#### Susitna-Watana Hydroelectric Project Document ARLIS Uniform Cover Page

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Notes: Proposals on research steps to be taken and management goals for caribou (specifically the Nelchina and Delta herds), moose, and ptarmigan. The focus is on Game Management Unit 13.		

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SUSITNA-WATANA DAM HYDROELECTRIC PROJECT TERRESTRIAL WILDLIFE RESOURCES

> Division of Wildlife Conservation Proposals



#### Nelchina Caribou Management

- Management Objectives: 35,000-40,000; and ensure consistently high sustainable harvest levels for Alaska Hunters.
- 2011 Population estimate: 40,233
- Population increased 18,737 27,528 1980's,
- Increased use of historical summer and winter range in northwest portion of herd's range.
- Herd passes through proposed project area during annual migrations.

#### Delta Caribou Management

- Management Objectives: 5,000 7,000
- 2007 Population estimate: 2,985
- Increased use of the proposed project area since the previous studies in 1980's further complicates the picture.
- Mixing of the Delta and Nelchina herds was documented beginning in 2006.

## Proposed Caribou Project Objectives

- 1) document seasonal use of, and movement through the greater Susitna-Watana hydroelectric project area by bulls and cows of both the NCH and the DCH,
- 2) determine relative importance of the greater project area to both the NCH and DCH, and
- 3) document productivity and calf survival of caribou utilizing the greater project area.

# Caribou Project Approach

#### Key Elements

- Add VHF collars to sample of bull caribou in both herds.
- Monitor radio collars monthly via aerial radiotelemtry w/ weekly monitoring during spring and fall crossing periods as well as during calving.
- Deploy Geographic Positioning System (GPS)/Argos satellite collar on bulls and cows to detect fine-scale movements for both herds.

# GMU 13 Moose Management

#### POPULATION OBJECTIVE

- Increase the unit moose population to 20,000–25,000 moose with a minimum of:
  - 25–30 calves:100 cows
  - 25 total bulls:100 cows
  - 10 yearling bulls:100 cows in the fall.
- Eight continuous count areas surveyed annually show increasing population trend.
  - Current surveys provide population composition and trend data.

### GMU13 Countinuous Count Areas



## Proposed Moose Project Objectives

- 1)document moose population composition and density in the greater Susitna-Watana hydroelectric project area,
- 2) determine relative importance of the greater project area to cow and bull moose, and
- 3) document productivity and calf survival of moose utilizing the greater project area.

# Moose Project Approach

#### Key Elements

- Continue count area aerial composition counts.
- Conduct population estimates above and below proposed dam site.
- Assess moose movements in the project area, as well as productivity and survival, a sample of cow and bull moose will be radio collared.
- Deploy Geographic Positioning System (GPS)/Argos satellite collars on bulls and cows to detect fine-scale movements for both sexes.

#### GMU 13 Ptarmigan Management

- Little known about population dynamics (abundance, survival, seasonal movements)
- Spring roadside surveys on the Denali, Parks, and Richardson highways indicate low or declining populations for past ten years.
- Board of Game (BOG) reduced daily bag limit in 13A, 13B, 13E from 10 to 5 (Dec. 1- March 31) in RY 2005-2006.
- BOG further restricted harvest in GMU 13B by closing season November 30 beginning in RY 2009-2010.

### GMU 13/Watana Dam Ptarmigan Concerns

- Possibility of increased human access and activity in GMU subunits 13A and 13E
- Need further understanding of ptarmigan abundance, distribution, and migratory patterns
- Value of northwest subunit 13A and southern 13E for ptarmigan is uncertain.
- Creating access points to the project site would allow large scale human vehicle access for hunters and recreational users to portions of GMU 13 that are currently inaccessible.
- These portions of subunits 13A and 13E may offer refugia for the larger GMU 13 ptarmigan population that increased human access may impact to an unknown degree.

## Proposed Ptarmigan Project Objectives

- 1)Estimate the seasonal distribution of willow ptarmigan in game management subunits 13A, 13B, and 13E.
- 2)Estimate seasonal migratory patterns of willow ptarmigan in game management subunits 13A, 13B, and 13E.
- 3)Estimate fall and spring abundance and occupancy of ptarmigan in game management subunits 13A, 13B, and 13E.
- 4)Estimate seasonal survival of willow ptarmigan in game management subunits 13A, 13B, and 13E.

# Ptarmigan Project Approach

#### Key Elements

- Annually tag 30 willow ptarmigan in each subunit (13A, 13B, 13E) with a necklace radio transmitter.
- Relocate birds 6 times
  - August/September-summer/fall, dispersal
  - November March-winter hunting season
  - April-May-breeding

# Ptarmigan Study Area

