

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

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Project Number: 19.10

Project Title: Region I research planning, design, and support

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Report Due Date: September 1, 2010

PRINCIPAL INVESTIGATORS: Rod Flynn, Research Coordinator, ADF&G

WORK LOCATION: Southeast Alaska

I. PROBLEM OR NEED THAT PROMPTED THIS RESEARCH

Research planning, 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. Before funding commitments are made to a specific research study, planning is a critical component to evaluate technical and logistical feasibility, cost effectiveness and relative priority of research proposals. Planning efforts for new studies may not always result in implementation of a study, but the process is necessary to ensure that only high quality, well designed studies are undertaken. Technical support in the form of biometric services is necessary to ensure sound study design and appropriate analyses both in the planning and post-data collection phase.

II. REVIEW OF PRIOR RESEARCH AND STUDIES IN PROGRESS ON THE PROBLEM OR NEED

Field-based wildlife research is often expensive to conduct in Alaska. Every effort should be taken to ensure that new studies are well designed and address priority issues. Results need to be adequate to address management needs identified during planning. This is best accomplished through planning efforts as a means of identifying priority needs for research and research designs that will have the greatest chance of producing useful results.

III. APPROACHES USED AND FINDINGS RELATED TO THE OBJECTIVES AND TO PROBLEM OR NEED

Research planning will be accomplished through a number of collaborative group processes and individual efforts. The process will provide for input from a broad base of division personnel and external constituents and will allow for decision making to occur at various appropriate levels within the division. (All animal

19.10 Region I research planning, design, and support
FY10 Progress Annual Report

capture activities will follow the protocols established in the ADF&G Division of Wildlife Conservation “Animal Welfare Policy” and its wildlife capture and restraint manual.)

Job 1. Establish research program priorities

Program priorities will be established through the involvement of the regional supervisory staff, biologists and technicians. External constituents and agencies are consulted relative to their priorities and opportunities for collaboration.

Job 2. Identify and develop specific research alternatives

Based on priorities, research staff will develop proposals, including alternative designs, which can be used to meet identified objectives. Developing proposals will follow standard scientific processes, including experimental design, evaluation of similar studies in other locations, statistical analysis and evaluation of data that has already been collected in previous studies, and collaboration with other researchers.

Job 3. Evaluate research designs

Evaluation of research designs and alternatives may be done at a statewide and/or regional basis with input from appropriate research and management staff. Researchers may use the pilot study approach as part of this job to conduct small field projects to better evaluate costs, efficiency and desired outcomes if a project is conducted at full-scale. Examples of pilot studies include placing 3-5 GPS radio-collars on a given species to evaluate data acquisition and general movements prior to a fully executed study, or acquiring bear hair samples from a locale to evaluate field costs and probability of identity for further study design using DNA methods. Outputs from this process may lead to development of a research implementation plan to conduct the new study.

Job 4. Conduct statistical and population estimation analyses

New and existing studies require data management and various analyses, some of which are conducted by the lead wildlife biologist while other analyses are conducted by the regional biometrician.

IV. SUMMARY OF WORK COMPLETED ON JOBS FOR LAST SEGMENT PERIOD ONLY

JOB/ACTIVITY 1: Establish research program priorities

Accomplishments: Short and longer-term research priorities were established through discussions and meetings with regional staff. 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. Because of partnering opportunities and targeted funding for specific groups of wildlife, regional staff identified additional priorities in the areas of furbearer management, elk population assessment and habit utilization, mountain goat population assessment, deer habitat evaluations related to timber harvest, wolverines movement, urban bears, Gustavus predators, and black bear population assessment. These

19.10 Region I research planning, design, and support
FY10 Progress Annual Report

are in addition to ongoing research priorities for brown bear, moose, and Sitka black-tailed deer.

JOB/ACTIVITY 2: Develop research design alternatives

Accomplishments: In the evaluation of regional research priorities, alternative studies were considered for several of the 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 manpower and expertise to work on the study.

JOB/ACTIVITY 3: Evaluate research designs

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

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

Accomplishments: In support of various management questions, our staff biometrician conducted various ad hoc analyses to evaluate the quality of information already in hand. In some cases these analyses were done as a follow-up from earlier research data collection, and in other cases it was done in support of new research ideas. These analyses included a number of game and nongame species, included population estimation, and habitat selection functions.

V. PUBLICATIONS

None.

I. RECOMMENDATIONS FOR THIS PROJECT

None.

Prepared by: Rod Flynn

Date: 9/01/2010