

SOUTHEAST ALASKA POWER AGENCY

55 Don Finney Lane
Ketchikan, Alaska 99901



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January 24, 2025

Via E-Filing

Ms. Debbie-Anne A. Reese
Office of the Secretary
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426

Re: Tyee Lake Hydroelectric Project, FERC No. 3015
Application for Capacity Amendment to License Installation of Third Unit in Existing
Bay at Powerhouse, Request for Waiver of Second Stage Consultation, and
Submission of PDEA for Exhibit E

Dear Secretary Reese:

The Southeast Alaska Power Agency (SEAPA) herein files a Final Application for Capacity Amendment for the Tyee Lake Hydroelectric Project (FERC No. P-3015). The amendment is to install a proposed third turbine-generator unit (Third Unit) in an empty bay in the existing powerhouse at the Project.

The 20-MW Tyee Lake Project, located at the head of Bradfield Canal, approximately 40 miles southeast of the City and Borough of Wrangell, Alaska, began operations in May 1984. The Project was designed and constructed with two 10-MW units and an empty bay for a third unit under a license issued by FERC in 1981. The proposal to add a third turbine would increase the total installed capacity of the Project to 30 MW. Since the Tyee Lake Project was designed and constructed with provisions for a third unit, there would be minimal environmental impact on the area. It would be a cost-effective way to meet the growing energy demand in the region, with the least environmental impact.

All activities associated with installation of the Third Unit would occur within the existing powerhouse and Project facilities already used for maintenance, repair, and other activities related to Project operation. There is no proposed construction affecting navigable waters or wetlands, and there would be no additional lands or waters affected by the proposed installation of the third unit.

SEAPA prepared this amendment application pursuant to FERC's regulations at 18 CFR 4.38 and 18 CFR 4.201. SEAPA is using the Commission's current exhibit nomenclature (A,B,C,D,E, and F), rather than the old nomenclature under the existing license (i.e., exhibits J, K, L, M and S), because of the difficulty finding and comparing old versus new exhibits and because the new exhibits will be used as the basis for relicensing the project, which begins in 2026. Exhibits to this application include:

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- Initial Statement
- Exhibit A pursuant to 18 CFR 4.51 (a)
- Exhibit M of current license showing changes as a result of this amendment in redline
- Exhibit B pursuant to 18 CFR 4.51 (b)
- Exhibit C pursuant to 18 CFR 4.51 (c)
- Exhibit D pursuant to 18 CFR 4.51 (d)
- Preliminary Draft Environmental Assessment in lieu of Exhibit E
- Exhibit F (includes updated Exhibit L drawings pursuant to 18 CFR 4.51 (g))

Exhibit F drawings F-1 through F-6 are provided in this application, and are intended to wholly replace the drawings L4, L5, and L6 that are currently on file with FERC.

The project does not require modification of the FERC project boundary, and as such, a revised Exhibit G is not provided in this application.

A draft of this amendment application was provided to agencies on October 9, 2024 in lieu of an Initial Consultation Document. SEAPA has received letters of support for the project and a waiver of Second Stage Consultation, as described in Attachment A, Waiver Requests. As such, SEAPA respectfully requests FERC's consideration of this application for a capacity-related amendment for the project. If you have any questions regarding this filing, please feel free to contact Mark Hilson, P.E. at 907-228-2017 or by e-mail at mhilson@seapahydro.org.

Respectfully,

Robert Siedman, P.E., Chief Executive Officer
Southeast Alaska Power Agency

BM:TMJ

Enc: Distribution List, Waiver Requests and Summary of Consultation

cc: Mark Hilson P.E., Project Manager, SEAPA
Betsy McGregor and Laura Cowan, Kleinschmidt Associates

