

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

**Subsistence Resources
Study Plan Section 14.5**

2014 Study Implementation Report

Prepared for

Alaska Energy Authority



SUSITNA-WATANA HYDRO

Clean, reliable energy for the next 100 years.

Prepared by

Corvus Culture

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LIST OF ACRONYMS, ABBREVIATIONS, AND DEFINITIONS

Abbreviation	Definition
ADF&G	Alaska Department of Fish and Game
AEA	Alaska Energy Authority
ANILCA	Alaska National Interest Lands Conservation Act
CFR	Code of Federal Regulations
CSIS	Community Subsistence Information System
FERC	Federal Energy Regulatory Commission
ILP	Integrated Licensing Process
ISR	Interim Study Report
RSP	Revised Study Plan
SPD	StudyPlan Determination
TP	Technical Paper

1. INTRODUCTION

This Study Implementation Report, Section 14.5 of the Revised Study Plan (RSP) approved by the Federal Energy Regulatory Commission (FERC) for the Susitna-Watana Hydroelectric Project, FERC Project No. 14241 focuses on documenting the extent to which communities harvest and use subsistence resources within or near the Project area, use Project area lands to access other lands for subsistence harvest and use, and/or harvest and use resources that migrate through the Project area and are later harvested in other areas. A summary of the development of this study, together with the Alaska Energy Authority's (AEA) implementation of it through the 2013 study season, appears in Part A, Section 1 of the Initial Study Report (ISR) filed with FERC in June 2014. As required under FERC's regulations for the Integrated Licensing Process (ILP), the ISR describes AEA's "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)).

Since filing the ISR in June 2014, AEA has continued to implement the FERC-approved plan for the Subsistence Resources Study. For example the study team conducted the following activities:

- Participated in the July 21 2014 Cook Inlet Regional Working Group meeting
- Participated in the October 22, 2014 ISR meetings related to the June 2014 Subsistence Resources ISR
- Completed community baseline household harvest surveys for Tyonek, Glennallen, Copperville, Gulkana, Lake Louise, Paxson, Tazlina, Tonsina, Mendeltna, Nelchina, and Tolsona

In furtherance of the next round of ISR meetings and FERC's Study Plan Determination (SPD) expected in 2016, this report describes AEA's overall progress in implementing the Subsistence Resources Study during calendar year 2014. Rather than a comprehensive reporting of all field work, data collection and data analysis since the beginning of AEA's study program, this report is intended to supplement and update the information presented in Part A of the ISR for the Subsistence Resources Study through the end of calendar year 2014. It describes the methods and results of the 2014 effort, and includes a discussion of the results achieved.

2. STUDY OBJECTIVES

The study objectives are established in RSP Section 14.5.1. As described in the Study Plan, the overall goal of this study is to demonstrate whether and, if so, the extent to which communities harvest and use subsistence resources within or near the Project area, use Project area lands to access other lands for subsistence harvest and use, and/or harvest and use resources that migrate through the Project area and are later harvested in other areas.

The objectives of the Subsistence Resources Study are as follows:

1. Document whether and, if so, the extent to which communities within the Susitna River watershed, as well as communities outside the Susitna River watershed that have subsistence use areas in the watershed, use areas that are within the Project area for subsistence harvests.
2. Document whether and, if so, the extent to which communities within the Susitna River watershed, as well as communities outside the Susitna River watershed that have subsistence use areas in the watershed, use Project area lands to access other lands or waters for subsistence harvest.
3. Document whether and, if so, the extent to which communities within the Susitna River watershed, as well as communities outside the Susitna River watershed that have subsistence use areas in the watershed, use resources that migrate through the Project area and are harvested in other areas.
4. Collect and document traditional and local knowledge of communities within the Susitna River watershed, or who have subsistence use areas within the watershed, to assist in assessing the potential impacts of construction and operation of the proposed Project on subsistence harvest and use. This information will be directly shared with the program leads for other resources, as appropriate.
5. Evaluate Project development plans to identify likely sources of potential impacts on identified subsistence uses.
6. Provide the necessary information needed to support preparation of an Alaska National Interest Lands Conservation Act (ANILCA) 810 evaluation.

Through a combination of household harvest surveys, mapping interviews, and traditional and local knowledge interviews, the Subsistence Resources Study is collecting baseline data and documenting traditional and contemporary subsistence harvest and use to facilitate the assessment of potential impacts of the Project construction and operation on subsistence harvest and use. The data developed through this study will be evaluated along with data from biological and wildlife and cultural resources studies to supplement the subsistence information and put it into context with other related resource conditions.

3. STUDY AREA

As established by RSP Section 14.5.3, the study area includes the Project area, as well as locations within the Susitna River watershed where the proposed Project could affect natural resources and access conditions upstream and downstream of the Susitna River as well as its associated tributaries. The study area includes the proposed reservoir, road and transmission corridors (including a portion of one corridor adjacent to the Denali Highway that extends outside the watershed), and other Project facility sites.

