

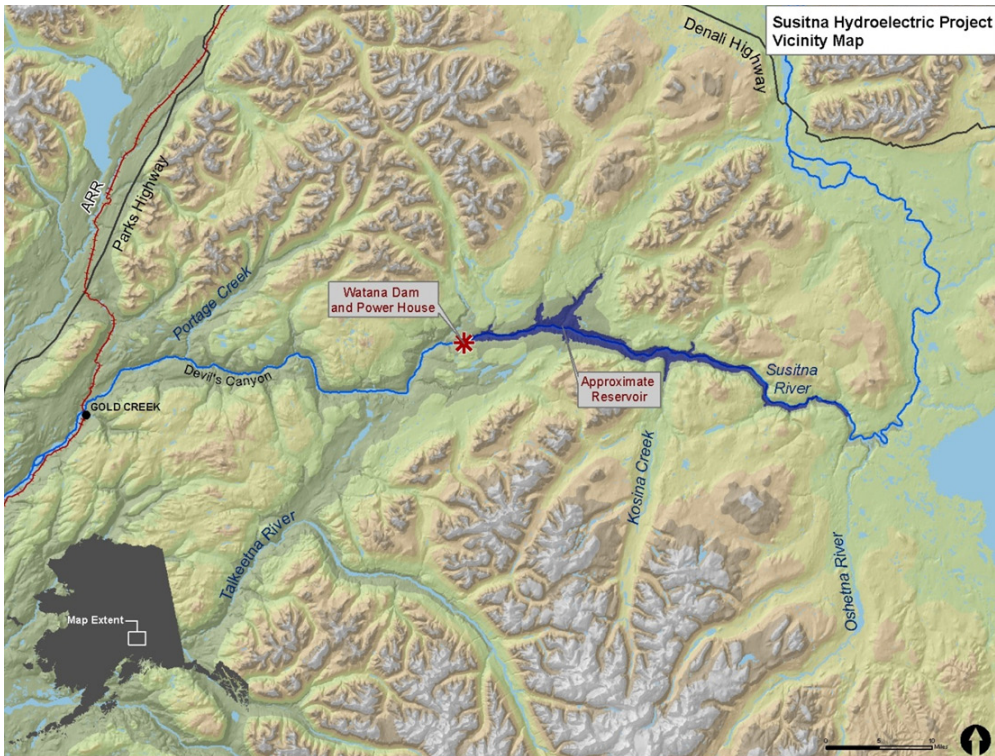
## Susitna-Watana Hydroelectric Project Document ARLIS Uniform Cover Page

<b>Title:</b> Susitna-Watana Hydroelectric Project, FERC Project no. 14241		<b>SuWa 182</b>
<b>Author(s) – Personal:</b>		
<b>Author(s) – Corporate:</b> [Alaska Energy Authority?]		
<b>AEA-identified category, if specified:</b> Newsletters		
<b>AEA-identified series, if specified:</b>		
<b>Series (ARLIS-assigned report number):</b> Susitna-Watana Hydroelectric Project document number 182		<b>Existing numbers on document:</b>
<b>Published by:</b> [Anchorage, Alaska : Alaska Energy Authority?, 2011]		<b>Date published:</b> [2011]
<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>		<b>Pagination:</b> 6 p.
<b>Related work(s):</b>		<b>Pages added/changed by ARLIS:</b>
<b>Notes:</b>		

All reports in the Susitna-Watana Hydroelectric Project Document series include an ARLIS-produced cover page and an ARLIS-assigned number for uniformity and citability. All reports are posted online at <http://www.arlis.org/resources/susitna-watana/>



# SUSITNA-WATANA HYDROELECTRIC PROJECT FERC Project No. 14241



## Background

In the early 1980s, based on earlier Corps of Engineers work, a feasibility study was completed and a Federal Energy Regulatory Commission (FERC) license application was filed for a three-stage hydroelectric project on the Susitna River. A draft Environmental Impact Statement was subsequently prepared by FERC. Development efforts were halted in 1986 because of a significant reduction in oil prices leading to a drop in State revenue and discovery of large quantities of low cost stranded gas in the Cook Inlet area. No further work on a Susitna River project was

performed until 2008 when the project was rekindled.

