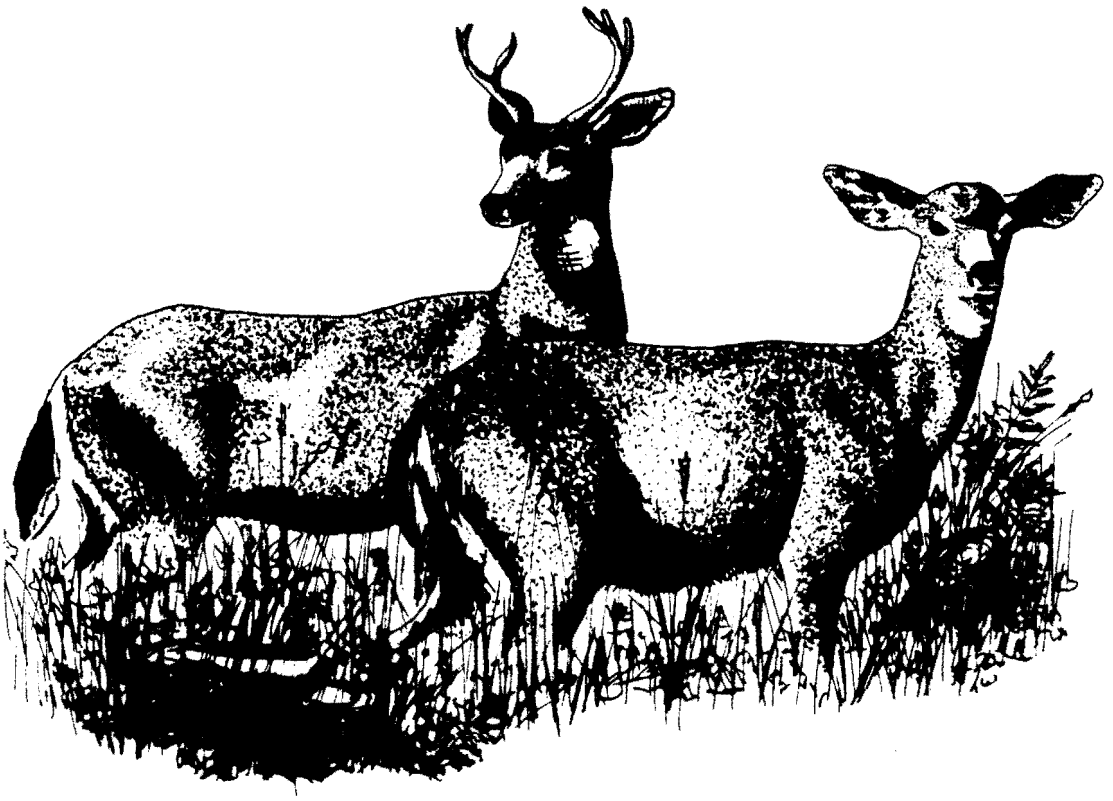
Alaska Department of Fish and Game
Division of Wildlife Conservation
Federal Aid in Wildlife Restoration
Annual Performance Report of
Survey-Inventory Activities
1 July 1989-30 June 1990

