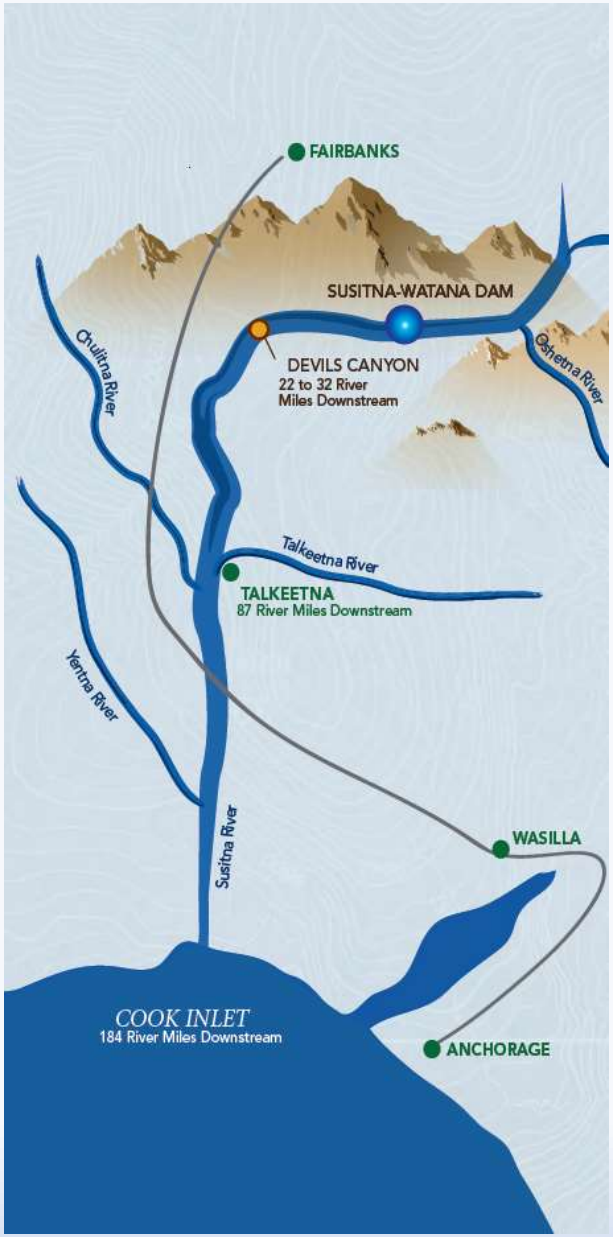


# Initial Study Report Meeting

## *Study 9.10*

## *Future Watana Reservoir Fish Community and Risk of Entrainment*

*October 15, 2014*

Prepared by
R2 Resource Consultants, Inc.

# *Study 9.10 Objectives*

- Develop scenarios for anticipated changes in reservoir habitat based on predicted reservoir operations, size, temperatures, and water quality and depth profiles.
- Develop scenarios for future reservoir fish communities based on current fish species composition upstream of the proposed dam site and enhancement potential for select salmon species.
- Characterize potential management options including recreational, commercial, and subsistence uses of the reservoir fishery.
- Conduct a qualitative desktop analysis on the potential for entrainment of fish species inhabiting the proposed reservoir upstream of Watana Dam.

# *Study 9.10 Components*

- Development of scenarios for anticipated changes in reservoir habitat characteristics, based on alternate Project operation scenarios.
- Development of alternatives of potential future fish communities.
- Development of alternative fisheries management scenarios.
- A desktop analysis on potential for fish entrainment.

# *Study 9.10 Variances*

- This study was not implemented in 2013 (RSP Section 9.10.10). As noted in the Study Plan, this study is largely a desktop analysis that is to be completed as information from other studies becomes available. These other studies are continuing, and AEA will meet study objectives by completing this study as described in the Study Plan.

# *Steps to Complete Study 9.10 (ISR Study 9.10, Part C – Section 7.1)*

AEA will implement the methods in the Study Plan, with no modifications. To summarize , AEA will:

1. Develop scenarios of anticipated changes in reservoir habitat corresponding to alternative Project operating scenarios. Tasks include coordination with modeling teams for evaluations of the lacustrine zone, water temperature and turbidity. (RSP Section 9.10.4.1).

2. Develop scenarios for future reservoir fish communities based on current fish species composition upstream of the proposed dam site, anticipated reservoir habitat, and management practices acceptable to ADF&G. Tasks include 1) defining the existing fish community, 2) identifying potential use of lacustrine habitat, 3) identifying potential invasive species and 4) identifying the potential for an anadromous versus land-locked salmon-based community. (RSP Section 9.10.4.2).

3. Characterize potential management options for a future reservoir fishery (RSP Section 9.10.4.3) based on information on plans for public access, recreational goals, fish passage.

4. Conduct a desktop analysis on the potential for entrainment and impingement of fish species inhabiting the proposed reservoir. Tasks are 1) develop an understanding of alternative Project designs and operating scenarios, 2) conduct a literature review on entrainment at deep water intakes and cold water reservoirs, and synthesizing the information to analyze the potential vulnerability of target species. (RSP Section 9.10.4.4).

# *Licensing Participants Proposed Modifications to Study 9.10?*

- Agencies
- CIRWG members and Ahtna
- Public