

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

**Paleontological Resources Study
Study Plan Section 13.6**

**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.

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EXECUTIVE SUMMARY

Paleontological Resources Study 13.6	
Purpose	The purpose of the paleontological resources study is to determine the potential effects of the Project on paleontological resources.
Status	Most of the methods described in the Study Plan are scheduled to occur in 2015 (RSP 13.6.10). In 2013, AEA began the process of determining geologic units that may be impacted by the proposed Project and the associated Potential Fossil Yield Classification (PFYC). This work, together with the other work originally scheduled for 2013, remains a work in progress. While no paleontological field studies were conducted in 2013, archaeological field crews in 2013 incidentally found and reported four plant fossil finds.
Study Components	<p>This study consists of three components:</p> <ol style="list-style-type: none"> 1. Identify potential impacts to paleontological resources by determining the geologic units that may be impacted by the proposed Project and the associated PFYC classes. 2. Determine the need for field surveys and monitoring efforts. 3. Undertake field surveys.
2013 Variances	While AEA completed initial literature review relevant to the determination of geologic units that may be impacted by the Project and associated PFYC classes, this work remains ongoing. All other methods described in the Study Plan are planned for 2015 (RSP Section 13.6.10). AEA will meet the study objectives by completing the remainder of the study in 2015.
Steps to Complete the Study	AEA plans to complete all remaining data collection and analysis for this study in 2015, with no modification of the methods in the FERC-approved Study Plan. As described in the ISR Overview, AEA has added the Denali East Option road and transmission line alternative corridor to the study area which will be considered in screening of the Project area for probability of fossil bearing rocks.
Highlighted Results and Achievements	<p>Highlights include:</p> <ol style="list-style-type: none"> 1. A map of known fossil finds, prepared based on information from the literature review. 2. Four fossil plant discoveries made by the archaeological field crews.

7. COMPLETING THE STUDY

7.1. Proposed Methodologies and Modifications

To complete this study, AEA will implement the methods in the Study Plan (RSP Section 13.6.4), with no modifications. These activities include:

- *Identify potential impacts to paleontological resources:* The study team will determine the geologic units that may be impacted by the proposed Project and the associated PFYC classes. Information about known localities and previous paleontological research will be consulted in making these determinations, requiring examination of mapped rock units and archived paleontological records at the USGS and other agencies. Based on this information, AEA will evaluate the risk of impacting significant paleontological resources.
- *Determine the need for field survey and monitoring efforts:* The need for field survey and monitoring efforts will vary by location and will be determined largely upon the basis of the PFYC classifications for the particular location.
- *Field Surveys:* Field surveys will generally be undertaken for PFYC Class 4 and 5 units, especially exposed bedrock areas (Class 4a and 5a). Class 3 units may or may not require a survey. Local conditions, such as vegetated areas or pockets of bedrock exposure, may affect the need and intensity of field surveys.

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 in 2013. As noted, no field studies were conducted in 2013.

7.1.2. Modifications to Study Plan

To complete this study, the study team will implement the methods in the Study Plan with no modifications to methods. However, the study area has changed slightly from that described in the RSP (Section 13.6.3). As described in the ISR Overview and depicted in Figure 1, AEA has added the Denali East Option road and transmission line corridor to the study area. This change has added some area to the potential Project footprint in the Denali road and transmission corridor area depicted in Figure 13.6-1 of 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 required data inputs from one individual study to another, unexpected weather delays, the short duration of the summer the 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.

7.3. Conclusion

This study can be successfully completed and the FERC-approved Study Plan objectives will be met in 2015. The study team has developed a list of known finds and a map on which they are plotted, which will assist in identifying potential impacts to paleontological resources and determining the need for any field surveys when this study is implemented in 2015. The results of this study will be reported in the USR.