R7 I&M BRANCH PROPOSAL

1. Station: Arctic NWR	2. Org Code (FBMS): FF07RARC00	3. Amount Requested: $7,755
4. Project Title: Development of long term databases for mammal surveys on the Arctic National Wildlife Refuge		
5a. Project Officer: Stephen Arthur	**5b. Phone:** 907 455 1830	**5c. email:** Stephen_arthur@fws.gov
6. I&M Staff Name: Josh Bradley	**7. PRIMR Survey ID:** FF07RARC00-027, FF07RARC00-028, FF07RARC00-029	**8. Station Project Ranking:** 2

PROPOSAL BODY:

9. Problem Statement and Objectives

Staff from the Arctic National Wildlife Refuge have conducted surveys of the abundance and distribution of moose (*Alces alces*) and Dall's sheep (*Ovis dalli*) in the Brooks Range and neighboring foothills since the 1970s. These surveys have used a variety of techniques, and the resulting data have been stored in a variety of formats. In some cases, the only existing data are the original field notes, data records, or maps of wildlife observations, while data from more recent surveys are stored in computer spreadsheets and GIS files. Because of the long time frame covered by these surveys and the scarcity of other comparable data from northeast Alaska, these data could be a valuable resource for assessing changes in moose and sheep populations over time. However, the lack of a standardized database with accompanying metadata greatly hinders their usefulness. For example, the Arctic Refuge has been collaborating with several external researchers conducting broad-scale analyses of environmental effects on ungulate distributions and movements through the NASA-funded ABoVE program, and we have provided data from these historical data sets. However, we have been unable to provide all of the pertinent metadata, simply because we have not yet located the necessary records. Similarly, Refuge managers must routinely make decisions about moose and sheep management based on recent survey data, but our ability to interpret these results in the context of long-term changes is severely limited due to difficulty accessing and understanding the historical data.

10. Methods/Scope of Work

This project will fund a technician who will search the files of the Arctic Refuge to locate all the existing survey data for Moose and Dall's sheep. The technician will then work with a database manager (either from the IM program or Arctic LCC) to determine the best way to archive the

data so that the data are accessible to managers and researchers both within and outside the FWS. The resulting database will then serve as a repository for all future survey data collected by the Refuge.

11. Partnerships and Roles

Arctic Refuge will hire a technician and provide supervision through the Refuge's biology program. Either the Refuge Supervisory Biologist or Ungulate Biologist (currently vacant) will serve as supervisor and technical advisor. We will also work with the Region 7 IM program and the Arctic LCC to determine the most efficient means of archiving the data. Some technical assistance in database design will be needed from either the IM or LCC database managers.

12. Products and Schedule

Products will include the creation of databases to house data from surveys of moose and Dall's sheep distribution and abundance. The data will be linked to GIS data as appropriate and will include all pertinent metadata. Basic summary tables will also be prepared and included in a final report, which will be completed by September 30, 2017. This work is expected to take 2 months, from August 1, 2017 through September 30, 2017. The work could begin sooner if funding and logistics can be arranged.
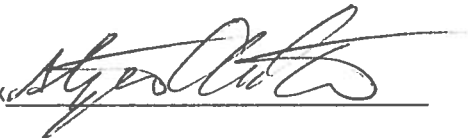
PROPOSAL APPENDICES:

13. Literature Cited (N/A)

14. Budget

Item	FWS I&M Funds	Other funds (state source)
Personnel (hours x rate)	(320 hr x $21.54/hr): $6893	
Fringe Benefits	$862	
Travel	0	
Equipment	0	
Supplies	0	
Contractual	0	
Other	0	
Indirect Charges (x% rate x Project Total)	0	
Total	$7755	

15. Station Project Leader Approval

REVIEWED BY/TITLE/DATE

x_____

Stephen Arthur, Supervisory Ecologist

APPROVED BY/TITLE/DATE

x_____

Steve Berendzen, Refuge Manager