for monitoring trends in river otter populations, modify the existing ADF&G trapper questionnaire to capture information on refuge-specific furbearer harvest, and document estimated furbearer harvest and population trends in the annual refuge narrative report.

No action was accomplished during FY-2011 due to a lack of staff and funding.

4.4 Initiate study of habitat ecology of snowshoe hares by 2012.

No action was accomplished during FY-2011 due to a lack of staff and funding.

4.5 During cabin maintenance and management of derelict structures, take precautions to minimize damage to native bat populations.

Precautions were taken to minimize damage to native bat populations.

GOAL 5: Monitor populations of resident and migratory birds as indicators of ecosystem health.

5.1.a. Conclude the evaluation of the winter seabird and waterfowl procedure.

Managers concurred with biologist's recommendations to incorporate minor edits into the existing draft report (Population Trends and Annual Density estimates for select Wintering Seabird Species on Kodiak Island, Alaska) and research options for publishing as grey literature. It was also agreed to investigate the possibility of working with new Region 7 biometrician Anna-Marie Benson to reanalyze the data incorporating a simple habitat model, extrapolating density to population estimates, and drafting manuscripts for selected species for submission to peer-reviewed publications. At this point in time there is no request from managers to conduct or redesign the survey. **[CORCORAN]**

5.1.b. Evaluate and prescribe survey design and analysis methods for estimating trends of selected bird and mammal species from data collected on the summer coastal survey.

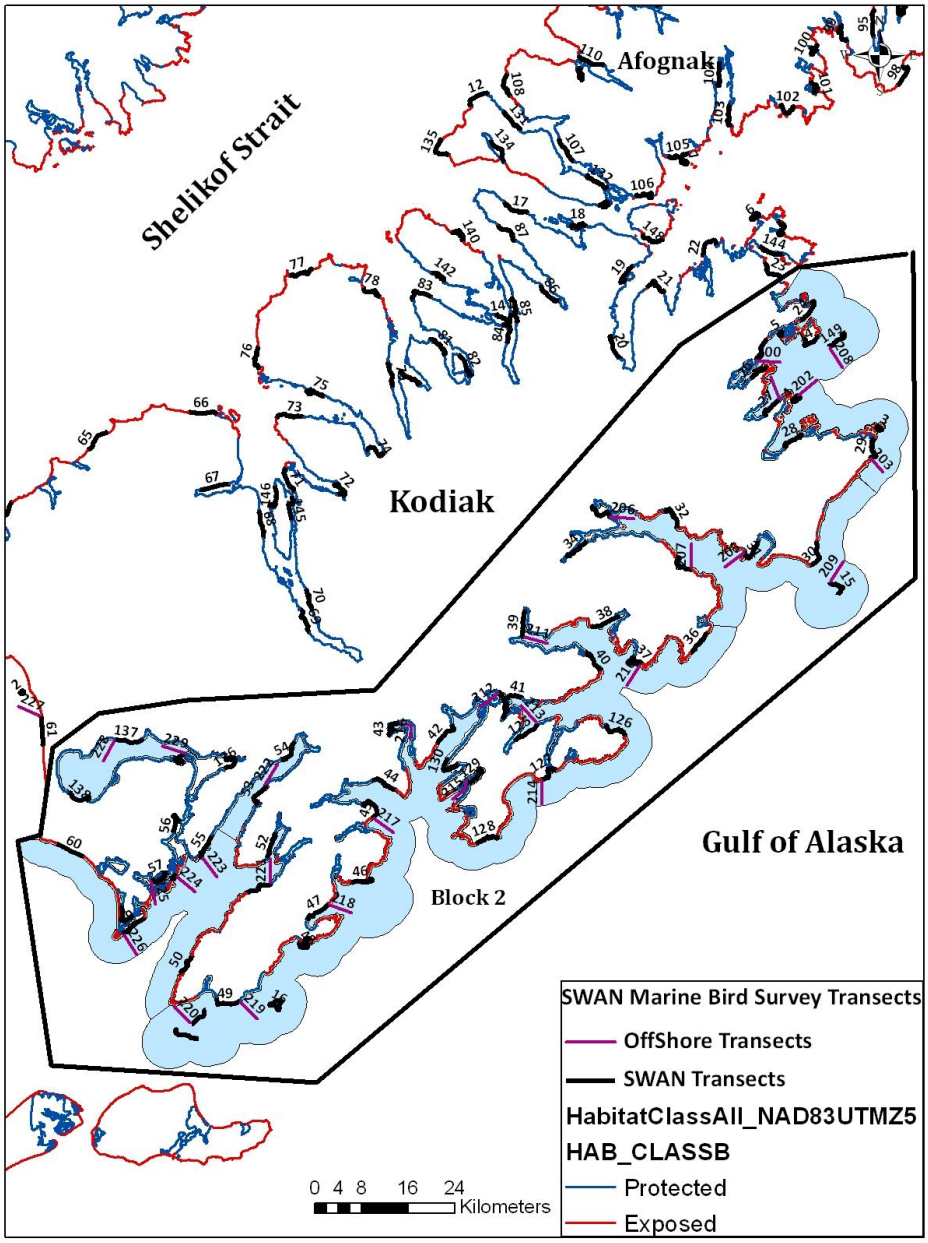
The evaluation was being directed by former Region 7 biometrician Joel Reynolds in collaboration with Alice Shelly a contracted biometrician. Joel has been in consultation with his replacement, Nathan Roberts, and is working to finalize a draft report to be delivered to the Refuge in FY2012. The summer harlequin duck coastal survey was not conducted in 2011 and managers agreed with biologist's recommendation to discontinue the survey. [CORCORAN]

This Rhinoceros Auklet was seen on the near shore bird surveys in August.
Robin Corcoran/USFWS

5.1.c. Initiate Regional Summer Nearshore Marine Bird Monitoring Survey as possible replacement for summer harlequin duck coastal survey to monitor coastal bird populations.

Surveys based on the National Park Service's Southwest Alaska Network (SWAN) Nearshore Marine Bird Survey were initiated along the east side of Kodiak Island from Chiniak Bay to Alitak Bay in summer 2011. This multispecies survey has been conducted at Katmai (2006-2010) and Kenai Fjords National Parks (2007-2010) and uses methods comparable to those developed to monitor the nearshore bird community in Prince William Sound over the past two decades. Modifications to the SWAN survey for Kodiak include addition of offshore transects to 5km, distance estimation to determine species detectability, and multiple with-in season surveys. The 2011 survey covered 1,500 km of coastline with transects sampling about 20% of the 3,000 km^2 study area.

The most commonly counted species were black-legged kittiwakes, glaucous-winged gulls, tufted and horned puffins, common murres, marbled murrelets, harlequin ducks, and pigeon guillemots. Field operations were supported by Jeff Lewis, who piloted the M/V Ursa Major II, and volunteers Pauline Hseih, Michelle Lebeau, Jenna Cragg, Deanna Russell, and David Sinnett of USDA-Wildlife Services. [CORCORAN]



Map of skiff-based transects completed along the east-side of Kodiak (Block 2) for the Nearshore Marine Bird Survey, June and August, 2011.

5.2 Continue to monitor populations of wintering waterfowl to provide information to the State of Alaska and the Alaska Migratory Bird Co-management Council in support of sound management of recreation and subsistence harvest of waterfowl. Monitoring

should emphasize species such as black scoter, harlequin duck, and Barrow's goldeneye, which make up much of the waterfowl harvest in the Archipelago.

No action was accomplished in FY-2011 due to a lack of staff and funding. At this point in time there is no request from managers to conduct or redesign the winter seabird survey. [CORCORAN]

5.3 Continue periodic monitoring of trends in distribution, size, and reproductive success of the Refuge's population of nesting bald eagles. By 2007, determine appropriate frequency and sample sizes for long-term monitoring.

Joel Reynolds, former Region 7 biometrician, and Alice Shelly, contract biometrician, issued a final report "Study Design Assessment for Surveys of Bald Eagle Nesting and Productivity on Kodiak NWR". The Refuge is still waiting on a companion report assessing monitoring frequency and the ability to detect trends. Manuscript reviewers on this report and the 2002 Refuge Biological Review concluded that productivity surveys were not warranted unless: 1) surveys indicated declines, or 2) relevant covariates explaining the high degree of variability in productivity were included in the survey Given this assessment, Refuge managers and biologists have agreed to discontinue annual productivity surveys. If funding permits we intend to adopt the regional Migratory Bird Management Coastal Bald Eagle Survey. [CORCORAN]

5.4 By 2007, develop a banding program to monitor trends in survival and productivity with a focus on sea duck species (black scoter, harlequin ducks, and Barrow's goldeneye) that make up much of the local waterfowl harvest. Areas along the Kodiak road system and adjacent to the villages would be given priority for the program.

No action was accomplished in FY-2011 due to a lack of staff and funding. [CORCORAN]

5.5 Identify important habitat areas on the Refuge for bird species of conservation concern, including bald eagles, Steller's eiders, harlequin ducks, emperor geese, marbled and Kittlitz's murrelets, red-throated loons, gray-cheeked thrush, orange-crowned warblers, and yellow warblers. Develop habitat maps by 2010.

5.5. a. Study nesting ecology of Kittlitz's murrelet.

This summer was the fourth year of a multi-year field study of Kittlitz's Murrelet (KIMU) breeding ecology on Kodiak National Wildlife Refuge. Two full-time volunteers, Steve Crane and Deanna Russell, assisted wildlife science technician James Lawonn with KIMU field research during May 10-September 10, 2011. Between early-June and mid-August, the team successfully located 22 active nests. Of those 22 nests, 14 made it to the chick stage, and four successfully fledged a chick. Chick provisioning, nest depredation and egg abandonment were recorded at 19 nests using remote cameras. The research team also conducted 16 audio-visual surveys of birds flying to and from nesting areas, recording 372 total detections from five locations. In addition to characterizing nest sites and early morning attendance behavior, embryo, egg fragments, and feathers were collected that will be used to expand the genetic database of KIMUs in Alaska. The total of 53 KIMU nests studied over the four years will contribute important

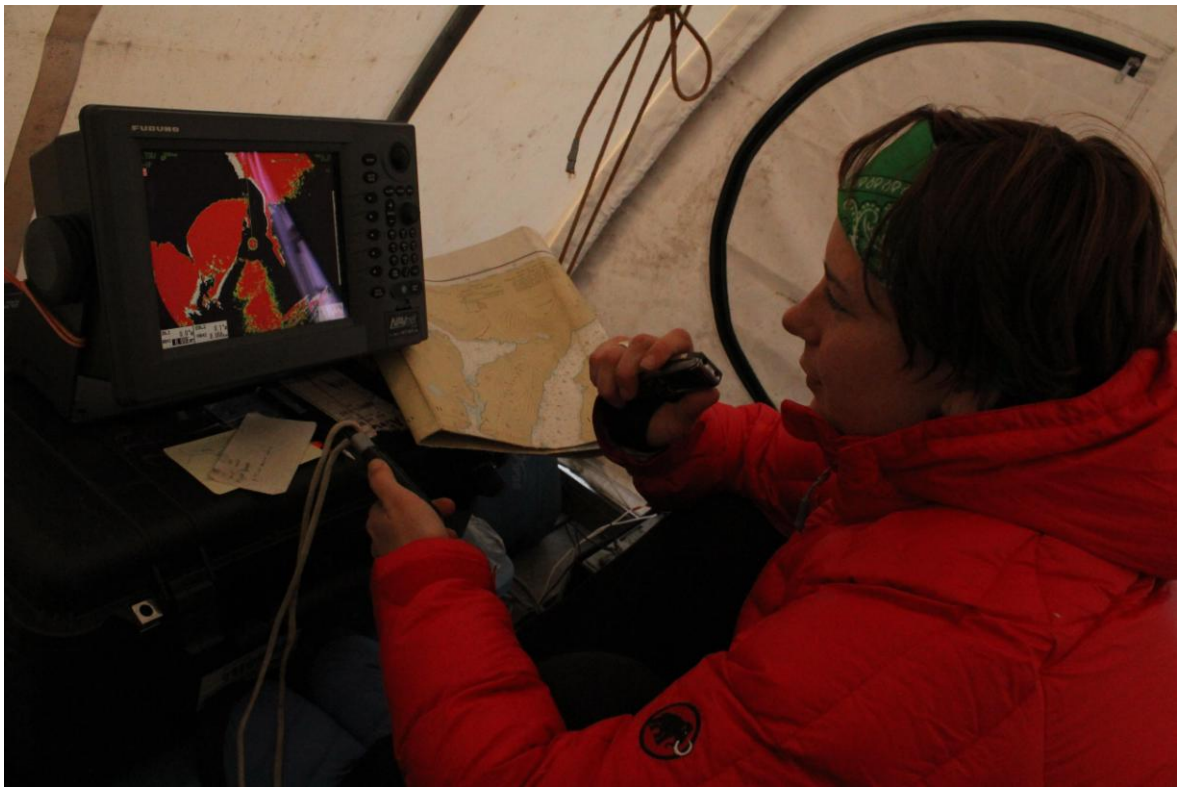
data for the listing determination for this candidate species under the Endangered Species Act. This project continues to be a cooperative effort between the U.S. Fish and Wildlife Service (Kodiak Refuge and Ecological Services), the U.S. Geological Service Alaska Science Center, and Oregon State University (OSU). James Lawonn is using this research for his master's thesis under the guidance of Dan Roby at OSU scheduled to complete the degree in Fall 2012. [LAWONN/CORCORAN/PYLE]

Volunteer Deanna Russell holding a Kittlitz's Murrelet chick. James Lawonn/USFWS

5.5. b. Radar monitoring of *Brachyramphus* murrelets on Kodiak Island.

