

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D.C. 20426
August 23, 2010

OFFICE OF ENERGY PROJECTS

Project Nos. 13212-001-AK and 13211-001-AK
Grant Lake/Falls Creek Hydroelectric Project
Kenai Hydro, LLC

Subject: Scoping Document 2 for the Grant Lake/Falls Creek Hydroelectric Project

To the Party Addressed:

On August 6, 2009, Kenai Hydro, LLC (Kenai Hydro) filed with the Federal Energy Regulatory Commission (Commission) a Notice of Intent to file a license application, a request to use the Traditional Licensing Process, and a Pre-Application Document for the proposed 5-megawatt Grant Lake/Falls Creek Project.

The Grant Lake/Falls Creek Hydroelectric Project (Grant Lake/Falls Creek Project or project; FERC Project Nos. 13212-001 and 13211-001), located on Grant Creek near the outlet of Grant Lake just east of the Seward Highway (State Route 9) in the Kenai Peninsula Borough near the community of Moose Pass, Alaska. The Commission granted Kenai Hydro's request to use the Traditional Licensing Process (TLP), with early scoping, on September 15, 2009.

Based on comments received and pursuant to the National Environmental Policy Act (NEPA), Commission staff intends to prepare an Environmental Assessment (EA), which will be used by the Commission to determine whether, and under what conditions, to issue a license for the project. To support and assist our environmental review, we are beginning the public scoping process to ensure that all pertinent issues are identified and analyzed, and that the EA is thorough and balanced.

On May 11, 2010, we issued Scoping Document 1, in which we disclosed our preliminary view of the scope of environmental issues associated with the proposed action. Based on the oral comments made at the June 2 and 3, 2010 public scoping meetings in Moose Pass, Alaska, and written comments received during the scoping process, we have prepared the enclosed Scoping Document 2 (SD2). We appreciate the participation of governmental agencies, non-governmental organizations, and the general public in the scoping process. The enclosed SD2 for the proposed project is intended to serve as a guide to the issues and alternatives to be addressed in the EA. SD2 is issued for informational use by all interested entities; no response is required. Key changes from SD1 to SD2 are identified in bold, italicized type.

This scoping document is being distributed to both Kenai Hydro LLC's distribution list and the Commission's official mailing list (Section 9.0 of the attached SD2). If you wish to be added or removed from the Commission's official mailing list, please mail your request to Kimberly D. Bose, Federal Energy Regulatory Commission, 888 First Street, N.E., Room 1A, Washington, DC 20426. All written requests must specify your wish to be removed or added to the mailing list and must clearly identify the following on the first page: Grant Lake/Falls Creek Hydroelectric Project Nos. 13212-001 and 13211-001.

For any questions about the SD2, the scoping process, or how the Commission staff will develop the EA for this project, please contact Mark Ivy at (202) 502-6156 or mark.ivy@ferc.gov. Additional information about the Commission's licensing process and the Grant Lake/Falls Creek Hydroelectric Project may be obtained from our website, <http://www.ferc.gov>.

Enclosure: Scoping Document 2

cc: Mailing List
Public Files

SCOPING DOCUMENT 2
GRANT LAKE/FALLS CREEK HYDROELECTRIC PROJECT



ALASKA

PROJECT NOS. 13212-001 AND 13211-001

**Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Licensing
Washington, D.C.**

August 2010

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ACRONYMS AND ABBREVIATIONS

<i>ACE</i>	<i>Alaska Center for the Environment</i>
Alaska DEC	Alaska Department of Environmental Conservation
Alaska DF&G	Alaska Department of Fish and Game
<i>Alaska DNR</i>	<i>Alaska Department of Natural Resources</i>
APE	Area of Potential Effect
cfs	cubic feet per second
<i>COE</i>	<i>United States Army Corps of Engineers</i>
Commission or FERC	Federal Energy Regulatory Commission
EA	environmental assessment
EIS	environmental impact statement
Forest Service	U.S. Forest Service
FPA	Federal Power Act
FWS	U.S. Fish and Wildlife Service
Grant Lake Project	Grant Lake/Falls Creek Hydroelectric Project
GWh	gigawatt-hours
<i>INHT</i>	<i>Iditarod National Historic Trail</i>
<i>KAP</i>	<i>Kenai Area Plan</i>
Kenai Hydro	Kenai Hydro, L.L.C./applicant
<i>KMTA NHA</i>	<i>Kenai Mountains – Turnagain Arm National Heritage Area</i>
<i>KRS</i>	<i>Kenai River Sportsfishing</i>
<i>KRWF</i>	<i>Kenai River Watershed Foundation</i>
kV	kilovolt
msl	mean sea level
MW	megawatt
MWh	megawatt-hours
NEPA	National Environmental Policy Act
<i>NPS</i>	<i>National Park Service</i>
NMFS	National Marine Fisheries Service
NGO	non-governmental organizations
PAD	Pre-Application Document
PDEA	preliminary draft environmental assessment
permits	Preliminary Permits
project	Grant Lake/Falls Creek Hydroelectric Project
<i>RBCA</i>	<i>Resurrection Bay Conservation Alliance</i>
SD1	Scoping Document 1
SD2	Scoping Document 2
TLP	Traditional Licensing Process

1.0 INTRODUCTION

The Federal Energy Regulatory Commission (Commission or FERC), under the authority of the Federal Power Act (FPA),¹ may issue licenses for terms ranging from 30 to 50 years for the construction, operation, and maintenance of non-federal hydroelectric projects. On August 6, 2009, Kenai Hydro (applicant) filed a Pre-Application Document (PAD) and Notice of Intent to seek an original license for the 5-megawatt (MW) Grant Lake/Falls Creek Hydroelectric Project (Grant Lake Project or project).²

