Alaska Department of Fish and Game
Division of Wildlife Conservation
Federal Aid in Wildlife Restoration
Annual Performance Report of
Survey-Inventory Activities
1 July 1990 - 30 June 1991

DEER

Susan M. Abbott, Editor
Volume XXII, Part VI
Project W-23-4, Study 2.0
December 1991

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 ubiquitous in southeast Alaska. Deer numbers are lowest on the mainland and highest on the Pacific Coast side of Baranof and Chichagof Islands. Harvests have declined somewhat since the 1987 estimate of nearly 20,000, but this is apparently more a function of reduced hunter effort than of declining populations. Most deer populations may be at or near all-time highs in northern Southeast. Populations continue to increase in southern and central Southeast, but they remain at low levels on Kuiu, Kupreanof, and adjacent islands.

Southeast Alaska deer management is oriented primarily toward providing deer for subsistence and personal use. Trophy hunting makes up only a small fraction of total deer hunting effort. Viewing deer is of great interest to nonhunters and hunters alike, and this can be provided 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 staff spend much of their time in this project working with USFS and private timber managers, attempting to reduce these losses. Nevertheless, existing habitat losses and scheduled cutting will inevitably result in smaller, less resilient deer populations.

Project Location: GMU 1A AND 2 (8,911 miles^2).
Unit 1A - Ketchikan area including mainland areas 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 per mi^2 of winter range (1.4 pellet groups per plot) in GMUs 1A and 2. Monitor deer densities using pellet-group surveys.

Work Accomplished During the Project Segment Period: Deer pellet-group surveys were completed in 12 VCUs within GMUs 1A and 2. In addition to the long-established transects, new transects were established in VCUs 569 and 821 (Baker and Winstanley Islands, respectively). Deer mortality surveys were conducted along established transects in George and Carroll Inlets, and an alpine deer survey was flown over a portion of Unit 2.

The deer harvest from GMUs 1A and 2 was determined from the regional mail questionnaires sent to a random sample of deer hunters. Anecdotal information about

deer numbers and harvests was collected from hunters, trappers, and Department personnel.

Progress Towards Meeting Project Objectives: Based on pellet-group surveys, the objective of 45 deer/mi^2 of winter range was met in 6 of the 12 areas surveyed. Deer densities apparently increased in 5 survey areas, decreases were noted in 3 areas, and densities apparently remained stable in 2 areas. The highest density (66 deer/mi^2) was noted at Warm Chuck, the lowest (3 deer/mi^2) at Baker Island.

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

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

Work Accomplished During the Project Segment: Harvest data was collected and analysis is in progress. No apparent changes were noted in harvest patterns from preceding years based on informal hunter interviews. Anecdotal information was collected from hunters and others to better understand public perceptions. Several public meetings were held by local groups and a conservative open season was proposed for portions of Unit 3. The Board of Game adopted the proposal. Pellet-group surveys were conducted in the spring in Unit 1B and in Unit 3 on Etolin, Kupreanof, Conclusion, Mitkof, Woronkofski and Woewodski Islands.

Progress Towards Meeting Project Objectives: Deer populations seem to still be increasing according to deer pellet surveys. Overall, pellet-group densities in Unit 3 were up slightly from the previous year. Deer Mortality Surveys in Unit 3 showed very few deer losses attributable to winter severity. Numerous wolf kills were located. Deer numbers on southern Mitkof Island increased by 18%.

New survey lines were established at Frosty Bay, in Unit 1B, to get a baseline indicator before the timber sale scheduled for this year. Deer numbers appeared moderate.

The season remained closed in most of Unit 3 north of Sumner Strait but will be open on a part of Mitkof and all of Woewodski and Butterworth Islands starting in fall 1991.

Deer have increased on Mitkof Island to the extent that they are becoming a problem in Petersburg and road kill incidents have increased greatly.

Project Location: GMU 1C (7,562 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 drainage of Berners Bay.

Project Objectives and Activities:

Maintain population densities on Douglas, Lincoln and Shelter islands at high levels as reflected by a mean pellet density of 2.0 pellet groups per plot; monitor harvest; participate in public planning meetings; participate in the annual deer pellet survey.

