

# STATE OF ALASKA

**SEAN PARNELL, Governor**

## **ANILCA IMPLEMENTATION PROGRAM Office of Project Management and Permitting**

550 W. 7<sup>TH</sup> AVENUE, SUITE 1430  
ANCHORAGE, ALASKA 99501  
PH: (907) 269-7477 / FAX: (907) 334-2509  
[sally.gibert@alaska.gov](mailto:sally.gibert@alaska.gov)

January 7, 2010

Andy Loranger, Refuge Manager  
Kenai National Wildlife Refuge  
P.O. Box 2139  
Soldotna, Alaska 99669-2139

Dear Mr. Loranger:

As you are aware, the State of Alaska participated on the core planning team throughout the recent Kenai National Wildlife Refuge Comprehensive Conservation Plan (CCP) 2009 revision. During this process, the use and impacts of snowmachines was a frequent and often contentious issue, both within the planning team and the public at large. The planning team agreed that all snowmachine related studies would be closely coordinated with the State of Alaska and the public. At this time, we have both procedural and substantive concerns with the proposed study. We are disappointed that we were not offered the opportunity to contribute to this process earlier, and we regret the possible implications of these substantive comments on the proposed project.

### Procedural: Lack of Consultation and Coordination

Given the complex and potentially precedent-setting nature of Kenai's snowmachine management issues, Kenai CCP planning team members carefully considered the need for studies of impacts related to such use. To that end, the planning team developed a specific objective in the CCP (Objective 9.4), and subsequent direction in the associated snowmachine Compatibility Determination (CD). Moreover, the Final CCP Response to Comments committed the Refuge to a cooperative course of action, including study design. These CCP excerpts are compiled for reference in the Attachment. The study itself even acknowledges the CCP's commitment to "*conduct studies with the State of Alaska.*" (page 13)

On November 25, 2010, Jeff Selinger, the Alaska Department of Fish and Game (ADF&G) Area Wildlife Biologist for the Kenai Peninsula, received an email from Kenai Refuge Supervisory Biologist John Morton (forwarding an approved study plan entitled "Cumulative Ecological Effects of Snowmobiles") noting a collaborative study of snowmachines in the Caribou Hills would be conducted. The email welcomed comments from Mr. Selinger and offered opportunities to "*leverage this ambitious effort into an even more comprehensive study.*" A review of the approved study plan showed that efforts related to the study had been ongoing since 2009 and that fieldwork would be aggressively pursued during the winter of 2010-11.

The implementation of this study and the request for collaboration with the State at this late date does not reflect the cooperative process envisioned during the development of CCP. The State has a high degree of interest in studies intended to implement the special access provisions in

Section 1110(a) of ANILCA. Consultation at the early, conceptual stages of such research, including the development of a mutual understanding of the purpose and scope of such research, is probably the most important step to ensure a sound study design that will carry forward through development, implementation, and subsequent interpretation. Without true collaboration, studies risk subsequent challenges by the public, user groups, and other state or federal managers with overlapping management responsibilities. We are concerned this study, if intended to be the basis for potential management (restriction) of snowmachine use under ANILCA, will not meet the standard necessary or previously agreed upon to address these challenges. While we do not want to derail this student's study, we request a reasonable opportunity provide input into its development, implementation, and subsequent interpretation.

### Preliminary Substantive Concerns

Based on a cursory review of the study plan provided, we have several concerns and provide some comments for your consideration below. Based on our understanding to date, it would be difficult to support conclusions from this study, particularly as a basis for subsequent management of snowmachine use. We are willing to discuss our concerns with Mr. Mullet and his University of Alaska advisors to assist him in the successful completion of his study.