In cooperation with Alan Burger and Jenna Cragg of the University of Victoria, British Columbia (B.C.), the Refuge facilitated completion of the second season of field data collection investigating diurnal, seasonal, and spatial patterns of inland flight behavior of Kittlitz's and marbled murrelets using radar. Marine radar is a commonly used tool to study marbled murrelets throughout B.C. and south along the west coast of the U.S., and has shown high statistical power to detect population trends. This is the first effort in Alaska to use radar for monitoring murrelets. Field work in 2011 involved a combination of radar, acoustic, and at-sea surveys. A combination of shore stations and boat-based

radar surveys (M/V Ursa Major II) were conducted between June 2 and July 17. Thirty radar counts (155 hours) were completed yielding 6,781 murrelet detections. Daily counts were much higher in 2011 then 2010 providing stronger and more consistent diurnal activity patterns and the highest counts occurred in unforested watersheds. Murrelet data from the SWAN nearshore marine bird survey (5.1.c) will be used to relate radar counts to at-sea abundance and distribution.



Murrelet radar technician Stacy Hrushowy records observations of murrelets flying between at-sea foraging locations and inland nesting locations using marine radar mounted on the flying bridge of the Refuge research vessel M/V Ursa Major II. Jenna Cragg/Univ. Victoria, BC

5.6 Continue collaboration with the Migratory Bird Management Office, Alaska Region, on periodic monitoring of wintering Steller's eider populations to contribute to monitoring and recovery efforts under the Endangered Species Act. Expand this effort to include monitoring of emperor geese.

If funding permits, we intend to complete aerial surveys of the east-side of Kodiak in cooperation with the Migratory Bird Management Office every five years. We are scheduled to conduct the next survey in winter 2015. [CORCORAN]

5.7 Develop baseline contaminants information for environmentally sensitive resident birds by 2010.

No action was accomplished in FY-2011 due to a lack of staff and funding.

5.8 Facilitate annual operation and completion of two breeding bird surveys in the Kodiak vicinity.

Established in the early 1980s, both road-based surveys were successfully completed by volunteers Cindy Trussell (observer) and Rich MacIntosh (data recorder, navigator) in June 2011. Results were issued to USGS in July. [CORCORAN]

GOAL 6: Maintain and restore native plant populations, communities, and habitats.

6.1 Develop and conduct reconnaissance surveys for invasive plants—particularly orange hawkweed *(Hieracium aurantiacum),* a known invasive on Kodiak Island—every five years in the vicinity of villages, private lands within the Refuge (e.g., lodges, canneries), and Refuge sites subject to routine use by people. Where invasive plants are detected, initiate collaborative control and eradication actions.

6.1.a. Completed NEPA process and implement invasive management plan.

In November 2010, Refuge Manager Wheeler approved a "Finding of No Significant Impact" regarding the Refuge's proposed invasive plant management plan, as documented in a 2010 environmental assessment (EA). In 2011, we initiated EA implementation. We updated pesticide use proposals and resumed the full scope of IPM management at sites formerly subject to invasive plant control action (Camp Island

Sonny Vinberg, Lands and Natural Resources Project Manager for Koniag, Inc. treats orange hawkweed at Camp Island, June 2011. Bill Pyle/USFWS

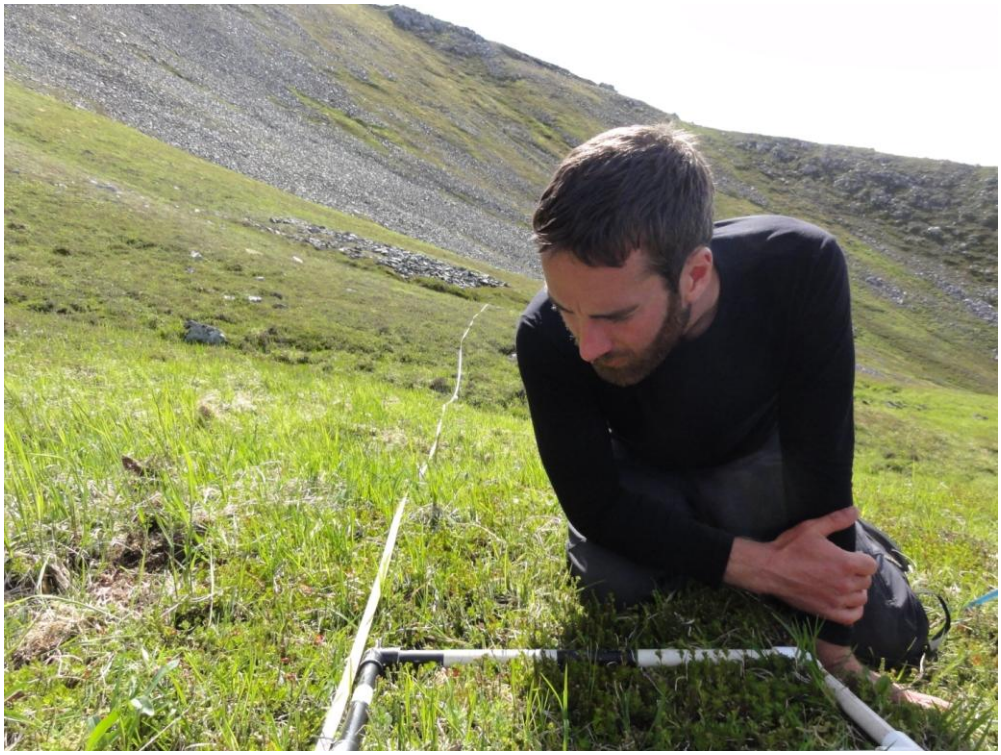
vicinity, Garden Island, Refuge Headquarters). In collaboration with the Kodiak Soil and Water Conservation District, we initiated control action on creeping buttercup and orange hawkweed at Alitak Cannery, southern Kodiak Island. We continued to document plant responses to IPM management on permanent plots located in and adjacent to treatment areas. Volunteers again proved invaluable to project work. A total of 20 volunteers collectively contributed 628 hours of labor in support of invasive plant management field operations including training, surveys, treatment site preparation, control, and monitoring. With exception of Refuge HQ, support of fieldwork including transportation was provided by a grant from the Service's Invasive Management with Volunteers Program. [PYLE/LEE]

6.1.b. Conduct reconnaissance survey of sites for invasive plants.

Coordinated with Kodiak Soil and Water Conservation District to survey invasive species in the village of Karluk. [LEE]

6.2 By 2008, describe species composition of plant communities for selected areas of the Refuge, with special emphasis on the Kodiak Refugium and areas likely to contain endemic plants.

As a part of a study of mountain goat feeding selection, we conducted vegetation surveys of alpine habitat across 3 study sites on Kodiak (Hepburn Peninsula, E. of Uyak Bay, and Terror Lake/ Hidden Basin region). We quantified vegetation diversity and composition in over 5000 plots (each 20x50cm). We identified 161 unique plant species. We are in the process of analyzing these data. [COBB]



Volunteer Ross Dorendorf surveys alpine vegetation as a part of a study on mountain goat feeding site selection, summer 2011. Adie Sovie/USFWS

6.3 By 2010, develop a monitoring program to evaluate major plant communities in the vicinity of remote weather stations.

No action was accomplished in FY-2011 due to a lack of staff and funding.

GOAL 7: **Conserve the abundance of natural salmonid populations for continued human and wildlife use and to ensure the diversity of species as indicators of the health of the Refuge's ecosystem.**

7.1 In collaboration with ADF&G, annually monitor escapement of salmon by means of aerial surveys and weir counts to ensure adequate escapement for future production and to support important commercial, recreation, and subsistence fisheries.

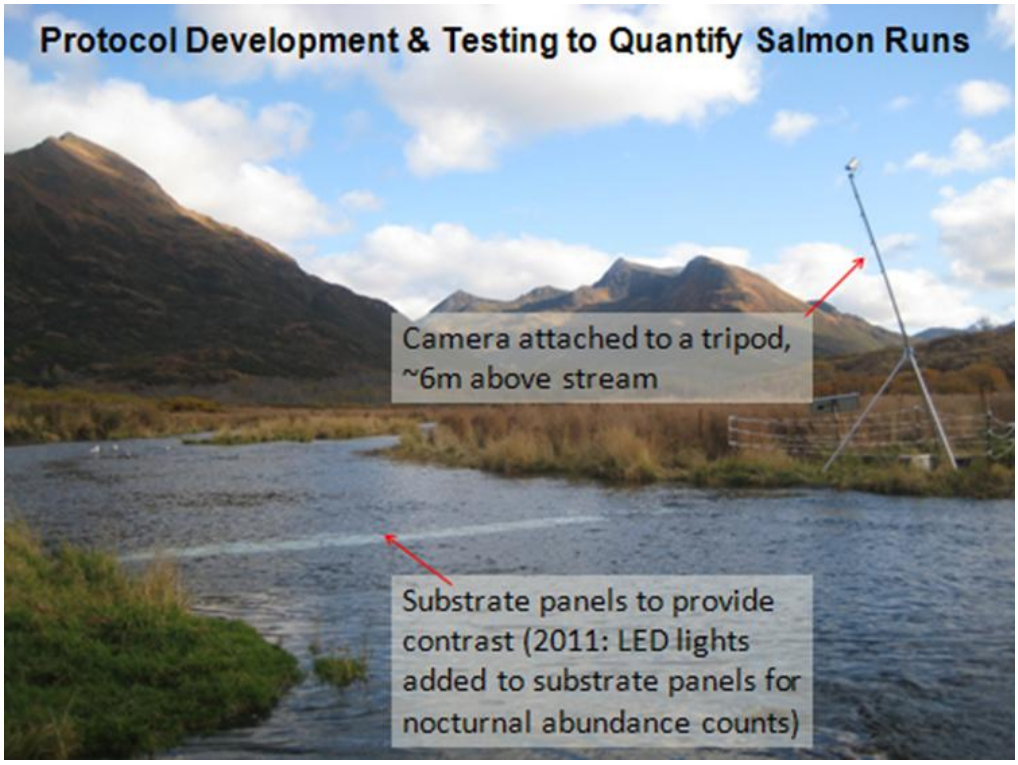
There are five systems on Kodiak Refuge lands and two systems on Federal submerged lands administered by Alaska Maritime Refuge (Litnik and Buskin River systems). The 2011 Kodiak Area Salmon escapement counts were classified as medium to below normal. The Chinook escapement through the Karluk weir was 3,420 fish, within the escapement range of 3,000 to 6,000 fish. The Ayakulik River escapement of Chinook was 4,316 fish, within the escapement goal of 4,000 to 7,000 fish.

Sockeye salmon escapement goals were not met on one of the five river systems within refuge boundaries that support this species (Karluk River early run). The Karluk early escapement was 86,642 (escapement goals of 110,000 – 250,000). (All fishery counts were taken from the ADF&G memo 2011 Kodiak Management Area Salmon Season Summary by James Jackson found in the Fisheries Appendix of this report.)