Work Accomplished During the Project Segment Period: Harvest data from the regional mail questionnaire sent to a stratified sample of deer hunters was not available by report time. Anecdotal harvest information did not indicate that hunters found better or worse success as in recent years. A regulatory change made the bag limit on the GMU 1C mainland 2 antlered deer only.

No planning meetings were held this report period. However, regional planners were consulted regarding the establishment of population objectives.

Pellet group surveys were conducted at a new location on Douglas Island. Three-hundred plots were measured in 3 transects, for an average pellet group density of .80 pellet groups per plot. This new location, accessible via North Douglas Highway, will permit Douglas Island transects to be surveyed when inclement weather precludes boat access to the back side of the island.

Progress Towards Meeting Project Objectives: The Douglas Island pellet group densities fell approximately 60% under objectives set out for GMU 1C deer populations. Field staff noted that few pellet groups were found close to the coastline; good numbers of pellet groups were first noted at elevations of 300-400 feet. Because browse was abundant and healthy, this is felt to be because of high numbers of people using the area.

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

Project Objectives: Maintain a population density capable of sustaining an average harvest/hunter of at least 1.5 deer, an effort of no more than 4 days/deer, and a composition of 60% males in the harvest.

Work Accomplished During the Project Segment Period: The harvest was analyzed from reports of the regional mail questionnaire sent to a stratified sample of deer hunters. Anecdotal information about harvests was collected from hunters, Department staff, and

Fish and Wildlife Protection officers. No planning meetings were held this report period. Pellet-group surveys were conducted in 9 VCUs on Baranof, Chichagof, Kruzof and Pleasant Islands. Deer mortality survey transects were conducted on Baranof, Chichagof, and Kruzof Islands. Transects were accomplished in 3 VCUs which had not been done before.

Progress Towards Meeting Project Objectives: Deer populations exceeded the population management objective. According to pellet-group data, the populations increased over the previous year in 5 of 6 VCUs.

Segment Period Project Costs:

	Personnel	Operating	Total
Planned	$75.2	$44.5	$119.7
Actual	$75.2	$40.0	$115.2
Difference	0	-$4.5	-$4.5

Explanation for difference: The U.S. Forest Service provided vessel time which saved money in this project.

Submitted by:

Bruce Dinneford
Regional Management Coordinator

Project Title: **Southcentral Alaska Deer Management**

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

Unit 8 (8,750 mi^2)
Kodiak, and adjacent islands.

Project Objectives: Maintain a deer population in Unit 6 that will sustain an annual harvest of at least 1,500 deer, a harvest of 60% males, and minimum hunter success rate of 50%. Maintain a deer population in Unit 8 that will sustain an annual harvest of at least 8,000 deer.

Work Accomplished During the Project Segment Period:

Unit 6

Hunting activities and the harvest were monitored by a mail questionnaire and a telephone survey of Cordova residents. Mail questionnaire results will be available in the next report period. The telephone survey indicated that 25% of harvest ticket recipients did not hunt and 67% of those who hunted were successful. Each successful hunter harvested an average of 2.9 deer and spent 5.7 days afield. The harvest was composed of 56% males. The survey also indicated that Cordova residents killed 73% of their deer during October and November. Hawkins Island provided 42% of the harvest, while Hinchinbrook and Montague Islands produced 34% and 13%, respectively.

The 1990 estimated harvest by Cordova residents was 963 deer; quite an increase over the 1989 estimate of 570 but similar to the 1988 estimate of 1,042 deer. The Exxon Valdez oil spill and cleanup activities affected the deer harvest in 1989. If we assume that the 1990 hunting season represented a typical hunting year, results of the Cordova survey suggest a total harvest of between 2,400 and 2,750 deer for Unit 6. The mail questionnaire results will provide a more valid estimate of unitwide harvests for the 1990 season.