ATTACHMENT A

DISTRIBUTION LIST

Distribution List

Name	Organization
Jot Splenda	Federal Energy Regulatory Commission
Diana Shannon	Federal Energy Regulatory Commission
	U.S. Army Corps of Engineers
Julianne Rosset	National Oceanic and Atmospheric Administration
Carol Mahara	U.S. Fish and Wildlife Service
Melissa Dinsmore	U.S. Department of Agriculture
Ann Marie Larquier	Alaska Department of Fish and Game
Sarah Meitl, Judith Bittner	Alaska State Historic Preservation Office
Carol Hasburgh	Alaska Department of Natural Resources
Carl Reese	Alaska Department of Natural Resources
Clint Gundelfinger	Alaska Department of Natural Resources
Jon Wendel	Alaska Department of Environmental Conservation
Ruben Duran	Ketchikan Gateway Borough
Delilah Walsh	City of Ketchikan
Lorraine Richmond	City of Saxman
Jeff Good	City and Borough of Wrangell
Kim Lane	City and Borough of Wrangell
Steve Giesbrecht	City and Borough of Petersburg
Debra Thompson	City and Borough of Petersburg
Tony Gallegos	Ketchikan Indian Community
Winona Wallace	Organized Village of Saxman
Esther Reese	Wrangell Cooperative Association
Chad Wright	Petersburg Indian Association
Albert Smith	Metlakatla Indian Community
Joel M. Jackson	Organized Village of Kake
Justna Cook	Craig Tribal Association
Sidney Edenshaw	Hydaburg Cooperative Association
Joe Nelson	Sealaska Corporation
Clifford Blair	Cape Fox Corporation
Joseph Reeves III	Ketchikan ANCSA Landless Representative
Leo Barlow	Wrangell ANCSA Landless Representative
Brenda Louise	Petersburg ANCSA Landless Representative
	Kake Tribal Corporation
Jeremy Bynum	Jeremy Bynum
Rod Rhoades	Wrangell Municipal Light & Power
Karl Hagerman	Petersburg Municipal Power & Light
	Alaska Power & Telephone
Robert Venables	Southeast Conference

John Cameron	Metlakatla Power and Light
	Wrangell Chamber of Commerce
	Alaska Power Association
	Petersburg Chamber of Commerce
	Southern Southeast Regional Aquaculture Association
	Greater Ketchikan Chamber of Commerce
	Southeast Alaska Fishermen's Alliance (SEAFA)

ATTACHMENT B

WAIVER REQUESTS AND SUMMARY OF CONSULTATION

Pursuant to Rule 212 of the Federal Energy Regulatory Commission's (FERC or Commission) Rules of Practice and Procedure [18 CFR 385.212] Southeast Alaska Power Agency (SEAPA) herein submits a Motion for Waiver of Second Stage Consultation [18 CFR 4.38(a)(9)] and Request to Substitute the Preliminary Draft Environmental Assessment (PDEA) pursuant to the FERC regulations for the Exhibit E [18 CFR 4.51(f)] and the requirements of the National Environmental Policy Act (NEPA).

SEAPA, licensee for the Tyee Lake Hydroelectric Project, FERC No. 3015 (Project), proposes to install an additional 10-megawatt (MW) hydroelectric Pelton-style turbine-generator (third unit) in the existing empty bay in the powerhouse. All Project facilities were designed and built to accommodate installation and operation of the third unit. Installation of the proposed 10-MW third unit would significantly reduce SEAPA's reliance on diesel-generation and would optimize its renewable generation system.

SEAPA prepared a Draft Application for Capacity Amendment to License (Draft Amendment Application) and provided it to the participants in the pre-filing process on October 9, 2024. SEAPA held a Joint Agency/Public Meeting on November 14, 2024. During the meetings, SEAPA discussed its interest in requesting approval to substitute the PDEA for the Exhibit E, and to request a Waiver of Second Stage Consultation, thereby allowing SEAPA to proceed directly to the Final Amendment Application.

In addition to discussions during the Joint Agency/Public Meeting, SEAPA has conducted consultation with multiple state and federal agencies (Table 1). A copy of the correspondence record is provided as an Appendix to the PDEA. SEAPA has not received any requests from agencies or stakeholders for studies, and several agencies provided in their letters support for SEAPA's request for a Waiver of Second Stage Consultation and the use of the PDEA in place of an Exhibit E (attached).