DEER



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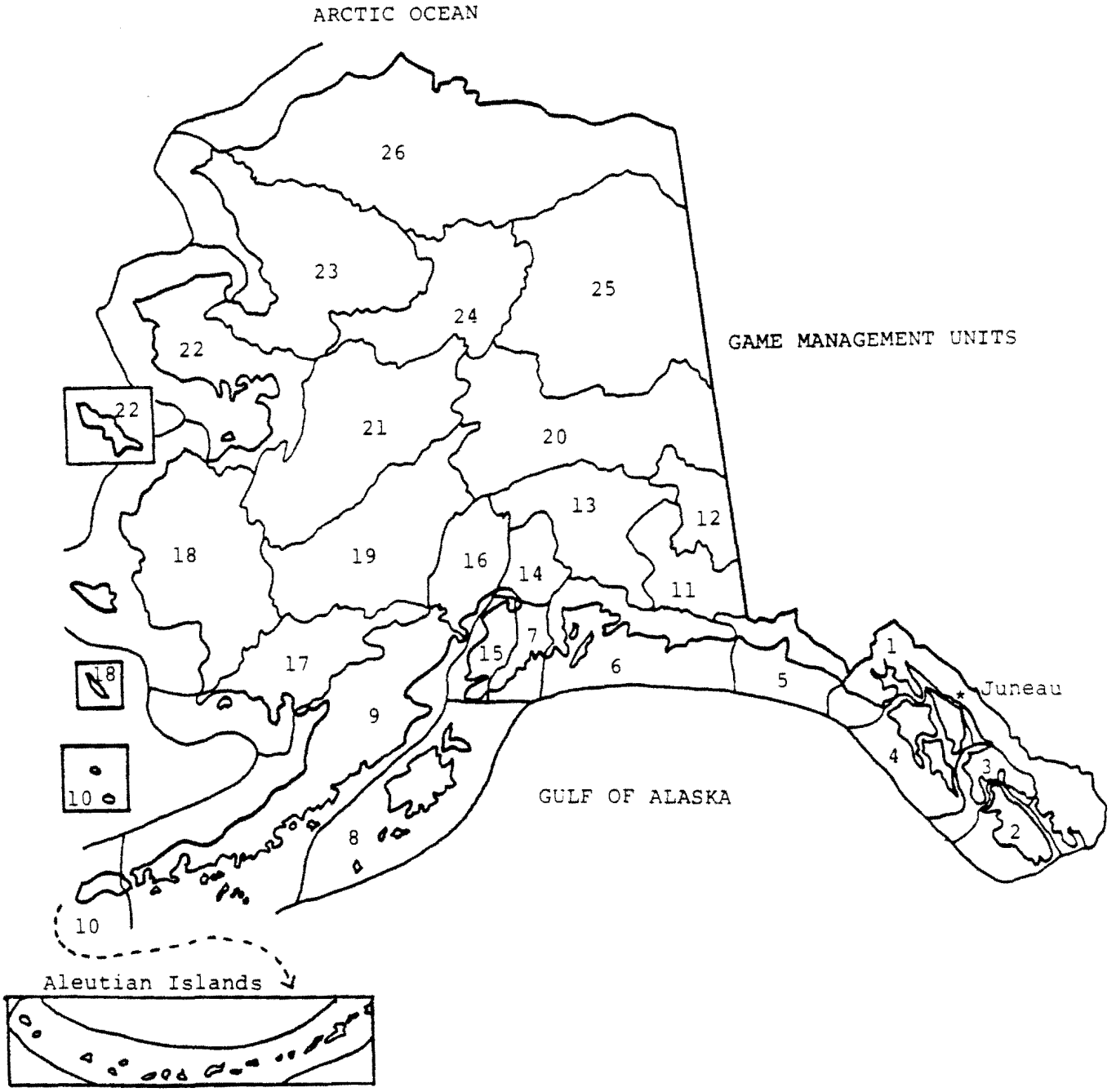
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PROJECT TITLE: Southeastern Deer Population Management

OVERVIEW: Deer are virtually ubiquitous 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 somewhat since the 1987 estimate of nearly 20,000, but this appears to be more a function of reduced hunter effort than 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 use can largely be provided for 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: Units 1A and 2 (8,900 mi^2)
Ketchikan area, including mainland areas draining into Behm and Portland Canals, and Prince of Wales and adjacent islands south of Sumner Strait and west of Kashevarof Passage and Clarence Strait.

POPULATION OBJECTIVES:

To maintain deer populations in excess of 75 deer/mi^2 of winter range as measured by mean pellet-group density of 1.4 groups per plot.

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

Five pellet-group survey areas were completed in 1990; a slight increase was recorded. The July alpine survey was only partially completed. Unusually hot weather apparently forced the deer into cover before the survey was completed. The annual hunter survey to monitor the 1989-90 harvest was completed. Hunter success and total deer taken declined slightly from those for the previous year in both units. Snow accumulation was greater during portions of the 1989-90 winter than for many years. Field observations did not indicate heavy mortality in any of the areas checked, although some losses occurred. No planning meetings were held.

PROGRESS TOWARD MEETING PROJECT OBJECTIVES:

The population objective of 75 deer/mi^2 of winter range was not met. The objective is unreasonably high, and it should be reduced. Current population levels in Unit 2 are providing good hunter success, particularly under an antlered deer season. Maintenance of the deer herd at existing levels would be a reasonable management objective. Deer numbers in much of Unit 1A are smaller than those in Unit 2, and an increase in its deer herd would be desirable. Either-sex hunting in Unit 2 would be logical at this time, while Unit 1A should remain an antlered only area until hunter success rises to a level comparable to Unit 2.

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

PROJECT OBJECTIVES:

To increase populations on deer winter range (<1,500 ft elevation) to moderate levels (50 deer/mi^2) as measured by a mean pellet density of one pellet-group/20 m^2 plot.