The Grant Lake Project would be located on Grant Lake, Grant Creek and Falls Creek on the Kenai Peninsula, near the community of Moose Pass, Alaska (Figure 1). Portions of the project would occupy federal lands within the Chugach National Forest, administered by the U.S. Forest Service (Forest Service). The PAD filed on August 6, 2009, included a diversion from Falls Creek diverting flows into a 13,000-foot-long pipe to Grant Lake. On May 3, 2010, the applicant filed a revised PAD and this diversion and pipe are no longer being considered as part of the proposed project. ***On August 13, 2010, the applicant filed a revision to section 3.0 of the PAD which includes several modifications to the project works.*** The project ***will now either include a smaller diversion dam at the outlet of Grant Lake or no diversion dam at all, and*** will include an intake, a power tunnel and short penstock, a powerhouse, ***a tailrace detention pond,*** and a tailrace returning flows to Grant Creek. A more detailed description of the key project facilities is provided in section 3.0.

The National Environmental Policy Act (NEPA) of 1969,³ the Commission's regulations, and other applicable laws require the Commission to independently evaluate the environmental effects of issuing an original license for the Grant Lake Project as proposed, and to consider reasonable alternatives to the applicant's proposal. Although Commission staff intends to prepare a draft and final environmental assessment (EA), there is a possibility that an Environmental Impact Statement (EIS) will be required. The EA will describe and evaluate the probable effects, including any site-specific and cumulative effects, of the proposed action and alternatives.

¹ 16 U.S.C. § 791(a)-825(r).

² On October 7, 2008, the Commission issued two Preliminary Permits (permits) to Kenai Hydro to study the feasibility of developing hydroelectric projects on Grant Lake and Falls Creek. The permits provide the applicant protection under the FPA from competitive applications while conducting the studies and processes necessary to complete an application for license.

³ National Environmental Policy Act of 1969, as amended (Pub. L. 91-190. 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, §4(b), September 13, 1982).

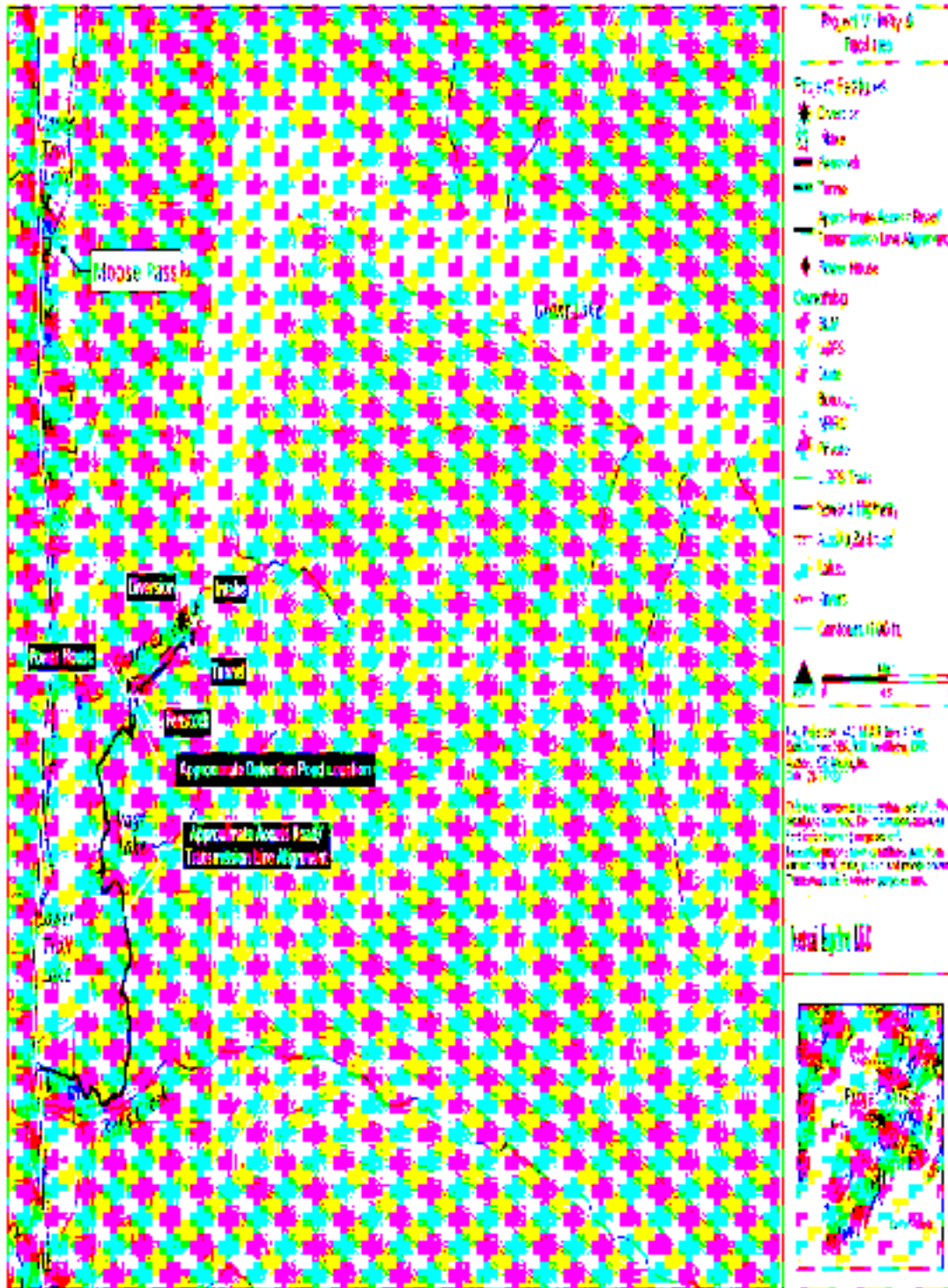


Figure 1. Project location and facilities for the Grant Lake Project (Source: Kenai Hydro LLC, Section 3 update, filed August 13, 2010).

