

**Wildlife Restoration MULTI-YEAR GRANT
INTERIM 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-29

PROJECT NUMBER: P7.0

PROJECT TITLE: Unit 17 Wolf Abundance and Demography

PERIOD OF PERFORMANCE: 23 March 2018 – 31 October 2022

PERFORMANCE YEAR: 24 March 2020 – 30 Sept 2021

REPORT DUE DATE: Submit to Coordinator 01 Dec 2021; due to FAC 29 Dec 2021

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Authorities: 2 CFR 200.328
2 CFR 200.301
50 CFR 80.90

I. PROGRESS ON PROJECT OBJECTIVES DURING PERFORMANCE YEAR

OBJECTIVE 1: Determine annual abundance of wolves in the Unit 17 Wolf Control Area (WCA).

ACCOMPLISHMENTS: We did not accomplish this objective.

Travel restrictions due to the Covid-19 pandemic, and considerations for personnel safety necessitated that we cancel our late winter wolf capture, which was scheduled for March 2020. At that point we were down to 2 collared wolves, and 1 of those was killed by wolves on April 5, 2020.

We planned a capture effort during November 2020, but never received adequate snowfall to initiate captures. At that point we had 1 collared wolf remaining, and its collar failed on Feb. 10, 2021.

In late March 2021, we initiated a capture effort and collared 1 wolf before suspending capture operations due to poor snow tracking conditions.

OBJECTIVE 2: Document annual demographic rates including productivity, survival, and dispersal.

ACCOMPLISHMENTS: We did not accomplish this objective.

Because we had a such a low sample of collared wolves, we were unable to estimate population demographic rates during this performance period.

II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.

This report covers year 3 of a 4-year study. We are still in the data collection phase of the project and do not have any results or findings to report.

III. SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.

Although no formal SDRs or amendments were submitted during this performance period, below we document some of the significant challenges that this study has experienced from the outset. The primary goal to meet Objective 1 was to determine an initial abundance/density estimate of wolves in the proposed expanded Unit 17 wolf control area (WCA) prior to the initiation of control activities. We originally proposed to estimate these parameters in/adjacent to the WCA using the Territory Mapping via Radiotelemetry (TMR) method (Gardner and Pamperin 2014) because it is considered the most practical method in areas with continual poor snow tracking conditions due to winter thaws, rain-on-snow events, and wind scouring, all of which were continual issues in the study area in the years immediately preceding this study. This method requires that ≥ 1 wolf in all packs in the study area are radiocollared and regularly tracked to determine pack size and composition and to map territory boundaries. Nonetheless, our primary goal of determining wolf abundance prior to removal was undermined by the decision to initiate the expanded wolf control program before we finished radiocollaring packs and subsequently determining pack sizes in the WCA. In the time since the grant was awarded, our capture efforts have been seriously hindered by being instructed to avoid captures during the months when conditions are considered ideal for pilots to implement control activities, and by poor field conditions when we were allowed to attempt captures. As such, we have had minimal opportunities to instrument wolves and maintain a sample of collared packs with which to satisfy the data requirements of the TMR method. Further, the success of control activities has resulted

in the loss of relatively large proportion of collared animals, in addition to other collared wolves being killed by conspecifics.

The resultant low success in obtaining and maintaining an adequate sample of collared wolves to this point has brought us to the conclusion that the TMR survey method is no longer feasible. We anticipate proposing an amendment to this project.

IV. PUBLICATIONS

We are still in the data collection phase of the project and do not yet have any publications associated with this project.

V. RECOMMENDATIONS FOR THIS PROJECT

Because the TMR method for estimating wolf population abundance and density is no longer feasible, the most practical approach at this point is to conduct aerial snow-track survey(s). Incidentally, winter weather in SW Alaska has been colder in recent years resulting in higher snowfall and generally better snow tracking conditions that, if the trend continues, would provide more periods of adequate conditions for aerial surveys. The two main methods are the Intensive Aerial Wolf Survey (IAWS) and Sample Unit Probability Estimator (SUPE)(Gardner and Pamperin 2014). The IAWS approximates a complete census of the study area and provides total number of wolves, number of packs, pack size and general distribution of packs. The SUPE is a stratified sampling approach that surveys ~30-47% of the study area, and provides a precise, unbiased estimated of the population and number of packs.

Comparing the two methods, the IAWS provides more useful information for evaluating predator-prey relationships because number of packs and pack sizes are better approximated, important factors in explaining predation rates. It can be conducted over multiple days or even extended periods but is still reliant on fresh snow prior to survey flights. Because of the size of the WCA (25,495km²) and the challenges for getting adequate flying weather and snow tracking conditions for such a vast area, the SUPE method, which was developed to estimate wolf and pack numbers over large areas, would be more cost-effective, but would provide less information relative to distribution of packs and pack territories.

Recommendation: Attempt IAWS or SUPE survey for the remaining 2 performance years.

Gardner, C. L., and N. J. Pamperin. 2014. Intensive aerial wolf survey operations manual for Interior Alaska. Alaska Department of Fish and Game, Wildlife Special Publication ADF&G/DWC/WSP-2014-01, Juneau.

Prepared by: Nick Demma

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