Purse seining for pink salmon was quite productive on the east side of Kodiak this year.
Gary Wheeler/USFWS

The policy for Statewide Salmon Escapement Goals and Management of Sustainable Salmon Fisheries requires the Alaska Department of Fish and Game to periodically review the salmon escapement goals for the Kodiak Management Area. This review process was completed in September of 2010, and a memo was published announcing the changes to various salmon population escapement goals in fiscal year 2011. There was a series of meetings between Koniag, ADF&G and the Refuge in advance of the state fisheries board meeting in Kodiak to ensure that the Karluk Chinook population was listed as a species of special concern and to adjust the target escapement numbers for this population. The state fisheries board adopted several regulatory changes as part of the Karluk River King Salmon Action Plan under the Sustainable Salmon Fisheries Policy. It specified that:

1) prior to July 30, if the department projects that the Karluk BEG will not be met and the sport fishery is restricted to non-retention or closure, the department a) shall place non-retention restrictions on the commercial seine fishery between Cape Kuliuk and the south boundary of the Inner Ayakulik Section by requiring king salmon over 28 inches to be released; and b) may place non retention restrictions on the subsistence fishery in the inner and outer Karluk and Karluk River waters by limiting gear to beach seines requiring king salmon be released; and 2) the pelagic and non-pelagic groundfish trawl fishery is closed in the waters from three nautical miles northeast of the mouth of the Karluk River to three nautical miles southwest of the mouth of the Karluk River continuing out to the state waters boundary. [VAN HATTEN/SUNDSETH/WHEELER]



Example of sockeye salmon monitoring system. W.B. Leacock/USFWS

7.2 Monitor salmon escapement in streams on the Refuge that are key seasonal feeding areas for brown bears and bald eagles and work collaboratively with ADF&G to maintain escapement levels that reflect wildlife needs.

Salmon escapement counts were monitored by ADF&G on Karluk, Ayakulik, Dog Salmon Rivers, and at Frazer Fish pass. These systems are the only systems that weirs are used to monitor salmon populations within the refuge boundaries. While there are other areas of interest, i.e. Sturgeon, Little River, Uganik, and Humpy Rivers, and 7-Mile Creek, escapement data is not available for these systems. [VAN HATTEN]

Remote cameras were successfully established on Meadow Creek, Canyon Creek, and O'Malley Creek, tributaries of Karluk Lake, to test a protocol for enumerating runs that serve as important food sources for brown bears. Monitoring was carried out both during daylight and nighttime hours. This system worked very well and we hope to implement it on additional streams in the near future. The graduate student is currently working on a sampling protocol for the video footage that would allow us to accurately estimate numbers of salmon from a subsample of video footage. [LEACOCK]

7.3 Annually review commercial, recreation, and subsistence harvest of salmon by means of ADF&G commercial harvest reports, special use permit reports, creel censuses, and subsistence reporting. Harvest data, along with escapement data, will be used to monitor productivity of salmon populations that occur in waters within Refuge boundaries.

The Kodiak Refuge Information Technician (RIT) continues to provide subsistence harvest data from villages that she has established contact with. The information collected by the RIT was provided to the Fishery Biologist and Managers. It was then summarized into a weekly report and submitted to the Office of Subsistence Management. Subsistence users were able to meet their salmon needs this year with strong runs at Litnik, Port Lions and the Buskin. ADF&G has released catch sampling results for 2010 and is working on releasing catch sampling results for 2011 (in Fisheries appendix). [LEE/VAN HATTEN/WHEELER/ SUNDSETH]

7.4 Continue to review management plans and harvest regulations that may affect exploitation of fish populations located within the Refuge. Make recommendations to ADF&G, regional advisory councils, the Federal Subsistence Board, local advisory committees, and the Alaska Board of Fisheries, as needed, for modifications to existing plans and regulations and/or for new plans and regulations.

Reports were provided and oral presentations given to the Kodiak Regional Advisory Committee at their spring and fall meetings outlining our Refuge's activities associated with subsistence species. Comments regarding Refuge fishery resources and habitat were provided on the draft Kodiak Comprehensive Salmon Plan. Refuge staff attended the Alaska Board of Fisheries meetings held in January 2011. Regulations regarding sport fishing for Chinook salmon on the Karluk and Ayakulik were adopted to protect these stocks. The Karluk stock of Chinook salmon was listed as a species of concern. [VAN HATTEN/WHEELER/SUNDSETH]

Fishermen float down the Uganik River in September in pursuit of Coho Salmon. Lisa Hupp/USFWS

7.5 Work with ADF&G to evaluate the need for steelhead escapement goals for Karluk, Ayakulik, and Sturgeon rivers. Additionally, recommend to ADF&G management actions or regulatory proposals that foster conservation of population structure and productivity of stocks that use these rivers.

There are currently no escapement goals for steelhead within the Kodiak Management Area. The Kodiak Refuge office has consulted with ADF&G – Sport Fish Division to start the process in establishing escapement goals for various systems. There is concern that the decline in Chinook salmon populations may increase fishing pressure on steelhead. [VAN HATTEN]

7.6 Assess and monitor populations to gather baseline data on noncommercial fish species such as Arctic char in Karluk Lake, Dolly Varden char, and resident rainbow trout. Use study methods such as mark-recapture, radio-tagging, weirs, video, and creel surveys with assistance of the Service's Anchorage Fish & Wildlife Service field office and ADF&G.

It is our intention to coordinate with the USFWS Conservation Genetics lab to study Arctic Char and Dolly Varden on Saltery, Karluk and Frazer River systems. [VAN HATTEN]

7.7 Continue to require ADF&G to implement monitoring programs for Kodiak Regional Aquaculture Association (KRAA) enhancement projects conducted on the Refuge, as outlined in specific refuge management plans (i.e., Spiridon and Hidden lakes enhancement management plans). Annually review project reports provided by ADF&G to ensure that biological parameters continue to meet management plan criteria, which will ensure protection of wild salmon stocks, char populations, and wildlife within the project area.

ADF&G – Division of Commercial Fisheries provided our office with a copy of the 2010 Spiridon (Fishery Management Report No. 11-13) and Hidden Lakes (Fishery Management Report No. 11-25) Sockeye Salmon Stocking Project and Related Monitoring Parameters report. Review of the 2011 reports submitted by ADF&G has shown these projects are meeting virtually all criteria established for each project. [VAN HATTEN]

7.8 Through a collaborative effort with ADF&G, evaluate situations when fish populations are determined not to be meeting escapement goals or management targets. When weak stocks are identified (e.g., the early run of sockeye in Akalura Creek) develop strategies to improve and stabilize runs, which may include implementation of specific management actions and research or rehabilitation projects, while maintaining genetic integrity of these fish populations.

Following the 2011 Board of Fish meeting, the Karluk River stock of Chinook salmon was listed as a stock of concern. To help protect this stock of salmon, an action plan was adopted. There most significant change to the present management plan involves commercial fishing on the west side of Kodiak Island. When the Chinook salmon escapement is projected to be below the lower escapement goal, non-retention restrictions will be placed on commercial fishermen from the inner Ayakulik section north to Cape Kuliuk. [VAN HATTEN]

The Ursa Maror II with Skipper Jeff Lewis is a major workhorse around the refuge hauling fuel, skiffs, cabin kits and biologists. Robin Corcoran/USFWS

7.9 Complete data collection and write a report describing and classifying genetic characteristics of salmon populations in the Kodiak Refugium by 2008.

No action was accomplished in FY-2011 due to a lack of staff and funding.

7.10 In cooperation with ADF&G, document and describe genetic characteristics and variability of natural fish populations that are important indicators of the diversity on the Refuge for both human and wildlife use.

In cooperation with ADF&G's Gene Conservation Laboratory, the Service's Conservation Genetics Laboratory was awarded a two-year grant from the Alaska Sustainable Salmon Fund to evaluate the genetic diversity of sockeye salmon in southwestern Kodiak Island. The project will involve fieldwork to collect additional genetic samples, extensive genetic analysis performed in the labs, delivery of a final project report by October 2013, and production of two publication manuscripts addressing the genetic diversity of sockeye salmon on southwestern Kodiak Island and the influence of stocking on sockeye salmon in Frazer Lake, by December 2013.

While conducting fieldwork on the sockeye genetics project, the Service's Conservation Genetics Lab also gathered samples Arctic char from Saltery, Karluk and Frazer Lakes. [VAN HATTEN]

7.11 Through a coordinated effort with ADF&G, evaluate salmon spawning and rearing habitat to determine productivity of salmon-producing systems within the Refuge.

ADF&G gathered limnological information on 7 systems on Kodiak and Afognak Island during 2011.

7.12 Through a collaborative effort among ADF&G, the Refuge, and the Anchorage Fish & Wildlife Service Field Office, use escapement, habitat, and other pertinent data to establish sustainable or biological escapement goals—subject to review by the Alaska Board of Fisheries—for all species of salmon within the Refuge.

The Alaska Board of Fisheries altered the escapement goals for Chinook salmon on the Karluk system during their January 2011 meeting in Kodiak. The Refuge was present at this meeting. [VAN HATTEN/WHEELER/SUNDSETH]

7.13 Establish and implement monitoring plans for streamside areas to ensure salmon and Arctic char rearing and spawning habitats remain productive.

No action was accomplished in FY-2011 due to a lack of staff and funding.

GOAL 8: Provide the opportunity for local residents to continue their subsistence uses on the Refuge, consistent with the subsistence priority and with other Refuge purposes.

8.1 Coordinate with ADF&G and the Federal Subsistence Board to issue special actions, as authorized under federal in-season management, when necessary to ensure conservation of healthy fish stocks and to provide for subsistence uses (subject to Title 8 of ANILCA) of fish in federal waters. Efforts will be made to minimize disruption to resource users

and existing agency programs, as agreed to in the Interim Memorandum of Agreement for Coordinated Fisheries and Wildlife Management for Subsistence Uses on Federal Public Lands in Alaska.

Subsistence deer hunting on Kodiak Island in 2011. Tonya Lee/USFWS

We presented 2 biannual Refuge activity reports to the Kodiak Aleutian Regional Advisory Council (KARAC). We reviewed applications for positions on the KARAC, and presented our recommendations on the candidates to the Office of Subsistence Management (OSM). We attended a tribal consultation hosted by OSM and were available to address any concerns raised by tribal representatives. We routinely provided input to OSM-authored weekly reports pertaining to the status of subsistence fishing between June and August. [COBB/LEE/PYLE/WHEELER/SUNDSETH]

8.2 Continue to coordinate with and assist the Division of Migratory Bird Management (MBM) in completing the annual Migratory Bird Harvest Survey in rural communities surrounding Kodiak Refuge.

In coordination with MBM and its contractor, ADF&G Subsistence Division, we completed Migratory Bird Harvest Surveys in Larsen Bay, Karluk, Port Lions, Akhiok, and Women's Bay. [LEE]

8.3 Coordinate with ADF&G and the Service's Office of Subsistence Management to complete subsistence use surveys as needed.

No action was accomplished in FY-2011 due to a lack of staff and funding.

GOAL 9: Improve baseline understanding of natural flowing waters on the Refuge and maintain the water quality and quantity necessary to conserve fish and wildlife populations and habitats in their natural diversity.

9.1 In coordination with the Service's Fisheries and Ecological Services and the Water Resources Branch, in the Regional Office, ensure the Kodiak Electric Association complies with instream-flow requirements of the Terror Lake Project agreement and the Federal Energy Regulatory Commission license. Additionally, monitor and maintain water quantity and water quality that could be affected by future hydroelectric or other water development projects.

Coordinated with Kodiak Electric Association regarding flows from Terror Lake in the Terror River. Signed up with USGS to receive email notifications if the flow in Terror River were to go below minimum flows. [WHEELER]

Asked for an annual meeting under FERC's experimental flow procedures. Looked at salmon returns from northwest Kodiak over the last 10 years to see if there was a reduction in salmon returns to the Terror River. Inconclusive, but none was obvious. [WHEELER]

Visited Kodiak Electric Association's Terror Lake facilities to become familiar with the project facilities. [SUNDSETH]

Worked with Federal Energy Regulatory Commission staff, Realty, and Planning staff to make FWS a cooperating agency on the FERC EA for the Old Harbor Hydroelectric project. Attended a project meeting about studies for the project. [WHEELER/SUNDSETH]

9.2 By 2009, complete the Five-Year Plan of Study for the Water Resources Inventory and Assessment on the Kodiak Refuge and, in coordination with the Service's Water Resources Branch, quantify and file for instream water rights for the maintenance and protection of fish and wildlife habitats.

