

**Wildlife Restoration OPERATING GRANT
FINAL PERFORMANCE REPORT**

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-C-2-2019

PROJECT NUMBER: 25.0

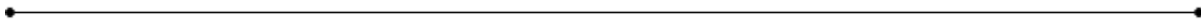
PROJECT TITLE: Alaska Wildlife Habitat Monitoring and Enhancement

PERIOD OF PERFORMANCE: July 1, 2018 – June 30, 2019

REPORT DUE DATE: Submit to Management Coordinator 19 August 2019, Federal Aid Coordinator 1 Sept. 2019

PRINCIPAL INVESTIGATORS: Thomas F. Paragi

COOPERATORS:



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 2018 update to the spatial database on fire history from the Alaska Fire Service website and periodically downloaded the 2019 active fire perimeters as needed to inform recommendations. 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. Match funds were secured through WSFR AKW-D-2-2019 Hunter Access, but funds were not secured in time for the FY19 construction season. DOF is planning for FY20 to replace the Fortune Creek bridge and do road improvements for Standard Creek, Cache Creek, and Nenana Ridge/Skinny Dick's roads along with installing kiosks describing hunter access enhancement.

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. He monitored the agenda for meetings of the Alaska Board of Forestry to determine if discussions were likely to include wildlife habitat issues and attended 2 meetings of the Citizen Advisory Committee of the Tanana Valley State Forest. 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. 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.

Following a 2018 pilot study near Fairbanks, Paragi worked with DOF and UAF to develop a research proposal outline for quantifying ecosystem services (moose habitat enhancement, moose harvest, and berry harvest) from hazardous fuel breaks. The proposed 4-year graduate student project was intended to inform the public on the magnitude of moose and berry production 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 was submitted internally for non-federal match in FY20 but was not funded.

Paragi began work with Hagelin and Region III outreach staff to develop a brochure for a non-technical audience on recommended guidelines for wildlife habitat management in boreal forest (project 34.0, Forest management and wildlife-habitat relationships in Interior Alaska—completed 30 June 2018). This will allow DWC to further assist DOF with ongoing consultation on timber sale planning, layout, and monitoring. It will also help us meet the intent for wildlife habitat conservation in the Alaska Forest Resources and Practices Act and inform recommendations on timber management by the Citizens Advisory Committee of the Tanana Valley State Forest. Paragi provided the project 34.0 recommendations to a Dartmouth College researcher funded for Phase II of the NASA program Arctic Boreal Vulnerability Experiment (ABOVE). The researchers will visit Fairbanks in 2020 to engage the Citizen Advisory Committee on identifying important ecosystem services, such as wildlife habitat and timber output, to guide modeling of the effects of projected climate trends on these services. The researcher will return in 2021 to present modeling results.

II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.

Work on Objective 1 during FY15–FY16 allowed us to identify 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

Paragi submitted a research note to the journal *Forest Science* on the 2018 pilot study that compares 3 methods for assessing conifer regeneration in hazardous fuel breaks.

V. RECOMMENDATIONS FOR THIS PROJECT

This has been an ongoing habitat management project in Region III since the mid-1990s. It began with experimentation on mechanical treatments (crushing, shearing), post-logging site treatments (scarification, prescribed fire), and broadcast prescribed fire to enhance woody deciduous vegetation near settled areas where wildland fire is suppressed to protect human resources. Extent and risk of wildland fire have generally increased in the last 2 decades, creating an impetus for hazardous fuels management in the urban interface. This project was terminated as a Region III project on 30 June 2019. Beginning in FY20, objectives and tasks pertaining to timber sale review to ensure wildlife habitat conservation, habitat enhancement planning and implementation, and hazardous fuels management that enhances wildlife habitat were assumed under the statewide Wildlife Habitat Enhancement & Spatial Analysis Program (AKW-B-SW-2020 P24.0). Paragi will continue to provide support to Rodman on these topics, particularly as they pertain to Region III.

Prepared by: Thomas F. Paragi

Date: 13 August 2019