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

**Dall's Sheep Distribution and Abundance
Study Plan Section 10.7**

**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

Alaska Department of Fish and Game and
ABR, Inc.—Environmental Research & Services

June 2014

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EXECUTIVE SUMMARY

Dall's Sheep Distribution and Abundance Study 10.7	
Purpose	The goal of this study is to obtain sufficient information on population size, summer distribution, and current use of mineral licks by Dall's sheep to evaluate potential Project-related effects on the species. The study's four objectives are to (1) estimate the current minimum population size of Dall's sheep in the study area, (2) delineate the summer range of Dall's sheep in the study area, (3) evaluate the current condition of mineral licks in and near the Project area, and (4) analyze and synthesize data from historical and current studies of Dall's sheep in the study area.
Status	Data collection occurred according to plan in summer 2013 and is scheduled for completion in summer 2014.
Study Components	Fixed-wing airplane surveys to document sheep distribution and develop a minimum population estimate were carried out in July 2013. Mineral licks were visited in May and June 2013 to provide a qualitative assessment of lick condition and levels of use. Historical and current data for Dall's sheep were reviewed and synthesized to examine patterns of habitat use in the study area, changes in population size, and use of the Jay Creek and Watana Creek mineral licks.
2013 Variances	During the site visit to the Jay Creek mineral lick in late May 2013, the study team deployed a time-lapse camera to record sheep presence on the main cliff face of the mineral lick, thereby providing a greater volume of data on lick use than would have resulted from the two site visits proposed in RSP Section 10.7.4. The data obtained from time-lapse photography provided additional information to use in achieving the study objective regarding characterization of mineral lick use.
Steps to Complete the Study Plan	No modifications are needed to complete this study and meet Study Plan objectives. AEA plans to finalize this study in 2014 by completing the following methods, as described in RSP Section 10.7.4: (1) aerial surveys for summer distribution and minimum population estimation, (2) inspection of the Jay Creek and Watana Creek mineral licks to assess their current condition and general level of use, and (3) analysis of historical (1980s) data and synthesis with current Alaska Department of Fish and Game monitoring results.

Highlighted Results and Achievements	Observers counted 512 Dall's sheep in the study area during aerial surveys in July 2013. Ram/ewe and lamb/ewe ratios were similar among the three survey blocks. Dall's sheep were observed at the Jay Creek and Watana Creek mineral licks during site visits in May and June. Comparison of historical and current data shows a decline in the sheep population in the study area since the 1980s.
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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, as described in RSP Section 10.7.4:

- Aerial surveys for summer distribution and minimum population estimation;
- Inspection of the Jay Creek and Watana Creek mineral licks to assess their current condition and general level of use; and
- Analysis of historical (1980s) data and synthesis with current Alaska Department of Fish and Game (ADF&G) monitoring results.

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 Study Plan are needed to complete the study and meet the Study Plan objectives.

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 expects to finalize all remaining data collection and analysis in the 2014 study season, which will be reported in the USR.

7.3 Conclusion

Implementation of the Dall's Sheep Distribution and Abundance Study is planned for 2014, 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.