Completed.

9.3 In cooperation with ADF&G and the Anchorage Fish & Wildlife Service Field Office, initiate limnological studies at lakes and streams within the Refuge that provide important habitat for fish and wildlife. Specifically, begin studies at Karluk, Ayakulik (Red Lake), Frazer, Akalura, Uganik, Sturgeon, Spiridon, and Little River systems.

Assisted ADF&G with limnological work at Karluk, O'Malley, Thumb and Uganik Lakes. [VAN HATTEN]

An angler tries their luck on the Uganik River. Lisa Hupp/USFWS

GOAL 10: Provide opportunities for quality public use and enjoyment of Refuge resources through compatible fish- and wildlife-dependent recreation activities, including hunting, fishing, wildlife observation, and photography.

These are the number of big game animals harvested by hunters on the Kodiak Archipelago during FY-2011. The numbers were obtained from the ADF&G and they do not distinguish federal and non-federal land.

Bear – 222

Elk - 26

Deer – 4,046

Mountain Goat – 147

Caribou/Reindeer - 7

10.1 Improve monitoring and continue appropriate onsite management of seasonal aggregations of public use at Ayakulik River, Karluk River, Frazer fish pass, and Uganik River and expand to other areas as use develops.

The Ayakulik River was not patrolled in FY 2011 due to poor weather delaying staff schedules. Alaska Department of Fish and Game staff floated the river and put up the voluntary closure signs on their way down to work at the Ayakulik fish weir.

The Upper Karluk River was patrolled with Koniag representatives looking at environmental impacts along the river corridor. [OLES/SUNDSETH]

USFWS housing at Frazer Fish Pass was completed. The Youth Conservation Corps (YCC) crew helped make directional signs for visitors, hardened foot trails and stairs using local rock. Nine hundred and seventy two visitors received on-site interpretive information involving the Frazer Fish Pass and Kodiak National Wildlife Refuge, from both USFWS, and ADF&G staff. [OLES/SHORT]
The Uganik River was staffed with a visitor contact camp for the fourth year in a row. The goal of the camp is to provide anglers with information to reduce environmental

impacts to the refuge and reduce conflict between users. Staff welcomed and educated 129 visitors to the refuge. Other accomplishments included fixing doors at the Uganik Lake Cabin and documenting bear human conflict along the river corridor. [OLES/HUPP/LAWSON/KLAUSNER]

10.2 In cooperation with ADF&G, Koniag, Inc., Akhiok-Kaguyak, Inc., and Old Harbor, continue to implement and manage easement agreements to minimize impacts of public use on fish, wildlife, and habitat; to ensure compatibility with Refuge purposes; and to provide for sustainable fish, wildlife, and wildlands recreation.

Fish and Wildlife Service staff worked with Koniag, Inc. to establish a Memorandum of Agreement to develop a private web-based permit system for conservation easement lands. The on-line permit system would be administered by Koniag and monitored by the Refuge. [OLES/SUNDSETH/GLASPELL/BEDINGFIELD]

10.2.a. Consult with Koniag, Inc. as needed regarding its development and business service plans for Camp Island and the Koniag Conservation Easement area.

Worked closely with Koniag regarding its bear-viewing and recreational plans at O'Malley, Thumb, and other areas in the Karluk Basin. [LEACOCK]

Koniag presentation to Kodiak Refuge for 70 Years of Excellence in Land Stewardship on Kodiak Island. Those present include Mitch Ellis, Chief of Alaska Refuges –USFWS; Chuck Reft, Manager of Lands and Resources – Koniag Inc.; Charlie Powers, Vice President of Corporate Affairs – Koniag Inc.; Geoff Haskett, Regional Director Alaska – USFWS; and Gary Wheeler, Refuge Manager, Kodiak National Wildlife Refuge – USFWS. USFWS Photo

Monitored Koniag construction on Camp Island to ensure it does not violate the Camp Island Limited Development Easement. [SUNDSETH/OLES/WHEELER]

10.2.b. Support implementation of Native of Larsen Bay's Tribal Wildlife Grant, much of which pertains to management of resources on the Koniag Conservation Easement.

Larsen Bay Tribal Council successfully concluded its grant in June following a final coordination meeting involving the Council, Koniag, Inc. and the Refuge. [PYLE]

10.3 In 2007, develop an operations plan encompassing all aspects of law enforcement to be completed by 2008. Annually monitor commercial activities on the Refuge, including compliance with special use permit conditions and operation plans. Expand law-enforcement outreach to include education programs and media releases regarding Refuge regulations, and increase the number of field patrols to protect resource values and to enhance visitor experiences on Refuge and conservation easement lands.

During FY2011 Refuge Officer (RO) Bedingfield made 192 contacts with fisherman, hunters and guides in the field. Using Refuge aircraft, he flew 95 hours patrolling refuge and easement lands. In November 2010, he spent a week patrolling the west side of Kodiak Island from the M/V *Camai*, the Alaska Wildlife Troopers marine enforcement vessel. RO Bedingfield worked thirteen investigations on refuge lands. Seven of these cases were on other Alaska refuges while working as a field trainer with a new officer. Of the thirteen investigations four ended in citations and four ended in written warnings. A warning letter was issued to an assistant fishing guide on Kodiak for cleaning his fish when bears were nearby thus creating a public safety nuisance and associating people with bear food. One case involved posting a no trespass sign and video camera on an ATV trail at the refuge boundary near Port Lions. Resulting video shows two hunters on separate ATVs come to the boundary sign, turn around, and leave. Since the boundary sign was posted, no further ATV use of this unauthorized trail has occurred to date. [BEDINGFIELD/OLES]

Refuge Officer Bedingfield spent time in the Villages of Larsen Bay, Karluk and Akhiok talking with local residents and guides. He answered questions about hunting and fishing regulations and provided hunting regulation books and land status maps. In December 2010, he visited Larsen Bay to talk with the school children and some of the local residents about Refuge Law Enforcement. In the spring of 2011, Bedingfield flew to Akhiok and sealed a bear for a subsistence hunter which provided an opportunity to talk with local residents in a positive setting. [BEDINGFIELD]

10.4 Assess the nature of visitor experiences available in different types of bear-viewing settings to support the design and development of viewing programs at O'Malley River and other potential sites. Complete the assessment(s) in advance of the implementation of any new bear-viewing program(s).

The O'Malley River bear viewing program did not start in FY 2011. Karluk Wilderness Adventures needed additional time to complete lodging for clients at their Camp Island facility. Kodiak Refuge staff and the YCC crew performed trail maintenance on the O'Malley Trail in the summer. The work has kept the trail defined as the approved route to access the O'Malley River bear viewing platform. [OLES/LAWSON]

10.5 Using rigorous social science methods assess the nature of visitor experiences, significant influences on those experiences, and public acceptability of potential management actions at Frazer fish pass. Use results of the study as input to visitor-use management and potential visitor-capacity decisions at that site.

No action was accomplished in FY-2011 due to a lack of staff and funding.

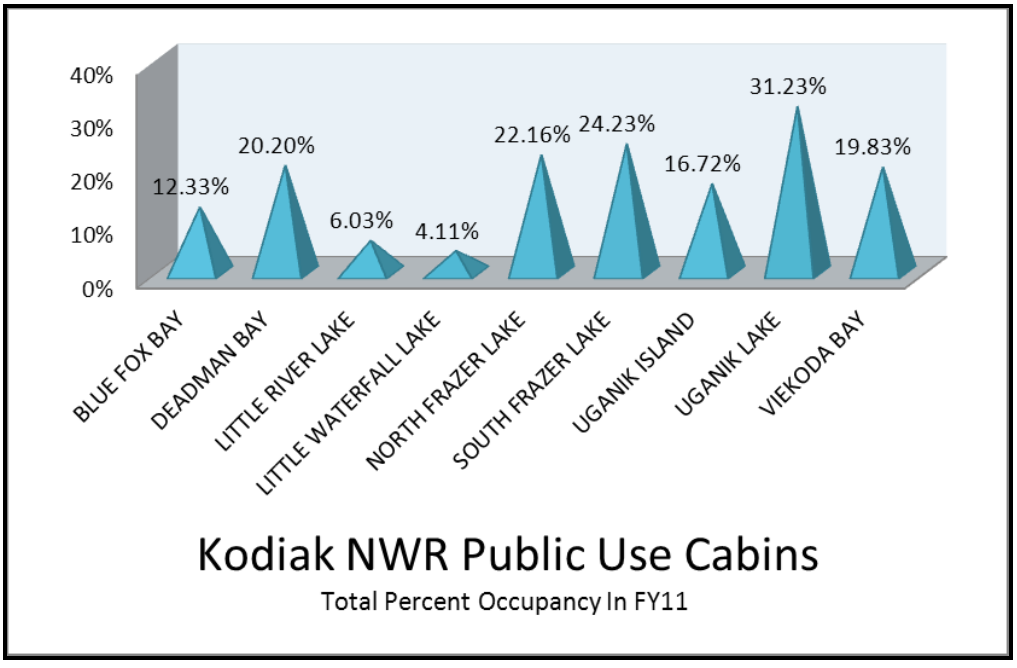
10.6 Manage the public use cabin system to support a variety of compatible recreation activities by carefully considering the location of all current cabins and potential future additions to the system.

The Refuge received $70,000 in deferred maintenance funds from the Region this year to apply towards public use cabins. Two new cabin kits were purchased and delivered to Kodiak. One of the units was constructed on Uganik Island to replace the existing cabin. Other public use cabin work included insulating the floor and improving trails at the Deadman Bay cabin and minor improvement projects at Uganik Lake and North Frazer Lake cabins. Several propane heaters were purchased and the first was installed in the Uganik Island cabin. [LEATHERMAN/OLES/ MCALLISTER/HUPP]

Offloading panels destined for assembly as new public use cabin at Uganik Island.
Jeff Lewis/USFWS

Maintenance Worker Robin Leatherman (on left) leads a crew that replaced the Uganik Island Cabin. Robin Leatherman/USFWS

Managed public use cabins through http://www.recreation.gov/. Some 250 people spent 1,440 nights in the Refuge cabins generating almost $24,000 in revenue. [L. MONZON]



10.7 Continue to monitor use of 17(b) easements and implement management actions as necessary to prevent resource impacts to the easements. (Also see Goal 1.)

No action was accomplished in FY-2011 due to a lack of staff and funding.

10.8 By 2008, assess off-road vehicle (ORV) use on conservation easements lands.

No ORV use was observed on conservation lands other than on authorized trails. [BEDINGFIELD]

10.9 Initiate assessment of snowmachine use on the Refuge.

No action was accomplished in FY-2011 due to a lack of staff and funding.

GOAL 11: Improve management of commercial use opportunities that are compatible with Refuge purposes, provide quality public use opportunities, enhance visitor experiences, and ensure compliance with provisions of ANILCA.

11.1 To accommodate an increasing number of permittees, review the current process for administrating special use permits and develop a simplified, more time-efficient system for receiving applications, issuing permits, processing use reports, and distributing billings.

