

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

**Social Conditions and Public Goods  
and Services Study  
Study Plan Section 15.6**

**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 Social Conditions and Public Goods and Services Study (Study Plan 15.6) 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 15.6 since the filing of the ISR in June 2014. As detailed below, AEA's recent activities for Study 15.6 have consisted of the following:

- The study team continued incorporation of recreation data into the Random Utility Model (RUM).
- The study team updated previously collected socioeconomic data with newly available data.
- The study team worked with the team for Study 15.5 to determine how to incorporate Regional Economic Models Inc. (REMI) model outputs into the socio-economic analysis.

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 15.6 in a manner that meets the objectives of the Commission-approved Study Plan.

## 2. BACKGROUND

### 2.1. Purpose of Study

The goal of the study is to assess potential changes in population, housing, public goods and services, and other quality of life factors resulting from the construction and operation of the Project and potential changes in regional economic conditions resulting from the nonpower effects of the Project.

The study objectives are established in RSP Section 15.6.1:

- Describe, using text and appropriate tables and graphics, existing socioeconomic
- conditions within the study area.
- Evaluate the effects of on-site manpower requirements, including the number of
- construction personnel who currently reside within the study area, who would commute

- to the site from outside the study area, or who would relocate temporarily within the
- study area.
- Estimate total worker payroll and material purchases during construction and operation.
- Evaluate the impact of any substantial immigration of people on governmental facilities
- and services, and describe plans to address the impact on local infrastructure.
- Determine whether existing housing within the study area is sufficient to meet the needs
- of the additional population.
- Describe the number and types of residences and businesses that might be displaced by
- the Project access road and transmission corridors.
- Describe, based on other studies, what bio-physical attributes of the Susitna River system
- may change as a result of the Project and what those changes might mean to commercial
- opportunities related to fishing, logging, agriculture, mining, and recreational activities,
- recreation and subsistence use values, quality of life, community use patterns, non-use
- environmental values, and social conditions of the area.

## 2.2. Study Components

This study consists of the following components:

- Identify recreation outcomes that are likely to occur under with-Project conditions.
- Assess currently available recreation data.
- Identify and apply existing recreation utility functions from the literature.
- Identify recreation demand by appropriately combining existing utility functions with site characteristics under without-Project and expected with-Project conditions.
- Identify aggregate demand using population data and participation rates.
- Document results of the social conditions and public goods and services study in initial and updated study reports.

## 3. STATUS, HIGHLIGHTED RESULTS, AND ACHIEVEMENTS

The following tasks were completed in 2013 and reported in Part A of the ISR for Study 15.6:

- Existing demographic, economic, and fiscal conditions in the study area were described based on data from a variety of state and federal sources, including the U.S. Census Bureau, Alaska Department of Labor and Workforce Development, and Alaska Department of Commerce, Community and Economic Development. In addition, the REMI model updated for 2012 was used to provide additional information on those economic sectors in the study area that are most likely to be affected by Project construction and operations. These sectors include the construction, transportation, recreation and tourism, commercial fishing, oil and gas, and electric utilities sectors.
- With respect to development of the REMI model assumptions for comparing future socioeconomic conditions with and without the Project, an information collection process was initiated aimed at developing a consensus about reasonably foreseeable future activities in Alaska under the with and without scenarios.
- Secondary sources were used to describe the existing local infrastructure and public services within the study area. Financial reports for governments of boroughs and incorporated communities in the study were collected to determine current local government revenues and expenditures.
- Discussions were initiated with preparers of the Transportation Resources Study (Study 15.7) to coordinate the collection of information on the primary sources and destinations of Project-related road and railroad traffic.
- Primary and secondary data were compiled to develop and refine the RUM that will be used to estimate Project-related changes in demand and social welfare associated with various recreational activities (sport fishing, boating, hunting, and snow machining).
- Discussions were initiated with preparers of the Recreation Resources Study (Study 12.5) to coordinate the collection of information on the recreation resources and facilities that currently support both commercial and non-commercial recreation in the Susitna River watershed and estimates of current levels of recreational use in the region. Descriptions of existing commercial farming, logging, and mining operations in the study area were prepared based on secondary literature. Discussions were initiated with preparers of the Analysis of Fish Harvest Study (Study 9.15) to coordinate the collection of information on baseline harvest levels and harvest locations of commercial fishing operations.
- An interactive map-based database available on the Matanuska-Susitna Borough's website was used to obtain the current values of selected land parcels in the study area. This database contains the current assessed value of properties in the borough and identifies the locations of the properties and their total acreage.
- A preliminary list of the specific attributes of the Susitna River corridor and upper watershed that may have non-use value has been compiled based on information in the Pre-Application Document and other secondary sources.
- Information on the values, attitudes, and lifestyle preferences of residents in Talkeetna, Trapper Creek, Cantwell, Chase, and the area north of Chase was collected through secondary sources. In addition, a list of potential key informants was prepared for the quality of life interviews to be conducted in the next study season.

