
SCOPING DOCUMENT 2
TAKATZ LAKE HYDROELECTRIC PROJECT



ALASKA

PROJECT NO. 13234-001

Prepared for the
Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Licensing
Washington, D.C.

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ACRONYMS AND ABBREVIATIONS

ac-ft	acre-feet
ALP	Alternative Licensing Process
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADOT&PF	Alaska Department of Transportation & Public Facilities
ADNR	Alaska Department of Natural Resources
APA	Alaska Power Administration
APE	Area of Potential Effect
City	City and Borough of Sitka
cfs	cubic feet per second
Commission or FERC	Federal Energy Regulatory Commission
DO	Dissolved oxygen
EA	environmental assessment
EIS	environmental impact statement
Forest Service	U.S. Forest Service
FPA	Federal Power Act
FWS	U.S. Fish and Wildlife Service
hp	horsepower
kV	kilovolt
LUD	Land use designation
MW	megawatt
MWh	megawatt-hours
mgd	million gallons per day
msl	mean sea level
NEPA	National Environmental Policy Act
NGO	non-governmental organizations
NMFS	National Marine Fisheries Service
NSRAA	Northern Southeast Regional Aquaculture Association
PAD	Pre-Application Document
PDEA	preliminary draft environmental assessment
SD1	Scoping Document 1
SD2	Scoping Document 2
SHPO	State Historic Preservation Office
Takatz Lake Project or project	Takatz Lake Hydroelectric Project

SCOPING DOCUMENT 2

Takatz Lake Hydroelectric Project, No. 13234-001

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 March 20, 2009, the City and Borough of Sitka (City) filed a Pre-Application Document (PAD) and Notice of Intent to seek an original license for the 27.6-megawatt (MW) Takatz Lake Hydroelectric Project (Takatz Lake Project or project).²

The Takatz Lake Project would be located on Takatz Lake approximately 20 miles east of the City of Sitka, Alaska, on the east side of Baranof Island (figure 1). The project would occupy federal lands within the Tongass National Forest, administered by the U.S. Forest Service (*Forest Service*). A new concrete dam and secondary saddle dam would raise the elevation of Takatz Lake 200 feet, providing a total storage capacity of 124,000 acre-feet (ac-ft), of which 82,000 ac-ft would be active storage. An approximately 2,800-foot-long tunnel and a 1,000-foot-long penstock would discharge the lake flows into a 4,000-square-foot powerhouse, with two 18,600 horsepower (hp) Francis turbines on the shore of Takatz Bay that would provide an estimated 97,100 megawatt-hours (MWh) of firm energy each year. 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 Takatz Lake Project as proposed, and to consider reasonable alternatives to the City's proposal. Although

¹16 U.S.C. § 791(a)-825(r).

²On September 19, 2008, the Commission issued a Preliminary Permit (permit) to the City to study the feasibility of developing a hydroelectric project on the Takatz Lake. The *preliminary* permit provides the City protection under the FPA from competitive applications while conducting the studies and processes necessary to complete an application for license. In its Notice of Intent, the City expects to file the license application with the Commission by **August 31, 2011**.

³National 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).

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.

Takatz Lake Project Background & Licensing Process to Date

Since the preliminary permit was issued on September 19, 2008, the licensing process for the Takatz Lake Project includes the following activities:

- Distribution of a PAD describing the project, the licensing process, and preliminary environmental information on March 20, 2009. The PAD contains descriptions of existing resources, expected impacts and possible environmental studies, as known at the time of writing, and is a source of background information.
- Submission to the Commission and consulting agencies of a request to utilize the Alternative Licensing *Process* (ALP). The ALP is a process for licensing which allows the applicant to prepare a preliminary draft environmental assessment (PDEA), in lieu of an Exhibit E, as part of the license application. Subsequently, the use of the ALP was approved by the Commission on April 28, 2009.

All documents, meeting minutes, and submissions from these early licensing activities are available from the City. The exact name, business address, and phone number of each person authorized to act as agents for the applicant are:

James E. Dinley, Municipal Administrator
City and Borough of Sitka
100 Lincoln Street
Sitka, AK 99835
Phone: 907-747-1808
E-mail: jimdinley@cityofsitka.com

Christopher Brewton, Utility Director
City and Borough of Sitka, Electric Department
105 Jarvis Street
Sitka, AK 99835
Phone: 907-747-1870
E-mail: chrisb@cityofsitka.com

All questions, comments, or correspondence related to the licensing for the project should be directed to Christopher Brewton.

The schedule shown in table 1 demonstrates *the City's* completed and prospective actions leading to *filing* a final license application *and PDEA* with the Commission for a license to construct, operate, and maintain the Takatz Lake Project.

Table 1. Process Plan and Schedule

<u>Activity</u>	<u>Schedule</u>
PAD/NOI/ALP Request	March 20, 2009
FERC approves use of ALP	April 28, 2009
Scoping Document 1 issued	<i>September 4, 2009</i>
Scoping	October 7 & 8, 2009
Scoping Document 2 <i>issued</i>	<i>June 2010</i>
Study Planning <i>meetings</i>	Fall 2009, Spring 2010
Study Execution	2009-2011
Engineering Studies	2009-2011
Draft License Application to Stakeholders <i>and federally recognized tribes and native corporations</i>	Spring 2011
Stakeholders and <i>federally recognized tribes and native corporations</i> comment on <i>Draft License Application</i>	Spring-Summer 2011
Final License Application filed with FERC	August 31, 2011

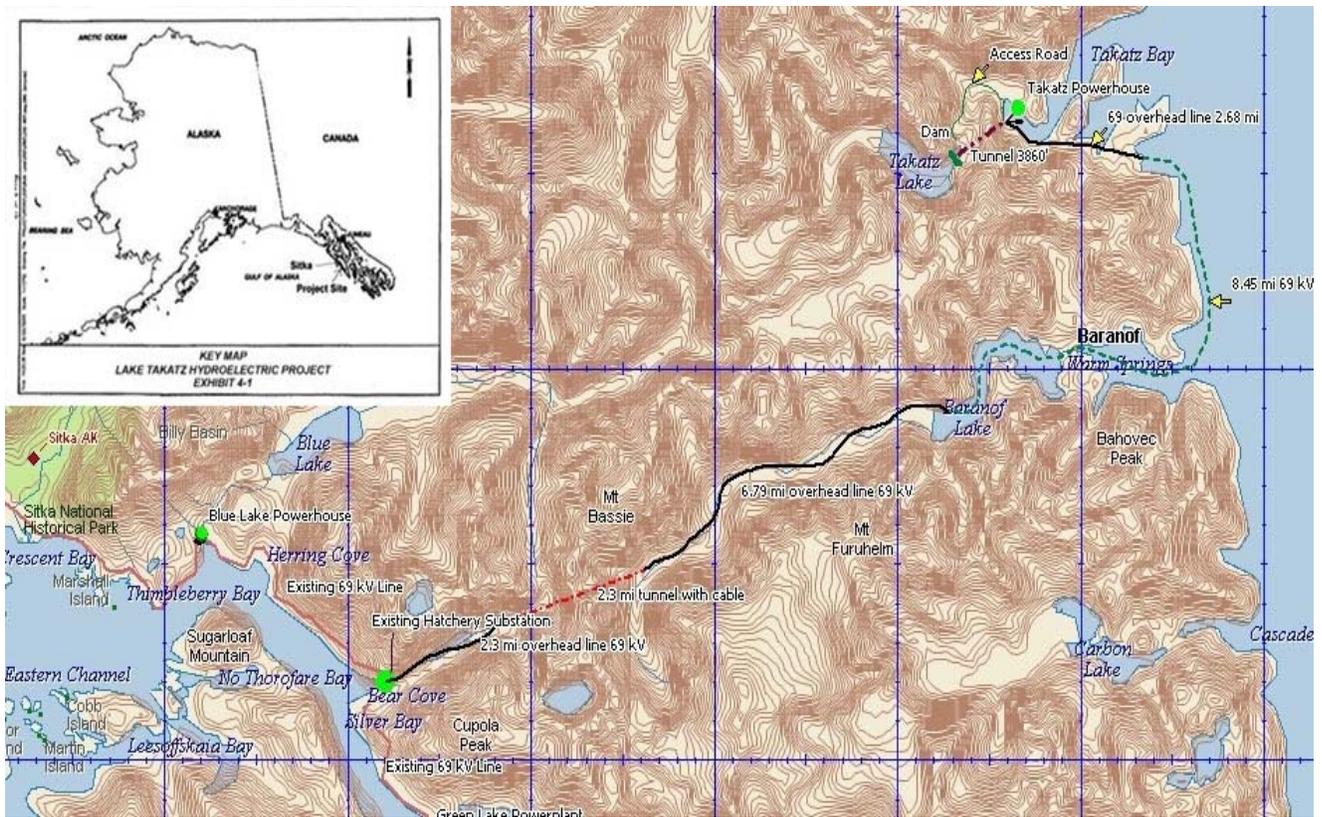


Figure 1. Location of the Takatz Lake Project (Source: City and Borough of Sitka Electric Department, PAD, 2009)