Using the Filemaker program, updated the special use permit Standard Operating Procedures to reflect the new national-standard permit application form. [L. MONZON]

Issued O'Malley Bear Viewing competitive Special Use Permit to Karluk Wilderness Adventures. [L. MONZON]

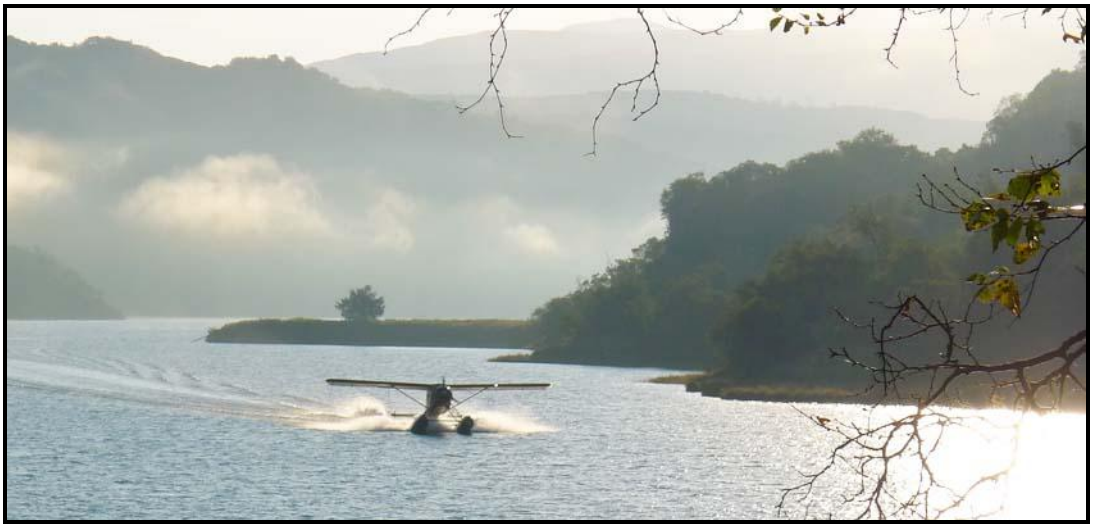
11.2 By 2008, develop an education program for commercial operators to inform permitees of refuge requirements, goals, and regulations. As a part of this, provide updated information on bear safety and awareness for distribution to clients.

Participated as instructor and content developer in KUBS/Refuge commercial bear viewing course at Kodiak College. Target audience was existing or would-be refuge permittees, and the long-term goal is to make the course a requirement for obtaining a refuge special use permit. O'Malley: reviewed, commented on, and scored O'Malley prospectus and regularly provided constructive suggestions on proposed program; strong efforts to maintain and foster good relationships with Koniag Corp. [LEACOCK]

11.2 By 2008, develop an education program for commercial operators to inform permittees of refuge requirements, goals, and regulations. As a part of this, provide updated information on bear safety and awareness for distribution to clients.

Participated as instructor and content developer in KUBS/Refuge commercial bear viewing course at Kodiak College. Target audience was existing or would-be refuge

permittees and the long-term goal is to make the course a requirement for obtaining a refuge special use permit. [GLASPELL/LEACOCK]



Float plane at Uganik Lake in September. Lisa Hupp/USFWS

11.3 By 2007, obtain stakeholder input, determine if the 1987 Management Plan for Commercial Fishing Activities needs to be revised, and update this plan if warranted.

Finalized the Commercial Fishing Support Facilities Management Plan and the Commercial Fishing compatibility determination this year after several years of drafts and taking public comments. [WHEELER/SUNDSETH]

A set net site under a special use permit on the Refuge. Gary Wheeler/USFWS

GOAL 12: Provide outreach, environmental education, and interpretive programs that increase a sense of stewardship for wildlife, cultural resources, and the environment and that enhance visitor experiences on the Refuge.

12.1 Plan, design, and construct a Refuge visitor center in the vicinity of downtown Kodiak to be complete by 2009.

The Visitor Center was completed and opened in November 2007. The Visitor Center welcomed an estimated 27,695 visitors this year.

12.1.a Facilitate completion of building, exhibits and FF&E (fixtures, furniture and equipment).

Worked with a contractor to remodel an upstairs storage closet into office space. [HUPP/ SUNDSETH]

Coordinated installation of the outside railing and interpretive sign by Madsen Bear statue. [KING/KAHN/GLASPELL]

Purchased furniture (chairs and cabinet) for the Visitor Center (VC) offices. [KAHN]

12.1.b Facilitate rearticulation and installation of gray whale with The Gray Whale Project Coordinator.

Coordinated installation of a "whale bone box" exhibit with and by Refuge volunteers. This gray whale display features interior artwork by a local artist and houses several small gray whale bones, baleen, and barnacles. [KAHN/GLASPELL/KING]

12.1.c Plan, publicize and present public talks, radio and newspaper interviews and press releases informing the public about building/exhibit progress, mission and public involvement.

Staff and volunteers coordinated and/or participated in a number of radio interviews to publicize Refuge events, programs and research.

Conducted a number of mission related newspaper interviews on a variety of topics in the Kodiak Daily Mirror including (see appendix on newspaper articles):

- Kodiak Junior Ranger Launch Party, 7/8/11 [LAWSON]
- New Nature Digital Photography program, 7/21/11 [K. LEATHERMAN]
- Successful YCC summer experience, 8/12/11 [LAWSON/YCC]
- Refuge Research, 8/31/11 [COBB/WHEELER]
- Public Use Cabin Construction [R. LEATHERMAN]
- Brown Bag Lunch Series [KAHN]
- Tule Elk [KAHN]
- Madsen Bear Rededication [KAHN]
- Refuge 70th anniversary event [KAHN]
- Art and Culture Walk [KAHN]
- Far North Conservation Film Festival [KAHN]

- Arctic NWR 50th anniversary film event [KAHN]

Staff and volunteers coordinated and presented a number of public talks and outreach efforts regarding Refuge programs and research. These included:

- Travis Tennessen presentation on introduced species in the Refuge. [HUPP]
- Winter Conservation Film Series. [PALMER/KAHN/HUPP]
- Robin Corcoran – Avian Presentation. [CORCORAN/HUPP]
- Kodiak High School Career Fair presentations. [HUPP]
- Kodiak YCC public presentation. [LAWSON/SQUARTSOFF/YCC]
- Refuge Mission Interpretive Talks for the general public. [SEARS/HANSEN/ LAWSON/SQUARTSOFF/PALMER]
- Coordinated with staff and volunteers to create a temporary display about brown bear research in the Refuge. [HUPP/OLES]

Coordinated Arctic NWR special film event celebrating 50th anniversary of Artic NWR. [PALMER/KAHN]

Retired Judge Roy Madsen dedicated his family's bear statue to the bear hunting guides of Kodiak at the ceremony this spring. Lisa Hupp/USFWS

Created, coordinated and planned a rededication event for the Madsen Bear statue upon its relocation to the VC grounds. [KAHN]

Created, coordinated and planned a Refuge 70th Anniversary event with RM Gary Wheeler as the presentation speaker. The Kodiak High School Jazz Combo provided music. [KAHN]

Hosted, publicized and promoted a Brown Bag Lunch Series (four different programs) of biologists and scientists giving presentations for the community (also see 12.8e). [KAHN/COBB]

Created or assisted with creation of event flyers for various Refuge special events in conjunction with VC Manager input. [HUPP/LAWSON/PALMER]

Refuge Manager Gary Wheeler was the main speaker for the Refuge's 70th Birthday. Annette Wheeler photo

12.1.d Draft Standard Operating Procedures for visitor center operation, visitor center volunteer training, Alaska Natural History Association (ANHA) Scope of Sale and coordinate ANHA sales branch in sync with grand opening in Fall 2007.

Updated and maintained SOP's for visitor center operation. [KAHN/PALMER]

Coordinated volunteer docent and temporary staff training in Alaska Geographic (AK GEO) policies and procedures. [SULESKI/HUPP/KAHN]

Reviewed and evaluated new products for bookstore, assuring product relevance to Refuge mission and Kodiak geographic location. [KAHN]

12.2 By 2007, provide better access to Refuge information on topics such as bear safety, campfire safety, permits, and public use cabins through a Web site and other electronic media. Information would also be available through a variety of non-electronic sources.

Updated Visitor Services program resource file for the VC information desk – land use/ownership and Alaska Native corporations/tribal council structure. [HUPP]

Updated FWS website with current information about permits and public use cabins that now allow visitors to self-book cabins and print receipts at the Visitor Center. [HUPP]

Updated Kodiak Public Use Cabin brochure. [LAWSON/PALMER/ALLARD]

Updated KNWR Visitor Center website with current information about displays, environmental education programs, and volunteer projects. [HUPP/LAWSON]

Managed summer use of Public Use computer to incorporate streaming video of a remote wildlife camera placed at the Frazer Fish Pass. [HUPP]

Our Visitor Services staff and summer temporaries enjoy a lunchtime picnic on a sunny day this spring. Shelley Lawson/USFWS

Maintained a Kodiak Refuge Visitor Center Facebook account to: publicize refuge events; post photographs of refuge sponsored activities, research and programs; and engage visitors in Refuge related information. [LAWSON/HUPP/KAHN/SEAONALS]

Updated VC website domain name for continued use. [KAHN]

Planned and coordinated a two week seasonal training for Visitor Services (VS) staff. Part of the training included topics such as bear safety and the VS program at the Refuge (which includes public use cabins, etc.). Certified Interpretive Guide certification was offered as an option in conjunction with RO staff, Kristen Gilbert through videoconferencing. The trainings provide staff with the knowledge and tools to better inform the public about the Refuge and other pertinent topics. Several members from other organizations in the Kodiak community also participated (Alaska State Parks volunteer, Kodiak Maritime Museum executive director). [KAHN]

12.3 Increase visitor center staffing to allow the center to be open seven days per week during peak visitor use season (dependent on funding).

VC was open and fully staffed seven days per week during the summer season.

Supervised and trained two temporary park rangers, one summer SCA volunteer, two fall Refuge volunteers (one of which was also employed on a 30 day emergency hire) to provide for summer/fall visitor center staffing. [KAHN]

12.3.a. Recruit volunteers for participation in new visitor center staffing and Refuge programs and continue to broadly recruit across Kodiak and elsewhere.

Scheduled and tracked docent shifts for staffing information desk and roving the VC in support of regular operations and special events. [HUPP/KAHN]

Volunteer Coordinator served as central contact for 21 VC docents. Coordinator recruited and trained 8 new local volunteers, assigned special projects as needed, supported retention through regular phone calls and appreciation. [HUPP]

Environmental Education and Volunteer Coordinators launched the Kodiak Refuge Youth Leadership Program to recruit more youth into Kodiak Refuge Environmental Education Programs. Students from 8th-12th grades joined Salmon Camp as instructor aides and participated in a mentorship training event. [LAWSON/HUPP]

Provided opportunities on Brown Bear Research and Management for 7 volunteers from May through October. [LEACOCK]

Volunteers assisting with processing immobilized brown bear. W.B. Leacock/USFWS

12.3.b. Provide visitor center staffing year-round.

Coordinated VC staffing year-round with combined use of permanent staff, Student Conservation Association (SCA) interns, volunteers and seasonal staff. [KAHN/HUPP]

Facilitated VC operations in the vacancy of a VC Manager. [HUPP/LAWSON]

Hired a full-time permanent VC Manager (Kahn) who facilitated VC operation starting calendar year 2011. [GLASPELL]

Permanent staff provided information desk coverage and Alaska Geographic sales support as needed throughout the year. [KAHN/HUPP/LAWSON/OLES/L. MONZON]

12.4 Acquire base funds for the Kodiak Summer Science and Salmon Camp base camp and village outreach project through Refuge System funding processes to avoid depending on annual fund-raising.

12.4.a. Seek non-refuge funding support for Kodiak Summer Science & Salmon Camp.

Funding support received. [LAWSON/GLASPELL]

12.4.b. Collaborate with Alaska Geographic on generating our annual appeal letter (a.k.a., donation letter) in support of Salmon Camp.

Coordinated with AK GEO to generate an annual appeal letter and also wrote letters of thanks to certain donors in collaboration with AK GEO. [LAWSON]

12.4.c. Bring Salmon Camp to Kodiak City and all 6 of Kodiak's remote villages.

Brought Salmon Camp to Kodiak City and 5 Kodiak area villages. Due to a scheduling conflict and unavailability of flights, we were unable to reach the village of Akhiok

during the summer. However, one Salmon Camp instructor did accompany Village Information Technician for a day trip to Akhiok for a Bear Safety environmental education program in the fall. [K. LEATHERMAN/LEE/ALLARD/SCA VOLUNTEERS]

12.4.d. Conduct Salmon Adventure Camp for middle school students.
Adventure Camp has grown in popularity and for the first time garnered a waiting list. We again had the opportunity to promote future stewards of the land and teach No Trace Ethics while empowering the campers in self-reliance on a camping trip to a neighboring island. [LAWSON/K. LEATHERMAN]

12.5 Annually sponsor, co-sponsor, or participate in community events, festivals, and programs (e.g., Migratory Bird Day, Crab Fest, Whale Fest) to build awareness of the Refuge and Kodiak ecosystems.

