

# Susitna-Watana Hydroelectric Project Document

## ARLIS Uniform Cover Page

<b>Title:</b> Susitna-Watana Hydroelectric Project, FERC Project no. 14241-000; Initial filing of September 2014 technical memoranda	<b>SuWa 228</b>
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<b>Author(s) – Corporate:</b> Alaska Energy Authority	
<b>AEA-identified category, if specified:</b> September 17, 2014 technical memorandum filings	
<b>AEA-identified series, if specified:</b>	
<b>Series (ARLIS-assigned report number):</b> Susitna-Watana Hydroelectric Project document number 228	<b>Existing numbers on document:</b>
<b>Published by:</b> [Anchorage, Alaska] : Alaska Energy Authority, [2014]	<b>Date published:</b> September 17, 2014
<b>Published for:</b>	<b>Date or date range of report:</b>
<b>Volume and/or Part numbers:</b>	<b>Final or Draft status, as indicated:</b>
<b>Document type:</b> Cover letter	<b>Pagination:</b> 4 p.
<b>Related work(s):</b> Attachments A-J (SuWa 229 - 238)	<b>Pages added/changed by ARLIS:</b>
<b>Notes:</b>	

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September 17, 2014

Ms. Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

**Re: Susitna-Watana Hydroelectric Project, Project No. 14241-000**

**Initial Filing of September 2014 Technical Memoranda**

Dear Secretary Bose:

By letter dated January 28, 2014, the Federal Energy Regulatory Commission (Commission or FERC) extended the procedural schedule for the preparation and review of the Initial Study Report (ISR) for the proposed Susitna-Watana Hydroelectric Project, FERC Project No. 14241 (Project).<sup>1</sup> In particular, the Commission's January 28 letter established a deadline of June 3, 2014 for the Alaska Energy Authority (AEA) to file the ISR, and provided a 120-day period for licensing participants to review the ISR prior to the ISR meetings, which are scheduled to begin the week of October 13.<sup>2</sup> The purpose of this filing is to provide several technical memoranda to Commission Staff and licensing participants prior to the ISR meetings.

As required by the Commission's January 28 letter, AEA filed the ISR with the Commission on June 3. Among other things, the ISR detailed AEA's planned work during the 2014 field season.<sup>3</sup> As AEA was preparing this 2014 work plan, it recognized that data gathered during the 2014 field season, together with other study work conducted prior to the October 2014 ISR meetings, could assist Commission Staff, AEA, and other licensing participants in developing the Project's licensing study program for 2015. For this reason, the ISR provided for AEA to prepare certain technical memoranda and other information based on 2014 work.

AEA recognizes that Commission Staff and licensing participants need a reasonable amount of time prior to the ISR meetings to review this additional information. AEA and licensing participants consulted with Commission Staff on this

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<sup>1</sup> Letter from Jeff Wright, Federal Energy Regulatory Commission, to Wayne Dyok, Alaska Energy Authority, Project No. 14241-000 (issued Jan. 28, 2014) [hereinafter, "January 28 letter"].

<sup>2</sup> The full schedule for the ISR meetings appears in Section 1.5 of the ISR, as well as on AEA's licensing website, <http://www.susitna-watanahydro.org/meetings/>.

<sup>3</sup> E.g., Initial Study Report § 1.3 & Table 3, Project No. 14241-000 (filed June 3, 2014) [hereinafter, "ISR"].

matter, and Staff directed that any additional information should be filed with the Commission and made available to licensing participants no later than 15 days prior to the ISR meetings, consistent with the typically applicable deadline under the Commission's Integrated Licensing Process regulations.<sup>4</sup>

With this letter, AEA is filing and distributing the first set of technical memoranda and other information generated during the 2014 study season, as described below. As part of its continued implementation of the study plan, AEA expects to file certain additional technical memoranda prior to October 1, 2014, in accordance with Commission Staff direction.

This first set of technical memoranda and other information consists of the following:

- *Attachment A: Proposal to Eliminate the Chulitna Corridor from Further Study.* As explained in the ISR, throughout the licensing process AEA has continually evaluated its proposal for Project development based on environmental review, technical feasibility, practical considerations, and other factors. As part of this iterative process, AEA notified the Commission and licensing participants in the ISR that it was evaluating whether to continue study of the Chulitna Corridor.<sup>5</sup> Attachment A details AEA's conclusion that development of the Chulitna Corridor is not a reasonable alternative, and therefore AEA proposes to eliminate the corridor from further study. AEA seeks any comments or information on this proposal from federal and state resource agencies and other participants in the licensing process.
- *Attachment B: Ice Processes in the Susitna River Study (Study 7.6), Detailed Ice Observations October 2013 – May 2014 Technical Memorandum.* The ISR indicated that AEA would provide a summary of the 2014 break-up observations.<sup>6</sup> This technical memorandum describes all field activities and observations between October 16, 2013 and May 15, 2014 for the Ice Processes in the Susitna River Study (Study 7.6).
- *Attachment C: Study of Fish Distribution and Abundance in the Upper Susitna River (Study 9.5), Proposed 2015 Modifications to Fish Distribution and Abundance Study Plan Implementation Technical Memorandum.* Based on AEA's experience in implementing the study plan for the Study of Fish Distribution and Abundance in the Upper Susitna River (Study 9.5) during 2014, this technical memorandum proposes to continue certain modifications to the implementation of this study during 2015.