2.0 SCOPING

This *Scoping Document 2 (SD2)* is intended to advise all participants as to the proposed scope of the EA and to seek additional information pertinent to this analysis. This document contains: (1) a description of the scoping process; (2) a description of the proposed action and alternatives; (3) a preliminary identification of environmental issues and proposed studies; (4) a request for comments and information; (5) a proposed EA outline; and (6) a preliminary list of comprehensive plans which would be applicable to the project.

2.1 Purposes of Scoping

Scoping is the process used to identify issues, concerns, and opportunities for enhancement or mitigation associated with a proposed action. According to NEPA, the process should be conducted early in the planning stage of the project.

The purposes of scoping include:

- invite participation of federal, state and local resource agencies, Indian tribes, non-governmental organizations (NGOs), and the public to identify significant environmental and socioeconomic issues related to the proposed project;
- determine the depth of analysis and significance of issues to be addressed in the EA;
- identify how the project would or would not contribute to cumulative effects in the project area;
- identify reasonable alternatives to the proposed action that should be evaluated in the EA;
- solicit, from participants, available information on the resources at issue, including existing information and study needs; and
- determine the resource areas and potential issues that do not require detailed analysis during project review.

We issued Scoping Document 1 (SD1) for the project on May 11, 2010, to enable appropriate resource agencies, Indian tribes, and other interested parties to more effectively participate in and contribute to the scoping process. In SD1, we requested clarification of preliminary issues concerning the Grant Lake/Falls Creek Project and

identification of any new issues that need to be addressed in the EA. We revised SD1 following the scoping meetings and after reviewing comments filed during the scoping comment period. Key changes to SD1 are identified in bold, italicized type.

2.2 Scoping Meetings and Comments

The Commission's staff held two scoping meetings in Moose Pass, Alaska, to discuss potential issues associated with the Grant Lake/Falls Creek Project. The scoping meetings were announced in local newspapers and in the Federal Register. An evening scoping meeting was held on June 2, 2010, and a morning meeting was held on June 3, 2010. A court reporter recorded oral comments made during the scoping meetings.

In addition to the oral comments received at the scoping meetings, the following 17 agencies, individuals, and NGOs filed written comments on the SD1:

<i>Entity</i>	<i>Date Filed</i>
<i>Seward Iditarod Trail Blazers</i>	<i>June 5, 2010</i>
<i>John Polonowski</i>	<i>June 15, 2010</i>
<i>William Brennan</i>	<i>June 23, 2010</i>
<i>Kenai River Watershed Foundation (KRWF)</i>	<i>June 25, 2010; July 6, 2010; July 19, 2010</i>
<i>Becky Long</i>	<i>June 25, 2010</i>
<i>Michael Cooney</i>	<i>July 6, 2010</i>
<i>Alaska Center for the Environment (ACE)</i>	<i>July 6, 2010</i>
<i>Shawn Lynch</i>	<i>July 6, 2010</i>
<i>Resurrection Bay Conservation Alliance (RBCA)</i>	<i>July 6, 2010, July 7, 2010⁴</i>
<i>U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service</i>	<i>July 6, 2010</i>
<i>Alaska Department of Natural Resources, Division of Mining, Land & Water (Alaska DNR)</i>	<i>July 6, 2010</i>
<i>U.S. Department of Interior, Fish and Wildlife Service</i>	<i>July 6, 2010</i>

⁴ *Public comments in response to a resolution regarding the development of the Grant Lake/Falls Creek Hydropower Project considered by the Kenai Peninsula Borough Assembly, during their June 21, 2010 council meeting, were submitted as part of the public record for this proceeding.*

<i>U.S. Department of Interior, National Park Service (NPS)</i>	<i>July 6, 2010</i>
<i>Alaska Department of Fish and Game, Division of Sport Fishing (Alaska DF&G)</i>	<i>July 6, 2010</i>
<i>Kenai Hydro, LLC</i>	<i>July 7, 2010</i>
<i>U.S. Department of Agriculture, Forest Service (Forest Service)</i>	<i>July 9, 2010</i>
<i>U.S. Department of the Army, Corps of Engineers (COE)</i>	<i>August 3, 2010</i>

All comments received are part of the Commission's official record for the project. Information in the official file is available for inspection and reproduction at the Commission's Public Reference Room, located at 888 First Street, N.E., Room 2A, Washington, DC 20426, or by calling (202) 502-8371. Information also may be accessed through the Commission's eLibrary using the "Documents & Filing" link on the Commission's web page at <http://www.ferc.gov>. Call (202) 502-6652 for assistance.

2.3 Issues Raised During Scoping

The general concerns raised by participants in the scoping process are summarized below by subject area. Oral comments received at the scoping meetings are similar to those written comments submitted to the Commission during the comment period. The summaries do not include every oral and written comment made during the scoping process. For instance, we do not address comments that are recommendations for license conditions or schedule. Such comments will be addressed when we request final terms, conditions, recommendations, and comments when we issue our Ready for Environmental Analysis (REA) notice. This SD2 presents our current view of issues and alternatives to be considered in the EA.