As explained in the RSP (Section 14.5.3), the study team developed a list of study communities in order to adequately address potential impacts to subsistence users who use the study area for

subsistence activities. This included communities that are located outside the study area but have documented use within the study area. AEA developed the following criteria for inclusion as a study community:

1. The community is located within the Susitna River watershed
2. The community is located outside of the Susitna River watershed but has previously documented subsistence use areas that extend into the watershed; or
3. The community is one of the communities preliminarily identified by Alaska Department of Fish and Game (ADF&G) as needing updated harvest information

Based on the above criteria, AEA identified 37 study communities whose subsistence uses could potentially be affected by the proposed Project (See Table 3-1 in ISR Section 14.5.3 filed June 2014).

4. METHODS AND VARIANCES IN 2014

As described in RSP Section 14.5.4, the Study Plan proposed to complete the following tasks:

1. Compilation of Existing Subsistence Data
2. Household Harvest Surveys
3. Household Surveys in State-Designated Nonsubsistence Areas
4. Subsistence Mapping Interviews
5. Traditional and Local Knowledge Interviews

In 2014, the study team continued to implement methods described in the Study Plan (Section 14.5.4 of the RSP); the following section summarizes the details of the tasks performed, the methods used, and any variances from the methods previously described in the Study Plan.

4.1. Task 1: Compilation of Existing Data

The methods used to compile existing data were previously discussed in the ISR Section 14.5.4, filed in June 2014.

4.1.1. Variances

No additional work on this task was done in 2014, thus variances from the existing data compilation methods described in the Study Plan (RSP Section 14.5.4) were unnecessary in 2014.

4.2. Task 2: Household Harvest Surveys

AEA implemented the methods as described in the Study Plan for conducting household harvest surveys (Section 14.5.4 of the RSP) with no variances. The ADF&G Division of Subsistence

conducted household harvest surveys in 10 of the 37 study communities in 2014: Tyonek, Glenallen, Gulkana, Lake Louise, Paxson, Tazlina, Tonsina, Mendeltna, Nelchina, and Tolsona.

The harvest survey documented one year (2013) of subsistence harvest and use by households in and around the study communities. In addition, the surveys included a “one-year mapping” component that documented each study community’s subsistence use areas for the previous year and also included a key respondent traditional knowledge interview component. A detailed description of the methods used to implement the household harvest surveys in nine of these communities is available in ADF&G’s Technical Paper (TP) *The Harvest and Use of Wild Resources in Selected Communities of the Copper River Basin and East Glenn Highway, Alaska, 2013* (Holen, Hazell and Zimpelman 2015); detailed descriptions of the methods used in the community of Tyonek are available in ADF&G’s TP *The Harvest and Use of Wild Resources in Tyonek, Alaska, 2013* (Jones, Holen and Koster 2015).

4.2.1. Variances

No variances from the household harvest survey methods described in the Study Plan (RSP Section 14.5.4) were necessary in 2014.

4.3. Task 3: Household Harvest Surveys in State-Designated Nonsubsistence Areas

The methods used to conduct household harvest surveys in state-designated nonsubsistence areas were previously discussed in the ISR Section 14.5.4, filed in June 2014. A detailed description of the methods used to generate the sample and implement the household harvest surveys is available in ADF&G’s TP *The Harvest and Use of Wild Resources in Cantwell, Chase, Talkeetna, Trapper Creek, Alexander/Susitna, and Skwentna, Alaska, 2012* (Holen et al 2014).

4.3.1. Variances

No additional work was performed in 2014, thus no variances from this task occurred in 2014.

4.4. Task 4: Subsistence Mapping Interviews

This task has not yet been implemented.

4.4.1. Variances

No work has been performed on this task and no variances to methods have been identified.

4.5. Task 5: Traditional and Local Knowledge Interviews

The methods used to conduct traditional and local knowledge interviews were previously discussed in the ISR Section 14.5.4, filed in June 2014.

4.5.1. Variances

No additional work was performed on the traditional and local knowledge interviews in 2014, thus no variances for this task beyond those discussed in the ISR Section 14.5.4 filed in June 2014 occurred.

5. RESULTS

5.1. Compilation of Existing Subsistence Data

No additional work was performed on this task in 2014. The results of the compilation of existing subsistence data are discussed in Section 14.5.5 of the ISR.

5.2. Household Harvest Surveys

The ADF&G Division of Subsistence completed household harvest surveys in the communities of Glenallen, Gulkana, Lake Louise, Paxson, Tazlina, Tonsina, Mendeltna, Nelchina, Tolsona and Tyonek in January-April 2014. Table 14.5.9-1 identifies household participation and response rates for each community. ADF&G has published complete results of the household harvest surveys in their technical paper series: *The Harvest and Use of Wild Resources in Selected Communities of the Copper River Basin and East Glenn Highway, Alaska 2013* (Holen, Hazell and Zimpelman 2015) and *The Harvest and Use of Wild Resources in Tyonek, Alaska, 2013* (Jones, Holen and Koster 2015); and updated harvest data available in the Community Subsistence Information System (CSIS). ADF&G also published results for household harvest surveys in the communities of McCarthy, Chitina, Kenny Lake, and Gakona in *Subsistence Harvests and Uses of Wild Resources in Kenny Lake/Willow Creek, Gakona, McCarthy, and Chitina, Alaska, 2012* (La Vine and Zimpelman 2014); and the communities of Cantwell, Chase, Talkeetna, Trapper Creek, Alexander/Susitna and Skwentna in *The Harvest and Use of Wild Resources in Cantwell, Chase, Talkeetna, Trapper Creek, Alexander/Susitna, and Skwentna, Alaska, 2012* (Holen et. al. 2014); and updated harvest data in the CSIS for these communities as well.