Because of the limited anticipated effects of the proposed action, the support from agencies, and the lack of study requests, SEAPA herein requests that FERC:

- 1) Grants a waiver of second stage of consultation pursuant to 18 CFR 4.38(a)(9), and
- 2) Grants a waiver of the regulations at 18 CFR 4.51(f) requiring the filing of an Exhibit E, and instead accepts an applicant-prepared Draft Environmental Assessment that addresses environmental effects of the proposed action.

Table 1. Summary of Consultation for the Proposed Tyee Lake Hydroelectric Project Amendment to Add a Third Turbine-Generator Unit.

Date	Correspondence
August 1, 2024	Email request for meeting to discuss the proposed Project and process with attached project description sent to: ADF&G, Alaska Department of Environmental Conservation, SHPO, U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS)
August 15, 2024	Meeting with ADF&G, USFWS, and NMFS to review proposed Project and process
September 19, 2024	Email to U.S. Forest Service (USFS) providing Project description and presentation
September 25, 2024	Meeting with USFS to review proposed Project and process
September 26, 2024	Email exchange with USFWS re Tongass National Forest Stream Lines data
October 9, 2024	SEAPA submitted Draft Amendment Application in lieu of ICD
October 16 and October 30, 2024	Wrangell Sentinel and Ketchikan Daily News newspapers notices of November 14, 2024 Joint Agency/Public Meeting (JAM)
October 17 and October 31, 2024	Petersburg Piper newspaper notices of November 14, 2024 JAM
October 17, 2024	Email notice of JAM with attached Draft Amendment Application filing cover letter to: agencies, Tribes and other stakeholders list
October 17, 2024	Email from SHPO requesting Project information be forwarded to OHA mailbox
October 30, 2024	Email notice of JAM with attached Draft Amendment Application filing cover letter to: OHA, USACE
November 1, 2024	FERC issues letter designating SEAPA as non-federal representative for consultation under the National Historic Preservation Act (NHPA), Magnuson-Stevens Fishery Conservation and Management Act for Essential Fish Habitat (EFH) and Endangered Species Act (ESA)
November 7, 2024	Email notice of JAM with attached meeting agenda and presentation to: agencies, Tribes and other stakeholders list
November 8, 2024	Email with attached letter to USFWS requesting initiation of ESA Consultation
November 8, 2024	Email with attached letter to SHPO/OHA requesting initiation of NHPA Section 106 Consultation
November 13, 2024	Email from SHPO/OHA logging request for NHPA Section 106 Consultation
November 14, 2024	Email from USFWS re ESA consultation process
November 14, 2024	Joint Agency Meeting; Attendees: ADF&G, NMFS, ADNR
November 20, 2024	Email to ADF&G as follow-up to JAM and requesting support for SEAPA's motion to FERC to waive second stage consultation
November 20, 2024	Phone call with NMFS to clarify Project information and process
November 21, 2024	Email with attached letter to NMFS requesting initiation of EFH and ESA Consultation

