

**Wildlife Restoration OPERATING GRANT
FINAL PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 115526
Juneau, AK 99811-5526

**Alaska Department of Fish and Game
Wildlife Restoration Grant**

GRANT NUMBER: AKW-B-R1-2020 Amendment #1

PROJECT NUMBER: 1.0

PROJECT TITLE: Region I Moose S&I program: Alaska's Moose Populations and Factors Influencing Their Status

PERIOD OF PERFORMANCE: July 1, 2020 - June 30, 2021

REPORT DUE DATE: August 24, 2021

PRINCIPAL INVESTIGATOR: Richard Nelson

COOPERATORS: None

I. PROGRESS ON PROJECT OBJECTIVES DURING PERIOD OF PERFORMANCE

Strategy: Research, Survey, Data Collection and Analysis

Objective 1: Conduct 3 investigations by 06-30-2021.

ACTIVITY 1A: Population Size, Status, and trend. Assess the size and status of each moose population to evaluate the 5-year trend.

ACCOMPLISHMENTS: Region I staff conducted aerial surveys of key moose populations as conditions and availability of aircraft and pilots allowed. Biologists wrote survey memos and added survey results to files enabling them to monitor long-term trends.

Unit-specific Objectives

Unit 1A

OBJECTIVE: Conduct one aerial sex and age composition survey in the Unuk and Chickamin drainages annually if conditions allow.

ACCOMPLISHMENTS: For the second year in row suitable conditions were present to conduct the Unuk River survey. Except for river bars and muskegs, most moose habitat in this area is mixed deciduous and coniferous forest. Spotting moose in the forest can be challenging. The available aircraft, a Cessna 185, flies too fast to be an ideal survey

platform, but staff counted nine moose and saw tracks of others. We believe the low annual harvest is sustainable.

Unit 1B

OBJECTIVE: Conduct one sex and age composition survey in the Stikine River drainage if conditions allow.

ACCOMPLISHMENTS: A composition survey of the Stikine River drainage was accomplished during the late winter. A Hughes 500D helicopter was used to conduct the survey, and 2 cows, 2 calves, and 30 unknown adults were observed.

Unit 1C

OBJECTIVE: Conduct at least one sex and age composition survey each of the Berners Bay and Gustavus Forelands populations.

ACCOMPLISHMENTS: Despite generally poor survey conditions, we succeeded in surveying the Gustavus and Berners Bay moose populations. Due to limited snow cover for much of the winter the Gustavus population was surveyed following a heavy frost with reasonable sightability estimated from radiocollared moose.

OBJECTIVE: Monitor radiocollared moose in Gustavus and Berners Bay to estimate sightability during aerial surveys for mark-resight population estimates.

ACCOMPLISHMENTS: We used sightability estimates derived from collared moose to estimate the size of the Gustavus and Berners Bay moose populations.

Unit 1D

OBJECTIVE: Do at least one sex and age composition survey of the Chilkat Valley population.

ACCOMPLISHMENTS: We flew a survey of the Chilkat Valley moose population. A partial survey was flown in December and a second complete survey was flown over two days in March. However, the March survey was conducted well after bulls drop their antlers. Consequently, we could not calculate reliable bull:cow or calf:cow ratios.

Two calf surveys were flown at the end of May and the beginning of June to estimate recruitment. One moose survival flight was conducted during the Fall of calendar year 2020 and repeated during the Spring of 2021.

Unit 2

OBJECTIVE: Document reported moose sightings in Unit 2.

ACCOMPLISHMENTS: No moose sightings were reported in Unit 2 during the reporting period.

Unit 3

OBJECTIVE: Opportunistically collect anecdotal information about moose populations on the Unit 3 islands.

ACCOMPLISHMENTS: Anecdotal reports of the presence and relative abundance of moose on the islands of Unit 3 were compiled in the Petersburg area office. Reports suggest moose continue to expand in GMU 3, particularly on Kuiu Island.

Unit 5

OBJECTIVE: Conduct at least one sex and age composition survey each for the Yakutat Forelands, Nunatak Bench, and Malaspina Forelands populations.

ACCOMPLISHMENTS: Poor survey conditions and lack of suitable survey aircraft in the Yakutat area resulted in no survey being flown during this reporting period.

