

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

**Invasive Plant Study
Study Plan Section 11.9**

**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

ABR, Inc.—Environmental Research & Services

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1. INTRODUCTION

Section 1 (Part A) of the June 2014 ISR for this Invasive Plant Study (Study Plan 11.9) 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. The most recent work conducted by AEA on this Study 11.9 is detailed in the June 2014 ISR, as AEA has not conducted any additional work since that time.

The primary purpose of this Part D Supplemental Information to the ISR for Study 11.9 is to identify all documents associated with this study, provide a summary of variances and modifications presented in the ISR (Parts A and C), and identify AEA's plans for completing Study 11.9 in a manner that meets the objectives of the Commission-approved Study Plan.

2. BACKGROUND

2.1. Purpose of Study

The goals of the study are to determine the current prevalence of invasive vascular plants in the Project area and nearby disturbed areas, and to assess the risk of the continued spread of invasive species as a result of Project development.

The study objectives are established in RSP Section 11.9.1:

- Identify the locations at which invasive plant species have already become established in the Project area and in nearby disturbed areas;
- Estimate population sizes for invasive species and map their current distributions; and
- Determine whether any of the species found could pose a substantial ecological threat if populations were to spread into the Project area.

2.2. Study Components

This study consists of the following components:

- Review the Alaska Exotic Plants Information Clearinghouse (AKEPIC) database and current aerial imagery to identify locations of previous collections of invasive species and disturbed sites that could serve as sources of invasive species.
- Conduct field surveys in disturbed areas in and near the Project area that could serve as sources of invasive species and estimate the abundance (using percent cover and/or stem-count data) of all invasive species found.

- Conduct an ecological risk evaluation of the invasive plant species found in and near the Project area to assess the threat that those species may pose to the native plant communities occurring in the Project area.

3. STATUS, HIGHLIGHTED RESULTS, AND ACHIEVEMENTS

The following tasks were completed in 2013 and reported in Part A of the ISR for Study 11.9:

- The study team reviewed the AKEPIC database, maintained by the Alaska Natural Heritage Program, to identify invasive species previously documented in the study area. The team also reviewed recent aerial imagery for portions of the Parks and Denali highway corridors near the Project area to identify disturbed sites and that could harbor invasive species or are at risk for colonization by invasive species.
- In August 2013, the study team surveyed 107 disturbed sites along segments of the Denali and Parks highways adjacent to the Project area, and including access points into the Project area, for invasive vascular plant taxa.
- The study team found twenty-eight invasive plant taxa at 99 of the 107 sites surveyed; this included 10 additional species that were not found in previous surveys, although 4 species that were previously recorded at some sites were not found in 2013.
- The study team prepared a preliminary ecological risk assessment for the 28 invasive species found in 2013 for review by licensing participants.

Because AEA has not conducted additional work on this study since the June 2014 ISR, there are no further updates to report for Study 11.9. The information presented in the ISR (Part A) is up to date.

4. SUMMARY OF STUDY 11.9 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 | |
|---|------------|--|------------------------------------|
| 11.9. Invasive Plant 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 invasive plants. | RSP for Study 11.9 |

| Title | Date | Description | |
|---|------------|---|---|
| FERC Study Plan Determination for Study 11.9 | 2/1/2013 | This document presents FERC approval of Study 11.9, which approved AEA's Revised Study Plan with no recommended changes. | FERC SPD for Study 11.9 |
| Draft Initial Study Report for Study 11.9 | 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 11.9. This draft ISR was later republished as Part A of the final ISR. | Draft ISR for Study 11.9 |
| Initial Study Report for Study 11.9 | 6/3/2014 | This document is the Initial Study Report (Parts A, B and C) for Study 11.9. 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 11.9 ISR Part B for Study 11.9 ISR Part C for Study 11.9 |
| Initial Study Report Meetings, October 21, 2014 (Parts A and B) | 11/15/2014 | Transcripts and AEA's agenda and PowerPoint presentations for the ISR meeting concerning the Project botanical studies filed by AEA. | Transcripts from ISR Meeting Materials from ISR Meeting |

5. NEW STUDY DOCUMENTATION SUPPLEMENTING THE ISR

Because AEA has not conducted additional work on this study since the June 2014 ISR, no additional reports or documents are available to supplement the ISR for this Study 11.9.

6. VARIANCES

6.1. 2013 Study Season

As noted in Section 4 of the ISR (Part A) for this study, AEA encountered no variances when implementing this study in 2013.

6.2. 2014 Study Season

Because AEA has not conducted additional work on this study since the June 2014 ISR, no variances were encountered during the 2014 study season.

7. STUDY PLAN MODIFICATIONS

7.1. Modifications Identified in ISR

Section 7 of the ISR (Part C) details one modification for this study:

- As explained in Section 1.3 of the ISR Part D Overview and Section 7.1.2 of Part C of the ISR for this study, the study area has been changed from that described in the RSP (Section 13.6.3) by adding the Denali East Option road and transmission line alternative corridor to the study area.

7.2. Modifications Identified since the June 2014 ISR

Other than the modification identified in Section 7.1 regarding the study area, AEA has identified one additional modification to this study since filing the June 2014 ISR:

- As explained in Section 1.3 of the ISR Part D Overview, AEA removed the Chulitna Corridor from the study area.

8. STEPS TO COMPLETE THE STUDY

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

- Conduct field surveys in disturbed areas in and near the Project area that were not surveyed in 2013 and that could serve as sources of invasive species, and estimate the abundance (using percent cover and/or stem-count data) of all invasive species found (RSP Section 11.9.4.1); and
- Conduct an ecological risk assessment of the invasive plant species found in and near the Project area to assess the threat that those species may pose to the native plant communities occurring in the Project area (RSP Section 11.9.4.2).