ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 115526
Juneau, AK 99811-5526

Alaska Department of Fish and Game
Wildlife Restoration Grant

GRANT NUMBER: AKW-23

PROJECT NUMBER: 25.0

PROJECT TITLE: Alaska Wildlife Habitat Monitoring and Enhancement

PERIOD OF PERFORMANCE: July 1, 2017 – June 30, 2018

REPORT DUE DATE: Submit to Research Coordinator 24 August 2019, FAC 1 Sept. 2019

PRINCIPAL INVESTIGATORS: Thomas F. Paragi

COOPERATORS: Susanne U. Rodman

I. PROGRESS ON PROJECT OBJECTIVES DURING PERIOD OF PERFORMANCE

OBJECTIVE (1) Inventory existing vegetation disturbances from fire, logging, and other readily measurable factors within the last 30 years near paved and forest roads and mapped All-Terrain Vehicle (ATV) trails in Region III and subsequently maintain statistics on annual vegetation disturbances and road or trail expansion

ACCOMPLISHMENTS: Paragi downloaded the 2017 update to the spatial database on fire history from the Alaska Fire Service website. He also obtained recent updates of timber sale and forest road locations from the Alaska Division of Forestry (DOF).

OBJECTIVE (2) Evaluate potential to extend or construct roads or trails to improve public access for wildlife related activities

ACCOMPLISHMENTS: In FY17, Paragi had assisted Rodman in writing a Federal Aid proposal to make improvements on forest roads with troublesome maintenance to improve public access to the Tanana Valley State Forest in the Fairbanks area beginning in FY2018. We submitted the proposal internally, but it was not submitted to WSFR for funding until late June 2018. Alaska Division of Forestry (DOF) has already begun work on these roads using other funding, but they will be able to incorporate Federal Aid funds on several primary road segments and a bridge in FY19.

OBJECTIVE (3) Involve and inform other professionals and the public about habitat trends, habitat management options, and the potential to achieve explicitly defined habitat objectives.

Paragi continued literature review on forest practices primarily as part of a related research project that ended in FY 18 (34.0, Forest management and wildlife-habitat relationships in Interior Alaska). He monitored the agenda for quarterly meetings of the Citizen Advisory Committee of the Tanana Valley State Forest to determine if discussions were likely to include wildlife habitat issues. He provided comments on wildlife habitat conservation to ADF&G Division of Habitat staff reviewing Forest Land Use Plans for proposed timber sales on state lands, primarily in the Tanana Valley State Forest but also for biomass energy harvesting near Galena. He consulted with Julie Hagelin (Wildlife Diversity Program, Fairbanks) when providing comments on non-game species.

Paragi continued work with Sue Rodman (Program Coordinator, Wildlife Habitat Enhancement & Spatial Analysis Program, Anchorage) to draft agency guidelines for planning, implementing, and evaluating habitat enhancement projects for moose. He assisted Rodman with planning, gave a presentation, and led field trip stops during an aspen ecology and management workshop for interior Alaska during 12-14 September 2017 <link>. The workshop presentations were attended by about 30 people, and the field trips included about 20 people. Paragi and Rodman produced an invited summary of the workshop for a newsletter of the Western Aspen Alliance <link>. Paragi presented an overview of the workshop to about 30 people at the annual meeting of the Alaska Society of American Foresters in Fairbanks on 12 April 2018.

Recent research on public attitudes toward hazardous fuel breaks in spruce-dominated forest of the wildland-urban interface of the Fairbanks North Star and Kenai Peninsula boroughs suggests favor toward thinning (park-like atmosphere of widely-spaced trees) over shear blading (clear cuts typically with debris windrows). The quandary for agencies is that shearing is often more effective (better chance for type conversion to less hazardous fuels, more tactical suppression options) and is 2-10 times less expensive per acre than thinning and burning slash. Paragi worked with a faculty member in the program for Long Term Ecological Monitoring at the University of Alaska-Fairbanks (UAF) and DOF staff to develop a research proposal outline for quantifying ecosystem services (moose harvest and berry picking) from hazardous fuel breaks. The proposed 4-year graduate student project would inform the public on magnitude of moose and berries as positive externalities when assessing the tradeoffs in creating fuel breaks in the wildland-urban interface. The concept was supported by regional staff in fall 2017, but non-federal match funding for FY19 was not available. The concept was drafted as a short research proposal and will be submitted internally for non-federal match in FY20.

In support of this research proposal development, Paragi collaborated with DOF and UAF on a pilot study in summer 2018 to describe vegetation response, berry production, and moose use of 10 sheared and 1 shaded fuel break in the Fairbanks North Star Borough that were treated in 2004-11. This helped DOF with immediate information (whether spruce fuels have regenerated to the point that re-treatment is necessary to reduce risk of fire spread), provides staff in both agencies with firsthand knowledge of positive externalities in fuel breaks for outreach, and allows estimates of sampling variance for design of future research.

II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.

Work on Objective 1 during FY15-16 allowed us to identified public access opportunities for wildlife uses in the Interior, resulting in the funding proposal for road upgrades in the Tanana Valley State Forest. Two of the original cooperators from Region III (wildlife biologist Kalin Seaton and GIS analyst Matt Warren) left state service by FY17, at which time Paragi shifted toward identifying new habitat enhancement opportunities near the road system that can be integrated with hazardous fuels management.

III. SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.

None

IV. PUBLICATIONS

None

V. RECOMMENDATIONS FOR THIS PROJECT

This in an ongoing habitat management project. Paragi will write a 5-year performance report during FY19, review the need to revise goals and objectives for the next 5-year period with regional staff, and revise the project statement as necessary for FY20-24.

Documentation of wildlife benefits achieved from fuel breaks enables outreach to the public for informed decisions on the type and location of fuel breaks to reduce wildland fire hazards near communities. If the research proposal described in Objective 6 is a candidate for receiving non-federal match funding in FY20, I will prepare a research operational plan and Federal Aid project statement.

We recently completed research that recommended guidelines for wildlife habitat management in boreal forest (project 34.0, Forest management and wildlife-habitat relationships in Interior Alaska). In FY19 I will develop an outreach brochure for a non-technical audience and examine the potential for DWC to further assist DOF with ongoing consultation on timber sale planning, layout, and monitoring. This will help us meet the intent for wildlife habitat conservation in the Alaska Forest Resources and Practices Act and include interaction with the Citizens Advisory Committee of the Tanana Valley State Forest.

Paragi and Rodman have served as past co-chairs of the Alaska Northern Forest Cooperative and will continue to mentor the new co-chairs in developing workshop agendas. A topic being considered for the next workshop is strategies to address the current outbreak of spruce bark beetles that is causing widespread conifer mortality in the Matanuska-Susitna Borough. This outbreak has implications for fire hazards near communities (thus fuels management) and wildlife habitat changes caused by tree mortality or potential salvage of dead wood.

Prepared by: Thomas F. Paragi

Date: 17 August 2018