5.3. Household Harvest Surveys in Non-Subsistence Areas

Preliminary results from this task were discussed in Section 14.5.5 of the ISR filed in June 2014; no additional data collection was performed for this task in 2014. Complete results from the Household Harvest Surveys in Non-Subsistence Areas (Talkeetna and Trapper Creek) have since been published in the ADF&G TP *The Harvest and Use of Wild Resources in Cantwell, Chase, Talkeetna, Trapper Creek, Alexander/Susitna, and Skwentna, Alaska, 2012* (Holen et. al. 2014), and updated in the CSIS.

5.4. Traditional Knowledge Workshops

Preliminary results from the Traditional Knowledge Workshops were discussed in Section 14.5.5 of the ISR filed in June 2014. Full results will be incorporated into a technical memorandum and filed with FERC upon completion of the two outstanding workshops.

6. DISCUSSION

AEA has completed all household harvest surveys and the existing data compilation for the study, as well as the majority of identified traditional and local knowledge interviews. Overall, the Subsistence Resources Study is progressing as planned. With the publication of household harvest survey results, household harvest and data compilation results can be shared among all studies, and continue to facilitate data integration among all related and applicable resource studies, as identified in the ISR interrelatedness diagram in the Study Plan.

As discussed in the ISR filed in June 2014, subsistence harvest and use research was not a main component of the data collected for the project between 1979 and 1985, and little baseline data regarding subsistence activities has been reported for the project area since that time. With the completion of household harvest surveys in subsistence and state non-subsistence areas, as well as the completion of traditional and local knowledge interviews in seven of the nine proposed communities, a robust baseline data set has been collected and documented. It is important to note that household harvest surveys only present data for one year in time, however accompanying key respondent interviews coupled with traditional and local knowledge interviews augment single year data with observations and insight regarding longer term patterns and trends in subsistence harvest and use, fish, wildlife and other subsistence resource population lifecycles and movements, and environmental factors. The planned subsistence mapping study will provide further longitudinal data regarding such trends and patterns, and together these studies will create a comprehensive data set that will successfully meet study objectives for the FERC-approved Subsistence Resources Study Plan.

7. CONCLUSION

Existing Data Compilation and Household Harvest Survey tasks are now complete, and the majority of traditional and local knowledge interviews have also been completed. Results from these tasks are reported in the ISR filed in June 2014, ADF&G-authored TPs (Holen et. al. 2014; Jones, Holen and Koster 2015; Holen, Hazell and Zimpelman 2015; La Vine and Zimpelman 2014) and the ADF&G Technical Memorandums referenced above. Remaining tasks to be completed are the subsistence mapping study and traditional and local knowledge interviews with the Knik Tribal Council and Chickaloon Village Traditional Council. Together, results from these tasks will provide the robust and comprehensive baseline data set needed to assess Project impacts to subsistence as well as meet agency obligations under Title VIII of ANILCA and State and Federal needs regarding subsistence resource management.

8. LITERATURE CITED

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9. TABLES

Table 14.5.9-1. Sample Achievement for Household Harvest Surveys for Communities Studied in 2014.

Sample Information	Community									
	Tyonek	Glenallen	Gulkana	Lake Louise	Paxson	Tazlina	Tonsina	Mendeltna	Nelchina	Tolsona
Interview Goal	63	112	35	23	11	137	46	14	30	14
Households Interviewed	49	77	29	10	8	79	23	10	18	8
Households failed to contact	9	41	3	1	3	27	12	3	9	2
Households declined to be interviewed	5	14	1	3	0	14	4	1	2	2
Households moved or nonresident	0	83	2	9	0	17	7	0	1	2
Total households attempted to interview	54	132	30	13	8	93	27	11	20	10
Refusal rate	9.3%	15.4%	3.3%	23.1%	0.0%	15.1%	14.8%	9.1%	10.0%	20.0%
Final estimate of permanent households	63	140	33	14	11	120	39	14	29	12
Percentage of total households interviewed	77.8%	55.0%	87.9%	71.4%	72.7%	65.8%	59.0%	71.4%	62.1%	66.7%
Interview weighting factor	1.3	1.8	1.1	1.4	1.4	1.5	1.7	1.4	1.6	1.5
Sampled population	111	211	91	19	23	232	53	24	47	16
Estimated population	142.7	383.6	103.6	26.6	31.6	352.4	89.9	33.6	75.7	24
<i>Source</i> ADF&G Division of Subsistence household surveys, 2013 and 2014.										