Created, coordinated and hosted International Migratory Bird Day events in conjunction with Audubon. Collaborated with Audubon on a Together Green grant for a volunteer project to improve MAPS trail. [KAHN/HUPP]

Participated in and designed a float for the Crab Festival Parade. Our float won a second place theme award. [HUPP/R. LEATHERMAN/K. LEATHERMAN/LAWSON/ SEASONALS]

Our Crab Fest Parade Float won a Second Place Theme award. Lisa Hupp/USFWS

Hosted a children's event during Crab Festival "retro days." [LAWSON/VOLUNTEERS]

Coordinated Crab Festival events in the VC (Kodiak Island Drummers and kid's face painting). [KAHN/LAWSON/SULESKI]

Coordinated and hosted local artists on the theme of "natural inspiration" to participate in community Art Walk. [HUPP/KAHN]

An artist explains her work to a patron at the Art Walk. Lisa Hupp/USFWS

12.5.a. Sponsor National Wildlife Refuge Week, planning, promoting and presenting public talks in support of the National Wildlife Refuge System.

National Wildlife Refuge Week was not celebrated during October 2010 due to the fact that we did not have a Visitor Center manager in place.

12.5.b. Participate in Whale Fest, both in planning and in facilitating environmental education efforts in the K-6 schools, home school groups and informal interpretive programs for all ages.

Coordinated with Audubon to host Whale Fest speaker Doug Thompsen. [HUPP]

Participated in the Whale Fest team committee to coordinate and promote Whale Fest 2011 events and schedule. [KAHN]

Hosted Community Monitoring of Marine Invasive Species workshop sponsored by the Kodiak Area Marine Science Symposium (KAMMS) as an official Whale Fest event. [KAHN]

12.5.c. Develop a Kodiak Envirothon event to foster environmental awareness and scientific skills in high school students.

Planned, sponsored and facilitated the Alaska State Envirothon Competition in April 2011. [LAWSON/HUPP]

12.6 By 2008, work within the community to increase partnerships and volunteers to form a friends group for Kodiak Refuge.

Volunteer Coordinator attended regional Friends Annual Membership and Board Meetings via webcast and served as Refuge Liaison during regular teleconference meetings. Continued dialog with regional board regarding potential Kodiak sub-chapter in lieu of defunct local independent Friends group. Coordinator recruited four new members for the regional organization. [HUPP]

Coordinated and hosted a Friends of Alaska National Wildlife Refuges (FANWR) outreach event: Mary Frische presentation about Refuge Reflections. [HUPP]

12.7 As staff and funding allow, conduct workshops with schools and teachers across Kodiak Island to enhance curriculum and outreach dealing with Refuge resources, issues, and opportunities.

12.7.a Facilitate teacher workshop and create Refuge-specific K-6 curriculum for bi-annual classroom environmental education efforts. Class visits to all six K-6 schools and home school organizations.

Hosted and participated in a Project WILD hands on environmental education workshop for teachers, parents and childcare providers. [LAWSON/HUPP]

Hosted teachers and administrators of Kodiak rural schools during fall in-service to share refuge educational and program resources. [LAWSON/LEE]

Created Refuge specific curriculum for classroom and VC environmental education efforts. [LAWSON/LEE]

A team negotiates one of the many problems of the Envirothon. Lisa Hupp/USFWS

12.8 Expand opportunities for individuals, organized groups, and families to learn about the Refuge through on- and off-headquarters programs, environmental education, nature walks and interpretive programs.

Created programs and program fliers listing Kodiak Refuge environmental education programs available to students PreK-12th grade. Information is available on the Refuge and VC websites. [LAWSON]

Completed third year of summer "Family Nature Club" Happy Trails program promoting the USFWS "Let's Go Outside!" and Connecting People with Nature goals. [LAWSON/ KAHN/SEARS]

Coordinated with Alaska Maritime NWR for Ferry Naturalist program on the Alaska Marine Highway system. This program provided information and interpretation about the Kodiak Refuge and Kodiak Refuge Visitor Center to ferry travelers between Homer and Dutch Harbor (with stops in Kodiak) during the summer season. [KAHN]

Tonya Lee conducting outreach in Old Harbor during its 4th of July celebration.
Tonya Lee/USFWS

Participated in Salmon Fest, Woody Island 5th graders, Old Harbor 4th of July Celebration, Dig Afognak Earth Camp, Port Lions and Old Harbor Alutiiq weeks. [LEE]

12.8.a. Plan and budget educational and interpretive activities in conjunction with cooperating association (AK GEO).

Oversaw the calendar year 2011 AK GEO budget in planning for a number of educational and interpretive activities and other special events. [KAHN/LAWSON]

"Coffee with a Ranger" interpretive programs and various special events linked AK GEO sales product to interpretive programing and special events. [KAHN]

A temporary bear studies display at the Visitor Center. Lisa Hupp/USFWS

12.8.b. Plan and provide summer interpretation programs through Visitor Center.

Oversaw scheduling and supervision of summer VC interpretation programs. These included:

- 15 interpretive ranger talks during cruise ship visits [PALMER/HANSEN/SCA/ SEARS]
- Road Scholar interpretive ranger talks during cruise ship visits [PALMER]
- 12 "Coffee with a Ranger" interpretive programs [PALMER]
- 12 Happy Trails programs [SCA/SEARS]
- Weekly FUN programs [HANSEN]
- Two Jr. Ranger programs with seasonal interpretive staff [HANSEN, SCA, SEARS]
- Other interpretive programming requests not on regular summer interpretive program schedule (various staff and volunteers). [KAHN/LAWSON]

The FUN program is one of the most popular education programs at the Visitor Center. Lisa Hupp/USFWS

Planned and prepared the VC schedule for cruise ship visits. This involved scheduling the information desk, roving, interpretive programming, as well as tracking and visitor updates. Various staff members, volunteers and AK GEO provided information,

orientation, bookstore sales, and formal and informal interpretation for numerous cruise ship passengers. [KAHN]

12.8.c. Create 'Families Understanding Nature' educational backpacks ('FUN Pack') for loan to Kodiak and visiting families.

The Families Understanding Nature educational backpack program is a successful and ongoing program of the Kodiak Refuge Visitor Center. [KAHN]

12.8.d. Conduct Families Understanding Nature (FUN) programs for children and their families to learn more about Kodiak's flora and fauna.

Last year the Kodiak Refuge VC was successful in expanding this popular program from twice a month to 4 times a month during the winter season. In the summer it consistently runs 4 times a month. [HANSEN/PALMER/LAWSON/VOLUNTEERS]

12.8.e. Update and expand visitor center website with the purpose of educating Kodiak community about upcoming and ongoing events, programs and activities taking place at the Visitor Center.

The VC website is regularly updated with videos, fliers, calendar of events, program information, etc. [HUPP/LAWSON]

12.8.f. Schedule public talks about and discussions of conservation and Kodiak ecosystems.

Brown Bag Lunch Series initiated in February 2011. Hosted by the Refuge at its Visitor Center, the series is geared to increase public awareness of science projects conducted by the Refuge and other organizations. Scheduled, hosted, and publicized a Brown Bag Lunch Series (four different programs) where Refuge biologists gave presentations to the public. Suspended in summer due lack of availability of scientists, the weekly series resumed in September, in collaboration with the University of Alaska's Fisheries Technology Center. The Center has committed to video-taping series presentations. [COBB/KAHN]

Hosted Avalanche Safety/Backcountry Snow Travel presentation. [HUPP]

The Refuge had its 3rd year of the "Coffee with a Ranger" program. Throughout the summer, weekly ranger talks addressed different Kodiak Refuge topics on conservation, Refuge research and Kodiak ecosystems. [PALMER]

The YCCs got experience working on the Refuge as well as at the Visitor Center.
Lacy Squartsoff/USFWS

Hosted invasive species talk in conjunction with the Kodiak Soil and Water Conservation District. [KAHN]

Scheduled and promoted a public talk by Refuge Bio Tech, James Lawonn on the Kodiak Refuge KIMU research project. [LAWONN/KAHN]

Launched the Kodiak Refuge Junior Ranger program for 5-8 year olds and 9-12 year olds. This program promotes future stewards of the land, while educating youth about Kodiak's environment and the mission of the Kodiak Refuge. [LAWSON/ALLARD]

12.8.g. Develop the Kodiak Youth Conservation Corps program to allow Kodiak high School students to gain a glimpse of what it is like to work for the FWS and to help with the Secretary's emphasis on youth hire.

This was the 3rd year for the Kodiak Refuge YCC program. Our program pioneered the creation of YCC programs that involve the students in a diversity of roles within the refuge while giving them an active voice through the creation of their own multi-media presentations and videos. This year the YCC students worked in the field by brushing the trail into the O'Malley viewing pad, they removed marine debris from the beach at Halibut Bay and they insulated the floor of the Deadman Bay cabin. In addition they worked in the Visitor Center telling visitors about Kodiak and the Refuge and working on their presentations when they weren't in the field. [GLASPELL/LAWSON]

12.8.h. Seek local volunteers to assist with operation of MAPS project.

The summer of 2011 marked the second season of the Kodiak Refuges' Monitoring Avian Productivity & Survivorship Program (MAPS) near Refuge Headquarters on the Buskin River State Recreation Area. MAPS is a nation-wide program established in 1989 to monitor landbird survivorship and productivity through mist netting and banding. The Refuge initiated the program to complement the two road-side Breeding Bird Surveys conducted annually on Kodiak and to connect the public with conservation issues through bird banding. This season, Refuge employees and volunteers banded 217 birds representing 13 species, and recaptured 45 birds including 16 birds banded last year. In general resident (non-migratory) and short distant migrants had higher capture and return rates and higher productivity compared to long-distance migrants. Cooperators from the community included Cindy Trussell, biology professor at Kodiak College, and Rich MacIntosh, a retired biologist with NOAA Fisheries and local bird expert. Despite the early morning hours, 30 local volunteers participated. [CORCORAN]

Keith Bruce getting ready to release a fox sparrow after banding during the Monitoring Avian Productivity & Survivorship Program. Ryan Burt/USFWS

GOAL 13: Conserve cultural and archaeological resources of the Refuge.

13.1 Identify priority areas to inventory for archaeological and other cultural sites and conduct surveys as time and personnel permit. Perform surveys at a level sufficient to evaluate, without a follow-up visit, eligibility of sites identified for inclusion on the National Register of Historic Places. While actual surveys will be conducted as funding and personnel become available, the identification of priority areas and overall planning for surveys should be completed by the end of 2007.

In 2011, the Alutiiq Museum archaeologists made collections of cultural resources on lands that the Refuge has a conservation easement with Koniag Inc. along the Karluk River.

13.2 Formalize the existing partnership with the Alutiiq Museum by the end of 2006. This agreement should spell out participation of the Refuge, the Service's Regional Office in Anchorage, and the Museum in terms of both funding and tasks. Seek out and develop partnerships with Native corporations, universities, other government agencies, etc., to cooperatively inventory, manage, and protect cultural resources.

The Alutiiq Museum has taken the lead in developing partnerships to protect cultural resources. The Refuge remains a vital part in protecting these resources.

13.3 Identify and acquire archaeological, historical, and ethnographical archival resources to provide the necessary background material to support archaeological and historic site protection, public interpretation, and paleobiological information useful in wildlife and habitat management.

No action was accomplished in FY-2011 due to a lack of staff and funding.

13.4 Provide Archaeological Resources Protection Act training to Refuge law-enforcement personnel. Provide basic cultural resource training to Refuge staff. Identify sites or areas at risk for vandalism and monitor with periodic law-enforcement patrols.

Refuge law enforcement personnel conducted periodic surveys, but no violations of cultural resource protection laws were observed.

13.5 Strengthen and expand the Alaska Heritage Resource Stewardship program for site monitoring and evaluating site conditions on Kodiak Refuge.

The Alaska Heritage Resource Stewardship program was active again in 2011. No disturbance of note was brought to the attention of the refuge.

The exuberance of its temporary workers makes Kodiak Refuge an especially fun place to work.
Lisa Hupp/USFWS

GOAL 14: Conserve special and unique features of the Archipelago ecosystem within the Refuge.

