

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

**Grant Number:** W-33 **Segment Number:** 12  
**Project Number:** 19.10  
**Project Title:** Region I research planning, design, and support  
**Project Duration:** 1 July 2003–30 June 2017  
**Report Due Date:** 1 September 2014  
**Principal Investigators:** Rodney Flynn and Dave Gregovich  
**Work Location:** Southeast Alaska

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**I. PROGRESS ON PROJECT OBJECTIVES DURING LAST SEGMENT**

**OBJECTIVES:**

1. Conduct strategic evaluations of research needs based on current management needs and objectives.

Design and support are an important part of maintaining a high quality research program. Planning is needed at many levels from strategic planning to planning experimental protocols of individual projects. A research plan is necessary to develop and maintain program direction, structure, and function that complement the Division of Wildlife Conservation's strategic plans. Short and longer-term research priorities were established through discussions and meetings with regional and headquarters staffs. Additional discussions were held with others outside of the regional staff, including other regions, federal management agencies, and universities. Research questions were designed to answer management questions. Regional priorities were reevaluated related to this new information and in conjunction with potential funding.

2. Develop research design alternatives based on identified priorities.

In the evaluation of regional research priorities, alternative studies were considered for all projects. Final decisions on topic selection, research design, and field techniques were based on an analysis of the likelihood of accomplishing the research objectives, logistical considerations, and available staffing and expertise to work on the study.

3. Compare alternative research designs using specific evaluation criteria.

Research designs were reevaluated and modified as necessary with the input of our statistical staff, based on information learned in previous years.

4. Conduct routine and sophisticated statistical and population estimation analyses.

We hired a new staff biometrician, Jason Waite in February 2014. Grey Pendleton shifted to new duties in April. We coordinated with our staff biometricians in the

review of projects. In addition, our staff biometricians conducted various analyses of research data for final reports and publications. Dave Gregovich worked as a research analyst II to improve our research support. Dave collects, processes, and analyzes spatial data used to provide information on wildlife-habitat relationships. Foremost amongst such habitat-related analyses are resource selection functions (RSFs) which assign probabilities that a wildlife species will use various areas of the landscape.

## **II. SUMMARY OF WORK COMPLETED ON JOBS IDENTIFIED IN ANNUAL PLAN THIS PERIOD**

### **JOB/ACTIVITY 1: Establish research program priorities**

Short and longer-term research priorities were evaluated through discussions and meetings with regional staff, other regions, federal management agencies, and universities. Regional priorities were reevaluated related to this new information and in conjunction with potential funding. Because of partnering opportunities and targeted funding for specific groups of wildlife, regional staff identified additional priorities in the areas of wolf population assessment and brown bear population assessment. These projects were in addition to ongoing research priorities for brown bears, moose, mountain goats, and Sitka black-tailed deer.

### **JOB/ACTIVITY 2: Develop research design alternatives**

Alternative studies were considered for several of the projects, especially for the POW wolf population assessment and Yakutat brown bear population assessment. Final decisions on topic selection, research design, and field techniques were based on an analysis of the likelihood of accomplishing the research objectives, logistical considerations, and available staff to work on the study.

### **JOB/ACTIVITY 3: Evaluate research designs**

Research designs were reevaluated and modified as necessary with the input of our statistical staff, based on information learned in previous years. We adjusted the design of the wolf population estimation project.

### **JOB/ACTIVITY 4: Statistical and population estimation/biometric services**

We coordinated with our staff biometrician in the review of projects. We provided technical support for various staff as needed. These analyses focused on habitat selection. We developed landscape habitat factors for use in studies spanning multiple projects and species, including projects related to marten, deer, brown bears, and moose. We created and maintained software for use in habitat selection studies.

We assessed DWC data management needs and worked towards creation of data management standards as part of the Data Management Working Group.

Dave Gregovich assisted Kevin White in compiling habitat and forage nutrition information and building a moose RSF for the Gustavus forelands. With Anthony Crupi, he performed a novel analysis of the probability with which brown bears will cross different sections of a proposed road corridor in Berners Bay, and also assisted Anthony with many aspects of building an RSF for brown bears in the Malaspina Forelands. He

provided two graduate students (Sophie Gilbert and Carl Koch) with data and programming guidance in developing their own models of wildlife space use. He also has collected and processed habitat and animal location data for use in RSFs for Sitka black-tailed deer (with Karin McCoy) and black bears (with Boyd Porter).

Dave organized a special session at the 2014 Wildlife Society, Alaska Chapter meeting on RSF modeling, including recruiting speakers and giving a presentation, 'Comparison of results of wildlife resource selection functions across methodologies and species'. He also helped to organize a workshop on RSF methods, and also presented a talk as part of the workshop, 'Interrelationships in space use of wildlife species as inferred from resource selection functions'. Additionally, he organized a UAS-sponsored talk series (Spatial Analysis Discussion Group), and presented a talk as part of that series, 'Analysis of wildlife movement and space use in southeast Alaska'.

**III.** Not applicable.

**IV. SIGNIFICANT DEVIATIONS AND/OR ADDITIONAL FEDERAL AID-FUNDED WORK NOT DESCRIBED ABOVE THAT WAS ACCOMPLISHED ON THIS PROJECT DURING THIS SEGMENT PERIOD**

None.

**V. PUBLICATIONS**

None.

**VI. RECOMMENDATION FOR THIS PROJECT**

Extend the project for another year.

**Prepared by:** Rod Flynn and Dave Gregovich

**Date:** 9/01/2014