Pellet-group surveys were conducted between 18-24 May on Hawkins, Hinchinbrook, Montague, and Elrington Islands (5 UCUs were sampled). Deer pellet group densities (pellet groups/plot) observed in 1991 were generally greater than those observed in 1988 or 1989. Number of plots sampled was 17% fewer this year because extensive snow cover persisted during the surveys. Detailed analysis of these data has not been completed.

The number of deer carcasses located incidental to pellet-group transects suggested that winter mortality during 1990-91 was greater than 1987-88. Deer mortality surveys conducted in Port Chalmers and Stockdale Harbor suggested beach fringe mortality

densities of 6-10 deer/mi. Evidence of the previous year's mortality was almost as high. This concurs with reports from hunters and pilots following the 1990-91 season -- that mortality this winter was equal to or greater than the previous winter. Recent deer carcasses were predominantly fawns (10), followed by adult males (6), adult females (2), and unidentified adults (2).

Unit 8

Hunting activity and harvest were monitored by conducting local interviews with hunters, and with a voluntary questionnaire published in the local newspaper and distributed at 2 Kodiak sporting goods stores. A postseason mail questionnaire was sent to a sample of potential hunters who obtained deer harvest tickets from outlets in southcentral Alaska. Results of the questionnaire will be available by the next report period. Interviews (N = 108) and local questionnaires (N = 268) provided some indication of the harvest: 553 deer (364 males, 176 females, 13 unknown) were taken, hunter success was 80% and successful hunters took a mean of 2.6 deer.

The total harvest, projected from the 1989-90 mail questionnaire, was 10,015 deer, a substantial decline from 13,308 deer harvest projected from the 1987-88 mail questionnaire. There was probably a reduction in the number of deer harvested in 1990-91 as the deer population was in the third year of a continuing decline. Local outfitters and transporters indicated the number of hunters also declined from the previous year.

Overwinter survival was much better than the previous 3 winters. A winter mortality survey was completed in March 1991, at Chief Cove, western Kodiak Island. In 5 miles of coastal winter range only 8 fawn carcasses were located compared to 112 dead deer located the previous year. An aerial survey of Afognak and Kodiak Islands on 1 March 1991 confirmed winter conditions were favorable with most southerly exposed winter range generally snow-free below 500-1,000 ft elevation. One-hundred-thirty-four deer (20 adult males, 34 females, 12 females with 1 fawn, 11 females with 2 fawns, and 23 unidentified adults) were observed during a 1.7 hr (78.8 deer/hr) aerial survey of alpine summer range on 30 July.

Progress Towards Meeting Objectives:

Unit 6

The Cordova deer hunter survey suggested that objectives may have been reached, despite an apparent decline in deer population. Declining deer densities caused by a hard winter may have reduced hunter interest and effort in fall 1990. Poor overwinter survival during the 3 previous years was the reason the Board of Game reduced season length and bag limits in 1991-92. The bag limit was reduced from 5 to 4 deer, and the antlerless season opening date was changed from 15 September to 1 November.

Unit 8

The 1990-91 mail questionnaire is expected to confirm the harvest objective was met (8,000 deer) but the total is expected to be less than the previous year's harvest (10,015 deer). Low recruitment during the 3 previous years prompted the Board of Game to adopt reductions in season length and bag limits in 1991-92. The bag limit was reduced from 5 to 4 deer, the January season was deleted, the antlerless season opening date was changed from 15 September to 1 October, and a bag limit of 1 antlerless deer was implemented from 1 October to 30 November on northern Kodiak and Afognak Islands. The Federal Subsistence Board adopted a 5 deer limit for subsistence hunters (i.e., residents of GMU 8) for the Kodiak National Wildlife Refuge.

A 3-year decline in the deer population apparently reversed with comparatively low mortality during the 1990-91 winter. Improved recruitment and more conservative regulations should assist the deer population increase on northern Kodiak and Afognak Islands, where the decline was most severe.

