

# Susitna-Watana Hydroelectric Project Document

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## 1.1. Socioeconomics: Social Conditions & Public Goods and Services Evaluations

### 1.2. Requestor of Proposed Study

AEA anticipates resource agencies will request this study.

### 1.3. Responses to study request criteria (18 CFR 5.9(b))

#### 1.3.1. Describe the goals and objectives of each study proposal and the information to be obtained.

The social conditions and public goods and services evaluations portion of the socioeconomics study will complete an assessment which identifies and quantifies (where possible) the impacts of constructing and operating the proposed Project on population, housing, local governmental services, and other public and community aspects within the Matanuska-Susitna Borough and the Denali Borough and communities in the vicinity of the proposed project. In addition to these communities and boroughs of primary significance the study needs to also evaluate the effects of the Project on other boroughs and census areas including the Fairbanks North Star Borough and the Municipality of Anchorage. Some communities in the Valdez-Cordova Census Area, which includes the Copper River Valley, as well as a few communities in the Yukon-Koyukuk Census Area may be affected by the Project and these potential effects need to be evaluated.

#### 1.3.2. If applicable, explain the relevant resource management goals of the agencies and/or Alaska Native entities with jurisdiction over the resource to be studied.

~~To be provided by the requesting agency, Alaska Native entity, or other state or local agency. Social conditions and the provision of public goods and services are primarily in the domain of state and local—including tribal—governments in Alaska. While federal and state requirements do exist for such items as the quality of drinking water and wastewater discharge, there are few standards for most aspects of the social environment or for providing public goods and services. However, in most instances the state and local governments wish to avoid circumstances where social conditions or public goods and services are adversely impacted by a proposed action. Thus, the purpose of the socioeconomic study for those topics will be to identify any impacts, and particularly any potential adverse impacts to which the study should strive to identify, if possible, potential means to mitigate such effects.~~

#### 1.3.3. If the requester is a not resource agency, explain any relevant public interest considerations in regard to the proposed study.

The primary benefit to the public of the social conditions and public goods and services evaluation will be assurance that the effects of the Project on public services are adequately addressed. The communities within the Railbelt are directly affected by the project and thus will have a great interest in how the Project may affect their lives. The project could affect the economic well-being of individuals and communities in several potential ways, but in particular with regards to energy security and cost stability. The identification of any increased demands on public and community services would allow for planning to address the important service provisions and capacities. ~~This report would also provide valuable information for multidisciplinary analysis required under the National Environmental Policy Act (NEPA).~~

**1.3.4. Describe existing information concerning the subject of the study proposal, and the need for additional information.**

The study team will need to obtain and review and collect baseline data and summarize the existing conditions for population, employment, income, ethnicity, housing, schools, health care facilities, police and fire protection, and other public services and facilities. Some of this information is available in the Pre-Application Document (PAD) but the PAD focused on the Denali and Matanuska-Susitna boroughs, and even for those two boroughs some needed information is missing. The Data Gap Analysis (HDR Alaska, 2011) also identified information that is lacking or that needs updating. To address these items the study can turn to a combination of sources including the U.S. Census Bureau, Alaska Department of Labor and Workforce Development, Alaska Department of Commerce, Community, and Economic Development, Matanuska-Susitna Borough, Denali Borough, and other public agencies. In addition, it will be important to review other published documents and information from public scoping meetings. Changes to the data collection methods used by the U.S. Census Bureau have led to challenges when evaluating socioeconomic conditions in many of Alaska's communities. While the 2010 Census provides complete coverage of basic characteristics like population, age, household size, race, gender, and familial relation, the broader range of characteristics—many of which will be critical components of the analysis—are covered by the American Community Survey, which suffers from limited geographic detail and significant sample size and precision issues. For example, the community of Cantwell, the closest community to the Project, is estimated to have a median household income of \$61,875 in the past 12 months but the margin of error around this estimate is +/- \$18,438, which means that the actual median household income could range from \$43,437 to \$80,313. This margin of error makes it difficult to say whether Cantwell is a thriving community with strong household income or one where households are struggling to make ends meet. It is important to anticipate these data constraints will affect not only communities but also the 24 community councils located in the Matanuska-Susitna Borough, which have boundaries that differ from the Census boundaries.