Date	Correspondence
November 26, 2024	Emails with attached letter requesting initiation of NHPA Section 106 Consultation to Ketchikan Indian Community, Organized Village of Saxman, Petersburg Indian Association, Wrangell Cooperative Association, Metlakatla Indian Community, Hydaburg Cooperative Association, Organized Village of Kake, Cape Fox Corporation, Sealaska Corporation, Kake Tribal Corporation
November 26, 2024	Email from ADF&G Habitat Division re Fish Habitat Permit
November 26, 2024	Email from Sealaska Corporation
November 26, 2024	Email from Metlakatla Indian Community
December 2, 2024	Email to Sealaska Corporation offering to meet to discuss the Project
December 2, 2024	Email from Metlakatla Indian Community offering to meet to discuss the Project
December 3, 2024	Email to ADF&G seeking clarification re Habitat Division comment
December 3, 2024	Phone call with ADF&G Habitat Division re Fish Habitat Permit and timing window for plant shutdown for routine maintenance
December 3, 2024	Email from ADF&G Habitat Division as follow-up from phone call
December 4, 2024	Comment letter from NMFS
December 4, 2024	Phone call with NMFS clarifying Hidden Creek Flow Monitoring Plan
December 6, 2024	Email communications with NMFS clarifying Project information and SEAPA's agreement to implement mitigation measures to protect ESA-listed humpback whales
December 9, 2024	Comment letter from USFWS
December 9, 2024	Phone call with ADF&G clarifying the process; Comment letter from ADF&G
December 13, 2024	Letter of concurrence from NMFS and completion of ESA consultation
December 13, 2024	Comment email from SHPO/OHA
December 18, 2024	Email to Alaska Department of Natural Resources (ADNR) seeking documentation of current water rights permit
December 18, 2024	Email to ADF&G Habitat Division requesting Fish Habitat Permit FH10-I-0160 be amended for proposed Project
January 21, 2025	Letter from ADNR confirming water rights
January 21, 2025	ADF&G provides amended Fish Habitat Permit FH10-I-0160 for the proposed Project
January 24, 2025	Memo to agencies agreeing to requested protection, mitigation and enhancement measures.



United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Southern Alaska Fish and Wildlife Field Office
Anchorage Fish and Wildlife Conservation Office
4700 BLM Road
Anchorage, Alaska 99507



In Reply Refer to:
FWS/R7/SAFWFO

Betsy McGregor
Senior Scientist and Regulatory Consultant
Kleinschmidt
55 Don Finney Lane
Ketchikan, Alaska 99901

Subject: Tyee Lake Hydroelectric Project (Federal Energy Regulatory Commission Project Number P-3015) Initial Consultation Document, Draft Application for Capacity Amendment to License, and Preliminary Draft Environmental Assessment (Service file number 2025-0028192)

Dear Betsy McGregor:

Thank you for providing the Initial Consultation Document (ICD) for the Draft Application for Capacity Amendment to License (Draft Amendment Application) for the Tyee Lake Hydroelectric Project (Project; Federal Energy Regulatory Commission Project [FERC] Number P-3015) on October 8, 2024. On behalf of Southeast Alaska Power Agency (SEAPA), licensee for the Project, Kleinschmidt is proposing a license amendment to enable the installation of an additional 10-megawatt hydroelectric Pelton-style turbine generator to an existing empty bay at the powerhouse. The ICD consists of the Draft Amendment Application, as well as an Exhibit E in the form of a Preliminary Draft Environment Assessment (PDEA).

With minimal impacts anticipated, SEAPA proposes to expedite the amendment application by seeking waivers of compliance with a portion of consultation requirements from resource agencies and Alaska Native Tribes. Specifically, SEAPA is seeking agency support that:

1. studies are not needed to assess resource impacts from installation and operation of a third unit
2. the second stage of consultation can be waived so that SEAPA can proceed directly to a Final Amendment Application
3. using the PDEA in lieu of Exhibit E in the Final Amendment Application is acceptable.

The U.S. Fish and Wildlife Service (Service) has reviewed the ICD and offers the following response to these requests.

Studies

The Service requests scour and deposition monitoring at the tailrace where changes in flows are anticipated but does not require a full study to assess resource impacts.

The proposed license amendment would not change water rights or minimum/maximum pool elevations at the lake, but if all three turbines were running simultaneously, the reservoir water surface elevation may be drawn down at a faster rate compared to existing conditions, and the maximum output at the tailrace could increase from 234 cubic feet per second (cfs) to 351 cfs. Some minor scouring of the tailrace channel bed may occur, and the mobilized fines would likely be deposited at either the lower end of the tailrace or Airstrip Slough. Because the Project tailrace was designed to accommodate simultaneous maximum output flows from three turbine units (ICD, page E-36), and because it is anticipated that the deposition of fines would be comparable to natural sedimentation processes for that intertidal area (ICD, page E-37), the Service does not require a full study to assess resource impacts, but requests monitoring that shows the tailrace and downstream environment are responding to the changes in flow regimes as expected.