ACTIVITY 1B: Mortality/Harvest Monitoring. Monitor hunter effort and assess the number of moose harvested by hunters and other sources of mortality that may influence the trend of each moose population.

Units 1, 2, 3, and 5

ACCOMPLISHMENTS: All moose hunts in Region I require hunters to obtain a registration, draw, or Tier II permit. We monitored hunter interest through issuing permits and documented hunter effort and harvest through the required permit reporting process. We collected lower jaws to extract incisors for aging and in areas with antler restrictions photographed antlers of harvested moose. We sent all teeth to a commercial lab for cementum aging. Ages were reported back to ADF&G and archived for future reports. Where photos of antlers are required, photos and cementum ages of individual moose were archived for future analysis. Area management staff monitored other sources of mortality including predation, disease, and parasites, but do not believe any has a significant effect on individual moose populations.

ACTIVITY 1C: HABITAT ASSESSMENT: Assess moose habitat and browse availability directly or indirectly in specified areas of the region and perform habitat enhancement in areas where it is feasible.

Units 1, 2, 3, and 5

Region-wide

- Conduct moose browse surveys and habitat analyses on discrete winter ranges.

ACCOMPLISHMENTS: No moose browse surveys were conducted during this report period due to COVID-19.

Unit 1D

- As staff time allows, monitor habitat conditions in the Chilkat Valley by ground surveys of willow browse using standard counts of number of leaders, annual browse production, and level of browsing by moose.

ACCOMPLISHMENTS: No habitat monitoring occurred in Unit 1D due to COVID-19.

Strategy: Planning

Objective 2: Develop/Revise 1 plan by June 30, 2021

Activity 2A: Moose Management with Public Participation and Outreach. When appropriate engage the public in moose and hunt management through public meetings, working groups, educational materials, and incentive programs.

ACCOMPLISHMENTS: Region I staff engaged with the public by holding public meetings prior to hunts, discussing management issues and regulatory proposals at Fish and Game Advisory Committee meetings and Federal Regional Subsistence Advisory Council meetings. Staff participated in the Federal Subsistence Board process by providing relevant data and presenting department comments on proposals.

II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.

During this reporting period moose harvest throughout Region I was generally similar to previous years and within the historic range of harvest in all Units/Subunits except Units 1B, 5A and 5C. Harvest in Unit 1B decreased by 36% from RY2019 and was the lowest in the last five years (Table 1). The harvest in Unit 5A increased by 23% and the harvest in Unit 5B decreased by 69%. Greater hunter interest and participation likely accounts for the increase in the Unit 5A moose harvest. The Unit 5B harvest is largely weather dependent, and inclement weather may explain the decrease in harvest. We continue to believe the current levels of harvest remain sustainable in all units. In areas with antler restricted hunts, compliance with antler restrictions averages about 90%.

GMU	Regulatory Year					5-Year Average
	2016	2017	2018	2019	2020	
01A	4	1	2	2	2	2
01B	33	45	24	33	21	31
01C	52	58	55	68	73	61
01D	25	27	25	20	28	25
03	80	77	77	91	93	84
05A	44	57	47	52	64	53
05B	9	6	10	16	5	9

Table 1. Summary of moose harvest by GMU for Southeast Alaska, regulatory years 2016 – 2020. A regulatory year begins on July 1 of that year and extends through June 30 of the following year.

III. SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.

In March 2021 Region I staff live-captured and radio-collared 6 adult cow moose in Berners Bay, Unit 1C. The primary purpose for collaring those moose was to improve our ability to

estimate abundance and trend of this population by incorporating sightability into aerial surveys. Previously only minimum counts were possible. Collaring adult cow moose will also allow insight into calf production and survival. No additional captures were conducted, resulting in a significant underspending of survey and inventory funds during this report period.

IV. PUBLICATIONS

None

V. RECOMMENDATIONS FOR THIS PROJECT

Recommendations for this project are detailed in the RY2015 – RY2020 Moose Species Management Report and Plan published in September 2017. That Report and Plan can be found at: <https://www.adfg.alaska.gov/index.cfm?adfg=librarypublications.wildlifemanagement#moose>

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