General Comments

Comment: *Moose Pass community representatives stated that the environmental document should be an EIS rather than an EA due to the controversial nature of the project.*

Response: *The scoping process would satisfy NEPA requirements irrespective of whether an EA or EIS is issued by the Commission. While our intent at the time of scoping is to prepare an EA, a final decision on whether to prepare an EIS or an EA will be made after completion of any required studies and the filing of Kenai Hydro's license application.*

Comment: *Moose Pass community and NGO representatives encouraged the exploration of Lowell Creek near Seward as an alternative site that may be better suited to hydropower development.*

Response: *The current scoping effort is focused on Kenai Hydro's proposed project at Grant Lake which is filed with the Commission.*

Comment: *Alaska DNR requested that the Kenai Area Plan (KAP, 2001) be added to the list of comprehensive plans reviewed for this project.*

Response: *We will consider the KAP in our analysis. Please note that this plan should be filed with the Commission in accordance with 18 CFR section 219, in order to be considered for addition to the Commission's List of Comprehensive Plans.*

Comment: *KRWF expressed concerns regarding the appropriateness of early scoping for this project.*

Response: *Early scoping was requested by Forest Service and Alaska DF&G to provide time for study development and for the analysis of results.*

Resources That Could Be Cumulatively Affected

Comment: *Moose Pass community and RBCA representatives stated that all resources may be cumulatively impacted by this project. ACE indicated that the watershed may be cumulatively affected as a result of project development. NPS and Forest Service indicated that recreation may be cumulatively affected, and the Forest Service specified that cumulative impacts to the Iditarod National Historic Trail (INHT) should be thoroughly analyzed.*

Response: *The geographic scope for cumulative impacts analysis is identified in section 4.1.2 as the Kenai River Basin; thus, the watershed will be analyzed regarding cumulative impacts for water quantity, water quality, and fishery resources (as identified in section 4.1.1). Conducting cumulative impact analysis for recreation resources was raised during scoping and we have revised section 4.1.1 accordingly.*

Geology and Soils Resources

Comment: *COE requested an analysis of wetland and terrestrial soils.*

Response: *A bullet was added to assess the effects of the proposed project construction and operations on soils in section 4.2.1.*

Comment: *Alaska DNR and RBCA state that a reduction in water flows in the bypassed reach may affect sediment transport and materials recruitment downstream.*

Response: *A bullet was added to assess the effects of the proposed project construction and operations on sediment transport and materials recruitment downstream in section 4.2.1.*

Water Quantity and Quality

Comment: *Forest Service stated that project construction and operation could increase heavy metal leaking to water in the project area as a result of water level fluctuations of Grant Lake, an area of past mining and milling operations, and that this potential effect should be analyzed.*

Response: *A bullet was added to assess the effects of project construction and operations on heavy metal leaking into project area water as a result of water level fluctuations of Grant Lake in section 4.2.2.*

Comment: *ACE stated that road development and vegetation clearing may affect water quality.*

Response: *As currently stated in section 4.2.2, assessing the effects of project construction and operation on water quality of Grant Lake, Grant Creek, Falls Creek, Lower Trail Lake, and the Narrows, is sufficiently broad to capture road development and clearing.*

Comment: *Moose Pass community and RBCA representatives voiced concern regarding the potential impact of climate change on the amount of water available for power generation, noting that the glaciers which feed the rivers and lakes in the region have been receding.*

Response: *Predictions of future flow scenarios on any given stream would be too speculative given the state of the science at this time. However, we do suggest that, when making flow recommendations and conditions, agencies consider whether different requirements for high and low water years are appropriate.*

Aquatic Resources

Comment: *Moose Pass community representatives requested that a model be developed to assess the potential impact on anadromous fish of reducing summer flows in order to enhance power generating flows during the winter months.*

Response: *In the PAD, Kenai Hydro identified plans to conduct an instream flow study to assess impacts from project operations. The results of this analysis will be analyzed within the context of any license application that may be submitted by the applicant.*

Comment: *Alaska DF&G states that the effects of modified flows below the powerhouse on aquatic resources should be evaluated.*

Response: *As currently stated in Section 4.2.3, assessing the effects of project construction and operation on fish and aquatic resources of Grant Lake, Grant Creek, Falls Creek, Lower Trail Lake, and the Narrows, is sufficiently broad to capture the effects of modified flows on aquatic resources below the powerhouse.*

Comment: *Forest Service indicates that the effects of project construction and operation on changes in distribution and abundance of aquatic insects should be analyzed.*

Response: *As currently stated in Section 4.2.3, assessing the effects of project construction and operation on fish and aquatic resources of Grant Lake, Grant Creek, Falls Creek, Lower Trail Lake, and the Narrows, is sufficiently broad to capture changes in distribution and abundance of aquatic insects..*

Comment: *RBCA indicates that the effects of project construction and operation on changes in distribution and abundance of anadromous fish should be analyzed.*

Response: *As currently stated in section 4.2.3, assessing the effects of project construction and operation on fish and aquatic resources of Grant Lake, Grant Creek, Falls Creek, Lower Trail Lake, and the Narrows, is sufficiently broad to capture changes in distribution and abundance of anadromous fish.*

Comment: *COE suggests the inclusion of riffle pool complexes as special aquatic sites that should be evaluated regarding potential environmental impacts.*

Response: *As currently stated in section 4.2.3, assessing the effects of project construction and operation on fish and aquatic resources of Grant Lake, Grant Creek, Falls Creek, Lower Trail Lake, and the Narrows, is sufficiently broad to capture riffle pool complexes.*

Comment: *Moose Pass community representatives suggest that if the geographic scope of analysis is extended to include the mouth of the Kenai River, an assessment of the impacts on beluga whales would be necessary.*

Response: *The geographic scope for cumulative effects analysis for water quantity and quality and aquatic resources has been set as the Kenai River basin, as stated in SD1. Project effects outside of the basin would be impossible to directly attribute to the proposed project therefore, extending the geographic scope to include open ocean habitat utilized by beluga whales is not appropriate. Should the geographic scope of analysis be extended to include the mouth of the Kenai River, a determination will be made as to appropriateness of incorporating an assessment of the impacts on beluga whales.*