Waiver of compliance with consultation requirements 18 CFR 4.38(e)

A second stage of consultation under 18 CFR 4.38(c) allows for more discussion and information gathering in order for FERC to make an informed decision regarding the merits of an application. Since the Service is not requesting an initial round of studies for this Draft Amendment Application, we do not need a second stage of consultation and waive that second stage consultation requirement under 18 CFR 4.38(e).

Exhibit E in the Final Amendment Application

An Exhibit E (Environmental Report) is part of a typical license application, but an applicant using alternative procedures may use an environmental review document under the National Environmental Policy Act instead of Exhibit E (18 CFR 4.34(i)).

Exhibit E of the Project ICD includes the PDEA (ICD, pages E-20 – E-111). The Service approves of using the PDEA in lieu of Exhibit E in the final amendment application.

Thank you for the opportunity to review and comment on the ICD and the Draft Amendment Application for the Project. The Service understands that relicensing procedures will commence in 2025 where the Project as a whole will be reviewed, and we look forward to working with SEAPA for that process. For more information or if you have any questions, please contact Senior Fish and Wildlife Biologist Ecological Services, Ms. Carol Mahara at (907) 280-9751 or via email carol_mahara@fws.gov and reference Service file number 2025-0028192.

Sincerely,

Acting For:
Douglass M. Cooper
Branch Chief, Ecological Services



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, AK 99802-1668

December 4, 2024

Betsy McGregor
Kleinschmidt Senior Scientist
55 Don Finney Lane
Ketchikan, Alaska 99901

Re: Tyee Lake Hydroelectric Project (FERC No. 3015) Draft Application for Capacity
Amendment to License and Preliminary Draft Environmental Assessment

Betsy:

The National Marine Fisheries Service has reviewed the Southeast Alaska Power Agency's (SEAPA or Licensee) draft Application for a capacity amendment to the Tyee Lake Hydroelectric Project (Project) license, as submitted to the Federal Energy Regulatory Commission on October 9, 2024.¹ On November 14, 2024, Kleinschmidt Associates, on behalf of SEAPA, hosted a meeting to discuss the process and seek agency and stakeholder support that:

1. Studies are not needed to assess resource impacts from installation and operation of a third unit.
2. The second stage of consultations can be waived and SEAPA can proceed directly to a Final Amendment Application to expedite installation.
3. Use of the Preliminary Draft Environmental Assessment (PDEA) in lieu of the Exhibit E in the Final Amendment Application is acceptable as it may expedite approval of the amendment.

Additionally, on November 20, 2024, Kleinschmidt Associates submitted a Request for Informal Consultation. That request is specific to the Endangered Species Act. The equivalent for consultation under Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act is an abbreviated consultation. After reviewing the amendment application, attending the November meeting, and reviewing the documents provided, we support the use of an abbreviated EFH consultation and offer the following comments.

Background

Tyee Lake receives between 250 and 350 feet of water from precipitation and runoff, which is diverted to the Project's powerhouse via a lake tap. The normal operating pool ranges in elevation from 1,250 feet to full pool. At 1,398.3 feet elevation, water spills over a weir at the

¹ Accession No. 20241009-5017



natural lake outlet to Tyee Creek, which joins Hidden Creek before flowing into Bradfield Canal about one half mile from the tailrace. As noted in the amendment application, Bradfield Canal is designated EFH for various life stages of Chinook (*Oncorhynchus tshawytscha*), chum (*O. keta*), coho (*O. kisutch*), pink (*O. gorbuscha*), and sockeye salmon (*O. nerka*). Additionally, the Alaska Department of Fish & Game's Anadromous Waters Catalog lists the lower 460 feet of Hidden Creek (AWC Stream No. 107-40-10538) as habitat for chum, coho, and pink salmon.