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. Under the ALP, the applicant conducts scoping in collaboration with Commission staff to fulfill the FERC's NEPA responsibilities. The purposes of the scoping process are as follows:

- invite participation of federal, state and local resource agencies, *federally recognized tribes and native corporations*, non-governmental organizations (NGOs), and the public to identify significant environmental and socioeconomic issues related to the proposed project;
- determine the resource issues, 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 review of the project.

We issued SD1 on September 4, 2009, to enable appropriate resource agencies, federally recognized tribes and native corporations, 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 Takatz Lake 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. SD2 presents our current view of issues and alternatives to be considered in the EA. Additions to SD1 are shown in bold and italic type in this SD2.

2.2 Comments and Scoping Meetings

In addition to written comments solicited by SD1, we held two scoping meetings to identify potential issues associated with the project. The notice of the scoping meetings was published in local newspapers and in the Federal Register. An evening scoping meeting was held on October 8, 2009, in Sitka and a morning scoping meeting was held on October 7, 2009, in Juneau. A court reporter recorded comments made during the scoping meetings.

In addition to the comments received at the scoping meetings, the following entities filed written comments on the SD1:

<i>Entity</i>	<i>Date Filed</i>
<i>James Brennan</i>	<i>November 18, 2009</i>
<i>Sitka Conservation Society</i>	<i>November 24, 2009</i>
<i>Northern Southeast Regional Aquaculture Association</i>	<i>December 7, 2009</i>
<i>Forest Service</i>	<i>December 7, 2009</i>
<i>Baranof Property Owners Association</i>	<i>December 8, 2009</i>
<i>Alaska Department of Fish and Game</i>	<i>December 8, 2009</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 & Filings” link on the Commission’s web page at <http://www.ferc.gov>. Call (202) 502-6652 for assistance.

2.3 Scoping Comments

The primary purpose of the scoping document is to identify issues pertaining to the effects of the proposed project on environmental resources so that we can be sure to include an analysis of all potential effects in the Environmental Assessment (EA). It is not the purpose of the scoping document to identify all of the recommended protection, mitigation, and enhancement measures, or license conditions. The scoping document summarizes the applicant’s proposed environmental measures because they are part of the proposed action that is the subject of the environmental analysis.

The general concerns raised by participants in the scoping process are summarized in Appendix I. The summary does not include every oral and written comment made during the scoping process, but rather, addresses the general comments or concerns that call for a response. We also summarize and respond to any issues that were recommended to be incorporated into the scoping process but were not adopted in the scoping document.

Multiple entities commented with requests for studies to explore data gaps related to the issues identified in SD1 and this SD2. Additionally, some of the commenting entities requested edits to SD1 that are actually requests for the City to conduct additional studies or expand upon existing proposed studies. The additional study requests are not evaluated in this SD2. The City is reviewing all study request comments and will be working together with stakeholders to address study needs throughout the ALP pre-filing process.

3.0 PROPOSED ACTION AND ALTERNATIVES

In accordance with NEPA, *Commission staff's* 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 City's Proposed Action

The City is seeking an original license to construct, operate, and maintain the Takatz Lake Project. The Commission will consider whether, and under what conditions, to issue an original license for the project.

3.1.1 Proposed Project Facilities

In its PAD, the City cites the proposed project design for the Takatz Lake Project and other supporting data from a report by the U.S. Department of the Interior and Alaska Power Administration (APA), entitled *Plan for Development for Takatz Creek Project, Alaska* dated January, 1968. The City's current design is the same as what is proposed by the APA.

Because exact locations of project features, particularly transmission facilities, are speculative at this time, no project boundary is shown. The project boundary will be initially proposed to extend about 100 feet from both the proposed reservoir shoreline and from all proposed project facilities.

Reservoir

Takatz Lake is located approximately 4,000 feet upstream of the mouth of Takatz Creek (figure 2), which flows into Chatham Strait by way of Takatz Bay on the eastern shore of Baranof Island. The natural existing water surface of Takatz Lake is at approximately 905 *feet mean sea level (msl)* and the current lake volume is estimated to be about 62,000 ac-ft. The proposed dam would increase the reservoir volume to approximately 124,000 ac-ft, or an increase in utilized reservoir capacity of approximately 82,000 ac-ft. The surface area of Takatz Lake would increase approximately 362 acres from 378 acres to 740 acres as a result of the proposed *project* impoundment.

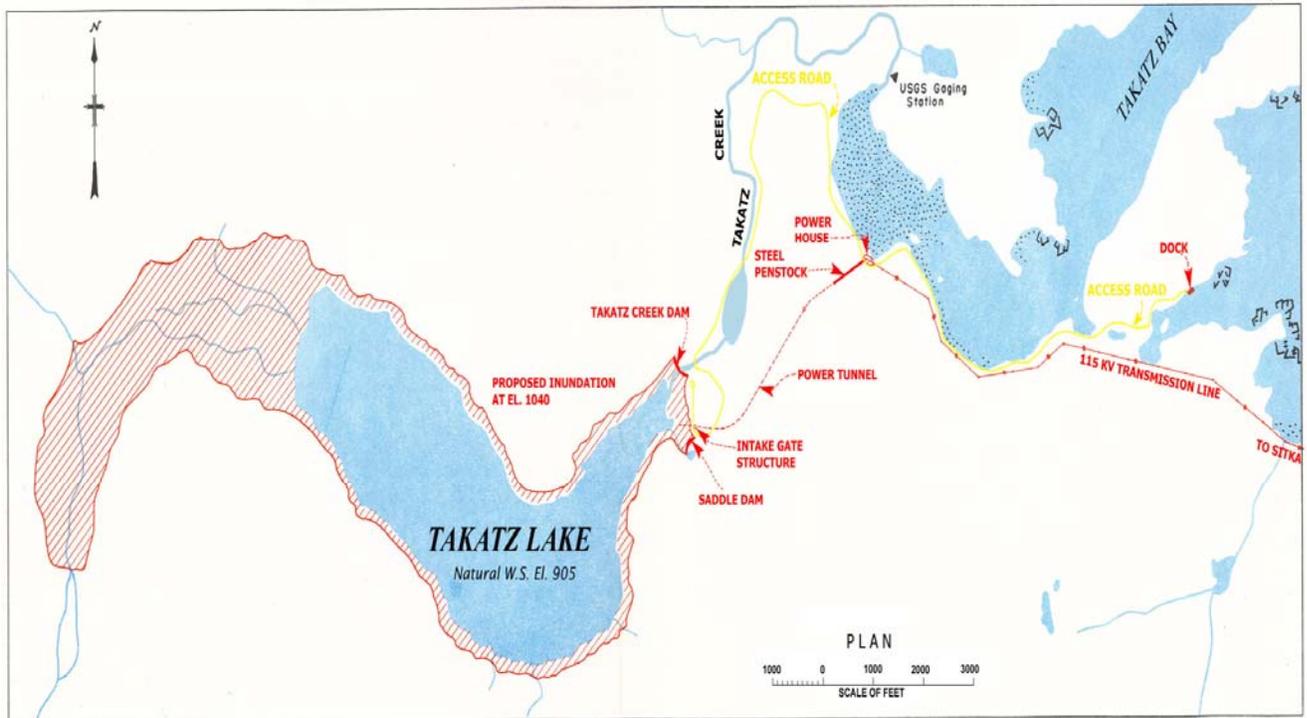


Figure 2. Project facilities for the Takatz Lake Project (Source: City and Borough of Sitka Electric Department, PAD, 2009).

