

**Meeting Summary**  
**Susitna-Watana Hydroelectric Project Licensing**  
**Aquatic, Terrestrial, and Water Quality Gap Analysis Meeting**  
**1:00 pm - 4:00 pm, August 18, 2011**  
**Held at 4<sup>th</sup> Floor Conference Room, CIRI Building**  
**2525 C Street, Anchorage, AK**

**Purpose of Meeting:** Present and discuss results of aquatic, terrestrial and water quality resources data gap analyses for the proposed Susitna-Watana Hydroelectric Project (Project) with stakeholders.

**Attendees:**

Present for AEA:	Bryan Carey, Project Manager
Present on behalf of AEA (CardnoEntrix)	Jim Gill
Present for ADNR, Division of Water	Gary Prokosch
Present for ADNR	Kim Sager
Present for NPS	Cassie Thomas
Present for USFWS	Mike Buntjer
Present for USFWS	Betsy McCracken
Present for USFWS	Jennifer Spegon (by phone)
Present for ADF&G	Monte Miller
Present for ADF&G	Jason Mouw
Present for ADF&G	Joe Klein
Present for ADF&G	Ron Benkert
Present for ADF&G	Mike Bethe
Present for NMFS	Susan Walker (by phone)
Present for NMFS	Eric Rothwell
Present for Solstice Alaska Consulting, Inc.	Robin Reich
Present for Solstice Alaska Consulting, Inc.	Colleen Bolling
Present for MWH	Kirby Gilbert
Present as MWH subcontractor	James Thrall
Present as MWH Subcontractor, Long View Associates	Steve Padula
Present as MWH Subcontractor, Long View Associates	Randall Filbert
Present as MWH Subcontractor, Long View Associates	Finlay Anderson (by phone)
Present for HDR	James Brady
Present for HDR	Mark Dalton
Present for ABR	Brian Lawhead
Present for URS	Paul Dworian
Present for LGL Alaska	Michael Link
Present for DOWL HKM	Kristen Hansen
Present for Attorney General's Office	Brian Bjorkquist
Present for Davis Wright Tremaine	Ted Wellan
Present for Coalition for Susitna Dam Alternatives	Becky Long

Present for Coalition for Susitna Dam Alternatives	Richard Leo
Present for Alaska Conservation Alliance	David Theriault
Present for Alaska Conservation Alliance	Kate McKeown
Present for the Alaska Ratepayers	Rich Wilson
Present for the Alaska Ratepayers	Kristina Woolston
Present for National Wildlife Federation	Pat Larin
Present for Northern Land Use Research	Richard Stern
Present for R2 Resource Consultants	Dudley Reiser
Present for R2 Resource Consultants	Betsy McGregor
Present for Natural Heritage Institute/Hydro Reform Coalition	Jan Konigsburg
Present for Cook Inlet Aquaculture Association	Gary Fandrei (by phone)

**Summary:**

Steve Padula facilitated the meeting and Kirby Gilbert took notes on a flip chart. Steve summarized the planned agenda and introduced the gap analysis presentations described below. Bryan Carey noted that identification of a data gap in these analyses did not necessarily mean that a study would be automatically conducted to address the gap in question. Rather, once the proposed project components and operations are better defined AEA and the resource agencies and other stakeholders would need to work together under the structure of FERC's Integrated Licensing Process (ILP) to identify important resource-related questions upon which the necessary studies would be based.

Steve and Kirby emphasized that AEA was interested in receiving feedback from the resource agencies and other stakeholders regarding the data gap analysis reports, which would help supply information for AEA's Pre-Application Document (PAD), slated to be filed by November 30, 2011. Steve reiterated that future studies would need to be based on well defined research questions aimed at assessing potential effects of the proposed Susitna-Watana Project, and that stakeholders would be integral to identifying these questions and helping to formulate study scopes.

Bryan Carey distributed the Alaska Power Authority's March 6, 1984 Issues List for the originally proposed Susitna Hydroelectric Project. Bryan noted that the issues identified for the historic project would not necessarily be the same as those associated with the currently proposed Project, but do serve as useful information in beginning to formulate study objectives or identify issue topics for the currently proposed project under the ILP. It was noted that PowerPoint presentations would be posted on the Project Website.

