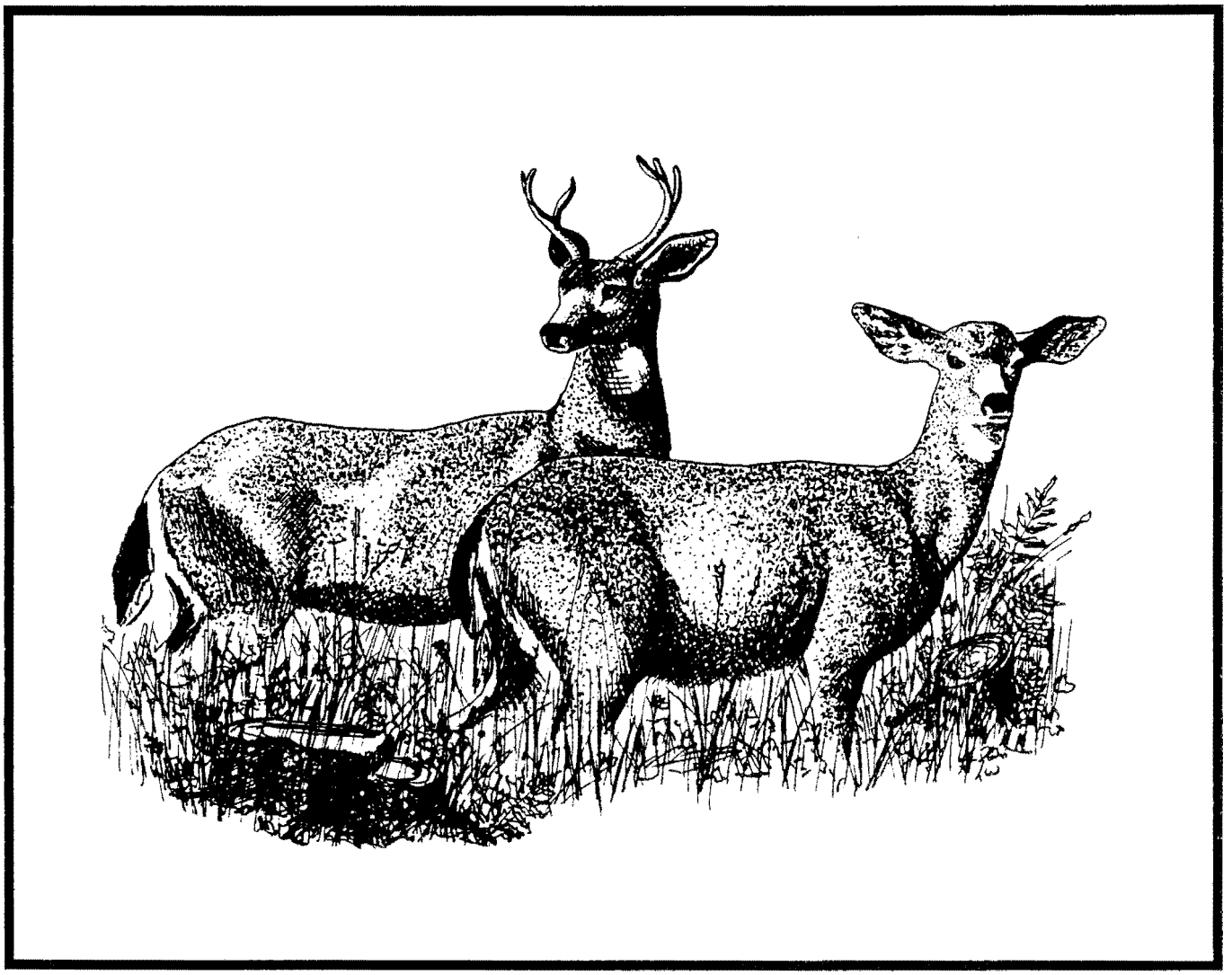
Alaska Department of Fish and Game
Division of Wildlife Conservation

Federal Aid in Wildlife Restoration
Annual Performance Report of
Survey-Inventory Activities
1 July 1992 - 30 June 1993

