

# Initial Study Report Meeting

## Study 10.11 Aquatic Furbearer Abundance and Habitat Use

October 21, 2014

Prepared by

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## Study 10.11 Objectives

- Delineate the distribution and estimate the current population size of beavers.
- Describe the distribution and relative abundance of river otters, mink, and muskrats.
- Describe habitat associations of aquatic furbearers.
- Review available information on food habits and diets of piscivorous furbearers (river otter and mink) as background for the pathways analysis for Study 5.7 (Mercury Assessment and Potential for Bioaccumulation).
- Collect hair samples from river otters and mink to characterize baseline tissue levels of mercury for Study 5.7 (Mercury Assessment and Potential for Bioaccumulation).

# Study 10.11 Components

- Beaver and Muskrat Surveys (ISR Part A, Section 4.1, pg 2)
  - Aerial surveys of beaver colonies in fall and spring
  - Aerial survey of muskrat “pushups” in spring
- River Otter and Mink Surveys (ISR Part A, Section 4.2, pg 3)
  - Aerial surveys of tracks in winter
- Information for Mercury Assessment (ISR Part A, Section 4.3, pg 4)
  - Literature review of food habits and diets of river otter and mink
  - Hair sampling of river otter and mink for mercury analysis

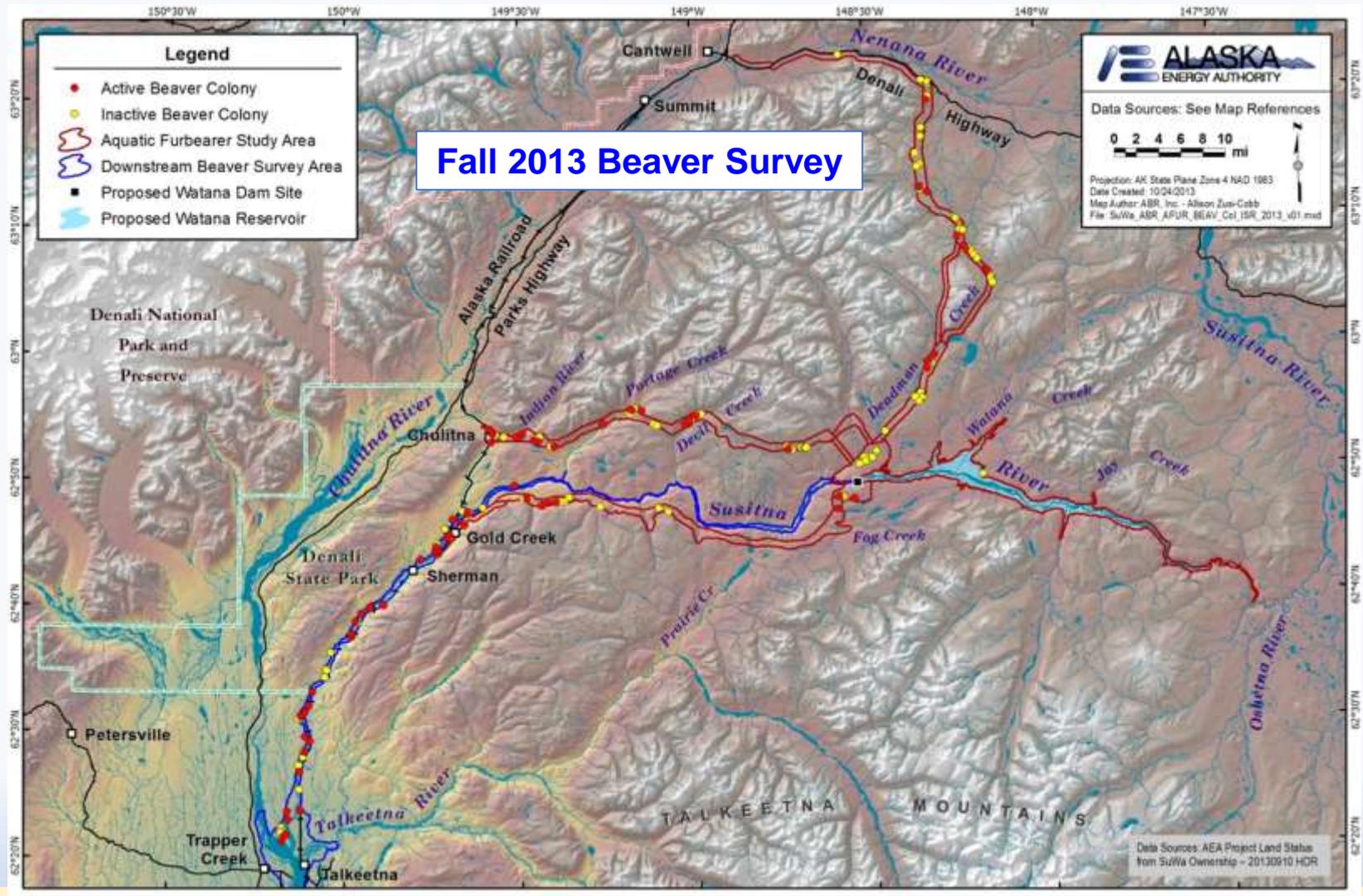
## Study 10.11 Variances

- **Aerial surveys for beaver were broadened** to include areas outside the study area (see RSP Sections 10.11.3 and 10.11.4.1), to cover the entire riverine physiography area delineated for Study 11.6 (Riparian Vegetation Study Downstream of the Proposed Susitna–Watana Dam), which provided more data than would have been collected otherwise.
- The planned **survey of muskrat pushups (RSP Section 10.11.4.1) was not conducted in 2013** because of the unusually late spring and persistent snow and ice cover; instead, researchers conducting surveys for Study 10.15 (Waterbird Migration, Breeding, and Habitat Use) and Study 10.14 (Surveys of Eagles and Other Raptors) in May 2013 recorded the presence of muskrat pushups.
- **Track surveys for river otters and mink were not conducted** in February–early April 2013 (RSP Section 10.11.4.1) or in November/December 2013 due to the lack of a suitable weather window in relation to pilot and aircraft availability. Incidental observations of river otters and river otter tracks were compiled from surveys conducted for other Project studies, however, to help meet the study objective.

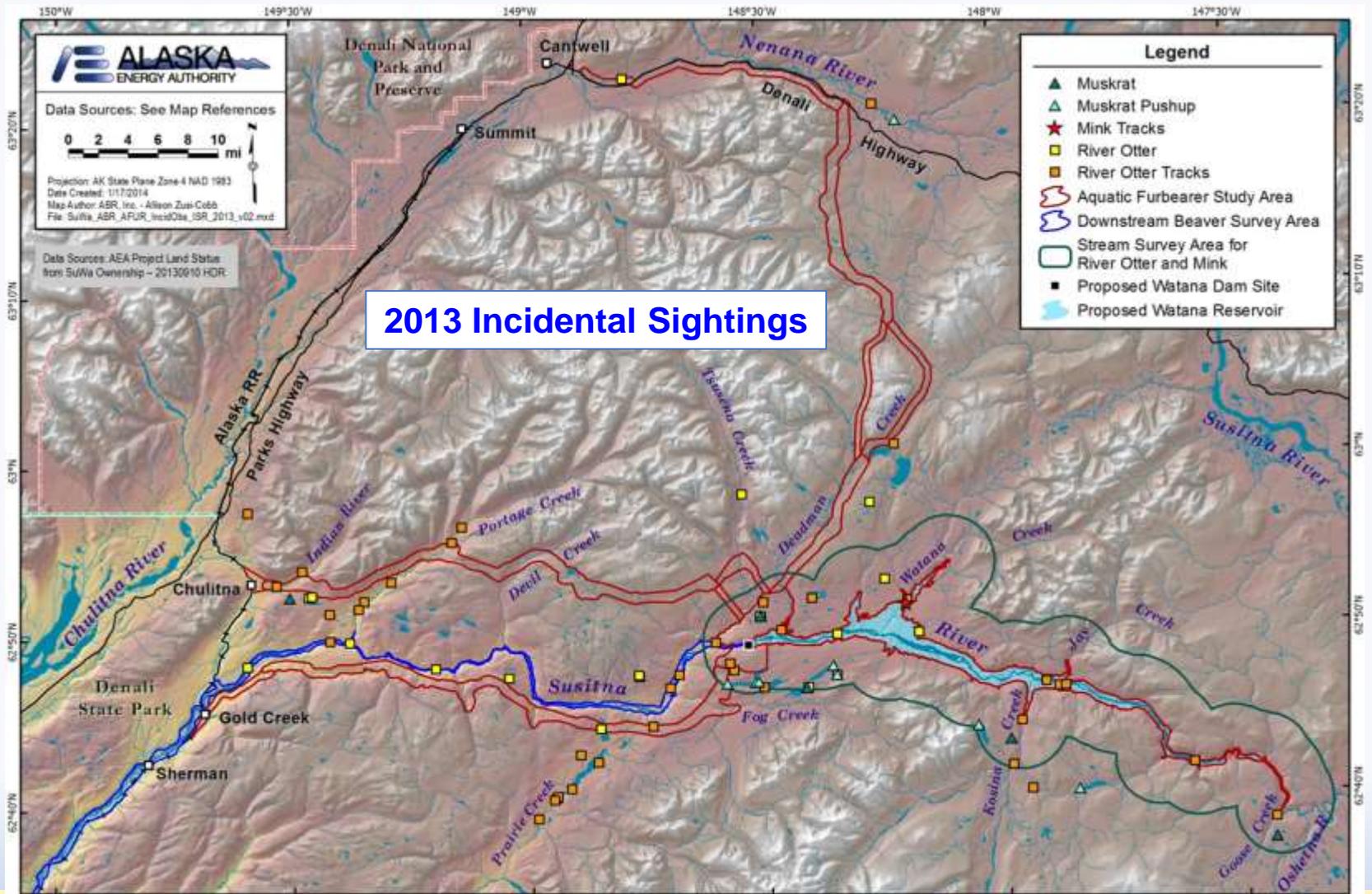
## Study 10.11 Summary of Results in ISR (ISR Part A – Section 5)

