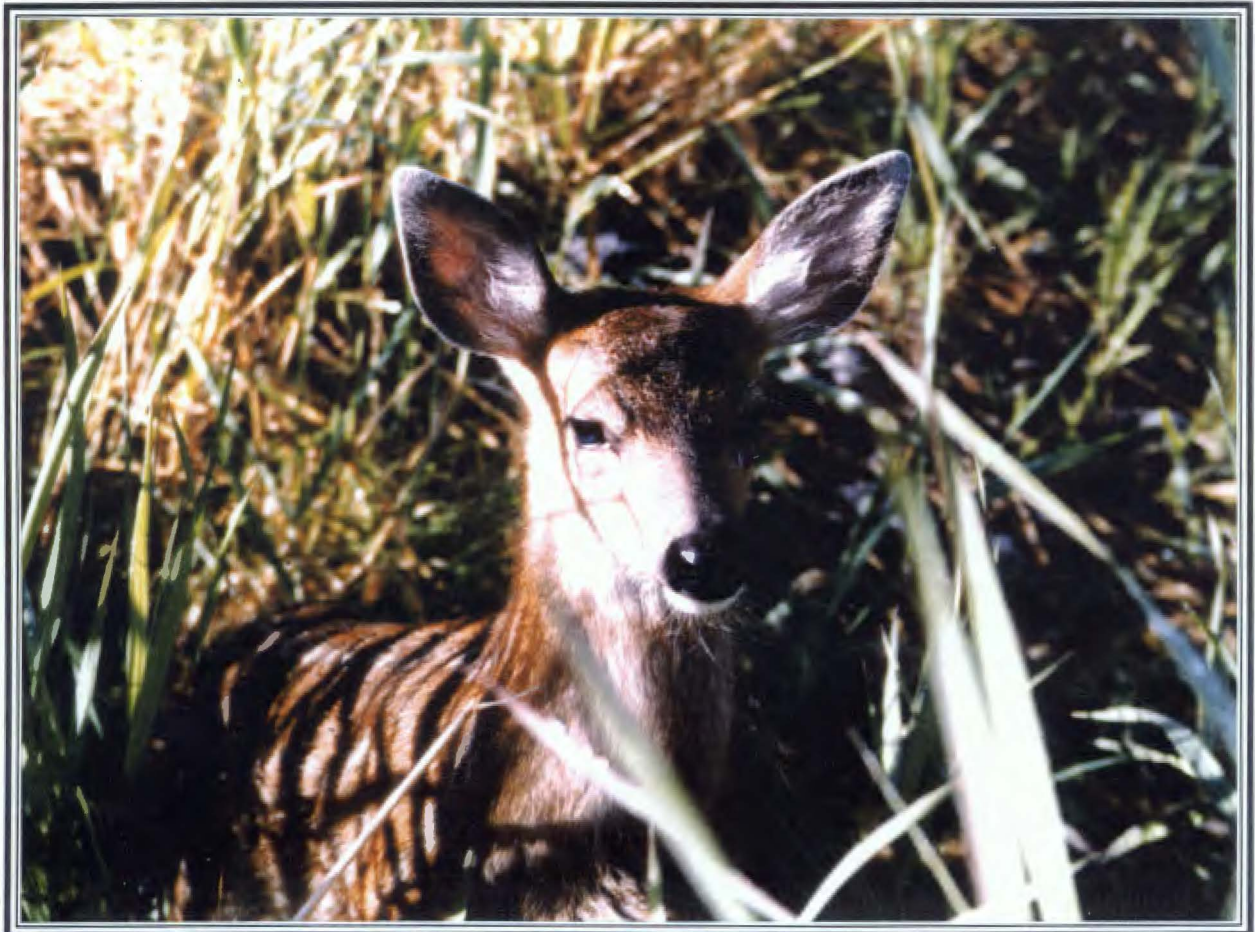


Alaska Department of Fish and Game
Division of Wildlife Conservation

Federal Aid in Wildlife Restoration
Annual Performance Report
Survey-Inventory Activities
1 July 1998 - 30 June 1999

DEER

Mary V. Hicks, Editor



Trevor Kirchhoff

Grant W-27-2
Study 13.0
October 1999

Project Title: Southeast Deer Population Management

Project Location: Unit 1A (5000 mi²)
Ketchikan area including mainland draining into Behm and Portland Canals

Project Objectives and Activities:

- Maintain deer populations in excess of 45 deer per mi² of winter range (1.4 pellet-groups per plot) in Unit 1A.
- Monitor deer densities using pellet-group surveys.
- Monitor deer winter survival using mortality transects.
- Monitor deer harvest using mailed questionnaire forms.