DEER

Susan M. Abbott, Editor



Volume XXIV, Part VI
Project W-24-1, Study 2.0
November 1993

STATE OF ALASKA
Walter J. Hickel, Governor

DEPARTMENT OF FISH AND GAME
Carl L. Rosier, Commissioner

DIVISION OF WILDLIFE CONSERVATION
David G. Kelleyhouse, Director
Wayne L. Regelin, Deputy Director

Additional copies of this report and other Division of Wildlife Conservation publications may be obtained from:

Publications Specialist
ADF&G, Wildlife Conservation
P.O. Box 22526
Juneau, AK 99802
(907) 465-4190

Project Title: Southeast Deer Population Management

Overview: Deer are widespread in the Southeast Alaska region. Deer numbers are lowest on the mainland and highest on the Pacific Coast side of Baranof and Chichagof islands. Harvests have declined since the 1987 estimate of nearly 20,000, because of a combination of reduced hunter effort and some declining populations. Most deer populations appeared to peak at all-time highs in northern southeastern in the late 1980s. Populations subsequently decreased in northern Southeast and seem to have stabilized, but appear to be slowly increasing on Kuiu, Kupreanof, and adjacent islands. Southern Southeast populations appear stable.

Southeast Alaska deer management is primarily oriented toward providing deer for subsistence and personal use. Trophy hunting makes up a small fraction of total deer hunting effort. Viewing deer is of great interest to nonhunters and hunters alike, and this use is accommodated by maintaining healthy populations.

The greatest threat to deer in Southeast Alaska is continued large-scale logging of prime habitats on U.S. Forest Service (USFS) and private lands. Division of Wildlife Conservation staff members spend much of their time working with timber managers attempting to reduce these losses. Nevertheless, existing habitat losses and scheduled cutting will result in smaller, less resilient deer populations.

Project Location: Subunit 1A and Unit 2 (8,900 mi^2)

Subunit 1A - Ketchikan area including the mainland draining into Behm and Portland Canals.

Unit 2 - Prince of Wales and adjacent islands south of Sumner Strait and west of Kashevarof Passage and Clarence Strait.

Project Objectives and Activities:

- Maintain deer populations in excess of 45 deer/mi^2 of winter range (1.4 pellet-groups per plot) in Subunit 1A and Unit 2.
- Monitor deer densities using pellet-group surveys.

Work Accomplished During the Project Segment Period: We completed deer pellet-group surveys in 4 Value Comparison Units (VCUs) within Subunit 1A and 4 VCUs within Unit 2. In addition to long-established transects, we established new transects in VCUs 719 and 722 (Port Stewart and Spacious Bay, respectively). Using a Bell 206 helicopter, we completed 5 informal alpine surveys over portions of Subunit 1A

and Unit 2 during July. We estimated the deer harvest from regional questionnaires mailed to a random sample of deer hunters.

Progress Towards Meeting Project Objectives: Preliminary data indicate the deer harvest for 1992/93 (638) in Subunit 1A is up from the previous season's estimate of 347. Similarly, the 3,042 harvest estimate in Unit 2 is up from the 2,466 harvested in 1991/92. A preliminary estimate shows hunter success at 39% and 69% in Subunit 1A and Unit 2, respectively.

Pellet-group data indicated that the 45 deer/mi^2 density objective was met in 2 of 8 sampled VCUs (VCU 635, Port Refugio, and VCU 716, Helm Bay). The lowest observed density was at Margaret (VCU 738) where we estimated 10 deer/mi^2. Of the 6 VCUs having preexisting data, 3 were lower than before (VCUs 578, 581, and 738), 2 were higher than before (VCUs 621 and 635), and 1 remained essentially unchanged (VCU 716). Overall, we believe that deer densities in southern Southeast have remained relatively stable during the past year.

Project Location: Subunit 1B and Unit 3 (5,900 mi^2) - Southeast Alaska mainland from Cape Fanshaw to Lemesurier Point and adjacent islands

Project Objectives: Increase populations on deer winter range (<1,500 ft elevation) to 32 deer/mi^2, measured by a mean pellet density of 1.0 pellet-group/20 m^2 plot.

Work Accomplished During the Project Segment: We collected harvest data and analysis is in progress. We did not locate any winter-killed deer during the spring pellet-group surveys in Unit 3.

Progress Towards Meeting Project Objectives: Deer populations have apparently risen slightly in most of Unit 3 based on deer pellet surveys. Based on the hunter survey, harvest appears to have increased slightly from previous years.