Dams

The Takatz Creek *primary* dam would be located on Takatz Creek just downstream of the existing outlet of Takatz Lake. The Takatz Creek *primary* dam would be 200-foot-high primary concrete arch dam with spillway at elevation 1,040 *msl* and dam crest at elevation 1,052 *msl*. A secondary dam, the “Saddle Dam,” would be approximately 30 feet high and would be located south and east of the primary dam.

Intake/Power Tunnel/Penstock

Water would be withdrawn through a gate structure intake into an approximately 2,800-foot-long, 6.5-foot-wide by 7-foot-high modified horseshoe tunnel. The tunnel’s downstream portal would connect to a 72-inch-diameter, 1,000-foot-long steel penstock leading to the powerhouse. The net operating head of the project would be about 1,000 feet.

Powerhouse, Switchyard, and Tailrace

A surface powerhouse approximately 4,000 square feet in area would be constructed at sea level near Takatz Bay. The powerhouse would house two 18,600-hp Francis turbines, driving two 13.8-MW generators. A switchyard would be located near the powerhouse. The powerhouse tailrace would provide an average discharge of about 166 cubic feet per second (cfs) into the tidewater of Takatz Bay.

The total installed capacity of the project would be 27.6 MW, depending on final design. The APA study indicated that two impulse-type turbine generators of approximately equal capacity would be installed. The high operating head suggests such generators, but exact turbine type will be determined during further feasibility studies. The Takatz Lake project configuration is expected to produce 97,100 MWh of firm annual energy and 9,800 MWh of non-firm energy for a total average capability of 106,900 MWh of generation each year.

Transmission Facilities

Power generated by the project would be transmitted by a new 21-mile-long, **115 kilovolt (kV)** transmission line (or whatever regional transmission voltage is established), but energized initially at 69 kV. The transmission line would consist of a combination of overhead, underground, and submarine segments. Exact transmission type and routing will be determined based on further field investigations and feasibility studies due to the high avalanche hazards along the route.

The proposed transmission line, **Marine Alternative Segment**, would be of submarine construction from Takatz Bay, into Chatham Straight and then Warm Springs Bay. A substation would be constructed at Baranof Warm Springs to supply power to the community. From Baranof Warm Springs, the transmission line would follow either a combined overhead and underground route around Baranof Lake or an underwater route on the lake bottom, depending on avalanche hazards and road construction. Once beyond Baranof Lake, the transmission line would continue up the Upper Baranof River valley, overhead, to an undetermined point at which it would follow a 2-mile-long tunnel passing north of Indigo Lake and south of Mount Bassie. The tunnel would daylight in the Medvejie Valley and would continue either buried or overhead down the Medvejie Lake valley to interconnect with the existing 69-kV transmission system connecting the Blue Lake and Green Lake Projects to the City of Sitka Electric Department service area (Figure 1).

Based on comments received from the scoping meetings and the SD1, the City has developed another alternative (Overland Segment) for the transmission line route.

This Overland Segment Alternative would follow the route of the Marine Segment Alternative transmission line to a point approximately 1.5 miles from the proposed powerhouse location. At that point, the route would proceed overland 3 miles south and west to the north shore of Baranof Lake. At Baranof Lake, the transmission line would follow either a combined overhead and underground route around Sadie Lake or an underwater route on the lake bottom, depending on avalanche hazards and road construction. From Baranof Lake, the transmission line would be above ground through the Upper Baranof River Valley to a 2-mile-long tunnel passing north of Indigo Lake and south of Mount Bassie. Beyond the tunnel, the transmission line would continue either buried or above ground through the Medveje Valley to the interconnection with the existing 69-kV Green Lake Project transmission line (Figures 3 and 4).

The Overland Segment responds to concerns for impacts on both the community of Baranof Warm Springs and those on marine resources in Chatham Strait and Baranof Bay. However, both transmission line alternatives will be evaluated as part of the development of final license application.⁴

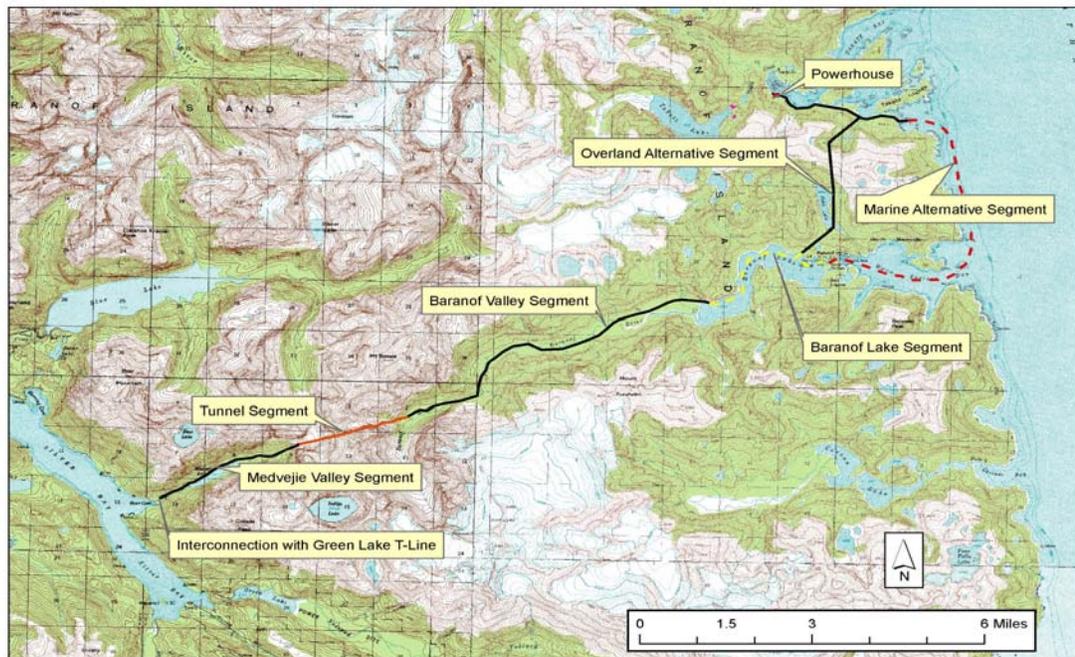


Figure 3. Detail of Transmission Line – Marine Segment (Source: City and Borough of Sitka, Electric Department).

⁴ The Overland Segment is the City’s preferred alternative and will be evaluated as quickly as possible to eliminate the potential study costs and environmental impacts of the Marine Segment.