- In 2010, the Alaska State Legislature passed legislation establishing a State energy policy and expressing intent that the State obtain 50 percent of its electrical generation from renewable and alternative energy sources by 2025. Hydropower, the largest renewable source and lowest cost energy for Alaska consumers, currently provides approximately 19 percent of the electrical energy used in Alaska. The only cost effective way to achieve the new goal of deriving 50 percent of Alaska's elec-

## Important to Alaska

This Project will create jobs and provide significant economic benefit to the State. The Alaska Energy Authority (AEA) is tasked with planning and developing the project.

The Governor requested that the legislature **provide \$65 million** to jump start planning, design, and permitting for the Project.

- Alaska will **derive 50 percent of its electrical power from renewable sources by 2025** – a policy which the legislature and Governor agreed on in 2010.
- The Susitna-Watana Hydroelectric Project will produce **reliable, abundant, sustainable and affordable power** for the Railbelt region in an environmentally responsible way.
- Project will produce **40% of the Railbelt's annual energy** (2,600 Gwh/year) once operational.
- Getting approval for the Project will provide **more predictability to Railbelt Utilities** in State resource planning efforts.
- Provides **stable source of power for the long term** and help to stabilize the State's power grid.

"The Susitna-Watana Project will provide an important and much needed supply of renewable energy for our homes and businesses while creating jobs for Alaskans."

Governor Parnell,  
July 14, 2011

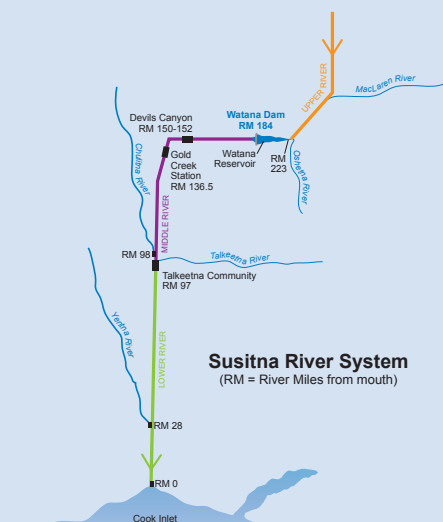
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## Project Concept

The Susitna River has its headwaters in the glaciers of the Alaska Range midway between Anchorage and Fairbanks. It flows westward and the southward for 317 miles until it reaches Cook Inlet. The feasible sites for hydroelectric projects are generally located along the east- west portion of the river from Devil Canyon upstream to Vee Canyon near the Oshetna River.

Environmental flow requirements in the Middle and Lower Susitna River would be met by water that passes through the power plant and is then released into the natural river channel. A preferred environmental flow regime (designated as Case E-VI) was developed for the previous FERC application in 1985. The previously recommended environmental flow regime may or may not be applicable to the newly proposed Susitna-Watana Hydroelectric Project, and this aspect of the proposed project needs further analysis.



tricity from renewable and alternative sources is for a new, large hydroelectric project to be built in the Railbelt region.

- The 2010 Legislature provided \$10 million in funding to AEA for the preliminary planning, conceptual design, start of permitting and field work for the Susitna and Chakachamna Projects, as well as Glacier Fork and other hydroelectric projects along the Railbelt. In November, 2010, AEA issued a Preliminary Decision Document (PDD) determining that the Susitna Hydroelectric Project – Low Watana Non-Expandable Alternative (now known as the Susitna-Watana Hydroelectric Project) was to be the primary large hydroelectric project for the State to pursue to help meet the State’s renewable energy resources goals. The PDD recommended that engineering and environmental studies be conducted on the Susitna-Watana Project and that a FERC licensing process be initiated by January 1, 2012.
- From the 2011 Legislative Session, SB 42 relating to powers and duties of AEA and SB 46 appropriating \$65 million to Susitna-Watana Hydroelectric Project planning, design, and permitting were enacted.
- Governor Sean Parnell on July 25, 2011, announced that the State will move forward on the \$4.5 billion Susitna-Watana Hydroelectric Project with an expected completion date in 2023.

“The Susitna-Watana Hydro Project is part of a comprehensive energy package that will help Alaskans in a number of different ways. It will grow jobs now and into the future, and it will help Alaska reach its goal of goal of 50 percent renewable energy by 2025.”

Governor Parnell, July 25, 2011

## Recent Studies

AEA conducted a number of studies from 2008 to 2010. They included a conceptual alternatives analysis to determine which Susitna projects were viable, and also preparation of a Railbelt Integrated Resource Plan. In addition a Roller Compacted Concrete dam concept cost analysis was prepared for a 700 foot high dam at Watana.