Note: Most of the objectives listed under Goals 1 through 7 are also objectives related to the special and unique features of the Archipelago ecosystem.

14.1 With public involvement, develop a management plan for the Mount Glottof Research Natural Area that identifies conservation and monitoring measures to preserve and document featured values and identifies how management under the plan may influence public use and access.

No action was accomplished in FY-2011 due to a lack of staff and funding.

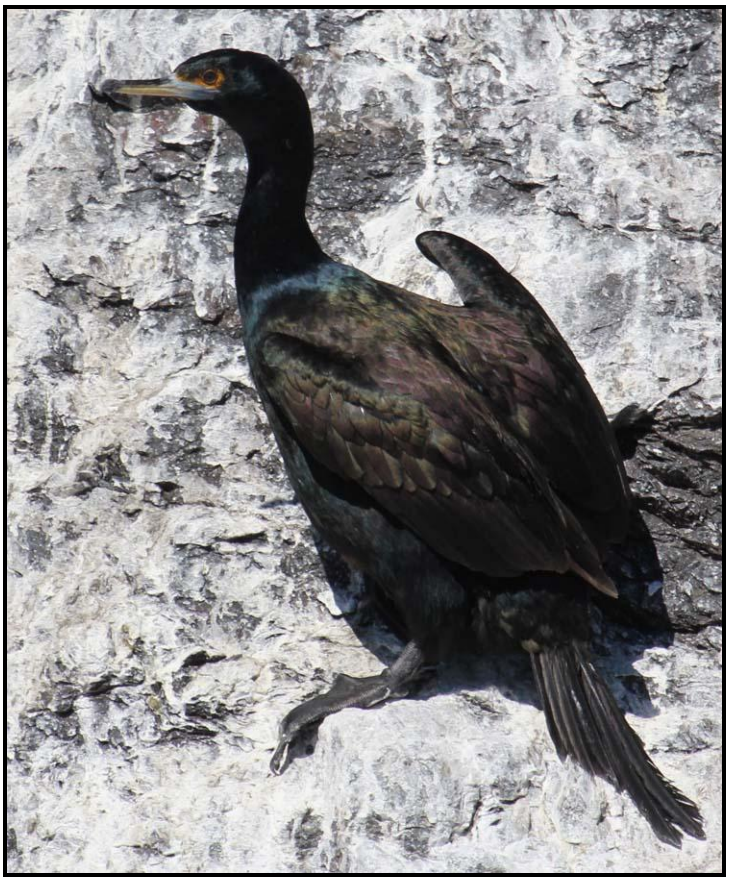
Heidi Helling takes notes on mountain goat habitat. Ava Sovie/USFWS

GOAL 15: Promote close working relationships through effective coordination, interaction, and cooperation with other federal agencies, state agencies, local communities, tribes, organizations, industries, the general public, and landowners adjoining the Refuge whose programs affect, or are affected by Refuge management activities.

15.1 Routinely report results of biological and subsistence management, monitoring, and research to external audiences, including Kodiak Fish and Game Advisory Committee, Kodiak-Aleutian Regional Advisory Council, tribal councils, and other interested groups and individuals.

15.1.a. Report subsistence management results to Kodiak-Aleutian Regional Advisory Council in the Council's meeting handbook.

We submitted two reports for publication in the KARAC meeting booklet. We presented these reports at their biannual meetings and addressed questions and concerns. (Reports contained in the appropriate appendix.) We participated in the evaluation and recommendation of candidates for committee seats.
[COBB/PYLE/LEE/SUNDSETH/WHEELER]



The cormorant often doesn't get much respect, but this red-faced has rather attractive plumage with the sun shining off of it. Robin Corcoran/USFWS

15.2 Use and assist in the fish and game regulation process through interaction with ADF&G, local fish and game advisory committees, state Boards of Fisheries and Game, Federal Subsistence Board, Kodiak-Aleutians Federal Subsistence Regional Advisory Council, and the Alaska Migratory Bird Co-Management Council.

We met with ADF&G frequently on an as needed basis. Staff regularly attended meetings of the ADF&G advisory committee and provided our advice, as appropriate.

The policy for Statewide Salmon Escapement Goals and Management of Sustainable Salmon Fisheries requires the Alaska Department of Fish and Game to periodically review the salmon escapement goals for the Kodiak Management Area. This review process was completed in September of 2010, and a memo was published announcing the changes to various salmon population escapement goals in fiscal year 2011. There was a series of meetings between Koniag, ADF&G and the Refuge in advance of the state fisheries board meeting in Kodiak to ensure that the Karluk Chinook population was listed as a species of special concern and to adjust the target escapement numbers for this population. The state fisheries board adopted several regulatory changes as part of the Karluk River King Salmon Action Plan under the Sustainable Salmon Fisheries Policy. Regulations regarding sport fishing for Chinook salmon on the Karluk and Ayakulik were

adopted to protect these stocks. The Karluk stock of Chinook salmon was listed as a species of concern. [VAN HATTEN/WHEELER/SUNDSETH]

15.3 Use public processes as necessary to encourage stakeholder involvement in implementation of this Conservation Plan.

We did not hold any public meetings this year.

15.4 Continue the Refuge Information Technician program to enhance information exchange with local communities on refuge issues, particularly those dealing with subsistence and bear management (such as bears killed in defense-of-life-or-property).

Produced and distributed 2 newsletters to village communities and land neighbors. Executed a total of 16 trips to village communities to address a variety of mission goals including outreach, environmental education, Tribal Wildlife Grant assistance, and subsistence resource management. [LEE]

Village	**# of Visits**	**Purposes of Travel**:
Old Harbor	5	• TWGrant Support, Meetings and Education • Subsistence Bear Permits • Alutiiq Week Education in School • Sea Otter Tagger Contacts • Koniag Meeting Cooperation / NWRefuges Vision Outreach
Larsen Bay	4	• Subsistence Bear Permits • Bear and Land Mammal Education • Sea Otter Tagger Contacts • Koniag Meeting Cooperation / NWRefuges Vision Outreach • Migratory Bird Harvest Surveys
Port Lions	3	• Alutiiq Week Education in School • Sea Otter Tagger Contacts • Migratory Bird Harvest Surveys • Ursa Major II Traveling Tour
Akhiok	3	• Koniag Meeting Cooperation / NWRefuges Vision Outreach • Migratory Bird Harvest Surveys • Sea Otter Tagger Contacts • Subsistence Bear Permits
Karluk	1	• Invasive Weed Survey • Brown Bear Activity with Kids • Migratory Bird Harvest Surveys
TOTAL :	16	

RIT Tonya Lee is a valuable liaison with Native villages and tribes. Gina Palmer/USFWS

15.5 Participate in interagency activities, cooperative agreements, data sharing, and sharing of equipment and personnel to accomplish mutual management goals and objectives.

Staff partnered with dozens of non-profit, local, state and federal agencies in support of the State Envirothon held in Kodiak this year. [LAWSON/HUPP]

Refuge Manager signed a cooperative agreement with nonprofit Island Trails Network this year that may bring trails to the Refuge in the future. [GLASPELL/WHEELER]

Kodiak Refuge YCC partnered with the Kodiak Area Native Association to participate in their Explore the Rock educational hikes as chaperones and leaders. [LAWSON]

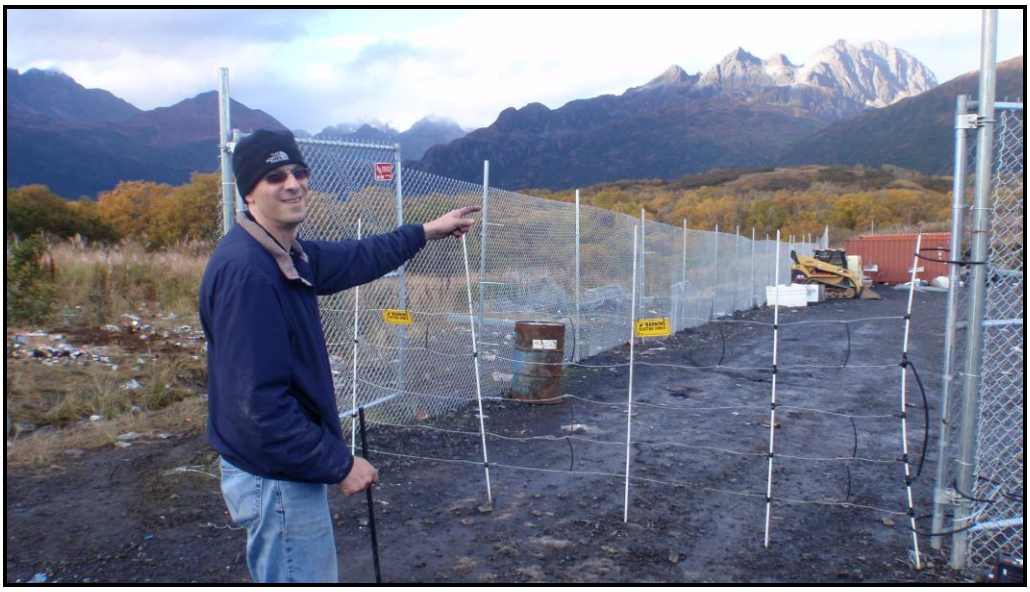
The Kodiak Refuge partnered with Island Trails Network to coordinate a marine debris clean up on a remote beach within the Kodiak Refuge. Over 3,000 lbs. of marine debris was collected. [GLASPELL/LAWSON/SUNDSETH]

Kodiak Refuge YCC partnered with the Kodiak Regional Aquaculture Association, Alaska Department of Fish and Game, Island Trails Network, Alaska Teen Media Institute and others to educate the youth about fisheries management, marine debris

impacts, public contact, and video generation for public outreach among other topics. [LAWSON/OLES/GLASPELL]

Coordinated with Koniag, Inc. to meet with village communities on general subsistence outreach and questions regarding the National Wildlife Refuge's vision. [LEE]

Coordinated with Coast Guard Auxillary Association to use boater safety equipment on the Ursa Major II tour to Port Lions. [LEE]



John Crye, ADF&G, points to newly constructed fence surrounding the landfill at Old Harbor. Tonya Lee/USFWS

Coordinated with village and town tribal councils to bring environmental education to culture camps and Alutiiq weeks. [LEE]

Worked closely with ADF&G, Division of Subsistence to complete Kodiak Island wide migratory bird harvest surveys. [LEE]

15.6 When requested, partner with community members to address bear-management concerns at villages, remote cabins, and lodges.

At the start of the year the Old Harbor dump was a mess and an attractant to brown bears. As the result of a Tribal Wildlife Grant, the RIT coordinated with ADF&G and Old Harbor TWG workers to improve landfill with an electrified fence, and provide environmental education on bear awareness and safety considerations to village community and schools. [LEE]

15.7 Hire full-time refuge-wide Volunteer Coordinator to manage community partnerships and volunteer opportunities in support of Refuge mission.

Completed.

15.8 Volunteer Coordinator will work to enhance cross-program volunteer recruitment and retention and foster collaboration and cooperation with Kodiak area agencies and organizations.

Updated Refuge volunteer opportunities postings on Region 7 website, KNWR websites, and specialty job posting boards. [HUPP]

A jazz combo might be pretty strange volunteers for a National Wildlife Refuge, but they provided music for our Crab Fest float and our 70th birthday celebration.
Annette Wheeler Photo

Provided oversight to Refuge staff by maintaining volunteer agreements, summarizing volunteer hours and achievements across programs, and conducting ongoing needs assessments for volunteer involvement. Coordinated 143 volunteers for a total of 17,432 hours contributed in 2011. [HUPP]

Planned, coordinated, and hosted annual volunteer appreciation award event. [HUPP]

Facilitated recruitment, selection, training, and support of biology and maintenance program volunteers. [HUPP]

Coordinated public use of VC multipurpose room, including processing use requests, reserving facilities and posting events on the VC website calendar, collecting fees or identifying in-kind donations, and training event hosts on VC and audio/visual system use. [HUPP/KAHN]

Volunteers have been a plus to the Refuge's biological program. James Lawonn/USFWS

Facilitated community partnerships, events, and training opportunities with Kodiak College, Kodiak Audubon, KIBSD, Kodiak Job Center, Island Trails Network, Kodiak Maritime Museum, Alutiiq Museum, KISAR, and Kodiak Soil and Water Conservation District. [HUPP]

Collaborated with staff and ITN to submit a challenge cost share proposal for the first annual Kodiak Trails Day. Facilitated event volunteers, participated in activities, and hosted appreciation gathering. [HUPP]

GOAL 16: Provide for safe, efficient, cost effective administration and maintenance of refuge facilities and programs.

