

# Susitna-Watana Hydroelectric Project Document

## ARLIS Uniform Cover Page

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September 26, 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**

**Second Set of 2014 Technical Memoranda for Initial Study Plan Meetings**

Dear Secretary Bose:

As the Alaska Energy Authority (AEA) explained in its September 17, 2014 filing with the Federal Energy Regulatory Commission (Commission or FERC) for the proposed Susitna-Watana Hydroelectric Project, FERC Project No. 14241 (Project), the June 3, 2014 Initial Study Report (ISR) provided for AEA to prepare certain technical memoranda and other information based on 2014 work. In accordance with Commission Staff direction, on September 17, 2014, AEA filed and distributed the first set of technical memoranda and other information generated during the 2014 study season.

With this letter, AEA is filing and distributing the second set of technical memoranda generated during the 2014 study season, as described below. As part of its continued implementation of the study plan, AEA expects to file a third set of technical memoranda prior to October 1, 2014.

This second set of technical memoranda includes:

- **Attachment A:** *Geomorphology Study (Study 6.5) - Updated Mapping of Aquatic Macrohabitat Types in the Middle Susitna River Segment from 1980s and Current Aerials Technical Memorandum.* This technical memorandum updates the Middle Susitna River Segment portion of the aquatic macrohabitat mapping results previously provided in the technical memorandum titled *Mapping of Aquatic Macrohabitat Types at Selected Sites in the Middle and Lower Susitna River Segments from 1980s and 2012 Aerials* (Tetra Tech 2013a).
- **Attachment B:** *Geomorphology Study (Study 6.5) - Mapping of Geomorphic Features and Turnover within the Middle and Lower Susitna River Segments from 1950s, 1980s, and Current Aerials Technical Memorandum.* This technical memorandum updates the geomorphic mapping and assessment of channel change that were initially provided in *Mapping of Geomorphic*

*Features and Assessment of Channel Change in the Middle and Lower Susitna River Segments from 1980s and 2012 Aerials (Tetra Tech 2013a).* The initial technical memorandum provided the results from tasks identified in Revised Study Plan Study 6.5 Section 6.5.4.4. This update extends the previous 30 year analysis between the 1980s and 2012 by an additional 30 years with aerial photography from the 1950s, and also provides a short term analysis of geomorphic changes by comparing 2012 with 2013 aerial photography.

- Attachment C: *Fluvial Geomorphology Modeling below Watana Dam Study (Study 6.6) - Decision Point on Fluvial Geomorphology Modeling of the Susitna River below PRM 29.9 Technical Memorandum.* This technical memorandum describes the decision of whether to extend the downstream limit of the 1-D bed evolution model below Susitna Station at PRM 29.9.
- Attachment D: *Fluvial Geomorphology Modeling Below Watana Dam (Study 6.6) - Winter Sampling of Main Channel Bed Material Technical Memorandum.* The overall purpose of this technical memorandum is to quantify main channel bed material gradations at selected sites in the Upper, Middle, and Lower Susitna River Segments. The data obtained from this study serves as input for the 1-D and 2-D bed evolution modeling efforts being conducted under the Fluvial Geomorphology Modeling Study (Study 6.6).
- Attachment E: *Cook Inlet Beluga Whale Study (Study 9.17) - 2014 Cook Inlet Beluga Whale Prey Study Implementation Technical Memorandum.* This technical memorandum summarizes activities implementing the Cook Inlet Beluga Whale Study (Study 9.17) conducted in 2014 that tested methods to document Cook Inlet Beluga Whale prey and prey habitat in the Susitna River delta.
- Attachment F: *River Productivity Study (Study 9.8) - 2013 Initial River Productivity Results Technical Memorandum.* This technical memorandum provides a preliminary review and summary of 2013 river productivity sample results based on laboratory data received after the ISR submittal in June 2014.
- Attachment G: *River Productivity Study (Study 9.8) - 2014 Field Season River Productivity Progress Report Technical Memorandum.* This technical memorandum presents an update on activities conducted during the Spring field sampling event in June 2014, which was focused on data collection to support the needs of the trophic modeling and stable isotope analysis objectives of the River Productivity Study.

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 or (907) 771-3955.

Sincerely,

A handwritten signature in black ink that reads "Wayne M. Dyok". The signature is written in a cursive style with a horizontal line underneath the name.

Wayne Dyok  
Project Manager  
Alaska Energy Authority

Attachments

cc: Distribution List (w/o Attachments)