Terrestrial Resources

Comment: *Alaska DNR suggested expanding the geographic scope to include areas potentially impacted by project related road development.*

Response: *A geographic scope is not defined within most of the bullets in section 4.2.4 so as to include all areas potentially impacted by project development, including road development.*

Comment: *Forest Service states that the effects of project construction and operation on changes to animal movement in and through the project area as well as displacement and disruption of seasonal movement patterns should be analyzed.*

Response: *The existing bullet in section 4.2.4, effects of project construction and operation on wildlife movement between Grant Lake and Trail Lake, has been modified to include movement through the project area as well as displacement and disruption of seasonal movement patterns.*

Comment: *Forest Service suggests that the effects of increased access on harvestable wildlife should be analyzed.*

Response: *A bullet was added to assess that the effects of increased access to harvestable wildlife in section 4.2.4.*

Comment: *Forest Service commented that project effects may extend beyond the immediate project area.*

Response: *We agree. An analysis of the project effects may extend beyond the immediate vicinity of the project.*

Comment: *ACE indicated that the Kenai Brown Bear is a species of special concern that may be impacted by project development.*

Response: *As currently stated in section 4.2.4, brown bear are identified as a Species of Special Concern by the State of Alaska and will be included in the analysis.*

Comment: *Forest Service indicates that the effects of project construction and operation on changes in distribution and abundance of aquatic insects' predators should be analyzed (a specific interest in bats was expressed).*

Response: *In section 4.2.4, bats were added to the list of Management Indicator Species under the bullet for effects of project construction and operation on wildlife critical life stages, distribution, and abundance.*

Comment: *ACE requested further studies of avian use at Grant Lake.*

Response: *The existing bullet in section 4.2.4, effects of project construction and operation on breeding and rearing habitat and nesting success of shorebirds and waterfowl in Grant Lake and Inlet Creek has been broadened to include other avian use in and around Grant Lake and Inlet Creek.*

Recreation Resources and Land Use

Comment: *Moose Pass community representatives and NPS identified the need to determine the spectrum of recreational activities that occur within the project area and assess the impacts of project development on each type of use.*

Response: *In the PAD, Kenai Hydro indicated that a recreational use assessment would be conducted. The assessment should provide information to assess the effects of project construction and operation on existing recreation and land use in and around Grant Lake, Grant Creek, Falls Creek, Lower Trail Lake and the Narrows, as stated in the existing bullet in section 4.2.6.*

Comment: *RBCA stated that displaced users from Grant Lake will likely increase visitation to nearby water bodies including Carter Lake, Vagt Lake, Upper Trail Lake, Trail River, Kenai Lake and Crescent Lake. The effects of increased use at alternative destinations should be examined.*

Response: *A bullet has been added to section 4.2.6 to address this issue.*

Comment: *NGOs and Forest Service raised the issue of project construction and operations on winter recreation use of Grant Lake due to unstable ice.*

Response: *This issue is already listed and will be evaluated.*

Comment: *Forest Service stated that the effects of the proposed project on the roadless character of the Kenai Mountains Roadless Area should be fully analyzed, including any vegetative clearing along the shoreline of Grant Lake. Similarly, Moose Pass community, NGO, and agency representatives voiced concern over the development of the proposed access road within one mile of a Forest Service designated roadless area (Kenai Mountains) and the potential for unauthorized motorized use.*

Response: *A bullet has been added to section 4.2.6 to address this issue.*

Comment: *The Forest Service, Alaska DNR, NGOs, and Moose Pass community representatives raised the issue of the proposed project access road affecting the Vagt Lake Trail as well as the INHT right-of-way. The most recently proposed road corridor would likely substantially alter and compromise the desired INHT recreation experience, as well as fall within the Kenai River Special Management Area.*

Response: *A bullet has been added to section 4.2.6 to address this issue.*

Comment: *Moose Pass community representatives suggested that a 1000-foot lake frontage development prohibition may exist on Upper and Lower Trail Lakes.*

Response: *After reviewing the Moose Pass Comprehensive Plan, the Kenai Peninsula Borough Plan and the Kenai River Comprehensive Management Plan, no reference to such a development restriction was found.*

Comment: *Moose Pass community and RBCA representatives identified a need to conduct a detailed analysis of the impacts associated with development of the access road and transmission line on neighboring landowners.*

Response: *As currently stated in section 4.2.6, assessing the effects of project construction and operation on local residential land use, is sufficiently broad to capture any impacts associated with development of the access road and transmission line on neighboring landowners.*

Comment: *ACE suggests that project development may have an impact on the Black Mountain Research Natural Area.*

Response: *As stated in section 4.2.6, effects of project construction and operation on existing recreation and land use in and around Grant Lake, Grant Creek, Falls Creek, Lower Trail Lake and the Narrows, is sufficiently broad to address potential impacts on the Kenai Lake-Black Mountain Research Natural Area.*

Aesthetic Resources

Comment: *NGOs and Moose Pass community representatives indicated that project facilities, including the access road, powerhouse, transmission lines and surge tank will negatively affect the aesthetics of the area as they will be visible from the Seward Highway, Alaska Railroad, and from the air. Forest Service recommended that the aesthetic impact assessment of project construction and operation consider aerial views. Similarly, RBCA states that security lighting would mar the nighttime sky and view.*

Response: *As currently stated in section 4.2.7, effects of project construction, facilities, and operation on the aesthetic values of the project area, including noise and light pollution, is sufficiently broad to addresses the aesthetic concerns identified by Moose Pass Community and NGO representatives.*