The study team has completed the following activities for Study 15.6 since the June 2014 filing of the ISR:

- The study team continued incorporation of recreation data into the RUM.
- The study team updated previously collected socioeconomic data with newly available data.
- The study team worked with the team for Study 15.5 to determine how to incorporate REMI model outputs into the socio-economic analysis.

#### 4. SUMMARY OF STUDY 15.6 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	Description	Link
15.6. Social Conditions and Public Goods and Services Study (Revised Study Plan)	12/14/2012	This document presents the plan for this study, including goals, objectives, the study area, and proposed study methods for social conditions and public goods study.	<a href="#">RSP for Study 15.6</a>
FERC Study Plan Determination for Study 15.6	2/1/2013	This document presents FERC approval of Study 15.6, which approved AEA's Revised Study Plan with no recommended changes.	<a href="#">FERC SPD for Study 15.6</a>
Draft Initial Study Report for Study 15.6	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 15.6. This draft ISR was later republished as Part A of the final ISR.	<a href="#">Draft ISR for Study 15.6</a>
Initial Study Report for Study 15.6	6/3/2014	This document is the Initial Study Report (Parts A, B and C) for Study 15.6. 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.	<a href="#">ISR Part A for Study 15.6</a> <a href="#">ISR Part B for Study 15.6</a> <a href="#">ISR Part C for Study 15.6</a>
Initial Study Report Meetings, October 21, 2014	11/15/2014	Transcripts and AEA's agenda and PowerPoint presentations for the ISR meeting concerning the Project Social Conditions and Public Goods and Services Study filed by AEA.	<a href="#">Transcripts from ISR Meeting</a> <a href="#">Materials from ISR Meeting</a>

## **5. NEW STUDY DOCUMENTATION SUPPLEMENTING THE ISR**

Because the work and data analysis for this study are ongoing as of the filing of this ISR Part D, AEA has not prepared an implementation report for this Study 15.6 at this time. Thus, no additional reports or documents are available to supplement the ISR for Study 15.6.

## **6. VARIANCES**

### **6.1. 2013 Study Season**

The following variance is reported in the June 2014 ISR:

- Based on information presented in the Transportation Resources Study (ISR Study 15.7), which describes the primary sources and destinations of Project-related road and railroad traffic, Seward, Point MacKenzie, Whittier, Wasilla, and Houston were added to the list of potentially affected communities in the study area. The inclusion of these communities is necessary to fully achieve the study objective of describing the effects of the movement of Project construction equipment, materials, and workers on local government public services, including police and medical services.

### **6.2. 2014 Study Season**

AEA encountered no variances when implementing this study in 2014.

## **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. However, based on information presented in the Transportation Resources Study (ISR Study 15.7), which describes the primary sources and destinations of Project-related road and railroad traffic, Seward, Point MacKenzie, Whittier, Wasilla, and Houston were added to the list of potentially affected communities in the study area.

### **7.2. Modifications Identified since the June 2014 ISR**

Since the June 2014 ISR, AEA has not identified any modifications of the methods for this study.

## **8. STEPS TO COMPLETE THE STUDY**

In light of the variances and modifications described above, the steps necessary for AEA complete this study are summarized below. These steps have been updated from those listed in Section 7 of the ISR (Part C).

- Completion of the description of existing socioeconomic conditions will require updating the description using more recent demographic and economic data.
- In addition, completion of the description of existing socioeconomic conditions will require continuing integration with other study reports, including the following:
- The description of current commercial fishing operations will require data on the baseline harvest levels and harvest locations for commercial fisheries for Susitna River-origin resident and anadromous fish collected by the Analysis of Fish Harvest Study (Study 9.15).
- Descriptions of the recreation resources and facilities that currently support both commercial and non-commercial recreation in the Susitna River watershed and estimates of current levels of recreational use in the region will be provided in the Recreation Resources Study (Study 12.5).
- The description of the specific attributes of the Susitna River corridor and upper watershed that may have non-use value will be revised as information in other study reports becomes available.
- The quality of life analysis will be supplemented with data collected by surveys and focus groups conducted for the Recreation Resources Study (Study 12.5) and Aesthetic Resources Studies (Study 12.6).
- In conjunction with Study 15.5, further develop the REMI model to help forecast socioeconomic conditions associated with the regional economic impact of Project employment and expenditures during the construction and operations phases.
- The REMI model will also be employed to analyze the regional economic impact of changes in recreation and subsistence expenditures and changes in the level of economic activity in the construction, transportation, recreation and tourism, commercial fishing, oil and gas, and electric utilities sectors.
- Further develop a RUM to predict changes in recreation site visitation and aggregated economic welfare (i.e., dollar-valued consumer satisfaction).
- Changes in non-use values will be described based on the predicted direction and degree of changes to the ecosystem and habitat. This assessment will largely be based on the impact analysis results of other study reports.
- Potential changes in property uses will be described, and, to the extent practicable, the changes in property values that would result from changes in use will be estimated.
- Changes in annual government expenditures and revenues for the state and each borough and community will be estimated using output from the REMI model for the state and boroughs, and from a gravity model for the communities.
- The socioeconomic effects of changes in transportation patterns will be described in quantitative or qualitative terms.