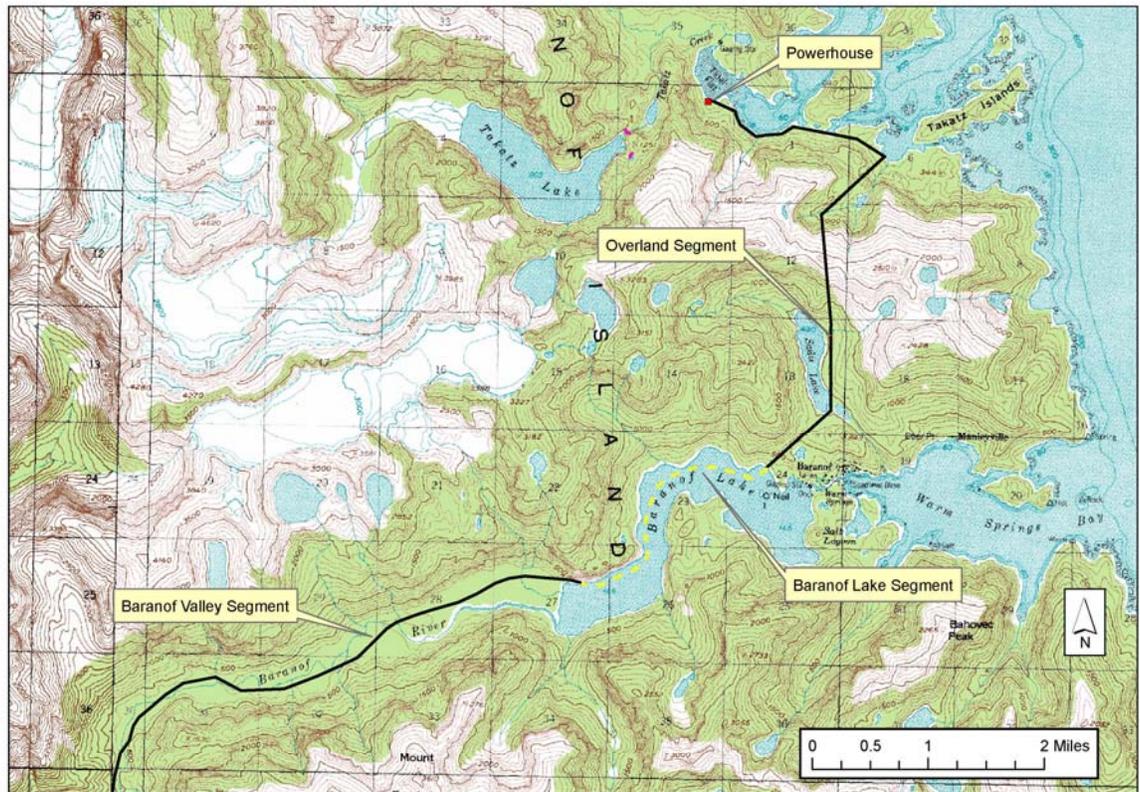


Figure 4. Detail of Transmission Line- Overland Segment (Source: City and Borough of Sitka, Electric Department).

3.1.2 Proposed Project Access

Generating Facilities

Access for construction and long-term operation and maintenance of the project generating facilities would be via floatplane, helicopter, and boat. A gravel-surfaced access and maintenance road would lead from a dock to be constructed on Takatz Bay to Takatz Lake and the project features. Access to the construction sites for transmission facilities near Baranof Lake would also be via floatplane or boat, and staging would be provided by a dock in Warm Springs Bay, *Alaska*.

Transmission Line Access Road

The transmission line construction *for Transmission Alternatives, Marine Segment and Overland Segment that would occur* west of Baranof Warm Springs may be accessed by a road which would connect Baranof Warm Springs with the Green Lake road at the Northern Southeast Regional Aquaculture Association (NSRAA) Medvejie hatchery. The road would facilitate construction of the transmission facilities. The approximately 2-mile-long tunnel would also house the transmission line in the road right-of-way.

3.1.3 Proposed Project Operations

The project would supplement energy generated by *the City's* two primary hydroelectric projects, the Blue Lake Project (FERC No. 2230) and Green Lake Project (FERC No. 2818). The City operates these projects to meet base and peaking load requirements within the *City's* Service area. Currently, the Blue Lake Project generates base-load energy and *the Green Lake Project* provides peaking capacity. The Takatz Lake Project would be used to meet base load or peaking load depending on reservoir management and frequency control. In any case, generation would be optimized by following a rule curve reflecting seasonal inflow, spill capacity, and drawdown limitations. Final project and system load configuration will be determined in further feasibility studies.

The project would be an unmanned facility. Operation would be monitored and controlled from the existing Blue Lake Control Center via a SCADA system. Maintenance personnel would visit the plant approximately monthly, providing routine equipment maintenance.

3.1.4 Proposed Environmental Measures

The *City* has not identified specific measures to protect and *mitigate* environmental resources of the project area at this time. However, the City proposes to conduct several studies that will analyze the project's impact on various resources. See Section 5.0 of this document for a description of the proposed studies.

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, federally recognized tribes and native corporations, NGOs, and the public.

3.3 No Action

Under the no-action alternative, the Commission would deny a license for the proposed Takatz 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.

Based on information from the PAD, *comments from scoping* and preliminary staff analysis, we have *identified geothermal, water quality, aquatic, terrestrial, and recreation resources as resources that may be cumulatively affected by the proposed project.*

4.1.1 Past, Present and Reasonably Foreseeable Actions

The primary actions which might cumulatively affect resources would be 1) The Blue Lake hydro power project (FERC No. 2230) and the Blue Lake Expansion Project, currently in the amendment application phase. This hydro project and its expansion lies in a basin whose headwaters are adjacent to the Takatz Lake basin headwaters; 2) a proposed road across Baranof Island which would connect Baranof Warm Springs with the Medvejie valley and an extension of the existing road system south of Sitka; 3) A proposed Alaska State ferry terminal in Warm Springs Bay; and 4) a small hydropower project proposed at Tenakee Hot Springs, a small community on Chichagof Island which has hot springs similar to those at the community of Baranof Hot Springs.

In addition, Northern Southeast Regional Aquaculture Association (NSRAA) of Sitka advised the City via comments on SDI and the Scoping meetings, their concern for current salmon hatchery operations including rearing facilities and release sites on the east side of Baranof Island, in and near Takatz Bay. Because NSRAA operates hatcheries in Silver Bay near the City's Green Lake (FERC No. 2818) and Blue Lake

(FERC No. 2230) Projects, and because the potentially-affected fish stocks are known to migrate throughout the waters surrounding Baranof Island, Project effects on NSRAA's hatchery-based fish stocks will be evaluated as cumulative effects, and will be considered in establishing the Geographic Scope of cumulative effects analysis, described below.

The Blue Lake project Expansion is highly likely to begin construction within the next five years. The cross-island road and ferry terminal are controversial and in any case would not be constructed for at least five years, more likely ten years. Cumulative effects of all of these actions, however, are expected to be decided upon within the likely period of the Takatz Lake Project license, if issued.

4.1.2 Cumulatively Affected Resources

Based on information in the PAD, comments from scoping, and preliminary staff analysis, we have identified wildlife, recreation and aquatic resources as those which might be cumulatively affected by construction and operation of the project, for the following reasons:

4.1.2.1 Wildlife

Among cumulatively affected wildlife resources, mountain goats are the most likely to be affected. The Blue Lake Project Expansion, depending on as yet undecided changes in access and hunting regulations, might be impacted by the Blue Lake Expansion because higher reservoir levels afforded by the dam raise would ease access difficulties and increase hunting pressure. Also, inundation associated with the dam raise might reduce goat habitat, particularly in the overwintering phase. Goats could be displaced from the Blue Lake basin into neighboring basins, among which is the Takatz Lake basin. Goats are also prevalent in the environs of the cross island trail, the Upper Medvejie Valley and the upper areas of Baranof River. The road would increase access to these areas, again adding hunting pressure on regional goat populations. The proposed project could affect wildlife from construction activities (such as blasting and excavation), and operation (such as increased human access on goat habitat, and potential raptor electrocution and collision from transmission lines).

4.1.2.2 Recreation

The Blue Lake Expansion and the cross-island road would both have significant effects on recreation in central Baranof Island. These effects might be deemed either positive or negative depending upon which user group would be affected. Recreation opportunities would be expanded by both proposals, but land use designations in the Tongass Land Use Plan would have to be considered if all more restrictive designation were to be met. The proposed project construction and operation could affect recreation by providing recreational opportunities at Takatz Lake and by affecting existing recreational use of the Baranof Lake/Warm Springs Bay area, including tourism use of the area by tour boats and

recreational boaters.

4.1.2.3 Aquatic Resources

Aquatic Resources might also be affected by both the Blue Lake Expansion and the cross-island road, in association with effects due to the Takatz Lake Project. The cross-island road, which might serve as the corridor for the Takatz Project transmission line, might affect the Baranof and Medvejie Rivers and water quality or water supply for the Medvejie fish hatchery and a proposed hatchery near Baranof Warm Springs. This aquatic resource, in turn, relates to anadromous fish which use Sawmill Creek which is affected by the Blue Lake project outflow. NSRAA operations take place on both coasts of Baranof Island, in areas which might be affected by the road, the Blue Lake Project and the Takatz Lake project. The proposed project could affect aquatic resources from construction activities (such as sedimentation, disturbance, and modifications to aquatic habitat), and operation (such as fluctuations in Takatz Lake and altered flows in Takatz Creek).