Cultural Resources

Comment: *RBCA noted that known historic sites would be flooded thus jeopardizing any existing artifacts located at those sites.*

Response: *As currently stated in section 4.2.8, effects of project construction and operation on historical and archaeological resources, and properties of traditional religious and cultural importance to Native Alaska tribes is sufficiently broad to address concerns of flooding existing artifacts.*

Comment: *Moose Pass community representatives stated that the proposed project falls within the recently designated Kenai Mountains – Turnagain Arm National Heritage Area (KMTA NHA).*

Response: *Commission staff will review the management plan developed for the KMTA NHA, should the plan be completed within the time frame of this license application, in order to assess potential effects of project development on the KMTA-NHA.*

Comment: *Forest Service and Moose Pass community representatives stated that an assessment of impacts on subsistence use of resources should include both Native and non-Native rural residents.*

Response: *comment noted and the bullet addressing this issue, in section 4.2.8, has been modified to include non-Natives.*

Socioeconomic Resources

Comment: *Several respondents indicated that energy infrastructure issues may influence the need for increased power generation on the Kenai Peninsula. Moose Pass community representatives state that an assessment should be conducted regarding how the proposed Alaska Bullet Gas Line might impact the need for energy and the cost/benefits of this project. Also, NPS stated that the regional electric grid may already be at capacity and that there is an excess of power being generated on the Kenai Peninsula.*

Response: *The need for power will be assessed in our developmental analysis for the proposed project.*

Comment: *Moose Pass community and NGO representatives requested a study of the potential impacts of project construction and operation on the recreation and tourism driven local economy. Additionally, Moose Pass community representatives stated that project development would negatively affect the community without providing any direct benefits to the residents of the area.*

Response: *As currently stated in section 4.2.9, the effects of project construction and operation on local, tribal, and regional economies will be assessed. The public benefits associated with project development will also be assessed.*

3.0 PROPOSED ACTION AND ALTERNATIVES

In accordance with NEPA, the environmental analysis will consider the following alternatives, at a minimum: (1) the no-action alternative, (2) the applicant's proposed action, and (3) alternatives to the proposed action.

3.1 The Proposed Action

3.1.1 Proposed Project Facilities

The project would consist of: a new **2-foot-high, 120-foot-wide concrete gravity dam on Grant Lake (*or no dam at all*)**, with a 60-foot-wide spillway section at elevation **700 feet mean sea level (msl) *if new dam is built***; the 1,790-acre Grant Lake with active storage of **15,900 acre-feet between 687 and 698 feet msl; *new outlet works including a 48-inch-diameter pipe and gatehouse***; a new multi-level intake at Grant Lake; a new **3,200-foot-long, 10-foot-high horseshoe power tunnel**; a new 8-foot-diameter, 110-foot-high surge tank (***10 feet would extend above ground***); a new **360-foot-long, 72-inch-diameter steel penstock**; a new powerhouse containing two Francis generating units with total installed capacity of **5 MW**; a new 200-foot-long open channel tailrace; ***a new 5 acre tailrace detention pond***; a 3.5-mile-long, overhead or underground transmission line at 24.9-kilovolt (kV); a new **4-mile-long access road**; and appurtenant facilities.

3.1.2 Proposed Project Operations

Kenai Hydro is proposing to operate the project ***block loading and level control (run-of-river) modes. The primary operational mode will be block loading at a specific output level. Level control, or balancing of outflow to inflow, will likely only occur during periods of low natural inflow to Grant Lake when the reservoir is at or near minimum pool elevation. Additionally, the project will be used to fulfill a portion of Homer Electric Company's spinning reserve capacity requirement. With Grant Lake operating as a regulating reservoir, the typical mode of operation will be to capture high spring and summer runoff and to enter the late fall and winter season with the reservoir full at elevation 698 feet msl (without an impoundment structure) or 700 feet msl (with an impoundment structure).*** Water from Grant Lake would be diverted at the new multi-level intake into the power tunnel, surge tank, and powerhouse. Flows from the powerhouse would be discharged back into Grant Creek.

3.1.3 Proposed Environmental Measures

Kenai Hydro proposes to conduct studies (section 5.0) to analyze the project's impact on environmental resources and develop appropriate protection, mitigation, and enhancement measures. At this time, Kenai Hydro has identified the following environmental measures to protect and enhance environmental resources of the project.

Terrestrial Resources

- Incorporate raptor protection guidelines into the transmission line design.
- Install collision avoidance devices on the transmission line in appropriate locations to protect migratory birds.

Aesthetic Resources

- Incorporate setbacks into the transmission line route to minimize visual impacts as viewed from the Seward Highway.

3.2 Alternatives to the Proposed Action

The EA will consider and analyze all recommendations for operation or facility modifications, as well as for protection, mitigation, and enhancement measures identified by Commission staff, resource agencies, Indian tribes, NGO's, and the public.

3.3 No Action

Under the no-action alternative, the Commission would deny a license for the proposed Grant Lake Project. The project would not be built and there would be no change to the existing environment. We use this alternative to establish baseline environmental conditions for comparison with other alternatives.

4.0 SCOPE OF CUMULATIVE EFFECTS AND RESOURCE ISSUES

4.1 Cumulative Effects

According to the Council on Environmental Quality's regulations for implementing NEPA (50 C.F.R. 1508.7), a cumulative effect is the effect on the environment that results from the incremental effect of the action when added to other past, present and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually

minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities.

4.1.1 Resources That Could Be Cumulatively Affected

Based on information in the PAD, preliminary staff analysis, *and scoping input*, we have identified water quantity, water quality, fishery resources, and *recreation resources* as resources that could be cumulatively affected by the proposed construction and operation of the project.