The season remained closed in most of Unit 3 north of Sumner Strait but was open on part of Mitkof and all of Woewodski and Butterworth islands. In the 1992 permit registration hunt in this area we issued 776 permits. Six hundred fifty-seven people hunted during a 16-day antlered deer season and reported a total kill of 187 bucks. However, the annual hunter survey indicated that 489 hunters killed 328 deer including 58 does. Conversely, the hunter survey for 1991 estimated a much lower kill than permit reports for that year. This disagreement suggests that validating the hunter survey is valuable.

Preliminary 1992 figures for all of Unit 3 show that 981 hunters killed 640 deer, both parameters being larger than in 1991. Although only bucks were legal, 58 does were reported killed. Only 47.8% of all hunters were successful, similar to the 1991 success rate. Hunters averaged 4.8 days in the field compared to 4.5 days in 1991.

In Subunit 1B, 246 deer hunters hunted and 55.4% were successful, killing 152 deer including 6 does. All estimates are slightly higher than in 1991.

Project Location: Subunit 1C (7,600 mi^2) - The Southeast Alaska mainland and the islands of Lynn Canal and Stephens Passage lying between Cape Fanshaw and the latitude of Eldred Rock, including Sullivan Island and the drainages of Berners Bay

Project Objectives and Activities:

- Maintain population densities on Douglas, Lincoln, and Shelter islands at high levels, indicated by a mean pellet density of 2.0 pellet groups per plot.

- Monitor the deer harvest, participate in public planning meetings, and partake in annual deer pellet survey.

Work Accomplished During the Project Segment Period: Preliminary harvest data from the annual deer hunter questionnaire indicated that hunter success increased substantially from the previous season (from 24.8% to 36.0%) and approximated the level of success seen in 1990 (34.3%). Total kill in the subunit was estimated at 521 deer (70% bucks). Little anecdotal harvest information was gathered regarding conditions in the subunit; Juneau area deer hunters were most concerned with the dual federal-state management of deer in Unit 4.

No planning meetings were held during the report period. We conducted pellet group surveys at Point Couverden, north Douglas Island, and Shelter Island in spring 1993.

Progress Towards Meeting Project Objectives: Pellet-group densities on north Douglas Island (0.7) fell well below the objective of 2.0 groups per plot. However, the objective was based upon the Point Hilda transects, which were not tallied this year. The last time north Douglas Island was surveyed, the transects yielded results of 0.8, similar to this year's figure. Also, the plots were read well after leaf-out during an early spring, so the results may underestimate pellet-group densities.

On Shelter Island we found 2.0 pellet groups per plot, meeting the objective. This was an increase over the 1990 figure of 1.6. Pellet-group density at Point Couverden was very low (0.35 groups per plot).

Project Location: Unit 4 (5,800 mi^2) - Admiralty, Baranof, Chichagof, and adjacent islands

Project Objectives and Activities:

- Maintain a population density capable of sustaining an average hunter kill of at least 1.5 deer, a minimum success rate of 1 deer killed per 4 days hunting, and a male deer harvest at 60% of the total kill.

- Collect population data through fecal pellet surveys, employ the hunter survey to determine harvest and effort information, and conduct deer mortality transects in key areas as needed.

Work Accomplished During the Project Segment Period: We collected population data by pellet-group surveys. We mailed a survey questionnaire to a sample of harvest ticket holders to obtain deer hunter effort and success information. Hunters were asked to indicate hunting locations by harvest areas. Mortality transects one mile in length were examined to determine the extent of winter mortality. Sex, age, and bone marrow condition of winter killed deer were recorded.

Progress Towards Meeting Project Objectives: According to preliminary results of the 1992-93 hunter survey, all three management objectives were achieved. The average kill was 1.8 deer per hunter (the same as in 1991/92) with a hunting effort of 2.9 days per deer (increased from 2.7). Males made up 71.1% of the harvest compared to 61.5% in the previous season.

Project Location: Unit 5 (5,800 mi^2) - Cape Fairweather to Icy Bay, eastern Gulf of Alaska coast

Project Objectives and Activities: No management objectives have been established for deer within Unit 5.

Work Accomplished During the Project Segment Period: Preliminary harvest information from the annual hunter questionnaire indicated that 15 people hunted deer in Subunit 5A, but no deer were taken. It is likely that some animals were taken and not reported on the survey, but the season apparently generated little activity.