**Aquatic Resources Data Gap Analysis:**

James Brady (HDR) presented the results of the Aquatic Resources Data Gap Analysis, which included the following elements:

- Purpose/objective



- Approach
  - Navigation of 1980s literature
  - Identification of key documents
  - Assessment of contemporary literature
- Organization of the data gap analysis report
- Overview of the existing information and potential data gaps for the following topics:
  - Adult salmon
  - Resident and rearing anadromous fish
  - Macroinvertebrates and periphyton
  - Water quality (as it relates to aquatic biota)
  - Hydrology, geomorphology, and climate (as they relate to aquatic biota)
  - Instream flow
  - Marine mammals (i.e., Cook Inlet beluga whale)

### **Wildlife Resources Data Gap Analysis:**

Brian Lawhead (ABR) presented the results of the Wildlife Data Gap Analysis, which included the following elements:

- Background
- Approach
  - Review of historical APA documents from scans of ARLIS documents and AEA microfiche
  - Review of recent resource literature
  - Resource agency contacts
  - Compilation of an annotated literature database
  - Synthesis of information and preparation of a data gap analysis report
- Description of the original Susitna Project
- Overview of the following items
  - Game management units and subunits in the Susitna River basin
  - Vegetation/land-cover mapping
  - National Wetlands Inventory wetlands mapping
- Potential information needs related to mammals, birds, and vegetation and wetlands

### **Water Quality Data Gap Analysis:**

Paul Dworjan (URS) presented the results of the Water Quality and Sediment Transport Data Gap Analysis, which included the following elements:

- Background
- Methodology
  - Significant studies prior to 1985, i.e., those with data readily available
  - Focus on collecting data from 1985 to present
  - Division of the Susitna River into segments to provide a framework for organizing and interpreting available data
- Water quality

- Review of data sources and data quality
- Comparison of data to water quality standards
- Water quality data gaps
- Sediment transport
  - Hydrology, sediment transport, and deposition
  - Formation and changes to aquatic habitats
  - Sediment data gaps

### Follow-up Discussions:

1. Eric Rothwell (NMFS) stated that it was not possible to adequately identify all resource data gaps without first defining relevant research questions. Eric stated that baseline conditions in the Susitna River basin have changed since studies were conducted in the 1980s, and that it would be necessary to decide which elements of the environment were likely to have changed and collect new baseline information as appropriate. Eric stated that to assess the proposed Project's effects on hydrology and sediment dynamics, particularly to construct and employ a sediment dynamics model, it would be necessary to have several years of flow data from a number of locations in the basin. Eric questioned whether flow data available from the US Geological Survey (USGS) would suffice for this purpose, noting that stream gaging had been conducted sporadically at different locations in the basin. Paul Dworin (URS) replied that existing flow data, coupled with quantitative analyses, could potentially be used to estimate some historic flows, thereby expanding the hydrologic dataset upon which other analysis tools would be based.
2. Mike Buntjer (USFWS) noted that Chinook salmon have a 6- to 8-year lifespan and stated that two years of field study, the minimum called for by the ILP, could be inadequate for gathering the information needed to assess potential Project effects on this species.
3. Monte Miller (ADG&G) stated that baseline data for understanding the distribution of salmon species in the basin, Chinook in particular, would require assessment of conditions under a range of flows. Monte noted that anadromous fish are likely to migrate farther upstream under low flows than under high flows, and failure to evaluate their distribution under low flow conditions could result in an inaccurate portrayal of salmon distribution over longer durations associated with varying hydrologic regimes.
4. Mike Bethe (ADF&G) stated that two years of data collection might be inadequate even for determining fish species presence/absence in the Susitna River and its tributaries upstream of Devil Canyon. Mike noted that he had observed both Chinook and sockeye salmon at the upstream end of the reach proposed for inundation, and he had seen salmon, but he could not identify the species, in the MacLaren River. These observations indicate that Devil Canyon might not be a barrier to the upstream migration of at least these two salmon species during some water years, and limiting

data collection to two years would not necessarily reveal the periodic upstream extent of salmon distribution. Mike stated that a substantial data collection effort would likely be required to identify areas of salmon overwintering/rearing in the Susitna River and its tributaries upstream of Devil Canyon, and these data could take more than 2 years to collect.