4.1.2 Geographic Scope

Our geographic scope of analysis for cumulatively affected resources is defined by the physical limits or boundaries of the proposed action's effect on the resources and contributing effects from other hydropower non-hydropower activities within the Kenai River Basin.

At this time, we have tentatively identified the Kenai River Basin as our geographic scope of analysis for water quantity, water quality, fishery resources *and recreation resources*. *As more information is provided during the licensing process the geographic scope may be adjusted as appropriate.*

4.1.3 Temporal Scope

The temporal scope of our cumulative effects analysis in the EA will include a discussion of past, present, and future actions and their effects on each resource. Based on the potential term of a new license, the temporal scope will look 30-50 years into the future, concentrating on the effect to the resources from reasonably foreseeable future actions. The historical discussion will, by necessity, be limited to the amount of available information for each resource. The quality and quantity of information, however, diminishes as we analyze resources further away in time from the present.

4.2 Resource Issues

In this section, we present a preliminary list of environmental issues to be addressed in the EA. We have identified these issues, which are listed by resource area, by reviewing the PAD and the Commission's record for this proceeding. This list is not intended to be exhaustive or final, but contains those issues raised to date that could have substantial effects. After the scoping process is complete, we will review the list and determine the appropriate level of analysis needed to address each issue in the EA.

Issues identified by an asterisk (*) will be analyzed for both cumulative and site specific effects.

4.2.1 Geologic and Soils Resources

- Effects of project construction and operation on erosion and sedimentation of Grant Lake and its shoreline.
- Effects of project construction and operation on erosion or sedimentation of the existing Inlet Creek delta.
- *Effects of construction of the proposed outlet works, diversion structure, intake structure, tunnel, penstock, surge tower, powerhouse, tailrace detention basin, tailrace, access roads and transmission line on erosion and sedimentation of Grant Creek, the Narrows and Lower Trail Lake..*
- *Disposal/dispersion methods of spoil material resulting from construction of the proposed project facilities and impact on the surrounding areas.*

4.2.2 Water Quantity and Quality*

- Effects of project construction and operation on the water quality of Grant Lake, Grant Creek, Falls Creek, Lower Trail Lake, and *the Narrows*.
- Effects of project construction and operation on the hydrology of Grant Lake, Grant Creek, Falls Creek, Lower Trail Lake and *the Narrows*.
- *Effects of project construction and operation on heavy metal leaking as a result of water level fluctuations of Grant Lake.*

4.2.3 Aquatic Resources*

- Effects of project construction and operation on the fish and aquatic resources in Grant Lake, Grant Creek, Falls Creek, Lower Trail Lake and *the Narrows*.
- Effects of diverted flows on fish and aquatic resources in the proposed bypassed reach of Grant Creek.
- Effects of Grant Lake reservoir fluctuations on fish and aquatic resources.

- Effects of entrainment on fish populations in Grant Lake and Grant Creek.
- Effects of the loss of habitat connectivity and bi-directional passage on resident fish populations in Grant Lake and Grant Creek.
- *Effects of project construction and operation on changes in distribution and abundance of aquatic insects.*
- *Effects of the proposed project construction and operations on sediment transport and materials recruitment downstream.*

4.2.4 Terrestrial Resources

- Effects of project construction and operation on the distribution and abundance of plant species designated by the Forest Service as sensitive.
- Effects of project construction and operation on the distribution and abundance of invasive plant species.
- Effects of project construction and operation on forest/scrub, wetland, riparian, and littoral habitats used by wildlife on Grant Lake and Grant Creek.
- Effects of project construction and operation on wildlife critical life stages, distribution, and abundance, including:
 - Wildlife species designated by the Forest Service as Management Indicator Species, such as: brown bear, moose, *bats* and mountain goat.
 - Wildlife species designated by the Forest Service as Species of Special Interest, such as: Canada lynx, wolverine, river otter, marbled murrelet, Townsend's warbler, Northern goshawk, bald eagle, and osprey.
 - Wildlife species designated by the State of Alaska as Species of Special Concern, such as: olive-sided flycatcher, gray-cheeked warbler, blackpoll warbler, and brown bear.
- Effects of project operation on availability of fish as food for wildlife.
- Effects of project construction and operation on wildlife movement *as well as displacement and disruption of seasonal movement patterns through the*

project area.

- *Effects of project construction and operation on increased access to harvestable wildlife.*
- Effects of project operation on littoral wildlife habitat at the narrows between Upper and Lower Trail Lakes.
- Effects of project construction and operation on breeding and rearing habitat and nesting success of shorebirds and waterfowl, *and other avian use in and around* Grant Lake and Inlet Creek.
- Effect of project transmission lines on raptors and other birds, including electrocution and collision hazards.

4.2.5 Threatened and Endangered Species

- No federally listed threatened and endangered species are known to occur in the project vicinity. No issues regarding threatened and endangered species have been identified at this time.

4.2.6 Recreation Resources and Land Use*

- Effects of project construction and operation on existing recreation and land use in and around Grant Lake, Grant Creek, Falls Creek, Lower Trail Lake and *the Narrows.*
- Effects of project construction and operation on current *and* future (over the term of a license) recreation demand and use, including barrier-free access and the need for and benefit of interpretive opportunities (such as interpretive signs) at the project.
- Effects of project construction and operation on local residential land use.
- *Effects of project construction and operation on the roadless character of the Kenai Mountains Roadless Area.*
- *Effects of the development of a project access road on the existing Vagt Lake Trail as well as the INHT right of way.*

- *Effects of recreational use at Grant Lake on the potential to increase recreational use at nearby water bodies.*

4.2.7 Aesthetic Resources

- Effects of project construction, facilities, and operation on the aesthetic values of the project area, including noise and light pollution.
- Effects of the transmission line on Scenic Byway viewpoints from the Seward “All American” Highway and views from existing recreation trails such as the Iditarod National Historic Trail.

