

RESEARCH WORK ORDER

U.S. Geological Survey,
Biological Research Division

Unit Cooperative Agreement No.:
1434-HQ-97-RU-01582
(formerly 14-45-00009-95-1582)
Work Order No.: 81

Project Title: Small mammal monitoring at the landscape scale and synthesis of monitoring data in Denali National Park and Preserve

Cooperator:
University of Alaska Fairbanks
Grant and Contract Services
109 Administrative Services Center
Box 757880
Fairbanks, Alaska 99775-7880

Contract Administrator:
Dept. of the Interior
U.S. Geological Survey
Office of Acquisition and Federal Assistance
Procurement Branch C
12201 Sunrise Valley Drive, Mail Stop 205
Reston, VA 20192

AK Coop. Fish & Wildlife Research Unit
UAF - Room 209 Irving Bldg.
Fairbanks, AK 99775

Cognizant Technical Office: Mail Voucher To:
AK Coop. Fish & Wildlife Research Unit
UAF - Room 209 Irving Bldg:
Fairbanks, AK 99775
AND
Mail copy of FINAL voucher to:
Contract Administrator at address above

Effective Date:
Date signed by NBS Contract Officer

Completion Date: 30 September 2001

Accounting and Appropriate Data:
Total Amount: \$220,942
Initial Amount: \$46,800

Appropriation No.:

The United States of America, hereinafter called the Government, represented by the Contracting Officer executing this Research Work Order, and the Cooperator agree that: (1) The Cooperator shall perform all work set forward in this Research Work Order; and (2) that this Research Work Order is issued pursuant to the terms and conditions of the Unit Cooperative Agreement No 1434-HQ-97-RU-01582 and Public Law 86-686.

Cooperator:
Signature: _____
Title: _____
Date: _____

U.S. Geological Survey,
Signature: _____
Title: _____
Date: _____

I. PROJECT TITLE

Small mammal monitoring at the landscape scale and synthesis of monitoring data in Denali National Park and Preserve

II. STATEMENT OF WORK

This work will be a continuation of data collection efforts on small mammal abundance estimates in interior Alaska. The work will allow an extended data set which is necessary to document the range of intrinsic variation in small mammal populations to differentiate natural patterns of variation from variation induced by anthropogenic causes, furthering the goals of the LTEM program, and will benefit the larger scientific community by serving as a benchmark for other subarctic small mammal investigations conducted in the State.

OBJECTIVES:

Phase 1:

- 1) Determine annual population size, productivity and survival of small mammal populations in Denali NP&P by continuing intensive sampling at Rock Creek and less intensive sampling at other Hines creek drainages, at the east end of Denali, in 1998, 1999, and 2000,
- 2) Complete development of metadata report and submit all field data to yet-to-be-identified LTEM data manager,
- 3) Formulate power and cost analysis of small mammal monitoring in Denali LTEM,
- 4) Contribute to USGS-BRD ecosystem model effort associated with LTEM,
- 5) Continued participation in planning of future LTEM research effort,
- 6) Beginning with the 1999 field season, geographic extension of sampling will continue to encompass 4 additional watersheds along the Road Corridor. In 1998, GIS, vegetative, and other information will be used to determine siting of these watersheds, consistent with scaling issues associated with LTEM.

Phase 2:

- 7) Integrate the diverse spatial and temporal data accumulated from small mammal sampling efforts.
- 8) Ascertain whether temporal variability in small mammal populations are keyed to variation in other elements of the ecology of Denali, e.g., food production, meteorological patterns, avian abundance.

All work shall be performed in accordance with the University's Research Proposal dated March 1998, which is attached and considered an integral part of this research work order.

III. REPORTS AND DELIVERABLES

- 1) Data and metadata for 1992-1997 field work to the Denali LTEM Data Manager by October 20, 1998.
- 2) Annual reports of sampling effort, data and updated metadata (following NPS guidelines) due December 15 of the year in which data are collected,

- 3) Draft Study Plan for geographic extension of sampling to additional watersheds due January 15, 1999,
- 4) Draft report on power and cost considerations relevant to small mammal monitoring at Denali NP&P due March 15, 1999,
- 5) Draft Study Plan for synthesis and integration work, including list of proposed manuscripts, due February 15, 1999.

Distribution of all required reports and deliverables shall be made to the BRD Project Officer designated herein. The Unit Leader should see that the project sponsor also receives appropriate products. The PI will therefore submit copies of cover letters to the Project Officer and copies of the reports to the Unit Leader.

IV. TERMS OF WORK ORDER PERFORMANCE

The period of performance of the work order is from the effective date, date of USGS Contract Officer Signature to 30 September 2001.

V. FINANCIAL ADMINISTRATION

USGS/BRD Contribution:

The total estimated cost of this work order is \$220,942.