Segment Period Project Costs:

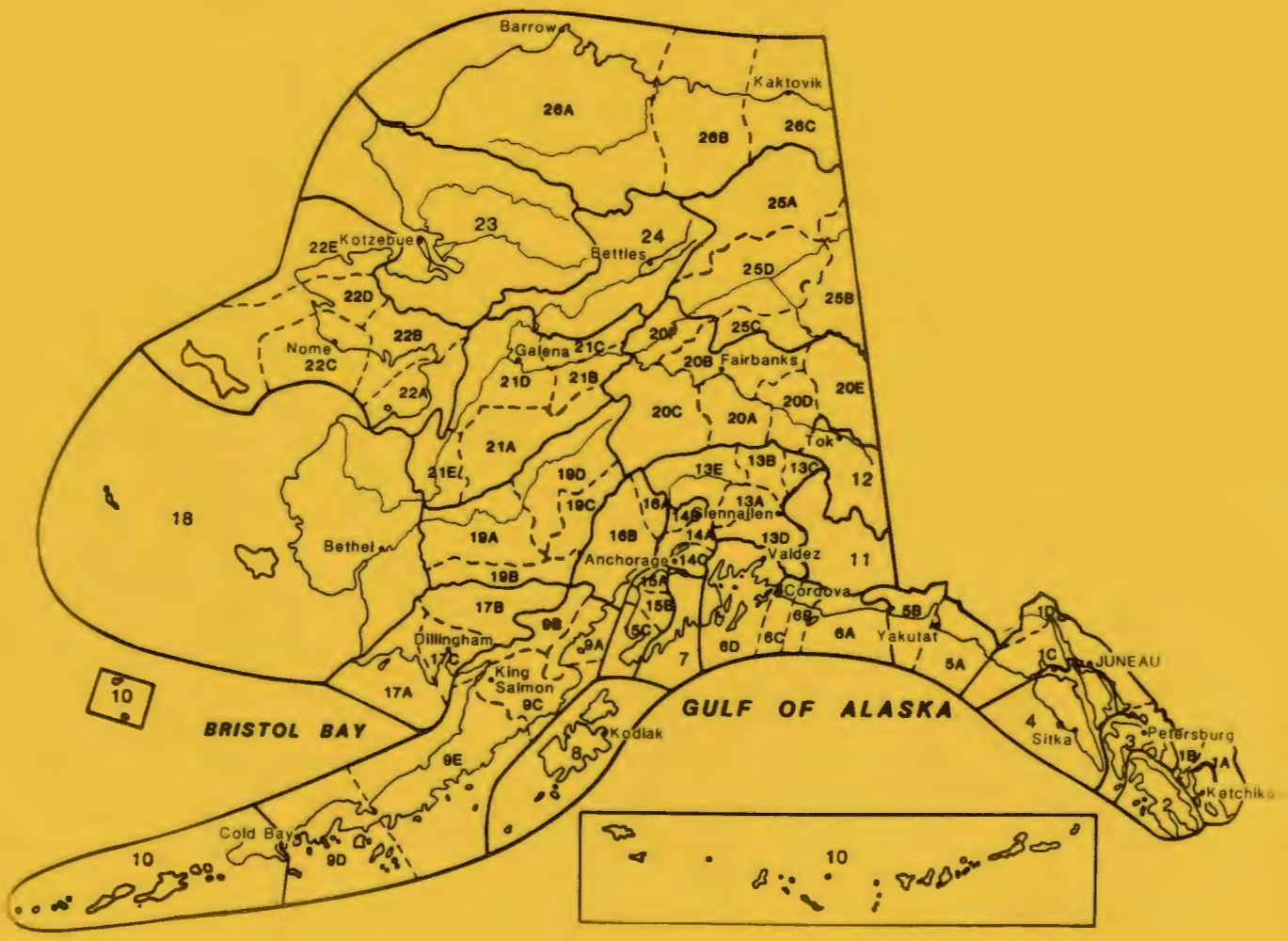
	Personnel	Operating	Total
Planned	26.4	16.9	43.3
Actual	26.4	12.3	38.7
Difference	0	-4.6	-4.6

The Cordova area office was vacant for 7 months.

Submitted by:

Kenneth W. Pitcher and John N. Trent
Regional Management Coordinators

Alaska Game Management Units



WILDLIFE RESTORATION

Funded by Federal Aid in Wildlife Restoration