4.2.8 Cultural Resources

- Effects of project construction and operation on historical and archaeological resources, and properties of traditional religious and cultural importance to Native Alaska tribes.
- Effects of Grant Lake reservoir fluctuations and reduced flows in Grant Creek on archaeological resources located along the reservoir shoreline.
- Effects of project construction and operation on subsistence use (hunting, fishing, and gathering) involving Native Alaskan tribes *and non-Native Alaskans*.

4.2.9 Socioeconomics

- Effects of project construction and operation on local, tribal, and regional economies.

4.2.10 Developmental Resources

- Effects of recommended environmental measures on project generation and economics.
- Effects of construction, operation, and maintenance on project economics.

5.0 POTENTIAL STUDIES

Depending upon the findings of studies completed by Kenai Hydro, L.L.C. and the

recommendations of the consulted entities, the applicant will consider, and may propose certain measures to enhance environmental resources affected by the project as part of the proposed action. The following are the applicant's initial study proposals to fill information gaps to address the above issues and determine appropriate environmental measures. Further studies may need to be added to this list based on comments provided to the Commission from interested participants, including Indian tribes. Kenai Hydro, L.L.C. proposes the following:

Geology and Soils

- Grant Lake Shoreline Erosional Processes Study

Water Resources

- Hydrology of Grant Lake/Grant Creek and Falls Creek Watersheds
- Water Quality of Grant Lake/Grant Creek and Falls Creek Watersheds

Fisheries and Aquatic Resources

- Grant Lake Fish Resources Distribution and Abundance
- Grant Creek Fish Resources Abundance and Distribution
- Grant Creek Habitat Modeling/Instream Flow Analysis
- Falls Creek Fish Resources Distribution and Abundance

Terrestrial Resources

- Wildlife and Bird Surveys and Habitat Use Mapping
- Vegetation Surveys and Mapping
- Wetlands Mapping

Cultural Resources

- Subsistence and Cultural Use Study
- Historical and Archeological Resources Survey

Recreation Resources and Land Use

- Recreation Use Assessment
- Land Use and Facilities Study (includes lands, roads, and construction practices)

Visual and Aesthetic Resources

- Aesthetic/Visual Resources Study

Socioeconomics

- Socioeconomics assessment to assess project-related effects on the local and regional economy.

6.0 EA PREPARATION SCHEDULE

At this time, we anticipate the need to prepare a draft and final EA. The draft EA will be sent to all persons and entities on the Commission's service and mailing lists for the Grant Lake Project. The EA will include our recommendations for operating procedures, as well as environmental protection and enhancement measures that should be part of any license issued by the Commission. All recipients will then have 30 days to review the EA and file written comments with the Commission. All comments on the draft EA filed with the Commission will be considered in preparation of the final EA.

The major milestones, including those for preparing the EA, are as follows:⁵

<u>Major Milestone</u>	<u>Target Date</u>
Scoping Meetings	June 2-3, 2010
License Application Filed	October 2013
Ready for Environmental Analysis Notice Issued	January 2014
Deadline for Filing Comments, Recommendations and Agency Terms and Conditions/Prescriptions	March 2014
Draft EA Issued	September 2014
Comments on Draft EA Due	November 2014
Final EA Issued	February 2015

If Commission staff determines that there is a need for additional information or additional studies, the issuance of the Ready for Environmental Analysis notice could be delayed. If this occurs, all subsequent milestones would be delayed by the time allowed for the applicant to respond to the Commission's request.

⁵ This schedule assumes that a draft and final EA would be prepared. If a draft and final EIS is prepared the target dates for comments on the draft EIS and deadline for filing modified agency recommendations may need to be revised.

7.0 PROPOSED EA OUTLINE

The preliminary outline for the Grant Lake Project EA is as follows:

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8.0 COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA, 16 U.S.C. section 803(a)(2)(A), requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by a project. We have a preliminarily identified and reviewed the plans listed below that may be relevant to the proposed Grant Lake Project. Agencies are requested to review this list and inform the Commission staff of any changes. If there are other comprehensive plans that should be considered for this list that are not on file with the Commission, or if there are more recent versions of the plans already listed, they can be filed for consideration with the Commission according to 18 C.F.R. 2.19 of the

Commission's regulations. Please follow the instructions for filing a plan at <http://www.ferc.gov/industries/hydropower/gen-info/licensing/complan.pdf>.

Alaska

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Federal

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Forest Service. 2002. Chugach National Forest revised land and resource management plan. Department of Agriculture, Anchorage, Alaska. May 31, 2002.

U.S. Fish and Wildlife Service. Undated. Fisheries USA: the recreational fisheries policy of the U.S. Fish and Wildlife Service. Washington, D.C.

9.0 FERC OFFICIAL MAILING LIST

If you want to receive future mailings for this project and you did not receive notice of these meetings from the Commission, please send your request by mail to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, NE, Room 1A, Washington, DC 20426. All written requests to be added to the Commission's mailing list must clearly identify the following on the first page: "*Grant Lake/Falls Creek Hydroelectric Project Nos. 13212-00 and 13211-0011.*" You may use the same method to remove your name from the Commission's mailing list for this project.

Also, please notify the applicant if you would like to be placed on their Distribution List for this project.

Register online at <http://www.ferc.gov/esubscribenow.htm> to be notified via email of new filings and issuances related to this or other pending projects. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov or toll free (806) 208-3676, or for TTY, (202) 502-8659.

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