The project identified in these evaluations is at the Watana site on the upper Susitna River. Project storage will provide energy during the winter, reducing natural gas deliverability problems, and the new generation will retire old generation.

The proposed Susitna-Watana Hydroelectric Project would be located at river mile 184 which is roughly 90 river miles north-east of the community of Talkeetna. The project would include a large dam with a 20,000-acre, 39 mile-long reservoir. As currently envisioned, the powerhouse would have an installed capacity of 600 MW.

Recent studies have placed the annual generation of the plant at 2600 GWh. This amount is nearly 40% of the Railbelt annual generation. The project would be producing from 200MW to 600MW of power depending on the time of year.

The project would likely have east-west running transmission lines connecting to the Railbelt Intertie and access could be either from the railroad at Gold Creek about 30 miles downriver or from the Denali Highway by road from the north, a distance of about 44 miles.

The type of dam construction is being evaluated as part of the on-going engineering studies and likely will be earth embankment, roller compacted concrete (RCC) or concrete faced rockfill.

Data Gap analyses are being performed in the areas of aquatics, wildlife, and hydrology. Data from the original 1980’s Susitna studies and more current data are being reviewed to determine what data gaps exist that may inform the need for additional studies.



## Land Ownership

The proposed dam site is on land owned partly by Cook Inlet Region Incorporated (CIRI), (an Alaska regional native corporation), Bureau of Land Management land, State-selected lands, and Native Village Corporation parcels.

## Cost Estimate

Construction cost has been estimated at between \$4 billion and \$5 billion. Engineering and geotechnical work during the next year will help AEA refine the cost estimate as the Project elements are defined.

## Development Timeline

AEA is embarking on the licensing process with preparation of the FERC Pre-Application Document (PAD) to commence a 5+ year FERC licensing process.

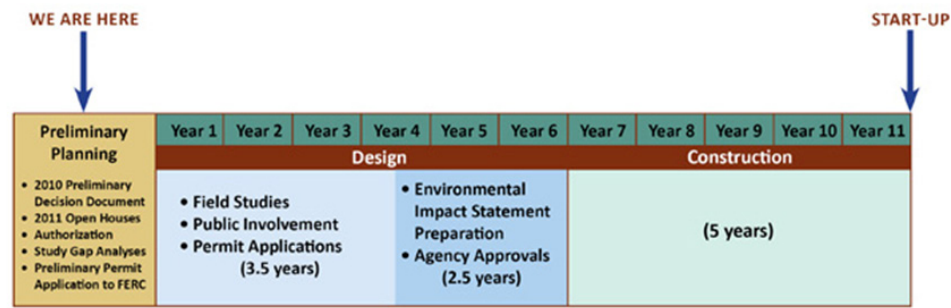
There are a variety of feasibility, engineering, design studies underway and licensing could take up to 5-6 years to complete. AEA is looking for ways to expedite the timelines for planning, design, and construction.

## AEA Approach to Licensing

AEA understands that a proposal to construct a large new hydroelectric project on an aggressive schedule will need to be well supported by technical and environmental information that has undergone the scrutiny of resource agencies and other interested stakeholders. To ensure that the licensing of the Susitna-Watana Hydroelectric Project will be successful, AEA is committed to conducting its licensing related activities according to the following principles:

- Conduct an open and transparent consultation process that allows multiple opportunities for input from resource agencies and other interested stakeholders and members of the public.
- Engage resource agencies and other stakeholders early, and on an ongoing basis, to identify critical information and study needs.

## Project Development Timeline



- Maximize the use of 1980s environmental study work from the original Susitna Project to help manage the time and cost of new studies.
- Commit to identifying appropriate environmental protection, mitigation and enhancement (PM&E) measures based on well vetted technical and environmental information.
- Seek to reach agreement on all major project elements, including operations and PM&E measures prior to filing the license application.

## The Licensing Process

Licensing a hydroelectric project under any of the FERC licensing procedures is a multi-year process that provides con-

siderable opportunity for public input and participation. The licensing process is based on federal laws and regulations and involves extensive planning, environmental studies, resource agency and Alaska Native organization consultation, community meetings and opportunities for public comment. There are numerous opportunities for the public to engage in this rigorous process of studying, preparing, and evaluating a licensing proposal.