As a means of overcoming issues with U.S. Census Bureau data, the study team will need to focus much of our baseline data collection efforts on published documents, research, and feedback received from public scoping meetings. It will be important to look at example methodologies of recently completed studies that involve similar considerations and needs in conducting a variety of similar studies in the region to inform the data collection and validation efforts for this Project. However, even with these steps, there will be a need to conduct surveys and interviews to address data gaps.

As part of the baseline data collection, it will be important to document regional and community-level service providers. Many communities in the Matanuska-Susitna and Denali Boroughs do not provide certain services, but instead benefit from services provided by the state, volunteer groups, regional organizations, and Alaska Native entities. The study team will need to develop a comprehensive list of the services provided in each community—ranging from public safety to health to utilities—and the entities that provide those services.

**1.3.5. Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements.**

Project construction will require a large construction workforce and the transportation of people, equipment, and materials to and from the construction worksite. During operations there would

be more routine operations and maintenance activities with a relatively small workforce. The construction workforce is likely to be drawn from a broad region of Southcentral and Interior Alaska with a scheduled rotation of crews so population effects on communities in the Matanuska-Susitna and Denali Boroughs from in-migration are not anticipated. The number of certain skilled occupations required for the Project may exceed the number of these workers available within the state, which could lead to in-migration of the workers and their families, or such workers might commute from their current residences in other states. The study will estimate the number of out-of-state workers that might be needed, the propensity to migrate rather than commute, and areas likely to experience population effects from in-migration. To the extent that population changes result in adverse effects on social conditions or demand for additional public goods and services, they will be identified in the study results.

Transportation of equipment and materials through communities on the transportation routes to and from the Project could result in increased traffic volumes, and associated noise and congestion effects. Such conditions might require additional police and emergency response calls for traffic accidents and other incidents. Estimates of changes in vehicle miles traveled can be converted into estimates of traffic accidents and injuries which could place additional demands on police, emergency response, and medical care services.

**1.3.6. Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge.**

The proposed Project would not start operations until 2023 under the current schedule, more than 10 years in the future. In addition, the Project is anticipated to continue operations for more than 100 years. The long time frame for construction of the project and its operations means that a comparison of the Project's effects on existing conditions in 2012 would be inappropriate. The comparison should be between the future conditions without the Project and the future conditions with the Project. This approach is the generally accepted practice for large infrastructure projects in the State of Alaska, and is the approach used for the Alaska Pipeline Project's recent submittal to FERC.

The proposed study methodology includes development of a set of model assumptions about the future, which are often the basis for reasonably foreseeable future actions that are used in the cumulative effects analysis. A set of interviews are conducted with persons knowledgeable about the regional and state economies and various industries in the state and the responses are used to develop a set of assumptions, with and without the Project, for use in a dynamic economic model. It would be appropriate to use a dynamic model developed by Regional Economic Models, Inc. (REMI) which has been calibrated to fit the state's economy (or similar model). The REMI model can provide projections to 2060 for all of the boroughs within the Railbelt area, including the Matanuska-Susitna Borough and the Denali Borough. The current REMI model also has the Yukon-Koyukuk Census Area included, but an additional module would need to be obtained for the Valdez-Cordova Census Area. Demographic and economic projections will be developed for the Without-Project condition and compared with a separate forecast for the With-Project condition. The effect of the incremental change in these demographic and economic forecasts will be used to determine the potential changes in social conditions and demand for public goods and services.

**1.3.7. Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.**

It is anticipated that completion of the work described above would require about five months of effort in 2013 to provide a draft report on Social Conditions & Public Goods and Services. Based on the results of the work in 2012, it may be that some new questions arise as a result of the initial study, and therefore there could be some addition follow-on analyses in 2014 determined by AEA in collaboration with stakeholders. The process described above should provide sufficient information for the licensing and environmental review of the Project.

**1.3.8. Literature Cited.**