- In early October 2013, 186 beaver colonies were observed in the survey area and 37.1% were determined to be active, based on the presence of fresh food caches near lodges.
- The study team compiled 60 incidental observations of river otters and river otter tracks and 14 incidental observations of muskrats and muskrat pushups recorded by other Project wildlife studies in 2013.
- A review of scientific literature on the food habits and diets of river otters and mink was undertaken to provide data inputs for the pathways analysis for Study 5.7 (Mercury Assessment and Potential for Bioaccumulation).

# Study 10.11 Summary of Results in ISR (ISR Part A – Section 5)



# Study 10.11 Summary of Results in ISR (ISR Part A – Section 5)



## Study 10.11 Summary of Results since ISR

- Track surveys for river otter and mink were completed on March 7–8 and April 10–11, 2014.
- A survey was conducted on May 2, 2014 to assess overwinter survival of 53 beaver lodges that had been active in fall 2013, producing a minimum estimate of 39% survival over the winter (survival probably was higher, in view of poor survey conditions).
- Eight modified, nonlethal, single-catch snares were deployed at two locations in March–April 2014 to obtain hair samples from river otters. A single sample of 4 hairs was collected at Kosina Creek for analysis of mercury content.

# AEA Proposed Modifications to Study 10.11 in ISR (ISR Part C – Section 7.1.2)

- AEA added the Denali East Option (access road and transmission corridor) to the study area.
- The 2013 variance of expanding the beaver survey area to include a broader area of the floodplain along the Middle Susitna River than was originally described in the Study Plan will be continued for the remainder of this study.
- The objectives and methods in this study related to mercury analysis, including the literature review of food habits and diets of river otters and mink and the collection of hair samples, have been consolidated under Study 5.7 (Mercury Assessment and Potential for Bioaccumulation).

# New Modifications to Study 10.11 since ISR

The Chulitna Corridor has been dropped from the study area.

## Current Status and Steps to Complete Study 10.11

- A second aerial survey of active beaver colonies was conducted in fall 2014 and overwinter survival of those colonies will be assessed on a follow-up survey in spring 2015.
- Additional aerial surveys for river otter and mink tracks will be conducted in winter 2014–2015, pending the occurrence of suitable snow conditions.
- An aerial survey of muskrat pushups will be conducted in spring 2015.
- Cumulative data analyses will be reported in the USR.

## Steps to Complete Study 10.11 (ISR Part C – Section 7.1)

To complete this study, AEA will conduct the following surveys:

- Aerial survey of beaver colonies to assess the distribution and abundance of active colonies (fall 2014).
- Aerial survey of those active beaver colonies during the following spring to assess overwinter survival (spring 2015).
- Aerial surveys of river otter and mink tracks along stream courses and transects in winter (winter 2014–2015).
- Aerial surveys of muskrat pushups in waterbodies and wetlands throughout the study area (spring 2015).

## Licensing Participants' Proposed Modifications to Study 10.11?

- Agencies
- CIRWG members and Ahtna
- Public

