

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

**Analysis of Fish Harvest in and Downstream of the  
Susitna-Watana Hydroelectric Project Area  
Study Plan Section 9.15**

**Initial Study Report**

Prepared for

Alaska Energy Authority



**SUSITNA-WATANA HYDRO**

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

Prepared by

R2 Resource Consultants, Inc.

February 2014 Draft

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## LIST OF ACRONYMS, ABBREVIATIONS, AND DEFINITIONS

<b>Abbreviation</b>	<b>Definition</b>
ADF&G	Alaska Department of Fish and Game
AEA	Alaska Energy Authority
FERC	Federal Energy Regulatory Commission
ILP	Integrated Licensing Process
ISR	Initial Study Report
PRM	project river mile
Project	Susitna-Watana Hydroelectric Project
RM	river mile
RSP	Revised Study Plan
SPD	Study Plan Determination

**EXECUTIVE SUMMARY**

Analysis of Fish Harvest in and Downstream of the Susitna-Watana Hydroelectric Project Area 9.15	
Purpose	The goal of this study is to compile and analyze baseline information on the harvest of resident and anadromous fishes in and downstream of the proposed Project area to understand the potential for Project construction and operation to alter harvest levels and opportunity. Baseline harvest levels for commercial, sport, personal use, and subsistence fisheries for Susitna-River-origin resident and anadromous fish will be determined by compiling fish harvest statistics. Using data from other ISR studies, this study will also evaluate the potential for harvest rates to be altered as a result of potential Project effects.
Status	This study was rescheduled for implementation during the next study season.
Study Components	Major study components include: <ul style="list-style-type: none"> <li>• Compilation and Apportionment of ADF&amp;G Commercial Harvest Records</li> <li>• Compilation of Harvest and Effort from Sport Fisheries</li> <li>• Compilation of Harvest and Effort from Personal Use Fisheries</li> <li>• Compilation of Subsistence Harvest Data</li> <li>• Evaluation of Potential Project Effects</li> </ul>
2013 Variances	Two components of the study—compilation of harvest and effort statistics and apportionment of commercial harvest using genetics—were rescheduled for initiation during the next study year, rather than 2013 (RSP Section 9.15.10). AEA will meet the study objectives by completing the entire study in one study season.
Steps to Complete the Study	As explained in the cover letter to this draft ISR, AEA’s plan for completing this study will be included in the final ISR filed with FERC on June 3, 2014.
Highlighted Results and Achievements	No results specific to this study have been obtained as of this ISR.

## 1. INTRODUCTION

On December 14, 2012, Alaska Energy Authority (AEA) filed with the Federal Energy Regulatory Commission (FERC) its Revised Study Plan (RSP), which included 58 individual study plans (AEA 2012). Section 9.15 of the RSP described the Analysis of Fish Harvest In and Downstream of the Susitna-Watana Hydroelectric Project Area. This study focuses on compiling and analyzing baseline information on the harvests of resident and anadromous fishes in and downstream of the proposed Project area to understand the potential for Project construction and operation to alter harvest levels and opportunity. RSP Section 9.15 provided goals, objectives, and proposed methods for data collection regarding the analysis of these fish harvests.

On February 1, 2013, FERC staff issued its study determination (February 1 SPD) for 44 of the 58 studies, approving 31 studies as filed and 13 with modifications. RSP Section 9.15 was one of the 31 studies approved with no modifications.

Following the first study season, FERC's regulations for the Integrated Licensing Process (ILP) require AEA to "prepare and file with the Commission an initial study report describing its overall progress in implementing the study plan and schedule and the data collected, including an explanation of any variance from the study plan and schedule" (18 CFR 5.15(c)(1)). This Initial Study Report (ISR) on Analysis of Fish Harvest In and Downstream of the Susitna-Watana Hydroelectric Project Area has been prepared in accordance with FERC's ILP regulations and details AEA's status in implementing the study, as set forth in the RSP approved by FERC's February 1 SPD (referred to herein as the "Study Plan").

## 2. STUDY OBJECTIVES

The goal of this study is to compile and analyze baseline information on the harvests of resident and anadromous fishes in and downstream of the proposed Project area to understand the potential for Project construction and operation to alter harvest levels and opportunity. This study has two primary objectives:

- 1) Describe baseline harvest levels and harvest locations for commercial, sport, personal use, and subsistence fisheries for Susitna-River-origin resident and anadromous fish.
- 2) Describe the potential for the Project to alter harvest levels and opportunities on Susitna-River-origin resident and anadromous fish based on potential Project-induced changes in fish abundance and distribution from flow- and habitat-related changes as estimated from other Project studies.

## 3. STUDY AREA

As established by RSP Section 9.15.3, the study area includes the Susitna River from its mouth upstream to and including the Oshetna River (Project river mile [PRM] 235.1; historic river mile [RM] 233.4). The study area includes tributaries that are connected to the mainstem of the

Susitna River and marine waters of Upper Cook Inlet where anadromous fish species originating from the Susitna River are intercepted in commercial fisheries north of the latitude of Anchor Point (59° 46.15' N. lat.).

## **4. METHODS AND VARIANCES IN 2013**

This Study Plan was not implemented in 2013. However, the Study Plan only required two components to be completed in 2013, with the remainder of the study implemented during the next study season (RSP Section 9.15.10).

### **4.1. Variances from Study Plan**

The Study Plan required two components of the study—compilation of harvest and effort statistics and apportionment of commercial harvest using genetics—to be undertaken in 2013 (RSP Section 9.15.10). These components have been rescheduled for the next study year. AEA will meet the study objectives by completing the entire study in one study season. This approach has the benefit of allowing the results of genetics studies being conducted by ADF&G to be incorporated into the study as part of the primary data compilation.

## **5. RESULTS**

There are no results to report for this study.

## **6. DISCUSSION**

As described in RSP Section 9.15, evaluating the potential for flow- and habitat-related changes to alter harvest rates for Susitna River fishery resources will require an integration of the results from multiple studies, consisting of the following: Geomorphology Study (ISR Study 6.5), Study of Fish Passage Barriers in the Middle and Upper Susitna River and Susitna Tributaries (ISR Study 9.12), Study of Fish Distribution and Abundance in the Upper Susitna River (ISR Study 9.5), Study of Fish Distribution and Abundance in the Middle and Lower Susitna River (ISR Study 9.6), Eulachon Run Timing, Distribution, and Spawning in the Susitna River Study (ISR Study 9.16), Fish and Aquatics Instream Flow Study (ISR Study 8.5), and Salmon Escapement Study (ISR Study 9.7). These other studies are ongoing and will inform the implementation and analysis of results for this study.

## **7. COMPLETING THE STUDY**

[As explained in the cover letter to this draft ISR, AEA's plan for completing this study will be included in the final ISR filed with FERC on June 3, 2014.]

## 8. LITERATURE CITED

AEA (Alaska Energy Authority). 2012. Revised Study Plan: Susitna-Watana Hydroelectric Project, FERC Project No. 14241. December 2012. Prepared for the Federal Energy Regulatory Commission by the Alaska Energy Authority, Anchorage.” Published online at: <http://www.susitna-watanahydro.org/study-plan>.