Work Accomplished During the Project Segment Period: We completed deer pellet-group surveys in 4 Value Comparison Units (VCUs) within Unit 1A. We evaluated winter deer mortality by walking previously established mile-long beach transects and enumerating winter kills. We estimated deer harvest from regional questionnaires mailed to a random sample of deer hunters.

Progress Meeting Project Objectives: Pellet-group data indicated the 45 deer/mi² density objective was not met in any of the 4 sampled VCUs. Estimated densities in Unit 1A ranged from 24.8 deer/mi² in Port Stewart to 2.9 deer/mi² in Spacious Bay. Of the 4 VCUs sampled during 1999, only Helm Bay was higher than last year. Estimated harvest was near the long-term average of the unit. We suspect that the widespread low counts may be a result of severe winter weather conditions in southern Southeast Alaska during 1998–99. The winter of 1998–99 was one of the most severe in nearly 3 decades. In mid-April biologists found knee-deep snow between 200 and 600 feet elevation, and annual deer pellet counts at Port Stewart and Spacious Bay were the lowest ever recorded. A number of winter-killed deer were also observed in these areas along previously established beach mortality transects.

Project Location: Unit 1B (3000 mi²)
Southeast Mainland from Cape Fanshaw to Lemesurier Point.

Project Objectives and Activities:

Increase populations on deer winter range (<1500 ft elevation) to 32 deer/mi², measured by a mean pellet density of 1.0 pellet-group/20 m² plot.

Work Accomplished During the Project Segment: Pellet counts were not conducted in Unit 1B. Harvest data was estimated from a regional questionnaire mailed to a random sample of deer harvest ticket holders.

Progress Meeting Project Objectives: Results from the 1998–99 hunter questionnaire indicate 186 hunters in Unit 1B harvested 72 deer.

Project Location: Unit 2 (3900 mi²)

Prince of Wales Island 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 mi² of winter range (1.4 pellet-groups per plot) in Unit 2.
- Monitor deer densities using pellet-group surveys.
- Monitor deer winter survival using mortality transects.
- Monitor deer harvest using mailed questionnaire forms.

Work Accomplished During the Project Segment Period: We completed deer pellet-group surveys in 6 Value Comparison Units (VCUs) within Unit 2. We evaluated winter deer mortality by walking previously established mile long beach transects and enumerating winter kills. We estimated deer harvest from regional questionnaires mailed to a random sample of deer hunters.

Progress Meeting Project Objectives: Pellet-group data indicated the 45 deer/mi² density objective was not met in any of the 6 sampled VCUs. Estimated densities in Unit 2 ranged from 15.4 deer/mi² at Mt. Calder to 40.5 deer/mi² at Tuxekan. Of the 6 VCUs sampled during 1999, only 1 was lower (VCU 528) than the previous year, the remaining 5 VCUs (549, 554, 575, 578, 587) were higher than the previous year. The harvest on Prince of Wales (POW) rebounded in 1998 from a 10-year low in 1997. Harvest was estimated at 2220 deer, within 200 of the long-term average. The harvest increased in all areas of POW except the Coffman Cove area. Both the number of hunters and the success rate were higher than during 1997. Although deep snow and winter weather conditions were the worst in nearly 3 decades, deer numbers in Unit 2 remained stable in Unit 2 during this report period.

Project Location: Unit 3 (3000 mi²)

All islands west of Unit 1B, north of Unit 2, south of the centerline of Frederick Sound, and east of the centerline of Chatham Strait.

Project Objectives and Activities:

Increase populations on deer winter range (<1500 ft elevation) to 32 deer/mi², measured by a mean pellet density of 1.0 pellet-group/20 m² plot.

Work Accomplished During the Project Segment: We completed spring pellet group surveys at Big Level, Little Level, Woewodski, Sokolof, Rynda, and Woronkofski, resulting in values of 2.00, 2.84, 1.36, 0.92, .25, and 0.11 pellet-groups/plot, respectively. Nineteen additional deer were fitted with radio collars on Mitkof Island in the cooperative study with the U.S. Forest Service; this brought the total collared deer to 44 (12 males and 32 females). Harvest data for Unit 3 was estimated from a regional questionnaire mailed to a random sample of deer harvest ticket holders.

Progress Meeting Project Objectives: Deer pellet surveys met project objectives in the Big Level, Little Level, and Woewodski survey areas. The Sokolof, Rynda, and Woronkofski survey areas did not meet objective goals. Results from the 1998–99 hunter questionnaire indicate 1144 hunters in Unit 3 harvested 1118 deer. Zarembo Island had the highest harvest with 397 deer taken by 347 hunters.

