

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

GRANT NUMBER: AKW-B-R1-2020

PROJECT NUMBER: P 1.0

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

PERIOD OF PERFORMANCE: July 1, 2019 - June 30, 2021

PERFORMANCE YEAR: July 1, 2019 - June 30, 2020; year 1 of a 2-year grant

REPORT DUE DATE: August 28, 2020

PRINCIPAL INVESTIGATOR: Richard Nelson

COOPERATORS: None

I. PROGRESS ON PROJECT OBJECTIVES DURING PERFORMANCE YEAR

OBJECTIVE 1: 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

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

ACCOMPLISHMENTS: For the first time in several years we had suitable survey conditions and were able to survey the Unuk River drainage. 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 four moose and saw tracks of others. We believe the low annual harvest is sustainable.

Unit 1B

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

ACCOMPLISHMENTS: A composition survey was attempted but consistently poor weather conditions prevented completion.

Unit 1C

- Conduct at least one sex and age composition survey each of the Berners Bay, Taku River, Endicott/St. James Bay, and Gustavus Forelands populations.

ACCOMPLISHMENTS: Despite generally poor survey conditions, we succeeded in surveying the Gustavus moose population. The Berners Bay survey was aborted after high winds made conditions too dangerous.

- Monitor radio collared 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 moose population but were unable to do the same for the Berners Bay population due to high winds during the survey. We also captured and collared 10 moose in Gustavus and 5 moose in Berners Bay to maintain sufficient collared animals in each population.

Unit 1D

- Complete 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 and we were unable to calculate sex and age composition.

- Live-capture and radiocollar up to 40 moose to estimate sightability for mark-resight population estimates during surveys and to learn about moose movements, survival, and habitat use.

ACCOMPLISHMENTS: We live-captured and radiocollared 16 moose in the Chilkat Valley near Haines.

- Conduct one or two calf production/survival surveys during spring and early summer.

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 2019 and repeated during the Spring of 2020.

Units 2 and 4

- Document reported moose sightings in Unit 2 and 4.

ACCOMPLISHMENTS: No moose sightings were reported in Units 2 or 4 during the reporting period.

Unit 3

- 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.

Unit 5

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

ACCOMPLISHMENTS: We were able to conduct a survey of the Yakutat Forelands, but high winds prevented surveys of the Nunatak Bench and Malaspina Forelands.

OBJECTIVE 2: Document the number of moose harvested by hunters and other sources of mortality that may influence each moose population in Region I.

Units 1, 3, and 5

Region I managers documented hunter harvest and other forms of mortality for moose throughout the region. Harvest in Units 1C and 3 exceeded the 5-year average and were the highest within the last 5 years. Harvest in other units was within the average range.

GMU	Regulatory Year					5-Year Average
	2015	2016	2017	2018	2019	
01A	4	4	1	2	2	3
01B	36	33	45	24	33	34
01C	57	52	58	55	68	58
01D	24	25	27	25	20	24
03	67	80	77	77	91	78
05A	50	44	57	47	52	50
05B	20	9	6	10	16	12

Table 1. Summary of moose harvest by GMU for Southeast Alaska, regulatory years 2015 – 2019. A regulatory year begins on July 1 of that year and extends through June 30 of the following year.

- Obtain age estimates of harvested moose by tooth section.

ACCOMPLISHMENTS: We collected lower jaws to extract incisors for aging. We sent all teeth to a commercial lab for cementum aging. Ages were reported back to ADF&G and archived for future reports.

- Collect information on age and antler architecture of all harvested moose to evaluate current antler restrictions in Units 1B, 1C, 1D, and 3.

ACCOMPLISHMENTS: In areas with antler restrictions we photographed antlers of harvested moose and archived those photos for future analysis.

- Collect and analyze tissue from moose harvested in the Gustavus hunt area in Unit 1C for potential contamination by PFOS, which was used as a firefighting chemical at the Gustavus airport.

ACCOMPLISHMENTS: We did not collect or analyze tissue from Gustavus moose this year because a report on previously collected tissue indicated prevalence of PFOS was far below the level of concern for human consumption.

OBJECTIVE 3: Habitat Enhancement /Assessment. Assess moose habitat and browse availability directly or indirectly in specified areas of the state 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: We did not conducted moose browse surveys this season due to travel restrictions for Covid-19.

Unit 1D

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

ACCOMPLISHMENTS: We did not conducted moose browse surveys this season due to travel restrictions for Covid-19.

- Monitor seasonal movements and habitat associations of radiocollared moose.

ACCOMPLISHMENTS: We periodically monitored movements and habitat associations of collared moose in Unit 1D and archived those data for future analysis.

OBJECTIVE 4: Manage the moose populations of Alaska with an effort to engage the public using public meetings, working groups, and educational materials.

ACCOMPLISHMENTS: Region I staff engaged with the public by holding public meetings prior to hunts, discussing management issues and regulatory proposals with Fish and Game Advisory Committees and the Federal Regional Subsistence Advisory Council. Staff contributed to the development of “Is This Moose Legal” educational hunting video. Staff presented information for the Federal Subsistence Board process by providing relevant data and presenting department comments on proposals. Management staff commented on requests for early season moose hunts in response to local perceptions of food shortages due to Covid-19.

The Game Management Unit projects are detailed in the Moose Species Management Report RY2010 – RY2014 and Plan RY2015 – RY2020 published in September 2017. That Report and Plan can be found at:

<https://www.adfg.alaska.gov/index.cfm?adfg=librarypublications.wildlifemanagement#moose>

II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.

Region I management staff successfully monitored moose abundance as survey conditions allowed and hunter harvest. During this reporting period moose harvest throughout Region I was similar to previous years except in Units 1B, 1C, and 3 where it increased compared to the previous year. Harvest in Unit 1C increased by 24% from RY2018 and was the highest in the last five years (Table 1). The harvest in Unit 1B increased by 38% and the harvest in Unit 3 increased by 18%. The number of permittees who hunted in registration hunt RM038 (Units 1B and 3) did increase slightly and may partially explain this 1-year increase in the RM038 harvest. However, we also believe that moose in Unit 3 continue to expand their range and abundance. We continue to believe the current levels of harvest remain sustainable in all units. In areas with antler restricted hunts, compliance with antler restrictions is high, averaging about 90%.

III. SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.

Division Administrative Operations manager, Jeff Hoover, applied a budget cut of \$4,500 for Contractual. Contractual spending was lower than planned because we were unable to complete aerial surveys in Unit 1B, Berners Bay in Unit 1C, and in a portion of Unit 5 due to unfavorable weather. We also captured fewer moose in Unit 1D than anticipated due to poor weather. Supplies spending was lower than planned because we purchased fewer supplies for the capture effort in Unit 1D, primarily collars.

IV. PUBLICATIONS

None

V. RECOMMENDATIONS FOR THIS PROJECT

We recommend continuing this project.

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Date: August 2020