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<sup>4</sup> See 18 C.F.R. § 5.15(c)(2).

<sup>5</sup> See ISR, ISR Overview § 1.4.

<sup>6</sup> See *id.*, Ice Processes in the Susitna River Study, Study Plan 7.6, Part C § 7.2.

- Attachment D: *Study of Fish Distribution and Abundance in the Middle and Lower Susitna River Study (Study 9.6), 2013-2014 Winter Fish Study Technical Memorandum*. At the time the ISR was filed, AEA was still in the process of conducting data entry, quality control, and analysis of winter sampling for this study. AEA reported in the ISR that it would develop plans for completing this study in a technical memorandum to be filed with the Commission.<sup>7</sup> This technical memorandum fulfills this commitment and sets forth AEA's proposal for winter efforts, including proposed methodologies and modifications.
- Attachment E: *Characterization and Mapping of Aquatic Habitats (Study 9.9), 2013 and 2014 Aquatic Habitat Mapping Field Season Completion Progress Technical Memorandum*. In the ISR, AEA reported that its 2014 activities for the Characterization and Mapping of Aquatic Habitats Study (Study 9.9) would consist of various ground-truthing surveys and collection of habitat information for the 12 lakes within the potential reservoir inundation zone.<sup>8</sup> This technical memorandum reports on these activities.
- Attachment F: *Eulachon Run Timing, Distribution, and Spawning in the Susitna River (Study 9.16), 2015 Proposed Eulachon Spawning Habitat Study Modifications Technical Memorandum*. After reviewing the 2013 and 2014 results from the Cook Inlet Beluga Whale Study (Study 9.17) and discussing the results with the National Marine Fisheries Service, AEA has determined that additional data are needed regarding eulachon spawning habitats. This technical memorandum describes a proposed modification to the Study of Eulachon Run Timing, Distribution and Spawning in the Susitna River (Study 9.16) to include an assessment of eulachon spawning habitats.
- Attachment G: *Fish and Aquatics Instream Flow Study (Study 8.5), Evaluation of Relationships between Fish Abundance and Specific Microhabitat Variables Technical Memorandum*. Consistent with the Commission's study plan determination,<sup>9</sup> this technical memorandum provides a detailed evaluation of the comparison of fish abundance measures with specific microhabitat variable measurements where sampling overlaps. This memorandum is used to determine whether a relationship between a specific microhabitat variable and fish abundance is evident.
- Attachment H: *Fish and Aquatics Instream Flow Study (Study 8.5), 2013-2014 Instream Flow Winter Studies Technical Memorandum*. In the ISR, AEA reported that it would distribute its finding concerning the 2013-2014

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<sup>7</sup> See *id.*, Study of Fish Distribution and Abundance in the Middle and Lower Susitna River Study, Study Plan 9.6, Part C § 7.1.2.5.

<sup>8</sup> See *id.*, Characterization and Mapping of Aquatic Habitats, Study Plan 9.9, Part C § 7.1.

<sup>9</sup> See Study Plan Determination on 14 Remaining Studies for the Susitna-Watana Hydroelectric Project, Appendix B at B-84 to B-86, Project No. 14241-000 (issued Apr. 1, 2013).

winter activities in 2014.<sup>10</sup> This technical memorandum describes the methods applied, and data and information collected, as part of the Instream Flow Study 2013-2014 winter studies.

- Attachment I: *Geomorphology Study (Study 6.5), Susitna River Historical Cross Section Comparison (1980s to Current) Technical Memorandum*. As specified in Revised Study Plan Section 6.5.4.1.2.3, this technical memorandum describes changes within the main and side channels of the Susitna River by comparing historical survey data from the 1980s with survey data from the current Project.
- Attachment J: *Geomorphology Study (Study 6.5), 2014 Update of Sediment-Transport Relationships and a Revised Sediment Balance for the Middle and Lower Susitna River Segments Technical Memorandum*. The purpose of this technical memorandum is to update the sediment load rating curves and preliminary estimates of the overall sediment balance in the Middle and Lower River segments under pre-Project conditions that were initially provided in “Development of Sediment-Transport Relationships and an Initial Sediment Balance for the Middle and Lower Susitna River Segments,” (Tetra Tech, Inc. 2013a). This update is based on additional data collected by the U.S. Geological Survey in 2012 and 2013.

AEA appreciates the opportunity to provide this additional information to the Commission and licensing participants, which it believes will be helpful in determining the appropriate development of the 2015 study plan as set forth in the ISR. If you have questions concerning this submission please contact me at [wdyok@aidea.org](mailto:wdyok@aidea.org) or (907) 771-3955.

Sincerely,



Wayne Dyok  
Project Manager  
Alaska Energy Authority

Attachments

cc: Distribution List (w/o Attachments)

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<sup>10</sup> See ISR, Fish and Aquatics Instream Flow Study, Study Plan 8.5, Part C § 7.5.2.