Staff from the U.S. Forest Service read pellet transects on islands near Yakutat in 1993.

Progress Towards Meeting Project Objectives: In the absence of objectives, no specific tasks were accomplished. Pellet-group densities (1.1) on Yakutat islands were higher than mean densities from earlier years (0.5). However, a relatively low number of plots were sampled, so it is unclear whether deer densities were actually greater than in the past.

Segment Period Project Costs:

	Personnel	Operating	Total
Planned	$74.6	$33.2	$107.8
Actual	$74.6	$33.2	$107.8
Difference	0	0.0	0.0

Submitted by:

Bruce Dinneford
Management Coordinator

Project Title: Southcentral Alaska Deer Management

Project Location: Unit 6 (10,140 mi^2)
Prince William Sound, north Gulf of Alaska Coast

Project Objective: Maintain a deer population in Unit 6 that will sustain an annual harvest of 1,500 deer, with a minimum annual harvest of 60% males, and minimum hunter success rate of 50%.

Work Accomplished During the Project Segment Period: We monitored hunting activities and harvest by a mail questionnaire. Preliminary results indicated the harvest was 2,153 (90% CI=$\pm$ 212), males comprised 64% of the harvest, success rate was 52%, and successful hunters harvested an average of 1.5 deer. Montague Island provided 34% of the take, while Hawkins and Hinchinbrook islands produced 14% and 24%, respectively.

I did not complete aerial composition surveys that were scheduled. Normal concentrations of deer on beaches, where they could be observed during late winter did not occur because of mild conditions. Natural winter mortality was low.

We conducted pellet group surveys during 1-6 June on Montague, Hinchinbrook and Hawkins islands. Analysis of these data has not been completed.

Progress Towards Meeting Objectives: All objectives were achieved. The population was able to sustain a harvest of 1,500, the percentage of males in the harvest exceeded 60%, and success rate was greater than 50%.

Project Location: Unit 8 (8,750 mi^2)
Kodiak and adjacent islands

Project Objective and Activities: Maintain a deer population that will sustain an annual harvest of at least 8,000 deer.

Work Accomplished in Project Segment Period: We monitored hunting activities and harvest by a mail questionnaire. The estimated harvest was 6,794 deer. Males comprised 72% of the harvest, and hunter success was 60%. An estimated 4,105 hunters went afield.

We completed an aerial survey on 8 March 1993 to assess winter conditions for deer on Kodiak Island. We encountered excellent conditions with many southerly aspect slopes, snow-free below 500-1,000 feet elevation.

We completed a winter mortality survey over a 6-mile coastal transect at Chief Cove in Spiridon Bay on 12 and 13 April 1993, and found only 1 dead fawn. We saw several live

deer in excellent condition. Although fairly heavy snowfall in late December forced deer to the coast briefly, winter survival was good throughout Unit 8.

We flew 2 replicate deer composition and trend surveys in the Uganik Island and Terror Bay drainages in western Kodiak Island in August 1992. We averaged 110 deer/hour (range = 79-138 deer/hour) in 1992, a decline from the 131 deer/hour (range = 88-180 deer/hour) recorded for comparable surveys done in 1991.

Progress Towards Meeting Objectives: The estimated 1992 harvest was below the 8,000 harvest objective. A decline in hunter success from 77% in 1991, to 60% in 1992 reflected the current decline in the deer population. Excellent survival during the 1992-93 winter will probably result in increased hunter success and a higher harvest in 1993.

The federal subsistence regulations provided for a bag limit of 5 deer on federal lands for residents of Unit 8, compared to a 4 deer bag limit under state regulations. An estimated 127 local hunters (10%) harvested the 5 deer limit.