### **ANILCA References**

Much of the discussion of ANILCA's access provisions and relationship to the Wilderness Act is either incomplete or inaccurate, and portrays a distinct bias against snowmachine use. For example, the study plan states:

*“The [Wilderness] Act goes on to say explicitly that there shall be no use of motor vehicles, motorized equipment, or mechanical transport except to meet minimum requirements for the administration of the area. However, snowmobiling has been primarily allowed in the designated Wilderness of KENWR based upon the more recent rule makings of ANILCA. ANILCA states that rural residents engaged in subsistence activities will be allowed to use snowmobiles to acquire subsistence resources on public lands (ANILCA 1980). ANILCA also specifies that snowmobiles shall be permitted on public lands by local residents as long as such activity has been “traditionally employed.” However, tradition is not defined by ANILCA.” (page 12)*

First, ANILCA amended the Wilderness Act as it applies in Alaska to ensure public access into these vast areas that would otherwise largely be inaccessible and to support the unique Alaskan way of life. Instead, this discussion incorrectly implies that the Wilderness Act's higher standard was compromised by ANILCA. Second, we recommend the access provisions of ANILCA be quoted and referenced specifically, rather than generally as “ANILCA 1980.” Specifically, subsistence access is addressed in Section 811(a) and (b), which respectively state “rural residents engaged in subsistence uses shall have reasonable access to subsistence resources on the public lands” [emphasis added] and “...the Secretary shall permit on the public lands appropriate use for subsistence purposes of snowmobiles....subject to reasonable regulation.” Also, section 1110(a) states “...the Secretary shall permit on conservation units...the use of snowmachines...for traditional activities...and for travel to and from villages and homesites...subject to reasonable regulation.” [emphasis added] This quoted language is significantly and substantively different from the summation provided in the study. For

example, terminology that applies to modes of access “traditionally employed” in Section 811 has been misapplied to snowmachine use allowed for “traditional activities” under Section 1110(a). The discussion must also acknowledge that restrictions cannot be imposed without first determining “*such use would be detrimental to the resource values of the unit or area*” and following the specific public process identified in 43 CFR 36.11(f) and (h), which includes rulemaking.

The ANILCA access provisions apply to all conservation system units, including designated Wilderness. As such, we request all references to the Wilderness Act be followed by “as amended by ANILCA.” We also recommend these sections be revised to ensure accuracy, eliminate bias and reflect the intended focus of the study, which is the “Ecological Effects of Snowmobiles”, not *the effects on Wilderness values*.

### **Fecal Sampling Collection**

- Specific fecal collection areas should be defined. Opportunistic collection along routes, such as snowmobile and ski trails, will not provide reliable data. We recommend identifying at least two landscapes within areas where snowmachine use is allowed *and* prohibited for the collection of fecal samples. Landscapes should be of sufficient size and separation to assure individuals are not moving among them (e.g., the Caribou Hills area and the Swanson Canoe Route areas). Traffic and sound monitors should be distributed in relation to fecal collection areas.
- The study needs to identify what specifically constitutes “a sample.”
- We agree “fresh” samples need to be collected; however, the study is unclear on how a sample will be identified as “fresh” unless there is recent snow to show a known passage of time or the moose is observed producing a “sample.” We suggest that potential sampling areas could initially be identified by aircraft with on-the-ground follow up to locate fresh feces occurring within 2-3 days.
- The study needs to acknowledge that data on seasonal excretion patterns are unavailable. Fecal collection periods need to be defined – the first week of each month, or some other systematic periodic timeframe. Uniform sampling and timing methodology also need to be identified.
- The study needs to acknowledge that data on daily excretion patterns in moose are not available and it is important to eliminate biases in sampling between sampling areas.
- The use of GC metabolite levels of moose at the Moose Research Center (MRC) as a control needs to be explained in detail to ensure their use is valid. Moose at the MRC have been exposed to different situations than “wild” moose (or, even “wild” moose that have matured in urban settings that are habituated to humans and motorized equipment) and their use as a control needs to be carefully considered. Additionally, collecting samples at the MRC will take careful planning and coordination to ensure that access and use of the MRC related to this study does not compromise ongoing research activities.
- The study needs to acknowledge that data on the effects of sample mass are unavailable. There is variability in GC metabolite measures within and among fecal masses from individual moose. Therefore, the dry matter mass of each fecal sample should be determined and its influence examined.
- Fecal sample size of n=60 is too small. The proposal states power analysis was based on Tomeo (2000); however, in that study samples were collected over a short period of time