The Forest Service monitored 44 radiocollared deer on Mitkof Island. During this reporting period hunters shot 7 males, wolves killed 4, a car hit 1, 1 succumbed to winter severity, and 2 collars failed, leaving 29 deer with active radio collars.

Project Location: Unit 4 (5800 mi²)
Admiralty, Baranof, Chichagof, and adjacent islands

Project Objectives and Activities:

- Maintain a population density of deer capable of sustaining an average hunter kill of at least 1.5 deer per hunter, a minimum success rate of 1 deer killed per 4 days hunting and a reported male deer harvest of at least 60%.
- Collect population data through fecal pellet surveys, use a hunter survey to determine harvest and effort information, and conduct deer mortality transects in key areas as needed.

Work Accomplished During the Project Segment: We measured deer population trends by pellet-group surveys and subsequent analyses. Deer hunter harvest tickets were distributed and harvest reports analyzed. A survey questionnaire was mailed to a sample of harvest ticket holders to collect deer hunter effort and success information. We completed spring mortality transects near Sitka. Paired longbones were collected from hunter-killed deer during the fall and from other mortalities found on spring mortality transects. Marrow fat contents were determined for various sex and age classes of deer following this severe winter. A deer condition index route was established on Baranof Island in an effort to allow earlier prediction of the extent of starvation mortality. We investigated incidence of lungworm and other parasites.

Progress Meeting Project Objectives: From extrapolations of the deer hunter survey and examination of hunter harvest ticket reports, it appears that the first objectives were met. Average reported number of deer per hunter was 2.4, with an average of 2.3 days afield per deer harvested. Sixty-seven percent of the reported harvest consisted of bucks. Deer pellet group surveys were conducted during spring 1999 in 7 areas within Unit 4. Generally, transects were abbreviated due to persistent snow at elevations in excess of 1000 feet. Data indicated deer populations were only slightly depressed in comparison to the previous year. Winter mortality transects were completed on all 3 major islands. We completed 30.5 miles of surveys on 29 established transects. We found 46 dead deer, for a mean of 1.5 dead deer per mile of beach fringe. Starvation mortality appeared higher on Admiralty than on Baranof or Chichagof.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	91.8	53.5	145.3
Actual	88.3	51.0	139.3
Difference	3.5	2.5	6.0

Explanation: Less was spent on staff time due to vacancies of the Ketchikan and Douglas area biologist positions. Also, we spent less monitoring deer harvest than was expected.

Submitted by:

Bruce Dinneford
Management Coordinator

Project Title: Southcentral Alaska Deer Management

Project Location: Game Management Unit 6 (10,140 mi²)
Prince William Sound, north Gulf Coast

Project Objective: Maintain a deer population in Unit 6 that will sustain an annual harvest of 1500 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. Total harvest was 2909, with males composing 69% of the take. Success rate was 66%, and successful hunters harvested an average of 1.7 deer each. Montague Island provided 39% of the take, while Hinchinbrook and Hawkins Islands produced 25% and 13%, respectively.

We conducted pellet group surveys from 17 May through 3 June on Montague, Hinchinbrook, Hawkins, and naked islands. Analysis of these data will be completed by August 1999.

Progress Meeting Objectives: We achieved all objectives. The population was able to sustain a harvest of 1500 and the proportion of males in the harvest exceeded 60%. The success rate was greater than 50%.

Project Location: Unit 8 (8750 mi²)
Kodiak and adjacent islands

Project Objective and Activities: Maintain a deer population that will sustain an annual harvest of at least 8000 deer.

Work Accomplished During the Project Segment Period: We monitored hunting activities and harvest by a mail questionnaire. Preliminary results indicated the 1998 harvest was 7821 deer with 76% males. Twenty-three percent of the harvest was from Afognak, Raspberry, and Shuyak islands; 77% of the harvest was from Kodiak and small adjacent islands. Hunter success was 83%, and successful hunters averaged 1.7 deer per hunter. The average number of days hunted was 5.5 days/hunter. Boats were the most common means of transportation (45%), followed by aircraft (19%) and highway vehicles (14%). Most hunters were from Kodiak Island (37%), Anchorage (25%), or other Alaskan locations (23%). Only 14% of the hunters were non-residents.

Winter mortality on Kodiak Island appeared to be heavy, with more deer dying during the 1998–99 winter than in year since 1989–90.

Progress Meeting Project Objectives: Preliminary results from the hunter questionnaires indicated the harvest was less than the 8000 deer objective for the first time in 4 years.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	29.9	13.3	43.2
Actual	29.9	13.3	43.2
Difference	0.0	0.0	0.0

Submitted by:

Michael G. McDonald
Assistant Management Coordinator