

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

**Wolverine Distribution, Abundance, and Habitat  
Occupancy  
Study Plan Section 10.9**

**Initial Study Report  
Part C: Executive Summary and Section 7**

Prepared for

Alaska Energy Authority



**SUSITNA-WATANA HYDRO**

*Clean, reliable energy for the next 100 years.*

Prepared by

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**EXECUTIVE SUMMARY**

Wolverine Distribution, Abundance, and Habitat Occupancy Study 10.9	
Purpose	The study team is collecting data on wolverine abundance and distribution to provide pre-construction baseline estimates of population size and habitat occupancy in the Project area. The study team will use this information to estimate the number of wolverines that may be affected by the Project and to evaluate impacts on habitats used in the winter by wolverines.
Status	Weather conditions necessary to complete a Sample Unit Probability Estimator (SUPE) survey did not develop during winter 2013; however, the study team completed two occupancy surveys, which provided data to develop an occupancy model.
Study Components	<p>SUPE survey — Provides a precise population estimate of wolverine in the Wolverine Study Area (WSA) that the study team will use to assess the occupancy model density estimation.</p> <p>Occupancy Modeling (OM) — Estimates the proportion of the study area that is occupied by wolverines and provides a population index that has the potential to detect changes in population trends.</p>
2013 Variances	RSP Section 10.9.4 proposed that “a single aerial Sample-Unit Probability Estimator (SUPE) survey will be attempted. If survey conditions are unsuitable for the SUPE in 2013, then an occupancy survey will be flown.” A SUPE survey was not conducted in 2013 because suitable survey conditions did not occur. Thus, no variances from the methods described for aerial surveys occurred in 2013.
Steps to Complete the Study	Weather conditions in winter 2014 were not suitable for either a SUPE survey or occupancy surveys. Therefore, a SUPE survey will be attempted in winter 2015, pending suitable conditions. If a SUPE survey is not possible, then occupancy surveys will be completed in winter 2015.
Highlighted Results and Achievements	The study team completed two occupancy surveys in April 2013. Results will be used along with data to be collected in 2015 to develop a model of wolverine occupancy in the study area.

## **7. COMPLETING THE STUDY**

### **7.1 Proposed Methodologies and Modifications**

To complete this study, AEA will implement the methods in the Study Plan with no modifications. These activities include the following:

- Conduct a Sample-Unit Probability Estimator (SUPE) survey in late winter (RSP Section 10.9.4).
- If a SUPE survey is not possible, then aerial surveys for the purpose of occupancy modeling will be flown (RSP Section 10.9.4).

#### **7.1.1 Decision Points from Study Plan**

There were no decision points in the FERC-approved Study Plan to be evaluated for this study following the completion of 2013 work.

#### **7.1.2 Modifications to Study Plan**

No modifications to the FERC-approved Study Plan are needed to complete the study and meet Study Plan objectives. As provided in the Study Plan, AEA attempted a SUPE in 2013 and again in 2014; however, suitable snow conditions for a SUPE survey did not occur either year. In 2014, in fact, snow conditions did not allow for occupancy modeling.

In winter 2015, AEA will again attempt a SUPE survey. If snow conditions are not suitable for a SUPE survey, AEA will meet Study Plan objectives by completing occupancy surveys, as provided in the Study Plan.

### **7.2 Schedule**

In general, the schedule for completing the FERC-approved Study Plan is dependent upon several factors, including Project funding levels authorized by the Alaska State Legislature, availability of required data inputs from one individual study to another, unexpected weather delays, the short duration of the summer field season in Alaska, and other events outside the reasonable control of AEA. For these reasons, the Study Plan implementation schedule is subject to change, although at this time AEA expects to complete the FERC-approved Study Plan through the filing of the Updated Study Report (USR) by February 1, 2016, in accordance with the ILP schedule issued by FERC on January 28, 2014.

With regard to this specific study, AEA is not proposing any efforts in 2014. AEA plans to complete all remaining data collection and analysis for this study in 2015, which will be reported in the USR.

### **7.3 Conclusion**

Implementation of the Wolverine Distribution, Abundance, and Habitat Occupancy Study is planned for 2015, with no modification of the FERC-approved Study Plan. This study is

interrelated with the Evaluation of Wildlife Habitat Use Study (Study 10.19). AEA expects the approved Study Plan objectives for both this study and Study 10.19 will be fully achieved, as AEA proposes no modifications to this study. The results of this study will be reported in the USR.