Segment Period Project Costs:

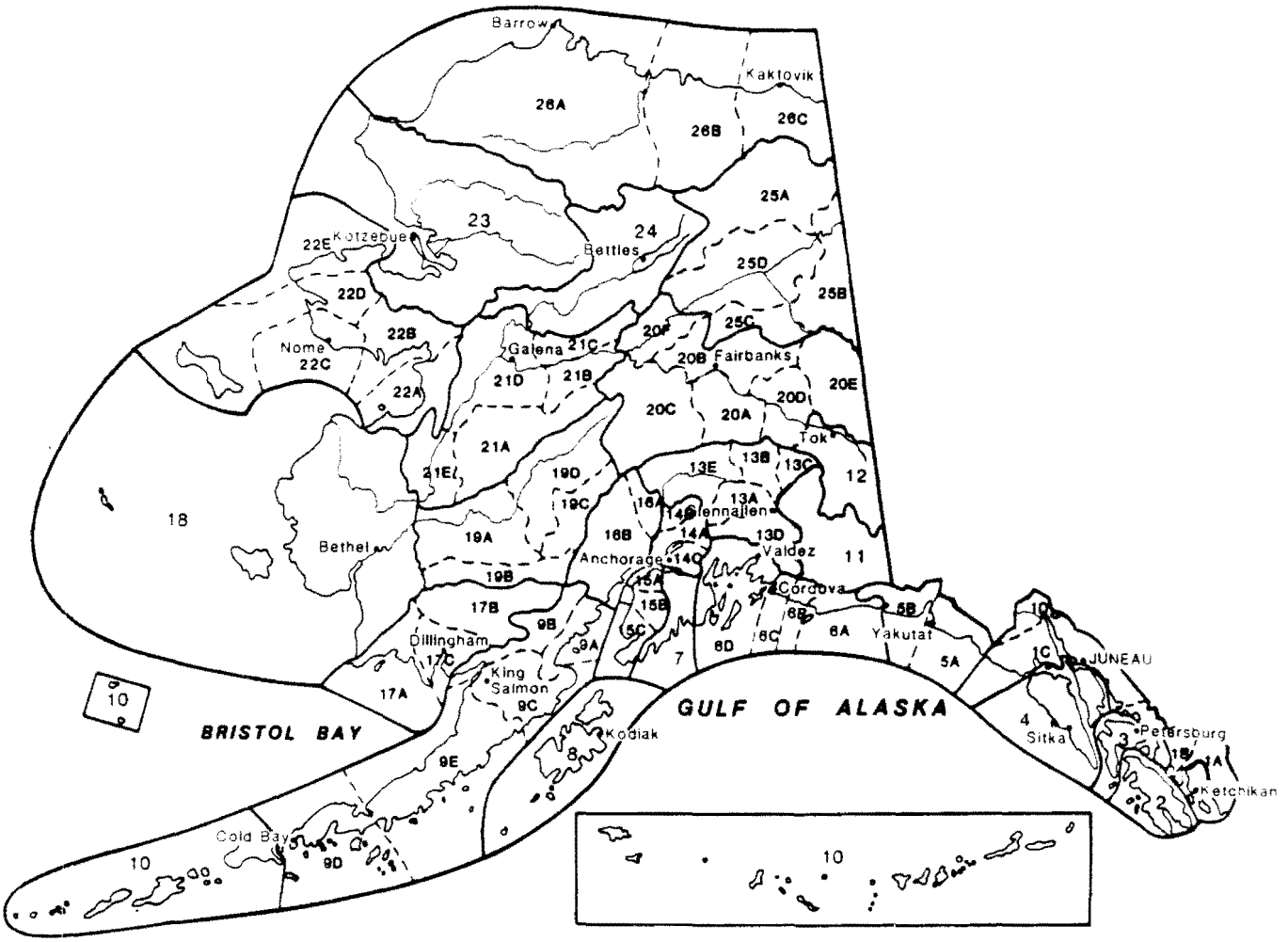
	Personnel	Operating	Total
Planned	21.5	18.5	40.0
Actual	21.5	16.0	37.5
Difference	0	+2.5	+2.5

Explanation: Because of unusual and inadequate weather conditions, staff were unable to complete surveys.

Submitted by:

Jeff Hughes
Wildlife Biologist

Alaska's Game Management Units



Federal Aid in Wildlife Restoration

The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manufacturer's excise tax collected from the sales of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program then allots the funds back to states through a formula based on each state's geographic area and the number of paid hunting license holders in the state. Alaska receives 5% of the revenues collected each year, the maximum allowed. The Alaska Department of Fish and Game uses the funds to help restore, conserve, manage, and enhance wild birds and mammals for the public benefit. These funds are also used to educate hunters to develop the skills, knowledge, and attitudes necessary to be reponsible hunters. Seventy-five percent of the funds for this project are from Federal Aid.