FERC has available three basic licensing processes: 1) the Traditional Licensing Process (TLP), 2) the Alternative Licensing Process (ALP), and 3) the Integrated Licensing Process (ILP) that was adopted by FERC in 2003, and became the default process in 2005.

All of the FERC processes are designed to produce the same result – receipt by FERC for processing of an acceptable license application. All involve consultation with agencies and other stakeholders and all require FERC to meet its obligations under a variety of federal laws including among others: the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Clean Water Act (CWA), the National Historic Preservation Act (NHPA) and the Coastal Zone Management Act (CZMA).

There are, however, significant distinctions among the FERC licensing processes in terms of how these objectives are met. The primary differences include:

- Sequence of activities – when NEPA scoping occurs; earliest under the ILP
- Deadline driven performance by all participants – most acute in the ILP
- Formality in approval of the study plan, review of study results and decisions on study plan modifications – only available in the ILP

All of the FERC licensing processes have their perceived strengths and weaknesses. Of the available processes, both the ILP and ALP require informing and consulting with members of the public, citizen groups and other non-governmental organizations (NGOs) in addition to state and federal resource agencies. Increased public involvement was one of the goals of FERC adding the ILP and ALP processes because the TLP that had been in place since the early 1980s provided limited opportunities for stakeholders to participate in the consultation and study processes. Because the ILP provides a structured formal sequence for all licensing steps, all participants are enabled to play key roles from the very beginning of the process.

For several important reasons, including its defined structure and timeframes, formal study plan determination, and early NEPA scoping, AEA has determined that the ILP is the most appropriate licensing process for the Susitna-Watana Hydroelectric Project. In general, the public has opportunities

for input from the very outset, beginning with informal consultation that takes place before the applicant publishes its Notice of Intent (NOI) and Pre-Application Document (PAD) to initiate the formal licensing process.

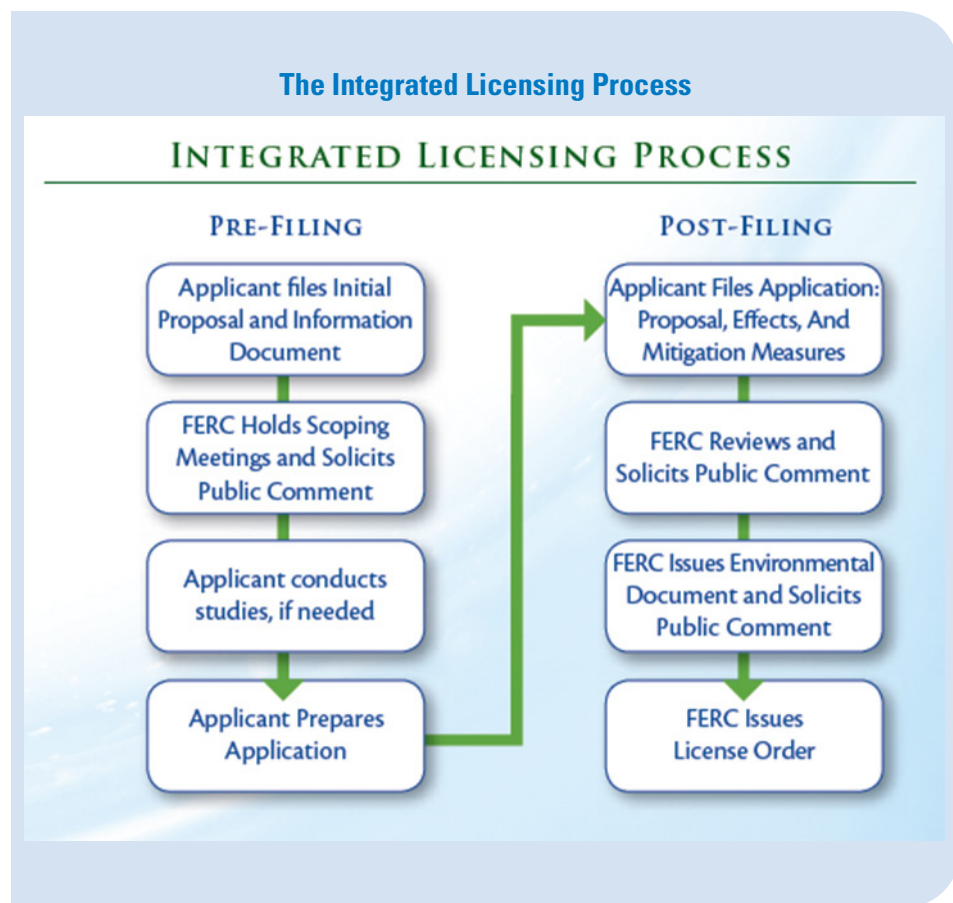
## How ILP Meets the Needs and Interests of AEA and other Participants

