Upper Yukon/Tanana Predation Control Implementation Plan and Activities
Report to the Alaska Board of Game
February 2005

Background

For more than 20 years, communities in and adjacent to Units 12 and 20E expressed concern about chronically low moose densities due to predation by wolves and bears, and proposed various predator control programs to increase moose numbers. During the Spring 2004 Board of Game meeting, the Upper Tanana/Fortymile Fish and Game Advisory Committee and the public provided testimony explaining the problem and made proposals to correct the situation. The Board of Game subsequently requested that ADF&G prepare a draft wolf and brown bear predation control implementation plan.

ADF&G developed the Upper Yukon/Tanana wolf and brown bear predation control plan to increase survival of moose in the dual predator system (wolves and brown bears) in Units 12 and 20E, and the board adopted the plan at the November 2004 meeting. The plan is in effect for 5 years, and began on January 1, 2005 in all of Units 12 and 20E, except on National Park Service and National Wildlife Refuge lands not approved by the federal agencies. The objective, as listed in 5 AAC 92.125(8)(A), is:

- To initiate an increase toward the intensive management moose population objectives of 4,000–6,000 moose with a sustainable annual harvest of 250–450 in Unit 12, and 8,000–10,000 moose with a sustainable annual harvest of 500–1,000 in the Fortymile and Ladue River drainages of Unit 20E.

Reduction of bears will be primarily focused in moose calving areas to improve calf survival, while wolf reductions will be conducted in a larger area of the Fortymile and Ladue River drainages to benefit all age classes of moose.

Plan Implementation Activities

Harvest Management. High moose densities in Unit 20E supported a long hunting season and a bag limit of one moose of either sex during the 1960s. As declines began in the early 1970s, hunting for cows was closed. The season for bulls was shortened in 1973 and closed during 1977–1981. A ten-day bulls-only season was held during 1982–1990, and lengthened to 15 days, including antler restrictions, during 1991–2004, with up to 30 additional days in limited portions of the unit. Progressively more restrictive hunting regulations have been implemented since RY 2001 to keep the 20E moose harvest within sustainable levels. Hunting pressure is expected to remain at current levels or increase in the future, while the moose population is expected to remain at low levels if the 2004 predator densities persist. If this occurs, even more restrictive moose hunting regulations will likely be required in the next few years, including possible allocation through Tier I or Tier II permits. This predator control program is aimed at preventing this scenario by increasing moose survival through reduction in wolf and brown bear numbers.

Wolf Control. Permits for the wolf control portion of the program were issued during January of 2005, and it is too early to evaluate the success of this portion of the program.

Bear Control. Permits for the bear control portion of the program will be issued beginning April 1, 2005 and it is too early to evaluate the success of this portion of the program.

Habitat Conservation. Habitat quality and availability are likely not important factors limiting the moose population. In the 1960s, Unit 20E likely supported a higher density than currently; however, no reliable population estimates were obtained. In southern Unit 20E, high twinning rates of 52% for adult cows observed during a 1984 research project and 31% observed during spring 2004 surveys indicate habitat in this area is capable of sustaining a higher moose density. By comparison, in Unit 20A where habitat is an important limiting factor, moose twinning rates averaged 8% since 1996. In addition, wildfires are common in Unit 20E and fire suppression efforts are limited, resulting in favorable habitat conditions. Over 1600 square miles of habitat burned in 2004 alone, which will benefit future moose productivity. All indications are that moose habitat in much of the unit is capable of sustaining at least 1.0–1.5 moose per square mile. No active habitat management is planed during the life of this control plan.

Status of Prey and Predator Populations

Moose Population. Available evidence suggests the moose population in Unit 20E was much higher in the 1960s, but since the late 1970s, it has been at low density. During 1981–2004, the department conducted ten moose density estimation surveys, which confirmed persistently low numbers. The 2004 population estimate for the entire unit was 2,900–3,600, or 0.35–0.45 moose per square mile of suitable moose habitat (8,000 square miles), with a calf:cow ratio of 24:100. The unit-wide population estimate is well below the Intensive Management objective of 8,000–10,000 within the Fortymile and Ladue River drainages.

Wolf population. Since 1980, the early-winter wolf population in Unit 20E has been estimated using extrapolation of density estimates derived from data collected during intensive winter aerial surveys, information from interviews with local trappers and trapping records. The early-winter wolf population size estimate for 2002–2003 was 245–260 wolves. Hunting and trapping harvest over the past 5 years averaged 36 wolves annually in Unit 20E and has not exceeded sustainable levels.

Increasing numbers of caribou in the Fortymile herd and the winter migration of the Nelchina herd through Unit 20E during the past 5 years appear to have allowed the wolf population to increase. Wolf densities in the northern and western parts of the unit are expected to further increase as packs sterilized under the Fortymile non-lethal wolf control program are replaced by unsterilized packs.

Brown bear population. The brown bear population size estimate for Unit 20E was 475–550 in 2002. This was based on extrapolation of a density estimate obtained in central

Unit 20E during 1986 and on intensive research studies conducted in similar habitats with similar bear food resources during 1981–1998 in Unit 20A, 100 miles to the west.

Brown bear hunting seasons are longer and less restrictive than during the 1970s when the bear population was lightly harvested. Harvest varied from a mean of 3 during 1966–1981, to 19 during 1982–1988, and 14 during 1989–2002. Mean proportion of males in the harvest during 1989–2002 was 56%. Despite liberal regulations, harvest appears to have had little effect on bear population size.

Recommendations to Achieve Plan Objectives

Continue to implement the plan as approved by the Board.