

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

GRANT NUMBER: AKW-20 Wildlife Restoration FY2017

PROJECT NUMBER: 10.0

PROJECT TITLE: The Status of Wood Bison and Factors Influencing Their Populations

PERIOD: July 1, 2016 – June 30, 2017

PROJECT LOCATION: Statewide

REPORT DESCRIPTION: This performance report describes wood bison survey and inventory activities. Activities are listed by game management unit.

**The Status of Alaska Wood Bison and Factors Influencing Their Populations in
Region III**

Region wide Activities: Unit 21E, 21D, 18, 23

1. Completed population studies. From July 2016 through June 2017, 4 known mortalities occurred out of 38 collared wood bison adults, resulting in an adult annual mortality rate of around 10%. The collared sample was 92% female, and all four mortalities were female. In August 2016, a peak of 17 calves was observed. In December, 14 calves were observed, suggesting an 8 month calf mortality rate of approximately 18%. In June 2017, a peak of 26 calves was observed. In late August, a preliminary count of 19 calves was observed, suggesting that summer calf mortality may have been near 27% in 2017. The population estimate was 150 animals by end of calving, summer 2017.
2. Completed population sex and age composition surveys. Calves in groups are counted on every radiotracking flight. Peak numbers were listed above. Preliminary work was done to help develop a composition survey method that involves high resolution aerial photography from ADF&G's caribou photocensus aircraft.
3. Progress was made on range resource assessments. Greater than 100 fecal samples were collected summer, fall, and winter to document plant composition of the wood bison diet. Plant and soil samples were also collected to be analyzed for forage quality and trace minerals. Hundreds of photos have been taken of wood bison during radiotracking flights which will illustrate their small scale habitat choices over time.

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4. Distribution and movements were studied. 14 GPS collars were deployed from November 2016 to March 2017, and 23 total GPS collars remained active by end of June 2017. Loss of radio collars was often associated with the engineering of the collars. Many radiocollars were built to fall off of growing animals with a breakaway cotton section that was designed to degrade in the sun and rain. Also, bulls tended to tear off their collars during late summer rut activities. 18 radiotracking flights were completed from July 2016 through June 2017, obtaining distribution and movement information on the bulk of the herd via the deployed VHF and GPS collars. Since release 3,100 VHF and 70,000 GPS collar locations have been obtained. A few animals have dispersed from the lower Innoko area, but almost 98% of the bison have stayed within 50 miles of the release site. The dispersing animals have helped identify habitats that are available for future expansion of the herd. Three main dispersing bison have explored an area of connected bison habitats that is over 600 miles length, from the mouth of the Kuskokwim to the upper Kobuk River. A large metapopulation (many local populations connected through the occasional exchange of individuals) of bison along this 600 mile corridor of habitat in western Alaska would constitute a successful wood bison restoration goal.
5. There were no open hunting seasons during this reporting period. There is no evidence that there has been any mortality from infectious disease, or predation during this reporting period. One wood bison (number 124) that had dispersed over 200 miles to the southwest, along the southern extent of the Yukon-Kuskokwim river delta was illegally shot by a resident of Quinhagak on January 27th, 2017. Two collared wood bison fell through the ice in late January and early February 2017, one near a beaver lodge, and one on a warm slough. One bison appeared to get stuck in the mud near Shageluk in June, 2017. From July 2016 to June 2017, relatively low adult mortality was experienced, similar to normal mortality for other wild bison herds. No known adult mortalities occurred between April 2016 and January 2017.
6. Fourteen bison were captured in the wild from November 2016 through March 2017. Blood, fecal, and mucus membrane samples were taken and tested for parasites and disease. No parasites or disease were detected.
7. No hunting seasons were open during this reporting period, so no hunter questionnaires were solicited. However, many local public meetings and presentations were held where ADF&G answered the public's questions about wood bison and the public answered ADF&G's questions about their opinions and knowledge regarding wood bison. Education curricula were developed and implemented that included training for future hunters so that they might better understand selective harvest of bison and bison natural history.
8. The Management Report cycle has not been initiated for wood bison. However, many other forms of information on the herd have been produced to inform the public such as periodic Facebook posts, Wood Bison News issues, several education curricula, and dozens of in-person presentations.

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9. In the publicly written management plan, “Wood Bison Management Plan for Lower Innoko/Yukon River in west central Alaska, 2015-2020”, the population objective was set to support “growth and expansion of wood bison into adjacent areas where suitable habitat exists.” As the years go by, ADF&G will be monitoring the way bison use their habitat to better understand carrying capacity. At this time it appears that the habitat accessible from the release area (up and down the Yukon River drainage) could hold thousands of wood bison. More solid population objectives will be built upon habitat use and the will of the people as wood bison build in number.

Submitted by: C. Tom Seaton, Wood Bison Project Biologist