4.1.3 Geographic Scope

Geographic scope of analysis for cumulatively affected resources is defined by the physical limits or boundaries of: (1) the proposed action's effect on the resources, and (2) contributing effects from other hydropower and non-hydropower activities within the project area. Because the proposed action would affect the resources differently, the geographic scope for each resource may vary.

We have identified all of Baranof Island and southern Chichagof Island, including their near shore marine environments, as the geographic scope for cumulative effects analysis. This area comprises ADF&G Management Unit 4 for wildlife and the Sitka Management Area and a portion of the Juneau Management Area for fisheries.

4.1.4 Temporal Scope

Depending on the term of an original license, the temporal scope will look 30-50 years into the future, noting effects from past and present actions, focusing on the Blue and Green Lake hydro projects, and on reasonably foreseeable future actions, primarily the Blue Lake Expansion, the cross-island road and the Baranof ferry terminal.

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 *City's* PAD, **conducting scoping meetings**, and **reviewing** the Commission's record for the proposed Takatz Lake Project. 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. ***Those resources identified by an asterisk (*) will be***

analyzed for cumulative and site-specific effects.

4.2.1 Geologic and Soils Resources

- Effect of project construction and operations on geology and soils resources, including spoil disposal.
- Effects of project construction and operation on existing mineral claims and mining areas.
- Effects of transmission line construction on geology and soil resources.
- *Effects of project construction and operation, including effects on the transmission line and substation, on the geothermal springs located throughout Warm Springs Bay.**

4.2.2 Water Quantity and Quality

- Effects of accidental releases of fuels, lubricants, and other wastes from construction equipment and machinery on Takatz Lake, Takatz Creek, and Takatz Bay water quality.
- Effects of project operations on changes to water temperature, dissolved oxygen (*DO*), and total dissolved gas levels of Takatz Lake and Takatz Creek.
- *Effects of project construction, operation, and maintenance, including effects on the transmission line, on the water quality of Takatz Lake, Takatz Creek, Takatz Bay, Baranof River, Baranof Lake, Warm Springs Bay, Medvejie River, and Medvejie Lake.**
- *Effects of road construction including blasting, on water quality, including heavy metals exposure.*
- *Effects of project construction, operation, and maintenance (which includes effects on the transmission line and substation) on domestic water supply for the community of Warm Springs.*

4.2.3 Aquatic Resources

- Effects of project construction and operation (e.g., sedimentation, disturbance, modification) on the physical habitat of Takatz Lake, Takatz Creek, and Takatz Bay.
- Effects of project operation and water level fluctuations on fish species and habitats in Takatz Lake.
- Effects of project operation, including alterations to the existing flow regime, on fish species and aquatic habitats of Takatz Creek, *including the potential for adverse effects on anadromous fish in lower Takatz Creek.*
- Effects of transmission line construction on fish communities in Takatz Bay, Chatham Straight, Warm Springs Bay, Baranof Lake, and Baranof River.*
- *Effects of electromagnetic radiation on fish and marine mammals, located along the undersea cable route.*⁵
- *Effects of the powerhouse outflow on anadromous fish and marine resources in Takatz Bay, including chum salmon homing and plankton production.*

4.2.4 Terrestrial Resources

- Effects of human access, blasting, excavation, and other construction activities on wildlife, *including Sitka black tailed deer, brown bears, and mountain goats.**
- *Effects of project construction and operation on nest trees for bald eagles, and waterfowl species and habitat.*
- Effects of habitat loss and alteration from construction of *the project* on wildlife and plant species, with particular emphasis on Forest Service sensitive species and state-listed species.*
- Effects of noise, improved access from project access roads, and increased human presence on wildlife, with particular emphasis on Forest Service

⁵ As noted previously in SD2, should the Overland Segment for transmission be selected then the issues related to the proposed Marine Segment would be moot.

sensitive species and state-listed species.*

- Effects of project construction and operation on the control and spread of noxious weeds.
- Effects of the new substation and transmission line on the potential for raptor electrocutions and collisions.

4.2.5 Threatened and Endangered Species

- Effects of project construction and operation on the federally listed threatened Steller sea lion and endangered humpback whale, *and potential federal candidate species*.

4.2.6 Recreation Resources and Land Use

- Any need for recreation facilities and public access within the project boundary to meet current or future (over the term of a license) recreation demand, including barrier-free access and the need for and benefit of interpretive opportunities (such as interpretive signs) at the project, *including the Baranof Trail and Sadie Lake Trail*.
- *The potential demand for recreational use of the project's access road including, but not limited to, the effects of the road being open to the public year-round.**
- Effects of project construction and operation *on Forest Service Land Use Designations (LUD) associated with the potentially affected areas of the Tongass National Forest*.
- *Effects of project construction and operation on existing recreational use of the Baranof Lake/Warm Springs Bay area, including tourism use of the area by tour boats and recreational boaters.**
- *Effects of project construction and operation on recreation opportunities, such as hiking, backpacking, bike riding, snowboarding, and off-road vehicle use.*
- *Effect of project construction and operation on the roadless area designation for the Tongass National Forest.*

4.2.7 Aesthetic Resources

- *Effects of project construction, facilities, and operation, including **substation placement**, on the aesthetic **resources** of the project area, including the Forest Service cabin on Baranof Lake and non-project land along Warm Springs Bay.*
- Effects of *project* construction noise *on* residents and *public* visitors within the project area, particularly the Warm Springs Bay vicinity.

4.2.8 Cultural Resources

- Effects of project construction and operation on the project's defined area of potential effects (APE).
- Effects of project construction and operation on historic and archeological resources that are listed *in* or considered eligible for inclusion in the National Register of Historic Properties.
- Effects of project construction and operation on properties of traditional religious and cultural importance to *federally recognized tribes and native corporations that have an affiliation to the area.*
- Effects of project construction and operation on subsistence resources (hunting, fishing, and gathering) and associated areas.

4.2.9 Socioeconomics

- Effects of project construction and operation on local, tribal, and regional economies.
- *Effect of project construction and operation on commercial uses in the project area, including use of the Baranof Wilderness Lodge.*
- *Effects of project construction and operation on the existing land values for land owners in the project area.*
- *Effects of project transmission line construction and maintenance on operations of Medvejie Hatchery.*
- *Effects of project construction and operation on commercial outfitters and guides.*

4.2.10 Public Safety

- *Effect of the project's transmission line on public safety.*

4.2.11 Developmental Resources

- Effects of any recommended *protection, mitigation, and enhancement* measures on project generation and economics.
- *Effects of project construction and operation on the project's economics under the applicant's proposal and action alternative(s).*

5.0 POTENTIAL STUDIES

The City's proposed studies are summarized in the following table:

Table 2. The City's Potential Studies. (Source: City and Borough of Sitka Electric Department, PAD, 2009)

Resource Area and Issue	Summary of Proposed Study
Geologic and Soil Resources	
Geotechnical study	Conduct a query with the U.S. Bureau of Land Management for any mineral claims prior to building any structures or otherwise blocking access to potentially valuable deposits.
Water Quality and Quantity	
Water quantity study	Study will include hydrologic studies of stream flow in the potentially affected streams and seasonal lake levels in potentially affected lakes. These studies may be based on field data or data synthesized from comparison with measured data in nearby basins.
Water quality study	Study will focus on characterization of the temperature, DO, dissolved solids, and clarity (turbidity) of waters affected by the project. These

