

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

**Study of Fish Passage Feasibility at Watana Dam
Study Plan Section 9.11**

**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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TABLE OF CONTENTS

| | |
|---|-----------|
| Executive Summary | ii |
| 7. Completing the Study | 1 |
| 7.1. Proposed Methodologies and Modifications | 1 |
| 7.1.1. Decision Points from Study Plan | 1 |
| 7.1.2. Modifications to Study Plan..... | 1 |
| 7.2. Schedule | 1 |
| 7.3. Conclusion | 2 |

EXECUTIVE SUMMARY

| Study of Fish Passage Feasibility at Watana Dam | |
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| Purpose | The goal of this study is to develop, to the feasibility level, a fish passage strategy in support of the License Application for the proposed Project. The study will explore various alternatives in support of three basic strategies related to fish passage: (1) proposed Project without fish passage, (2) integration of upstream and downstream passage features into the current Project design, and (3) the retrofit of upstream and downstream fish passage features to a Project designed without passage. |
| Status | This is a multi-year ongoing study initiated in 2013. Tasks 1 through 3 described below have been completed. |
| Study Components | <p>Major study components include:</p> <ul style="list-style-type: none"> • Task 1: Establish the Fish Passage Technical Workgroup (FPTWG) to Provide Input on the Feasibility Assessment • Task 2: Prepare for Feasibility Study • Task 3: Conduct Site Reconnaissance • Task 4: Develop Concepts • Task 5: Evaluate Feasibility of Conceptual Alternatives • Task 6: Develop Refined Passage Strategy(ies) |
| 2013 Variances | Variances from the Study Plan in 2013 were limited to schedule modifications for Tasks 2 and 3 (RSP Section 9.11.6). |
| Steps to Complete the Study | <p>To complete this study, AEA will implement the methods in the Study Plan, with no modifications to the methods. These activities include Tasks 4 through 6 as described above.</p> <p>Based upon the schedule outlined below, AEA expects to complete development of passage strategies in both the 2014 and 2015 study seasons, which will be reported in the USR.</p> |
| Highlighted Results and Achievements | Important accomplishments during 2013 included the establishment of the Fish Passage Technical Workgroup (FPTWG), selection of the potential target fish species, a site visit by the FPTWG in September 2013, and compilation of biological, physical, and Project feature information. Development of the biological performance tool (BPT) began in September 2013. |

7. COMPLETING THE STUDY

7.1. Proposed Methodologies and Modifications

The Study of Fish Passage Feasibility at Watana Dam will be continued in 2014 and 2015. Tasks scheduled for work are listed below. Methods to be used for each of these tasks are described in RSP Section 9.11.4.

- Task 4: Develop Concepts (RSP Section 9.11.4)
- Task 5: Evaluate Feasibility of Conceptual Alternatives (RSP Section 9.11.4)
- Task 6: Develop Refined Passage Strategy(ies) (RSP Section 9.11.4)

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 completion of 2013 work.

7.1.2. Modifications to Study Plan

Although the schedule has been modified, no modifications to the Study Plan are needed to complete the study and meet 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.

Work planned for 2014 includes Task 4 activities (RSP Section 9.11.4):

- Preparation for Workshop #2, including continued development of the draft evaluation criteria and evaluation matrix, and necessary background information based on meetings and discussions during the site reconnaissance meeting.
- Conduct Workshop #2, planned for a 3-day brainstorming meeting in Seattle, Washington in 2014, and distribute meeting notes. Workshop #2 will be scheduled in the late summer or early fall of 2014 with a date to be determined after coordination with the Fish Passage Technical Team.
- Organize and clarify fish passage concepts with drawing sketches and text descriptions.

- Update the draft evaluation criteria and the evaluation matrix based on comments received during Workshop #2.
- Continue development and perform initial runs of the Biological Performance Tool.
- Prepare an interim package for the FPTWG for Meeting #5, conduct Meeting #5, and distribute meeting notes.
- Begin compilation and development of fish passage alternatives.

In 2015, AEA plans to complete all remaining analysis for this study, which will be reported in the USR.

7.3. Conclusion

The Fish Passage Feasibility Study was initiated in 2013 and will continue with no anticipated modifications to the FERC-approved methods. The successful completion of this Study is dependent on information that will be provided by several interrelated studies (see Section 6). Modifications to the methods of these studies are not anticipated to affect meeting the objectives of Study 9.11.