16.1 Provide for a permanent and seasonal staffing pattern necessary to meet existing and future program management needs as identified in approved management plans.

The existing staffing pattern seems optimal given the current budget allocations. [WHEELER]

16.2 Oversee AWP and budget process including budget tracking, automated data processing, document preparation and control, time and attendance, travel administration, personnel records, and purchasing.

Managed budget entry/tracking/reconciling process. Provided manager with updates upon completion of monthly reconciliation. Kodiak IT network was highly dependable with only a few minor/short term outages. Personnel records and purchasing consistently met administrative requirements. [CASTONGUAY]

Deputy Secretary David Hayes and Secretary Salazar made a brief visit to the Refuge and were escorted by Pilot Kevin Van Hatten, Deputy Refuge Manager Kent Sundseth, Biologist Bill Leacock and Ranger Jason Oles. USFWS

Document preparation, time and attendance, personnel records, and purchasing were accomplished in accordance with regulations and guidance. [CASTONGUAY, CHILDERS]

Captured and entered travel, completed travel requests, authorizations, and travel vouchers and accomplished travel management through GOV.Trip. [CHILDERS, CASTONGUAY]

16.3 Work with ITRM to provide a seamless, robust, secure ITRM system useful to Kodiak users and compliant with national and regional mandates.

ITRM supported the refuge this year, and Gerri Castonguay served as liaison between IRTM and Refuge personnel. [CASTONGUAY]

16.4 Provide a pro-active safety program in accordance with the Station Safety Plan and other Service and OSHA policies and regulations.

A safety assurance inspection was completed to ensure compliance with OSHA regulations. Issues identified have been, or are being addressed. Hazardous materials no longer needed by the Refuge (paints, lubricants, etc.) were collected and disposed of properly during a Borough clean up event. [R. LEATHERMAN]

An August 2011 Regional Director's memo regarding aviation safety required Dunker Training of all employees. Our employees received training at the Coast Guard pool. Gary Wheeler/USFWS

Contributed to Alaska Region Bear/Firearms Safety Committee. Assisted with bear awareness and firearms training. Active member of the IACUC committee reviewing animal capture and handling procedures for projects throughout Region 7. [LEACOCK]

Isaac Bedingfield and Tonya Lee assisted the Marine Mammals Management Program by being ivory and sea otter taggers. Gary Wheeler/USFWS

16.5 Develop and implement an aviation program to support Refuge biological, visitor services, law enforcement, and maintenance programs.

Over 500 hours were flown this year to support Refuge biological, visitor services and maintenance programs. Our Refuge planes are used in ways perhaps too numerous to mention. We use the Husky (a two-place aircraft) primarily for biological surveys, telemetry and law enforcement. The Beaver (a five- or six-place aircraft) is used to haul personnel and heavier loads to and from the field. An additional 125 hours were flown for law enforcement. [BEDINGFIELD/VAN HATTEN]

An updated Aviation Management Plan was approved for Kodiak Refuge in November 2010. Project specific plans were also developed and approved as per Region 7 policy. [VAN HATTEN/BEDINGFIELD]

The headquarters renovation project made more efficient use of our space and got most employees under one roof once the Visitor Center was constructed. Gary Wheeler/USFWS

16.6 Utilize the FWS fire program to enhance habitat, where possible, and to minimize damage to infrastructure on the Refuge and on adjacent lands.

There were no fires on the Kodiak Refuge this year.

Fire personnel visited the Refuge to work on planning in September.

16.7 Conduct refuge LE program in cooperation with community, state and federal authorities with emphasis on prevention and education.

Completed (see objective 10.3). [BEDINGFIELD]

16.8 Maintain and replace equipment and facilities and effectively use and update real and personal property records, SAMMS, and MMS databases.

The Refuge filled a vacant lead maintenance worker position in April 2011. Robin Leatherman joined our staff from the National Park Service. We also brought on a Wage Grade SCEP student to replace David King, who left Kodiak Refuge for the National Park Service. Mike McAllister joined the Refuge in late August. [SUNDSETH]

The major renovation of the Refuge headquarters building was completed in November of 2010. An office was created in the NE corner, a reception office was created next to it

on the north side, the copy room was expanded by taking out the east wall and an office was created to the east of it, the audio visual room was turned into two offices and a door was taken out of it on the south wall, and the washrooms were renovated. The old lab next to the employee entrance was also turned into office space. The roof was better insulated and replaced with a PVC material. Sod was used once again for ballast. The roof was completed in the fall of 2010 except for the seeding which was done in August 2011. A new office was constructed on the second floor of the visitor center for our Volunteer Coordinator. Residences, the bunkhouse, hangar and Lily Lake facilities were all maintained with minimal issues. A photovoltaic solar power array was installed at Camp Island facilities in April 2011 and worked well to power new refrigerators and electrical equipment. This greatly reduced the amount of propane and gasoline used at that location. [R. LEATHERMAN/KING/SUNDSETH/WHEELER]

A variety of maintenance projects related to building and equipment (too numerous to list) were completed successfully. Equipment replaced this year included a new 15 passenger van and a 90 hp replacement outboard for the large vessel at Camp Island. An Alumaweld Talon skiff and 50 hp outboard were purchased and air lifted to Camp Island. [R. LEATHERMAN]

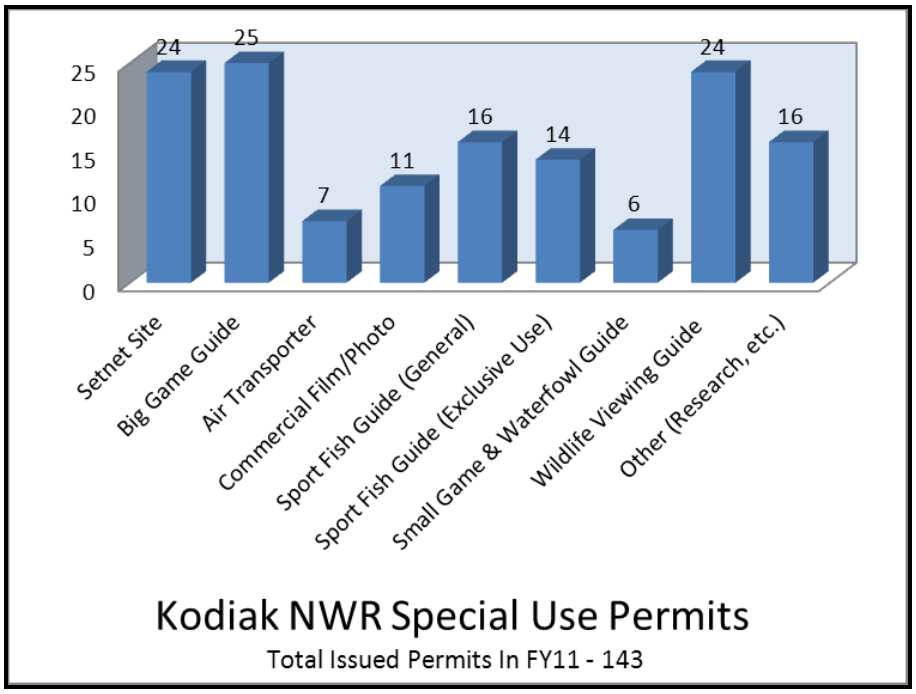
Floor drains in the Refuge shop building were sealed and environmental testing was completed according to EPA guidance. [R. LEATHERMAN/SUNDSETH]

SAMMS and property records were maintained according to agency policy. [CHILDERS]

The Refuge Headquarters building as it looked after renovation. The building was painted, a new reception office with large windows was added, the lab space was turned into an office and the roof and gutter system was replaced. Gary Wheeler/USFWS

16.9 Complete annual RAPP report with accuracy, consistency, and timeliness.

Completed in August, 2011. [SUNDSETH]



16.10 Manage the Refuge special use permit (SUP) program to ensure that refuge uses are appropriate, compatible, and have minimal impact upon refuge resources.

Completed successfully. [L. MONZON/GLASPELL]

Contractor Dave Dumm and Maintenance Worker Dave King install the Camp Island solar system which provided electricity and powered refrigeration. Kent Sundseth/USFWS

16.11 Maintain file system in accordance with Service standards.

Completed successfully. [L. MONZON]

Created MS Access databases to hold current and historical data for mountain goats and deer. [COBB]

16.12 Manage the Refuge's digital and slide images to facilitate their effective use in Refuge programs and by the Public.

Digital images are saved to a shared network allowing all Kodiak staff access to images for creation of a variety of reports, fliers, videos, slide shows and presentations.

16.13 Utilize the Refuge vessel Ursa Major II and other watercraft in support of Refuge programs and activities.

In FY2011, the Ursa Major II was used to support a variety of marine bird research projects including near shore surveys, waterfowl banding projects and a Christmas bird count. The vessel was also used to transport cabin materials for a new public use cabin on Uganik Island, and to haul fuel used at our administrative facilities on Camp Island. In June, the Ursa Major II paid a visit to Port Lions, where Refuge staff provided information regarding Refuge resources to local residents. [LEWIS]

Ursa Major II was configured to serve as a travelling visitor center for an outreach mission to Port Lions. Tonya Lee/ USFWS

16.14 Continue to acquire private lands inside the refuge boundary in accordance with the Land Conservation Plan as opportunities arise from willing sellers.

No lands were acquired on Kodiak NWR this year. However, a native allotment of 94.16 acres on neighboring Aiaktalik Island was acquired in May. Realty staff asked the Kodiak Refuge Manager if this parcel should be acquired, and the Kodiak pilots were instrumental in getting photographs of the parcel. This land is under management of Alaska Maritime NWR.

16.15 Assist the Regional Office realty division when land actions or program action activities occur.

The Service continues to negotiate with Old Harbor Native Corporation about a conservation easement on Sitkalidak Island. The Division of Realty has been the central Service entity in these negotiations, but the Refuge has played an important role in talking with the lawyers representing Old Harbor and in reviewing drafts of the conservation easement. [WHEELER/SUNDSETH]

PERSONNEL

1.	**Gary Wheeler**	**Wildlife Refuge Manager**		
2.	**Kent Sundseth**	**Deputy Refuge Manager**		
3.	**William Pyle**	**Supervisory Wildlife Biologist**		
4.	**Robin Corcoran**	**Wildlife Biologist – Birds**		
5.	**William Leacock**	**Wildlife Biologist – Bears**		
6.	**McCrea Cobb**	**Wildlife Biologist – Ungulates/subsistence**		
7.	**Tonya Lee**	**Refuge Information Technician**		
8.	**Jeffrey Lewis**	**Small Craft Operator**		
9.	**Brian Glaspell**	**Supervisory Park Ranger**	**LDD**	**6/4/11**
10.	**Ava Kahn**	**Visitor Center Manager**	**EOD**	**12/5/10**
11.	**Michelle Lawson**	**Environmental Education Specialist**		
12.	**Lisa Hupp**	**Volunteer Coordinator**		

13. Lecita Monzon	**Administrative Technician (Permits)**	
14. Jason Oles	**Park Ranger**	
15. Jose Monzon	**Custodial Worker**	
16. Isaac Bedingfield	**Refuge Officer/Pilot**	
17. Kevin Van Hatten	**Fisheries Biologist/Pilot**	
18. Gerri Castonguay	**Administrative Support Assistant**	
19. Cinda Childers	**Refuge Clerk**	
20. Robin Leatherman	**Maintenance Worker**	**EOD 3/27/11**
21. David King	**Maintenance Worker**	**LDD 7/2/11**
22. Michael McAllister	**Maintenance Worker**	**EOD 9/25/11**

SUMMER BIOTECHNICIANS AND PARK RANGERS

1. James Lowann	**Biotechnician**
2. Mat Sorum	**Biotechnician**
3. Heidi Helling	**Biotechnician**
4. Karen Leatherman	**Salmon Camp Director**
5. Gina Palmer	**Park Ranger**
6. Elsa Hansen	**Park Ranger**
7. Lacy Squartsoff	**YCC Crew Leader**