	water parameters are measured either continuously or periodically (seasonally, daily or weekly), using modern equipment capable of high accuracy and reliability. Water quality surveys will be conducted on Takatz Lake, Takatz Creek, Baranof Lake, Baranof Creek, <i>Baranof River, and the Medvejie watershed.</i>
Aquatic Resources	
Aquatic resource studies	Studies include conducting baseline surveys of fish species, their habitats and general life histories in the potentially affected Takatz Lake, Takatz Creek, Takatz Bay, Chatham Straight, Warm Spring Bay, Baranof Lake, Baranof Creek, <i>and the Medvejie watershed.</i> Study plans for these surveys will be developed in consultation with state and federal resource agencies, including Alaska Department of Fish and Game (ADF&G), Alaska Department of Environmental Conservation (ADEC), Forest Service, National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (FWS).
	Takatz Lake and Creek: Takatz Lake and Takatz Creek fisheries studies may include, but not be limited to, lake and tributary observations and various capture techniques to determine the fish species present and their relative abundance.
	Baranof Lake and Baranof Creek: Baranof Lake and Baranof Creek fisheries studies may include, but not be limited to, lake and tributary observations and various capture techniques to determine the fish species present and their relative abundance.
	Marine Areas: Studies in these areas will seek to generally determine the distribution and abundance of resident and anadromous marine fish species, and to the extent possible, of marine invertebrate and botanical resources in areas potentially affected by the project's submarine transmission line.
	<i>Medvejie Drainage: Baranof Lake and Baranof River fisheries studies may include, but not be limited to, lake and tributary observations and various capture techniques to determine the fish species present and their relative abundance.</i>
Terrestrial Resources	
Wildlife study	The study consists of wildlife surveys <i>that the City proposes to conduct</i> during <i>any</i> licensing period. All wildlife-related study plans will be developed

	in association with Alaska state and federal resource agencies, including Forest Service, ADF&G, FWS, NGOs, and tribes. Typically, wildlife surveys would include: (1) ground surveys to determine large mammal habitat utilization and food habits; (2) small mammal trapping, to determine distribution and relative abundance of small mammals; and (3) general visual observations of birds, bird calling, and other forms of documentation.
Botanical study	The study consists of baseline surveys for potentially affected botanical resources, according to study plans approved by the Forest Service, ADF&G and perhaps other agencies. Typically, baseline plant surveys include: (1) aerial inventories of vegetative type, primarily from existing imagery; (2) foot surveys, to ground-truth the aerial inventories; (3) a preliminary jurisdictional determination, to determine location, type, function and extent of wetlands, uplands, and water of the US in the project area; and (4) prior to construction, sensitive plant surveys according to Forest Service prescriptions in potentially affected areas delineated in the project final design.
Threatened and Endangered Species	
<i>Threatened and Endangered Species</i>	<i>The Commission granted the City's request to be designated the non-federal representative for section 7 consultation under the Endangered Species Act. The City will consult with NMFS and FWS prior to commencement of field or literature surveys to determine federally listed species and candidate species. In the course of wildlife surveys, the City will note and document in reports the species surveyed.</i>
Recreation Resources and Land Use	
<i>Recreation and Land Use Resources</i>	<i>The City will research the Tongass Land Use Management Plan to determine existing LUD's and to align those designations with the various project features and activities throughout the project area. The City will consult with the Forest Service to determine the need for and extent of surveys of current recreation use within the various potentially affected areas. In subsequent reports and any licensing documents, the City will determine the potential effects of project construction and operation on recreation opportunities and use levels.</i>

Aesthetic Resources	
Aesthetic resource study	The City will research existing aesthetic resource information, including existing Forest Service plans, to distinguish aesthetic impacts in the various potentially-affected areas. Viewshed analysis may be required to evaluate effects in different areas. All constructed project features will be evaluated relative to Forest Service and other stakeholder <i>recommendations, terms, conditions, or prescriptions</i> for maintenance of aesthetic values from various viewing points.
Cultural Resources	
Cultural resource study	<i>The City will retain an approved cultural resources specialist to inventory and report on cultural resources in a defined APE, which might be affected by project-related construction, road building, or other ground disturbance. These surveys will be in two stages: Stage 1 will be less-intensive reconnaissance surveys designed to define the direct and indirect impact area of the project and the potential of the areas for containing archaeological sites. Stage 2 surveys will be conducted in those areas identified in the Stage 1 surveys as having a reasonable likelihood of containing archaeological sites. The scope of all surveys work will be determined in consultation with the Alaska State Historic Preservation Office, the Forest Service, affected tribes, and Commission staff.</i>
Socioeconomic	
<i>Socioeconomics</i>	<i>Socioeconomics studies typically seek to determine: (1) effects of the project's generation on local, tribal, or regional economies and (2) effects of project construction and operation on local economic uses such as recreation and commercial fishing. The City, in separate reports and/or in any future licensing documents, will document the economic effects of project generation both now and throughout the licensing period. The City will also, using information from recreation, aquatic resources and other study surveys described above, determine economic effects on guide services, recreation economics, and commercial fisheries.</i>

6.0 INFORMATION REQUESTED

We are asking federal, state, and local resource agencies, federally recognized tribes and native corporations, NGOs, and the public to forward to the Commission any information that will assist us in conducting an accurate and thorough analysis of the project-specific and cumulative effects associated with licensing the Takatz Lake Hydroelectric Project. The types of information requested include, but are not limited to:

- information, quantitative data, or professional opinions that may help define the geographic and temporal scope of the analysis (both site-specific and cumulative effects), and that helps identify significant environmental issues;
- identification of, and information from, any other EA, EIS, or similar environmental study (previous, on-going, or planned) relevant to the proposed licensing of the project;
- existing information and any data that would help to describe the past and present actions and effects of the project and other developmental activities on environmental and socioeconomic resources;
- information that would help characterize the existing environmental conditions and habitats;
- the identification of any federal, state, or local resource plans, and any future project proposals in the affected resource area (e.g., proposals to construct or operate water treatment facilities, recreation areas, water diversions, timber harvest activities, or fish management programs), along with any implementation schedules);
- documentation that the proposed project would or would not contribute to cumulative adverse or beneficial effects on any resources. Documentation can include, but need not be limited to, how the project would interact with other projects in the area and other developmental activities; study results; resource management policies; and reports from federal and state agencies, local agencies, federally recognized tribes and native corporations, NGOs, and the public; and
- documentation showing why any resources should be excluded from further study or consideration.

The requested information and comments should be submitted in writing to the Commission no later than **July 19, 2010**; all filings must clearly identify the following on the first page: Takatz Lake Hydroelectric Project No. 13234-001. Address all communications to:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E., Room 1A
Washington, DC 20426

All filings sent to the Secretary of the Commission should contain an original and eight copies. Failure to file an original and eight copies may result in appropriate staff not receiving the benefit of your comments in a timely manner. Comments may be filed electronically via the Internet in lieu of paper. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's web site (<http://www.ferc.gov/docs-filing/ferconline.asp>) under the "e-Filing" link. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov or toll free at 1-866-208-3676, or for TTY, (202) 502-8659. The Commission strongly encourages electronic filings.

Register online at <http://www.ferc.gov/docs-filing/esubscription.asp> to be notified via email of new filings and issuances related to this or other pending projects. For assistance, please contact FERC Online Support.

In addition, there is a "Quick Comment" option available, which is an easy method for interested persons to submit text only comments on a project. The Quick-Comment User Guide can be viewed at <http://www.ferc.gov/docs-filing/efiling/quick-comment-guide.pdf>. Quick Comment does not require a FERC eRegistration account; however, you will be asked to provide a valid email address. All comments submitted under either eFiling or the Quick Comment option are placed in the public record for the specified docket.

Any questions concerning the licensing process, or how to file written comments with the Commission should be directed to Joseph Adamson at (202) 502-8085 or joseph.adamson@ferc.gov. Additional information about the Commission's licensing process and the Takatz Lake Hydroelectric Project may be obtained from the Commission's website, www.ferc.gov.

7.0 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 Takatz Lake Project. The EA will include our recommendations for operating procedures, as well as environmental protection, *mitigation*, 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:⁶

<u>Major Milestone</u>	<u>Target Date</u>
Scoping Meetings	October 2009
License Application Filed	August 31, 2011
Ready for Environmental Analysis Notice Issued	November 2011
Deadline for Filing Comments, Recommendations and Agency Terms and Conditions/Prescriptions	January 2012
Draft EA Issued	May 2012
Comments on Draft EA Due	June 2012
Final EA Issued	September 2012

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 City to respond to the Commission’s request.

8.0 PROPOSED EA OUTLINE

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

TABLE OF CONTENTS
 LIST OF APPENDICES
 LIST OF FIGURES
 LIST OF TABLES
 ACRONYMS AND ABBREVIATIONS
 EXECUTIVE SUMMARY

1.0 INTRODUCTION

⁶ 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.