and the number, sex and reproductive status of the individuals represented in the samples were unknown. This new study proposes to collect samples on a monthly basis, identify individuals and sex through DNA techniques and determine reproductive status through pregnancy hormone metabolite analysis in feces. With this number of factors, the sample size required from each population will more likely be about  $n=200$  from each population (area).

### **Glucocorticoids (GC)**

- Glucocorticoids (GC) have largely been associated with “stress” despite their role in normal physiological processes. Measurement of excreted GC metabolites in feces provides an integrated reflection of adrenal responsiveness over a period of time (a species-specific lag time between GC secretion into the blood stream, metabolism in the liver and the resulting conjugated metabolites transiting the gut and being excreted in the feces). While the affinity of the multi-species corticosterone antibody (produced by ICN Biomedicals, Inc.) to moose fecal GC metabolites has been demonstrated (Crouse 2003), to our knowledge, there have been no studies conducted with moose to examine any of several potential confounding factors (see the review by Millspaugh and Washburn (2004) on considerations for application and interpretation). In other words, what causes the observed variability in GC metabolite measures and how do we isolate the effects of snowmachine activity on those levels? In addition, there have been only a few studies to date that have measured moose fecal GC metabolites, so we have no knowledge as to what ‘normal’ levels or patterns might be. As such, a lot of effort will be put forth to collect feces and determine GC metabolite levels and the interpretation of the results will be problematic and perhaps controversial. What do the absolute values mean (i.e., how do they relate to population performance)? How will these values be used to make decisions? We strongly believe further research is necessary before meaningful interpretation of fecal GC metabolite measures can be made.
- The study needs to clarify what GC levels in moose will mean biologically. It appears that there is a predetermined assessment that higher GC levels indicate negative outcomes for moose, but it is not clear what levels need to be reached or how long they need to be maintained to have a negative impact on individual animals.
- The study needs to acknowledge that data on the effects of diet are unavailable. We recommend evaluating diet composition among areas (through microhistological examination of the feces).
- There is no consideration for sex, age class, reproductive status, group size, moose density, nutritional condition, what stage of the rut if cows experience multiple estrus cycles, habitat differences relating to food availability, topography, understory condition, downfall, etc.
- This study measures a few variables, relates them to GC levels and then draws conclusions regarding what the measured levels indicate. The study indicates there is a time delay from when the GC levels are in the blood stream and when they show up in the feces, but there is no attempt to identify what sorts of stimulus the moose was exposed to prior to feces deposition (e.g., disturbances from predators, skiers, loose dogs, traveling through deep snow, low flying aircraft). With no marked animals for monitoring purposes and no attempts made to at least backtrack individual animals (such

as back tracking the moose to its last bed site) it will be impossible to identify the causative stimulus.

Thank you for considering and addressing these comments. State representatives, including those from the Alaska Departments of Fish and Game and Natural Resources, are available for follow-up discussions as warranted. I may be reached at 907-269-7477.

Sincerely,

A handwritten signature in black ink, appearing to read "Sally Gibert". The signature is fluid and cursive, with a prominent loop at the end of the last name.

Sally Gibert  
State ANILCA Program Coordinator

cc: Tracey McDonnell, Refuge Supervisor  
Timothy Mullet, UAF Ph.D. Student in Biological Science & Principal Investigator  
The UAF Graduate Committee:  
Falk Huettmann, UAF Associate Professor of Wildlife Ecology  
Brian McRae Barnes, Director, UAF Professor of Zoophysiology  
Perry Barboza; UAF Professor of Biology