The total funding obligated to this Work Order is \$ 46,800, which is estimated to defray the costs of performance through 30 September 1998. The University shall not incur costs in excess of the funds actually obligated. Subject to the availability of funding, the obligated amount may be increased at any time by the Government Contracting Officer without the concurrence of the University up to the total estimated amount of the Work Order.

An SF-270, Request for Advance or Reimbursement, shall be submitted quarterly to the Cognizant Technical Office for review and submission to the BRD Project Officer for approval and transmittal to the paying office. All vouchers shall include a reference to Unit Cooperative Agreement Number and Work Order Number.

VI. PROJECT OFFICERS

This project is being conducted under the auspices of the Alaska Cooperative Fish and Wildlife Research Unit. The BRD Project and/or Liaison Officer(s) designated below are responsible for maintaining coordination among the different groups involved in the project.

Project Officer

Ms. Karen Oakley
USGS-Biological Resources Division
Alaska Biological Sciences Center
1011 E. Tudor Road
Anchorage, AK 99775
907/786-3579

Principal Investigator:

Dr. Eric Rexstad
Associate Professor of Quantitative Wildlife
Institute of Arctic Biology
University of Alaska Fairbanks
Fairbanks, AK 99775-7000
907/474-7159

The Project Officer is responsible for administering the performance of work under this Research Work Order. In no event, however, will any understanding, agreement, modification, change order, or other matter deviating from the terms of this Research Work Order be effective or binding upon the Government unless formalized by proper documentation executed by the Government Contracting Officer prior to completion of the Research Work Order.

The Government Contracting Officer shall be informed of any action or inaction by either party of this Research Work Order which will change the required delivery of completion times stated in the Research Work Order, and the Research Work Order will be modified accordingly.

VII. GOVERNMENT FURNISHED PROPERTY

The University may acquire, without further approval, the following listed property:

<u>Item</u>	<u>Quantity</u>	<u>Estimated Cost</u>
Computer	2 ea	2100

Promptly upon acquisition of the property authorized for use under this Work Order, the University shall forward an inventory summary to the Contract Administrator to include the make, model, serial number, acquisition cost, and any other pertinent information concerning the property acquired. During the operational phase of this RWO, title to all property shall vest with the U.S. Government. Upon completion of this Work Order the above listed property will:

1. revert to the Institute of Arctic Biology, University of Alaska Fairbanks.

VIII. SPECIAL CONSIDERATIONS

1. Upon execution of Work Order No. 81, the University is committed to the completion of this project, as detailed herein, notwithstanding the status of the Alaska Cooperative Research Unit.
2. Upon delivery of the final products and submittal of the final invoice and Financial Status Report, SF-269A, to the Contract Administrator, close-out procedures will be initiated for the Work Order. Each Work Order is a separate action and will be closed out in accordance with the applicable general provisions.
3. The Work Order may be modified in writing by mutual consent of the University representative and the Government Contracting Officer.
4. This Work Order may be terminated by either party upon written notification to the other 60-days in advance of the proposed effective date of the termination.
5. Publication of any reports or parts thereof by Cooperator personnel will be subject to BRD review and approval. Authorship will not incur any privileges of copyright or restriction on distribution. Appropriate credits to the United States Department of the Interior, U.S. Geological Survey, Biological Resources Division, shall be in any formally published article(s) providing BRD does not otherwise feel it appropriate to issue a disclaimer.
6. General Provisions: The recipient shall be subject to the following OMB circulars, as amended, which are incorporated by reference:
 - a. OMB Circular A-21, Cost Principles for Educational Institutions
 - b. OMB Circular A-88, Indirect Cost Rates, Audit, and Audit Follow-up at Educational Institutions
 - c. OMB Circular A-110, Grants and Agreements with Institutions of Higher Educations, Hospitals, and Other Non-Profit Organizations
 - d. OMB Circular A-133, Audits of Institutions of Higher Education and Other Nonprofit Institutions
7. BRD activities on private and other non-federal lands (Public Law 103-139)
 - a. Compliance with State Laws. The Biological Resources Divisions shall comply with applicable State and Tribal government laws, including laws relating to private property rights and privacy.
 - b. Consent and Notice Requirements.

1. In general - BRD shall not enter non-Federal real property for the purpose of collecting information regarding the property, unless the owner has --
 - a. consented in writing to that entry;
 - b. been provided notice of that entry; and
 - c. been notified that any raw data collected from the property must be made available at no cost, if requested by the land owner.

 2. Limitation - Paragraph (1) does not prohibit entry of property for the purpose of obtaining consent or providing notice as required by that paragraph.
- c. BRD Defined - In this provision, the term “BRD” includes any person that is an officer, employee, or agent of BRD, including any such person acting pursuant to a contract or cooperative agreement with or any grant from the USGS/Biological Resources Division.