

Initial Study Report Meeting

## Study 7.7 Glacier and Runoff Changes

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#### Study 7.7 Status

- ISR Documents (ISR Part D, Section 4)
  - Initial Study Report Parts A, and B (Jun 3, 2014)
  - Assessment of the Potential for Changes in Sediment Delivery to Watana Reservoir Due to Glacial Surges Technical Memorandum (Nov 14, 2014) [Discussed under Study 6.5]
  - ISR Part D (Nov 6, 2015)
- The study has been completed.

#### Study 7.7 Purpose

# The primary goal of this study is to analyze the potential impacts of glacier wastage and retreat on the project flows.

### Study 7.7 Components

- Review existing literature relevant to glacier retreat in south-central Alaska and the Upper Susitna watershed.
- Investigate the potential for additional sediment loading to Watana Reservoir from glacial surge, and if significant, add a glacial surge loading scenario to the reservoir trap efficiency analysis in Study 6.5 (RSP Section 6.5.4.8.2.1). This study component was added in response to FERC recommendations in the February 1, 2013 SPD.



#### There were no variances to this study



## Summary of Results

- The study team reviewed relevant literature and completed a summary of findings about potential future changes in glacial runoff (ISR Part A, Jun 2014).
- Assessment of the Potential for Changes in Sediment Delivery to Watana Reservoir Due to Glacial Surges Technical Memorandum (Nov 14, 2014).

#### **Decision Points from Study Plan**

- Potential additional sediment loading resulting from glacial surge will be investigated (RSP Section 7.7.4.4 and RSP Section 6.5.4.8.2.1). If this investigation indicates that the increased sediment load can actually be delivered in substantial quantities to Watana Reservoir, more detailed analyses of the increased loading will be performed and a sediment loading scenario accounting for glacial surge will be added to the reservoir trap efficiency and sediment accumulation analysis.
- Based on the evaluation, it was determined no further geomorphic investigations were warranted for flow or sediment production from glacial surges. This included the decision to not include a glacial surge sediment loading scenario in the reservoir sediment trap efficiency and sediment accumulation modeling to be performed in Study 6.5.
  (Assessment of the Potential for Changes in Sediment Delivery to Watana Reservoir Due to Glacial Surges Tech Memo [November 14, 2014]).

#### **AEA Proposed Modifications**

AEA plans no modifications of the methods for this study, as this study is now complete.

#### **Steps to Complete Study**

# AEA has successfully met all study objectives of the FERC-approved Study Plan.

AEA has completed this study.



#### **Licensing Participants Proposed Modifications to Study 7.7?**

- Agencies
- CIRWG members and Ahtna
- Public