5. Mike Buntjer (USFWS) stated that construction and operation of the Susitna-Watana Project, depending on the Project's effect on flow regime, could create conditions that allow salmon and other fish species to migrate farther upstream than they do under existing conditions, resulting in a situation where fish might at times accumulate at the base of the dam.
6. Sue Walker (NMFS) concurred with statements made by USFWS and ADF&G regarding the need for more than two years of fisheries data to understand existing baseline conditions. Sue added that NMFS would need to allocate sufficient staff to satisfy the requirements of the Susitna-Watana Project ILP, a process that would take significant time and effort to complete.
7. Monte Miller (ADF&G) noted that review of existing information revealed that concentrations of metals at some locations in the basin exceed water quality criteria, and disturbance of rock sources during construction could liberate metals and potentially result in even higher concentrations.
8. Becky Long (Coalition for Susitna Dam Alternatives) asked whether current technologies would allow for a more accurate assessment of fish distribution in the Susitna River basin than those conducted in the past. James Brady (HDR) stated that modern technologies, e.g., dual-frequency identification sonar (DIDSON) among others, have allowed for more accurate assessments of sockeye distribution in recent years. James added, however, that application of modern technologies had not been applied to other salmon species in the basin.
9. Jason Mouw (ADF&G) stated that instream flow assessment would also be critical for assessing potential Project effects on wildlife species, citing as an example the effect of altered flow regimes on the availability of vegetative browse species for moose in the reaches downstream of the proposed Project. Jason added that changes in flow regime could also have impacts on recreational use of the river downstream of the proposed Project, including the ability of recreational users to access the river on both public and private lands.
10. Becky Long (Coalition for Susitna Dam Alternatives) also expressed concern about the potential effect of the proposed Project on recreational use in the middle and lower reaches of the Susitna River. Bryan Carey reiterated that AEA was currently in the process of developing a data gap analysis for recreation resources and that recreation issues would be evaluated during the ILP.

11. Cassie Thomas (NPS) stated that it would be necessary to know how the proposed Project's operation would affect ice formation and persistence on the Susitna River and its tributaries, both in the area to be inundated by the proposed reservoir and downstream of the Project, particularly in sloughs downstream of the Project. Cassie added that it would also be necessary to understand the proposed Project's effects on large woody debris recruitment and movement.
12. Monte Miller (ADF&G) added that the effects on ice dynamics could influence caribou migration, potentially resulting in injury to caribou if ice becomes less stable in a fluctuating reservoir or because the flow and temperature ranges change.
13. Mike Buntjer (USFWS) stated that few people have the expertise needed to conduct modeling of ice dynamics and that it would be important to identify a qualified expert.
14. Jan Konigsburg (Natural Heritage Institute) asked what criteria would be used by AEA to determine actual study needs under the ILP. Bryan Carey replied that AEA would base its evaluation of study needs on the potential for project effects after it had a firmer understanding of how the proposed Project would operate, which was expected to be soon.
15. Susan Walker (NMFS) asked if AEA intended to pursue settlement negotiations to come to agreement with stakeholders regarding mitigation for the proposed Project, adding that if so, AEA should expand the extent of its outreach in the near future to include all potentially interested resource agencies, native tribes, and nongovernmental organizations. Steve noted that AEA was in the process of expanding its outreach, beginning with meetings planned for August 29, 2011 in Talkeetna and September 1, 2011 in Anchorage. It was noted that site visits would also be conducted on August 29<sup>th</sup>.
16. Jan Konigsburg (Natural Heritage Institute) stated that site visits of the proposed Susitna-Watana Project area seemed premature, noting that site visits associated with the ILP typically occur following the filing of the PAD and Notice of Intent with FERC. Bryan Carey replied that the site visit had been scheduled to correspond with FERC's attendance of the National Hydropower Association's meetings in Girdwood. Bryan added that waiting until after the filing of the PAD (which is to be filed in November 2011) would result in a winter site visit, which would not be desirable in this part of Alaska.
17. Gary Prokosch (ADNR) asked when the USGS flow study for the basin would be completed. Bryan Carey replied that the USGS report was expected to be available in the winter of 2011/2012.

18. Monte Miller (ADF&G) noted that the AEA's data gap analyses were released later than expected and questioned whether the same would be true of the PAD/NOI. Monte stated that without a timely issuance of the PAD, it would be unlikely that fieldwork would be conducted in 2013. It was noted by Steve and Bryan that the PAD is also expected to inform plans for information gathering efforts in 2012, prior to the start of the formal field efforts in 2013 and that AEA was eager to begin receiving input from stakeholders regarding their ideas on study needs. Monte replied that stakeholders could only begin to really provide input on study needs after AEA released a description of the proposed Project's facilities and operations.

Kirby Gilbert, Sr. Regulatory Specialist, MWH & Randall Filbert, LVA