- 1.1 Application
- 1.2 Purpose of Action and Need for Power
- 1.3 Statutory and Regulatory Requirements
 - 1.3.1 Federal Power Act
 - 1.3.1.1 Section 18 Fishway Prescriptions
 - 1.3.1.2 Section 4(e) Conditions
 - 1.3.1.3 Section 10(j) Recommendations
 - 1.3.2 Clean Water Act
 - 1.3.3 Endangered Species Act
 - 1.3.4 Coastal Zone Management Act
 - 1.3.5 National Historic Preservation Act
 - 1.3.6 Magnuson-Stevens Fishery Conservation and Management Act
- 1.4 Public Review and Comment
 - 1.4.1 Scoping
 - 1.4.2 Interventions
 - 1.4.3 Comments on the Application
 - 1.4.4 Comments on Draft EA
- 2.0 PROPOSED ACTION AND ALTERNATIVES
 - 2.1 No-action Alternative
 - 2.2 Proposed Action
 - 2.2.1 Proposed Project Facilities
 - 2.2.2 Project Safety
 - 2.2.2 Proposed Project Operation
 - 2.2.3 Proposed Environmental Measures
 - 2.2.4 Modifications to Applicant’s Proposal—Mandatory Conditions
 - 2.3 Staff Alternative
 - 2.4 Staff Alternative with Mandatory Conditions
 - 2.5 Alternatives Considered but Eliminated from Detailed Study
- 3.0 ENVIRONMENTAL ANALYSIS
 - 3.1 General Description of the River Basin
 - 3.2 Scope of Cumulative Effects Analysis
 - 3.2.1 Geographic Scope
 - 3.2.2 Temporal Scope
 - 3.3 Proposed Action and Action Alternatives
 - 3.3.1 Geologic and Soil Resources
 - 3.3.2 Aquatic Resources
 - 3.3.3 Terrestrial Resources
 - 3.3.4 Threatened and Endangered Species
 - 3.3.5 Recreation and Land Use
 - 3.3.6 Cultural Resources
 - 3.3.7 Aesthetic Resources
 - 3.3.8 Socioeconomics

3.3.9 Public Safety

3.4 No-action Alternative

4.0 DEVELOPMENTAL ANALYSIS

4.1 Power and Economic Benefits of the Project

4.2 Cost of Environmental Measures

4.3 Comparison of Alternatives

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Comparison of Effects of Proposed Action and Alternatives

5.2 Comprehensive Development and Recommended Alternative

5.3 Unavoidable Adverse Effects

5.4 Recommendations of Fish and Wildlife Agencies

5.5 Consistency with Comprehensive Plans

6.0 FINDING OF NO SIGNIFICANT IMPACT (OR OF SIGNIFICANT IMPACT)

7.0 LITERATURE CITED

8.0 LIST OF PREPARERS

APPENDICES

9.0 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 identified and reviewed the plans listed below that may be relevant to the proposed Takatz 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

- Alaska Department of Fish and Game. 1989. Northwest area plan for state lands. Fairbanks, Alaska. February 1989.
- Alaska Department of Fish and Game. 1998. Catalog of waters important for spawning, rearing or migration of anadromous fishes. November 1998. Juneau, Alaska.

- Alaska Department of Fish and Game. 1998. Atlas to the catalog of waters important for spawning, rearing or migration of anadromous fishes. November 1998. Juneau, Alaska.
- Alaska Department of Natural Resources. 2004. Alaska's Outdoor Legacy: Statewide Comprehensive Outdoor Recreation Plan (SCORP), 2004-2009. Juneau, Alaska. July 2004.

Federal

- Forest Service. 2008. Tongass National Forest land and resource management plan. Department of Agriculture, Ketchikan, Alaska. January 2008.
- U.S. Fish and Wildlife Service. Undated. Fisheries USA: the recreational fisheries policy of the U.S. Fish and Wildlife Service. Washington, D.C.

10.0 FERC OFFICIAL MAILING LIST

If you want to receive future mailings for this project, 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: "Takatz Lake Hydroelectric Project No. 13234-001." You may use the same method to remove your name from the Commission's mailing list for this project.

Also, please notify the City 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.

Appendix I

AGENCY/PARTY COMMENTS RESPONSE TABLE

US Forest Service (Forest Service) Comments of December 7, 2009

Comment Number	Comment Summary	Response and Location
Forest Service 1	Add Alaska Native Claims Settlement Act native corporations to list of participants.	Section 2.1 has been modified.
Forest Service 2	Include transmission routing studies under List of Potential Studies.	The City is reviewing all study request comments and will be working together with stakeholders to address study needs throughout the ALP.
Forest Service 3	Describe clearing width of transmission-line corridor.	Clearing width detail will be available once more advanced design is finalized in the license application.
Forest Service 4	Describe dimensions of running surfaces of roads and bridges.	Details will be available once more advanced design is finalized in the license application.
Forest Service 5	Address agreements between City of Sitka and State of Alaska regarding construction of the cross-island road.	All such agreements will be addressed by the stakeholders during the ALP.
Forest Service 6	Provide details on access corridor road specifications.	Details of access corridor will be available once more advanced design is finalized in the license application.
Forest Service 7	Include information necessary to identify mitigation measures in NEPA document.	We do not evaluate protection and enhancement measures in this SD2. The EA will identify and analyze protection, mitigation, and enhancement measures for the project.
Forest Service 8	Add “ <i>and operation</i> ” to the second bullet under section 4.2.2 Water Quantity and Quality.	Section 4.2.2 has been updated.

Forest Service 9	Add “Effects to aquatic resources, including habitat, for all potentially affected water bodies,” to section 4.2.2 Water Quantity and Quality.	Section 4.2.3 has been updated.
Forest Service 10	Analyze effects to threatened, endangered, and sensitive species under Terrestrial Resources.	This issue will be addressed under section 4.2.5, Threatened and Endangered Species.
Forest Service 11	Provide a strategy to control and manage noxious weeds.	Added noxious weeds as issue to section 4.2.4, Terrestrial Resources.
Forest Service 12	Analyze effects of project development on recreational uses.	Issue added to section 4.2.6, Recreation Resources and Land Use.
Forest Service 13	Add “including, but not limited to, effects of road being open to public year-round, seasonally, etc.” to the second bullet under section 4.2.6 Recreation Resources and Land Use.	Section 4.2.6 has been modified.
Forest Service 14	Replace “Indian tribe” in the third bullet under section 4.2.8 Cultural Resources with: “Federally Recognized Tribes and ANSCA native corporations that have an affiliation to the area.”	Section 4.2.8 has been updated.
Forest Service 15	Add language concerning the potential shift in use of commercial outfitters and guides under section 4.2.9 Socioeconomics.	This issue is already identified under section 4.2.6, Recreation Resources and Land Use.
Forest Service 16	Create new section 4.2.10 for Subsistence.	This issue is addressed under section 4.2.8, Cultural Resources.
Forest Service 17	Develop timber management plan.	The City intends to work collaboratively with the Forest Service and other stakeholders to develop appropriate protection and enhancement measures throughout the ALP.
Forest Service 18	The Forest Service looks forward to reviewing study plans, and	Study plan elements will be addressed during detailed study

	subsequent study results.	plan development with stakeholders throughout ALP.
Forest Service 19	Forest Service requests an evaluation of how the project affects roadless area characteristics.	Roadless area issues will be addressed in section 4.2.6, Recreation Resources and Land Use.
Forest Service 20	Request adding certain federally recognized tribes and native corporations to mailing list.	Although it is encumbered upon the party to request that it be added to or deleted from the Commission mailing and service lists, staff has already revised the mailing list to include federally recognized tribes and native corporations, as they requested.