AEA has chosen the ILP because it represents the best framework to meet a number of needs and interests that have been identified through early outreach efforts:

- Urgency to complete licensing process driven by required on-line date for power
- Predictability of process steps and timing so that all participants can plan for their participation
- Clarity of information needs to ensure an efficient study program
- Complete administrative record which will benefit all participants

- Opportunity for flexibility when needed and possible without endangering overall schedule
- Framework available for resolving disputes efficiently
- Clear tie needed to other regulatory processes (ACOE 404, ESA, NHPA)
- Flexibility to allow settlement process to be completed if desired

During early outreach efforts, AEA heard a variety of concerns with regard to the challenges of participating in the licensing effort for a new large hydroelectric project, and in particular the use of the ILP. AEA readily acknowledges that the licensing of the Susitna-Watana Hydroelectric Project will place a substantial time burden on all entities that choose to participate. AEA will take measures to help relieve some of that burden. One early step by AEA has been to initiate a series of gap analysis efforts to evaluate the applicability of existing technical and environmental information from the original Susitna



Project studies to today's licensing effort. This early vetting of information will assist in developing appropriate scopes of new studies and avoid duplication of efforts.

In addition, AEA plans, to the extent possible, to streamline the licensing consultation process while keeping important study decisions local. In this regard, AEA will:

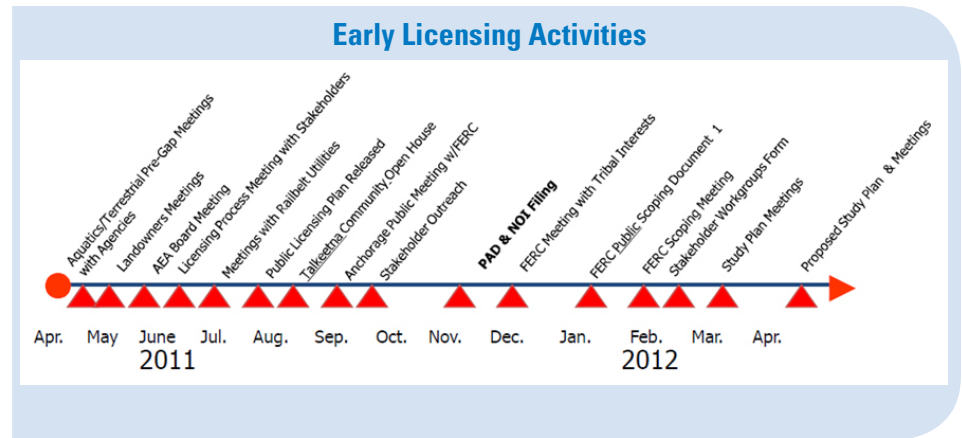
- Look for ways to take advantage of flexibility within ILP framework
- Work with agencies and others to resolve disputes locally
- Address the need for adequate funding for agencies to participate effectively in ILP
- Develop a communications protocol to guide effective information sharing with stakeholders.

For the Susitna-Watana Hydroelectric Project, some of the main pre-PAD, NEPA scoping and study planning activities where the public can participate are outlined in the following timeline that assumes filing of the NOI and PAD in late 2011.

This rigorous scoping and study planning activity will provide the foundation for a comprehensive study effort designed to supplement the existing knowledge regarding resources in the Susitna River basin potentially affected by construction and operation of the Susitna-Watana Hydroelectric Project.

## Public Participation Opportunities in the Susitna-Watana ILP

FERC's licensing process involves two distinct parts: Pre-Application activities led by the applicant (with the exception of NEPA scoping and study plan approval which are led by FERC in the ILP), and Post-Filing activities which are led by FERC. The first Pre-Application activity phase for the Susitna-Watana Hydroelectric Project includes AEA's preparation and filing with FERC of the NOI to file an application for a license and a PAD. As part of the PAD, AEA is required to consult with the public and all interested parties, and to develop



and maintain mailing lists of all interested parties who wish to receive information regarding the licensing activity. Anyone who wishes to be included can add their name and contact information to the mailing lists that will eventually be used for a variety of required notifications by AEA, FERC, and other agencies.

