

Susitna-Watana Hydroelectric Project Document

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**Susitna-Watana Hydroelectric Project
(FERC No. 14241)**

**Distribution, Abundance, and Habitat Use by
Large Carnivores
Study Plan Section 10.8**

**Initial Study Report
Part B: Supplemental Information (and Errata) to
Part A (February 3, 2014 Draft Initial Study Report)**

Prepared for

Alaska Energy Authority



SUSITNA-WATANA HYDRO

Clean, reliable energy for the next 100 years.

Prepared by

Alaska Department of Fish & Game

Anchorage and Palmer, Alaska

and

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Fairbanks and Anchorage, Alaska

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**PART B: SUPPLEMENTAL INFORMATION (AND ERRATA) TO PART A
(FEBRUARY 3, 2014 DRAFT INITIAL STUDY REPORT)**

Part A Reference	Description
Section 5.1.2, Downstream Bear Surveys	The results of genetic and stable isotope analyses received after the February 3 ISR was filed are summarized here. A total of 96 hair samples were collected for DNA and stable isotope analyses from 77 tripped snares. Multiple clumps of hair collected at some snares were analyzed separately rather than being pooled. DNA analyses of the 96 hair samples were successful in identifying 37 samples from 33 tripped snares to species and individual. Sex was determined for all but two of these samples. This rate of genetic identification (37/96, or 39%) is lower than was reported for similar bear-hair sampling by other researchers (68% by Beier et al. 2005; 71% by Fortin et al. 2007). The 37 genetically identified hair samples came from 27 different individuals. Of those individuals, 16 were black bears and 11 were brown bears. The black bear sample comprised nine females, six males, and one of unknown sex. The brown bear sample comprised nine females, one male, and one of unknown sex (Table B-1). Stable isotope analysis was conducted on 79 of the 96 different hair samples, from 67 tripped snares. All but one of the 37 hair samples with identifiable genetics was analyzed successfully for stable isotopes. Most brown bears had higher δ^{13} carbon signatures and a greater range of δ^{15} nitrogen signatures than did black bears (Figure B-1). These analytical results support the adequacy of the data collected to meet the study objectives.

Table B-1. Number of individual bears identified by genetic analysis at different locations by species and sex, 2013.

	Black Bear			Brown Bear			Total
Location	Female	Male	Unknown	Female	Male	Unknown	
4 th of July	3	2		3	1		9
5 th of July	2	1	1				4
Oxbow Slough		2				1	3
Slough 10	1						1
Slough 21	3	1		4			8
Slough 9A				2			2
Total	9	6	1	9	1	1	27