**Northern Southeast Regional Aquaculture Association (NSRAA) Comments of
December 7, 2009**

Comment Number	Comment Summary	Response and Location
NSRAA 1	Concern about powerhouse outflow on spring chum rearing.	Included in section 4.2.3, Aquatic Resources.
NSRAA 2	Discuss effect of flow regime changes on zooplankton production and chum homing to Takatz Bay.	Included in section 4.2.3, Aquatic Resources.
NSRAA 3	Concern about road construction and major excavations on water quality and fish production.	Included in section 4.2.2, Water Quantity and Quality.
NSRAA 4⁷	Concern about the effects of underwater transmission line location.	Included in section 4.2.3, Aquatic Resources.
NSRAA 5	Concern about construction effects on water quality in Baranof River Valley.	Included in section 4.2.2, Water Quantity and Quality.
NSRAA 6	Concern about the potential water quality impacts in Medvejie Lake and on the Medvejie Hatchery.	Included in section 4.2.2, Water Quantity and Quality.

NSRAA 7	Concern about increased public traffic to hatchery from increased road access.	Included in section 4.2.6, Recreation Resources and Land Use.
NSRAA 8	Concern about the effects of transmission interconnection to Green Lake Project lines on groundwater, etc. near Medvejie Hatchery.	Effects of project, including transmission line construction and maintenance, added to section 4.2.2, Water Quantity and Quality
NSRAA 9	Concern about transmission line construction and maintenance on hatchery operations.	Included in section 4.2.9, Socioeconomic Resources

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Sitka Conservation Society (SCS) Comments of November 24, 2009

Comment Number	Comment Summary	Response and Location
SCS 1	Request energy demand, carbon emissions, and alternative energy source (other than Takatz Lake hydroelectric development) analyses.	Requests for studies will be addressed by the City through the pre-filing ALP study planning process.
SCS 2	Request further studies and analyses on transmission corridor impacts; impacts on Baranof Warm Springs; alternative routes for the transmission line; and impacts of road construction/utility corridor on water quality, aesthetic, and recreation.	Requested analyses will be addressed under resource issues identified in SD2. Requests for studies will be addressed by the City through the pre-filing ALP study planning process.

Baranof Property Owners Association (BPOA) Comments of December 8, 2009

Comment Number	Comment Summary	Response and Location
BPOA 1	Object to the development of the	We do not evaluate the

⁷ As noted previously in SD2, should the Overland Segment for transmission be selected then the issues related to the proposed Marine Segment would be moot.

	project, particularly within the Baranof Warm Springs Bay area	appropriateness of the project in this SD2. A determination on whether the proposed project would be in the public interest would be made by the Commission after staff evaluation of all reasonable alternatives, proposed and recommended protection, mitigation, and enhancement measures, and associated effects in the EA.
BPOA 2	Character of Baranof Warm Springs discussed.	The effects of the project on Baranof Warm Springs are reflected in multiple issues throughout the SD2.
BPOA 3	Concern about the effects (i.e., recreation, aesthetics, socioeconomics, and human health) of transmission lines through the Baranof Warm Springs community.	These issues are included in the SD2 and will be evaluated in the EA.
BPOA 4	Concern with the future development of State of Alaska Department of Transportation (DOT) road from Sitka to Baranof Warm Springs and transmission line on the Baranof Warm Springs area. Would request no road development and alternative transmission line route for power sales.	We have included the effects of potential road development by the State of Alaska DOT in section 4.1, Cumulative Effects. The EA will evaluate the environmental effects of any potential road or transmission line development.
BPOA 5	Concern that project is out of date, since the design for the Takatz Lake Hydroelectric Project was developed in the 1960s.	FERC process requires full evaluation of purpose and need for the project, relative to current and future conditions.
BPOA 6	Concern about the effects of the dam on tourism and wildlife.	These issues are identified in section 4.2 of SD2 and will be evaluated in the EA.
BPOA 7	Opposed to use of the ALP because it is an abbreviated process, preventing adequate review of the proposed project.	The ALP includes all FERC regulatory requirements and promotes extensive collaboration among the

		applicant and all stakeholders.
BPOA 8	Discussed City of Sitka's need for power for the project.	Need for the project power will be evaluated in the EA.

Alaska Department of Fish and Game (ADF&G) Comments of December 8, 2009

Comment Number	Comment Summary	Response and Location
ADF&G 1	Add detailed baseline studies of fish, wildlife, etc.	Any requests for studies will be addressed by the City through the pre-filing ALP study planning process.
ADF&G 2	Pre-, during-, and post- construction plans are needed.	Details of construction plans will be available once more advanced design are finalized in the license application.
ADF&G 3	"Baranof Creek" should be replaced with "Baranof River".	Changes made throughout SD2.
ADF&G 4	Evaluate alternative transmission routes.	During the ALP, alternatives to the proposed project will be identified. All reasonable alternatives for transmission line alignment will be evaluated in the EA.
ADF&G 5	Add detail of outlet structure, spillway, and operations relative to instream flow.	Details of outlet structure, spillway, and their operation will be available once more advanced design is finalized in the license application.

ADF&G 6	Add information on spoils disposal, and a Sedimentation and Erosion control plan.	We have included spoils disposal in section 4.2.1 of the SD2. Any recommendations for sediment and erosion control will be analyzed in the EA.
ADF&G 7	Concern about the location of the powerhouse discharge and its effects on water quality.	Project effects on water quality are included in section 4.2.2, Water Quantity and Quality.
ADF&G 8	Design of proposed tailrace requested.	To be determined in further design studies.
ADF&G 9	Add the proposed Baranof Hatchery to cumulative effects analysis.	We have included the effects of potential commercial fish hatchery construction and operation in section 4.1, Cumulative Effects.
ADF&G 10	Include effects on geothermal resources.	Issue included in section 4.2.1, Geologic and Soil Resources.
ADF&G 11	Add soils stability information and erosion control.	Details of soils stability and erosion control will be available once more advanced design are finalized in the license application.
ADF&G 12	Add description of soils, faults, active or abandoned mines etc. and identify unstable soils that could be affected by project reservoir fluctuations.	Details of soils analysis will be available once more advanced design are finalized in the license application.
ADF&G 13	Comments related to study and analysis of hydrology and water quality relative to project operations	Requests for studies will be addressed by the City through the pre-filing ALP study planning process.
ADF&G 14	Comments requesting studies and analysis for fisheries resources in Takatz Lake and Creek	Requests for studies will be addressed by the City through the pre-filing ALP study planning process.
ADF&G 15	Concern about project-related fluctuation of Takatz Lake on fish.	Issue included in section 4.2.3, Aquatic Resources.
ADF&G 16	Need for water allocation data.	Water quantity effects are included in section 4.2.2, Water

		Quantity and Quality
ADF&G 17	Need to analyze construction and operations impacts on fish and wildlife.	Issue included in sections 4.2.3 and 4.2.4 of SD2.
ADF&G 18	Need to study and analyze impact on terrestrial resources.	Issue included in section 4.2.4, Terrestrial Resources.
ADF&G 19	Need to analyze and study effects on socioeconomics, including the potential increase of recreational opportunities.	The potential project effects on these resources are included in the specific resource sections of the SD2.

Comments of James Brennan (JB), dated November 18, 2009

Comment Number	Comment Summary	Response and Location
JB 1	Commented that the project would be more expensive than currently estimated; and cannot be justified by Sitka electrical demand.	Project cost and need for power will be analyzed in EA.
JB 2	Avalanche damage and repair to the proposed transmission line during project operation.	Transmission line safety and maintenance will be further evaluated in design and operation studies.
JB 3	Concern about the effects of road building and existence near Baranof Lake and River.	The potential effects of any project roads on Baranof Lake and River are included in the resource issues in section 4.2 of the SD2.
JB 4	Concern about the costs of transmission line and tunnel, and how they are not in accord with Sitka needs.	Project cost and need for power will be analyzed in EA.
JB 5	Concern about the effects on Takatz Bay shellfish and finfish resources.	Issue included in section 4.2.3, Aquatic Resources
JB 6	Concern about the effects of transmission line on Baranof Bay and community of Baranof Warm Springs.	The potential effects of any project transmission line on Baranof Bay and Baranof Warm Springs are included in the resource issues in section 4.2 of

		the SD2.
JB 7	Concern about the effects of project construction and maintenance (transmission line and road) on the aesthetic and recreational resources in the Baranof Warm Springs Bay area.	Issue included in section 4.2.6 Recreation and Land Use and section 4.2.7 Aesthetic Resources.