In the both Pre-Application and Post-Filing phases, agencies and any member of the public can access FERC's web-based e-library system that will hold the Commission's complete records of documents filed under FERC Project No. 14241. Anyone can search and download documents, as well as file letters and other documents. Interested individuals can also subscribe to a FERC email service that will inform them of new documents as they are added to e-library for the Project. Additionally, the PAD and license application filings will be available in public libraries.

To ensure opportunities for productive involvement of interested members of the public:

- AEA has developed a new website specifically for the Susitna-Watana Hydroelectric Project complete with listserv capabilities where interested parties can sign up for emails to stay abreast of current activities in the licensing process.
- <http://www.Susitna-Watanahydro.org>

## Public Meetings

The PAD provides FERC and potentially interested parties with existing, relevant and reasonably available information

pertaining to the Project. This information helps identify potential impacts, issues and related information needs and develop study requests and comment on study plans.

Under the ILP regulations, within 120 days of the date the NOI is filed, FERC will hold initial meetings with all potentially-affected Alaska Native interests; issue a public notice that the NOI and PAD have been filed; prepare and issue a Scoping Document 1 (SD1) that discusses the project and related issues; and hold public meetings and a site visit. The FERC NEPA scoping meetings are expected to include daytime and evening meetings in locations in the Project area and in Anchorage. Each meeting will provide the opportunity for the public to learn more about the Project plans and licensing process. The scoping meetings will provide opportunities for interested parties to give verbal testimony that is transcribed by a court recorder and made available to the public on FERC's eLibrary. Written comments may also be submitted as part of NEPA scoping. All interested parties may file comments with FERC on the NOI, PAD, and SD1 for a period of 30 days after the last scoping meeting.

One of the key advantages of the ILP for the public is that all parties will have certainty that they can participate at a set point, starting early in the process, and can continue to stay engaged throughout all of the subsequent licensing stages rather than entering the process after most decisions regarding studies and other commitments have been made.



## Study Plans

Under the ILP, upon the completion of NEPA scoping the applicant must file a Proposed Study Plan that includes detailed plans for each study it proposes to perform. Within 90 days, AEA must hold at least one study plan meeting open to all interested participants who may file comments on the Proposed Study Plan. AEA will then file a Revised Study Plan, and FERC will issue a Study Plan Determination, which directs AEA to perform the studies described by FERC in the determination.

At the conclusion of each field season under the ILP, AEA will file a Study Report with FERC that describes the progress in performing the studies, and identifies any variances and modifications, including the potential need for new studies. All interested parties have an opportunity to meet with AEA to discuss each report and file comments with FERC before FERC makes a determination regarding any proposed modifications. The final Pre-Application activity phase commences when the applicant files either a Draft License Application (DLA) or a Preliminary Licensing Proposal (PLP), followed by its Final License Application (FLA). Interested parties have 90 days to file comments on the DLA or PLP.

Post-Filing activities for the Susitna-Watana Hydroelectric Project will commence once AEA files its FLA. During the Post-Filing activities FERC will: 1) determine if the application is complete and ready for processing and request additional information from AEA if needed; 2) prepare an Environmental Impact Statement (EIS) consistent with NEPA; and 3) make a decision on issuance of the license, including license terms and conditions deemed appropriate under the Federal Power Act and other federal laws. In this process the public is notified and allowed to participate through commenting on FERC's NEPA document.

In summary, for the Susitna-Watana Hydroelectric Project members of the public can expect to have multiple opportunities to participate in the licensing process through:

- Getting placed on mailing lists and accessing licensing information through each stage of the process.
- Providing written comments to FERC and all other parties at any time documenting concerns with, or support for the Project.

- Providing oral comments and asking questions of FERC staff and AEA at public scoping meetings, site visits, and in other technical meetings.
- Submitting study requests and participating in workgroups during study plan development.

AEA will utilize its licensing website <http://www.susitna-watanahydro.org> to keep all stakeholders apprised of these opportunities throughout the licensing process. Be sure to check the website regularly for updates or new information or events.

