

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

**Fish Passage Feasibility Study
Study Plan Section 9.11**

**Part D: Supplemental Information to
June 2014 Initial Study Report**

Prepared for

Alaska Energy Authority



SUSITNA-WATANA HYDRO

Clean, reliable energy for the next 100 years.

Prepared by

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1. INTRODUCTION

Section 1 (Part A) of the June 2014 ISR for this Fish Passage Feasibility Study (Study Plan 9.11) details the development of this study from the Revised Study Plan (RSP) in 2012, through the end of the 2013 study season. Section 7 of the ISR (Part C), filed in June 2014, sets forth AEA's plan and schedule, at that time, for completing this study and meeting the objectives of the RSP.

As detailed in Section 2.2 of the ISR Part D Overview, various circumstances have required AEA to extend the original timeframe for completing the Commission-approved Study Plan. However, AEA has made meaningful progress with this Study 9.11 since the filing of the ISR in June 2014. As detailed below, AEA's recent activities for Study 9.11 have consisted of the following:

- Preparing and conducting Workshop #2
- Developing a comprehensive list of fish passage concepts.
- On October 15, 2014, AEA held an ISR meeting for the Fish and Aquatics Program, which included a presentation and discussion of the 2013 Study of Fish Passage Feasibility at Watana Dam.
- Completion of the *2014 – 2015 Study Implementation Report for the Study of Fish Passage Feasibility at Watana Dam (9.11)*, filed in November 2015.

The primary purpose of this Part D Supplemental Information to the ISR is to report on the implementation of the Study Plan from the filing of the ISR in June 2014, through the filing of this ISR Part D. In light of this additional implementation, this Part D also identifies AEA's plans for completing Study 9.11 in a manner that meets the objectives of the Commission-approved Study Plan.

2. BACKGROUND

2.1. Purpose of Study

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 methods section of this report outlines the process that is being used to achieve this objective. A variety of engineering, biological, sociological, and economic factors will be considered during this process as it continues forward. 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.

2.2. Study Components

This study consists of the following components:

- Establish a Fish Passage Technical Workgroup (FPTWG) to provide input on the feasibility assessment.
- Prepare for feasibility study.
- Conduct site reconnaissance.
- Develop concepts.
- Evaluate feasibility of conceptual alternatives.
- Develop refined passage strategy(ies).

The first four of these tasks were initiated in 2013, and the first three of these were completed during 2013.

3. STATUS, HIGHLIGHTED RESULTS, AND ACHIEVEMENTS

The following tasks were completed in 2013 and reported in Part A of the June 2014 ISR for Study 9.11:

- Fish Passage Technical Workgroup (FPTWG) was established.
- Potential target fish species were selected.
- The study area was visited by the FPTWG.
- Biological, physical, and Project feature information was compiled.
- Development of the biological performance tool (BPT) was initiated.

Tasks 1 through 3 were completed in 2013. Task 4 was partially completed in 2014.

The study team has completed the following activities for Study 9.11 since the June 2014 filing of the ISR:

- Completion of Workshop #2 to brainstorm fish passage concepts,
- Organization and clarification of the fish passage concepts,
- Advancement of the Biological Performance Tool, and
- Development of draft evaluation criteria.

4. SUMMARY OF STUDY 9.11 DOCUMENTS

Since filing of the RSP in 2012, AEA and FERC have prepared several documents pertaining to this study. To aid review by FERC staff and licensing participants, each of these documents is listed below. Each of these documents is accessible on AEA's Project licensing website

(<http://www.susitna-watanahydro.org/type/documents/>) by clicking on the entry in the “Link” column in the table. In addition, these documents are available on FERC’s eLibrary system (<http://www.ferc.gov/docs-filing/elibrary.asp>), in Docket No. P-14241.

Title	Date Filed	Description	Link
9.11. Study of Fish Passage Feasibility at Watana Dam (Revised Study Plan)	12/14/2012	This document presents the plan for the Study of Fish Passage Feasibility at Watana Dam, including goals, objectives, the study area, and proposed study methods.	RSP for Study 9.11
FERC’s Study Plan Determination for Study 9.11	2/1/2013	This document presents FERC approval of Study 9.11, which approved AEA’s Revised Study Plan with no recommended changes.	FERC SPD for Study 9.11
FERC’s Study Dispute Determination	4/26/2013	This document presents FERC’s Study Dispute Determination for Study 9.11, which required adjustments to the study.	FERC SDD for Study 9.11
Draft Initial Study Report for Study 9.11	2/3/2014	This draft of the ISR summarized the study methods and variances during the 2013 study season, and presented preliminary data collected for Study 9.11. This draft ISR was later republished as Part A of the final ISR.	Draft ISR for Study 9.11 (File 1) Draft ISR for Study 9.11 (File 2)
Initial Study Report for Study 9.11	6/3/2014	This document is the Initial Study Report (Parts A, B and C) for Study 9.11. Part A republishes the Draft ISR. Part B identifies supplemental information and errata in Part A. Part C presents study modifications and plans for completing the study.	ISR Part A for Study 9.11 (File 1) ISR Part A for Study 9.11 (File 2) ISR Part B for Study 9.11 ISR Part C for Study 9.11
Initial Study Report Meetings, October 15, 2014 (Parts A and B)	11/14/2014	Transcripts and AEA’s agenda and PowerPoint presentations for the ISR meeting concerning the Project riparian studies filed by AEA.	Transcripts from ISR Meeting Materials from ISR Meeting
2014 Study Implementation Report for the Study of Fish Passage Feasibility at Watana Dam	11/4/2015	A summary of tasks completed during 2014. Includes appendices A -Biological Performance Tool, B- Updated Summary of Biological Information and C -Reconciled Brainstorm Concepts and Tally.	2014 SIR for Study 9.11

5. NEW STUDY DOCUMENTATION SUPPLEMENTING THE ISR

The following table identifies and describes additional reports and other documents that update, refine, or otherwise supplement certain sections of the ISR pertaining to this Study 9.11, during AEA's continued implementation of the Study Plan since the ISR was filed in June 2014.

ISR Reference	Description
Part A, Section 4.4, Task 4 Develop Concepts	This Section is updated by the Study 9.11 2014 Study Implementation Report, Section 4.1, describing 2014 study plan implementation.
Part A, Section 5.2 Feasibility Study Preparation	This Section is updated by the Study 9.11 2014 Study Implementation Report, Appendices A and B.
Part A, Section 5.5 Concept Development	This section is updated by Study 9.11 2014 Study Implementation Report, Section 5 and Appendix C, both describing 2014 study results.

6. VARIANCES

6.1. 2013 Study Season

The following variance is reported in the June 2014 ISR:

- 9.11 Study Plan task schedule was delayed.

6.2. 2014 Study Season

As noted in Section 4 of the Study Implementation Report for this study, the following variance occurred when implementing this study in 2014:

- Study component 4 was initiated in 2014 but not completed. Study components 5 and 6 have not yet been started.

7. STUDY PLAN MODIFICATIONS

7.1. Modifications Identified in ISR

As detailed in Section 7 of the ISR (Part C), AEA plans no modifications of the methods for this study.

7.2. Modifications Identified since the June 2014 ISR

As detailed in the 2014 Study Implementation Report, AEA plans no modifications of the methods for this study.

8. STEPS TO COMPLETE THE STUDY

In light of the variances described above, the steps necessary for AEA to complete this study are summarized below:

- Task 4: Complete development of passage concepts.
- Task 5: Evaluate feasibility of conceptual alternatives.
- Task 6: Develop refined passage strategy(ies).