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT:

The harvest data were analyzed. No apparent changes were noted in harvest patterns from preceding years. Anecdotal information was collected from hunters and others to better understand public perceptions. No specific public meetings were held for deer planning, but deer were discussed during the regular meetings of the local advisory committees. Pellet-group surveys were conducted in the spring in Unit 3 on Kuiu, Kupreanof, and Woewodski Islands.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Deer populations seem to have stabilized during the past few years, according to results of the deer pellet surveys. Overall, pellet-group densities in Unit 3 were up slightly from that of the previous year, but slightly below the high of 3 years ago. No surveys were conducted in Unit 1B. Very few remains of winter-killed deer were observed during the spring pellet surveys. Deer numbers on Kuiu Island continue to be very low, but they are increasing slightly.

New survey lines were established on Kupreanof Island along the eastern shore of Duncan Canal. The mean density of these lines was 1.11 pellet-groups/plot, compared with the mean of 0.40 pellet-groups/plot found last year on the western shore. The herd seemed to be growing faster on the Lindenberg Peninsula than on the rest of the Kupreanof Island. New lines were also established on Mitkof Island, and VCU 449 was surveyed for the

first time since 1981. Mean density for those lines in 1981 was 0.08, compared with 0.55 during the reporting period. This is still much smaller than the mean of 1.46 found on the south end of Mitkof Island.

Hunter harvests have remained about the same for the past 3 years. The season remained closed in Unit 3 north of Sumner Strait. Except for Mitkof Island the deer population remained low, even though no legal deer harvests have occurred since 1975.

PROJECT LOCATION: Unit 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:

To maintain population densities on Douglas, Lincoln, and Shelter Islands at high levels reflected by a mean pellet density of 2.0 pellet-groups per plot.

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

The harvest was analyzed from returned mail questionnaires that had been sent to a stratified sample of hunters. Anecdotal information about harvests was collected by Department staff and Fish and Wildlife Protection officers.

No planning meetings were held during the reporting period; however, regional planners were consulted regarding the establishment of population objectives. Pellet-group surveys were conducted on Shelter Island. A total of 3 transects were walked, and an average pellet-group density of 1.6/plot was observed. Douglas Island transects were not surveyed because of inclement weather.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Shelter Island pellet-group densities fell approximately 20% under objectives set out for Unit 1C deer populations. Douglas Island exhibited a relatively high doe harvest, but the lack of spring pellet surveys precluded speculation on that event's impact on deer numbers. Although pellet count values are below those desired, an increase was noted over those for 1989.

PROJECT LOCATION: Unit 4 (5,800 mi^2)
Admiralty, Baranof, Chichagof, and adjacent islands

PROJECT OBJECTIVES:

To 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 during the reporting period. Pellet-group surveys were conducted on Admiralty, Baranof, Chichagof, and Kruzof Islands. Deer mortality survey transects were conducted on Baranof, Chichagof, and Kruzof Islands.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Deer populations exceeded the population management objective. According to pellet-group data, the populations increased over the previous year.

SEGMENT PERIOD PROJECT COSTS:

	Personnel	Operating	Total
Planned	85.5	33.2	118.7
Actual	90.0	27.7	117.7
Difference	-4.5	5.5	1.0

Actual personnel costs were estimated. Personnnel costs were higher than planned. This was attributable, in part, to the illness of a Wildlife Biologist III, which required us to fill in for him by temporarily upgrading a WB I and extending his normal working season. Some savings were realized in project costs when a vessel was made available at essentially no cost for the pellet-group survey project.

SUBMITTED BY:

David M. Johnson
Regional Management Coordinator

PROJECT TITLE: Southcentral Alaska Deer Management

PROJECT LOCATION: Units 6 and 8
Prince William Sound and north Gulf Coast and Kodiak and adjacent islands

PROJECT OBJECTIVES:

To 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%.

To 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 survey of all hunters and a telephone survey of Cordova residents. Mail questionnaire results will be available in the next reporting period. The telephone survey indicated that 38% of harvest ticket recipients did not hunt and 51% of those who had hunted were successful. Successful hunters averaged 2.9 deer and 5.7 days afield. The harvest was composed of 54% males. The survey also indicated that Cordova residents killed 70% of their deer during October and November; the remainder was equally spread between September and December. Hinchinbrook Island apparently provided 40% of the harvest, while Montague and Hawkins Islands produced 37% and 23%, respectively.

The 1989 estimated harvest by Cordova residents was 570 deer, compared with 1,042 in 1988. Assuming that the 1989 hunting season represented a typical hunting year, results of the Cordova survey projected a harvest of between 1,430 and 1,630 deer. However, impacts of the Exxon Valdez oil spill suggested that this is not a valid assumption. The mail questionnaire results will provide a more reliable estimate of unitwide harvests for the 1989 season.

Unit 8

Hunting activities and the harvest were monitored by conducting field interviews with hunters and with mailing out questionnaires. Results of the mail survey will be available by the next reporting period. Personal interviews with 79 deer hunters were conducted by the Kodiak National Wildlife Refuge staff at hunting camps on western Kodiak Island. For 65 hunters who had completed at least half of their planned stay, a harvest of 129 deer (81 adult males, 34 adult females, 14 fawns) was

reported. Hunters reported seeing an average of 38 deer per hunt, and the average planned hunt length was 5.9 days.

A study on deer and habitat relationships in the Spiridon Bay area is being conducted jointly by University of Alaska graduate student Jeff Selinger and staff from the Kodiak National Wildlife Refuge. Seventeen deer were captured and radio-collared, and J. Selinger began field work there in July 1990.

Winter mortality surveys were conducted at 4 locations in April and May. Approximately 13 miles of coastline were searched; 131 deer carcasses were located and classified by sex and age. The mortalities were classified as follows: 9 adult males; 13 adult females; 16 adult unknowns; 9 male fawns; 9 female fawns; 73 unknown fawns; and two of unknown age or sex. Relatively poor survival of 1989 fawns was indicated, but adult female survivals were relatively high.

Unit 6

A 16 March aerial survey of Montague, Hinchinbrook, and Hawkins Island beaches produced a count of 1,065 deer (linear density of 3.5 deer/mile), compared with 4.5 deer/mile observed the previous year. Survey timing, in relation to snow depth, favored a higher observation density on Montague Island (4.9 deer/mile) and a lower observation density on Hawkins Island (0.1 deer/mile) compared with those in 1988. Deer were observed on Hinchinbrook Island at 2.6 deer/mile. A new observer had difficulty separating short yearlings from adults, thus preventing an assessment of age composition; however, the observer felt that fawn survivals to that time had been poor. A minimum of 2 dead deer were observed.

Unit 6

Pellet-group surveys conducted from 21 May to 6 June produced an average density of 1.3 pellet-groups/plot (pgp). A total of 6 UCUs were sampled. Four UCUs were sampled on Montague Island, producing 0.4 pgp on the southwest, 1.2 pgp on the northeast, and 1.6 pgp on the southeast shores. The UCUs sampled on southwest and southeast Hinchinbrook Island produced 2.7 and 1.2 pgp, respectively.

PROGRESS TOWARDS MEETING OBJECTIVES:

Unit 6

The Cordova deer hunter survey suggested that objectives may have been reached, despite an apparent decline in the deer population. Declining deer densities caused by a hard winter and the impacts of the Exxon Valdez oil spill may have reduced hunter interest and effort during the fall of 1989. The composition of the

Cordova hunter deer harvest suggested that availability of male deer was reduced, an expected condition following a hard winter.

If deer numbers continue to decline, hunting seasons and bag limit changes may become necessary to meet all objectives. To maintain a minimum 50% success rate, a reduced bag limit or reduced season length may become necessary. A delayed opening of the either-sex season would allow harvest composition objectives to be met. The above changes would also increase population recovery to some degree.

Unit 8

The deer population was at an historical peak in the early to mid-1980's. The population was probably well above the long-term carrying capacity of the coastal winter range. A series of 3 relatively severe winters beginning in 1987-88 have resulted in an overall population decline; however, it has not been uniform, and relatively high numbers of deer were observed by hunters on southern Kodiak Island in 1989. Hunting effort appeared to decline in 1989.

Both adult female survivals and fawn production have remained high. A rapid recovery of the deer population could occur with milder winters, but attrition in aging adult females will exacerbate the decline if winter severity continues to limit fawn recruitment to older age classes. Except in limited road-accessible areas of northern Kodiak Island, hunting has not been a serious limiting factor.

Lack of objective, economical methods of assessing population trends and only occasional harvest estimated by mail questionnaire are potential problems in achieving management objectives, particularly when the population is declining. Winter mortality surveys provide some insight into trend and composition of the population, but harvest surveys are the most economical and reliable method of assessing population trends. It is recommended that hunter questionnaire surveys be done annually.

SEGMENT PERIOD PROJECT COSTS:

	Personnel	Operating	Total
Planned	26.4	20.0	46.4
Actual	26.4	12.7	39.1
Difference	0.0	-7.3	-7.3

In Unit 6, savings in operational costs were realized through sharing of oil spill personnel and cost sharing with other field

projects. Hunt monitoring and winter mortality surveys were done at less-than-planned intensity in Unit 8 partially because of oilspill-related time demands.

SUBMITTED BY:

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

Federal Aid Project
funded by your purchase of
hunting equipment