During the November meeting, the Licensee indicated stakeholders were concerned that the diversion of Tyee Lake water would result in the loss of anadromous fish habitat in Hidden Creek when the Project was constructed. However, according to SEAPA, Hidden Creek has continued to flow year-round since the Project began operating in 1984. The Licensee does not anticipate a reduction in the amount, or frequency, of spill in average to above-average water years will affect salmon in Hidden Creek after installation and operation of the third unit.

Comments

We do not object to the installation of the third turbine at the Project. However, it will be important to monitor the lower 460 feet of Hidden Creek after the turbine is operational to ensure that the reduction in spill does not affect salmon or salmon habitat. If SEAPA agrees to this monitoring, we can agree that second stage of consultations can be waived and use of the PDEA in lieu of the Exhibit E in the Final Amendment Application is acceptable. A monitoring plan should be established in consultation with us. Please note, this does not waive our ability to revisit the operation of the third turbine or its impacts to fish and their associated habitat in the upcoming relicensing process that begins in 2025.

Questions regarding our comments should be directed to Julianne Rosset at 907-271-3654 or julianne.rosset@noaa.gov.

Sincerely,



Catherine Coon
Assistant Regional Administrator
Habitat Conservation

Cc: Mark Hilson, SEAPA, mhilson@seapahydro.org
Carol Mahara, USFWS, carol_mahara@fws.gov
Anne Marie Larquier, ADF&G, ann.larquier@alaska.gov
Jarrod Sowa, ADF&G, jarrod.sowa@alaska.gov



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, AK 99802-1668

December 13, 2024

Betsy McGregor
Kleinschmidt Senior Scientist
55 Don Finney Lane
Ketchikan, Alaska 99901

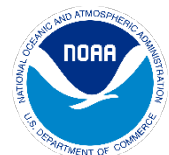
Re: Tyee Lake Hydroelectric Project (FERC No. 3015) Letter of Concurrence, AKRO-2024-03054

Dear Ms. McGregor:

The National Marine Fisheries Service (NMFS) has completed informal consultation under section 7(a)(2) of the Endangered Species Act (ESA) regarding the proposed Tyee Lake Hydroelectric Project (FERC No. 3015) located approximately 40 miles southeast of Wrangell, Alaska. Southeast Alaska Power Agency (SEAPA) and its contractor for the project, Kleinschmidt Associates (KA), non-Federal designee, requested, on behalf of the Federal Energy Regulatory Commission (FERC), written concurrence that the proposed action may affect, but is not likely to adversely affect, the Mexico distinct population segment (DPS) humpback whale (*Megaptera novaeangliae*). Based on our analysis of the information you provided to us, and additional literature cited below, NMFS concurs with your determination.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on May 6, 2024 (89 FR 24268). We are applying the updated regulations to this consultation. The 2024 regulatory changes, like those from 2019, were intended to improve and clarify the consultation process, and, with one exception from 2024 (offsetting reasonable and prudent measures), were not intended to result in changes to NMFS' existing practice in implementing section 7(a)(2) of the ESA (84 FR at 45015; 89 FR at 24268). We have considered the prior rules and affirm that the substantive analysis and conclusions articulated in this letter of concurrence would not have been any different under the 2019 regulations or pre-2019 regulations.

This letter underwent pre-dissemination review in compliance with applicable Data Quality Act guidelines. A complete administrative record of this consultation is on file in this office.



Consultation History

NMFS received your request for consultation on November 21, 2024, and your correspondence identifying SEAPA and contractor KA as your non-Federal representative for this project as of November 1, 2024. On December 6, 2024, NMFS requested and received more information about the project from KA. NMFS initiated consultation on December 6, 2024.

Description of the Proposed Action

“Action” means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas. 50 C.F.R. §402.02.

On behalf of FERC, SEAPA is proposing an amendment to the Tyee Lake license to install a third 10 megawatt (MW) Pelton-style turbine-generating unit in the existing empty bay at the Tyee Lake powerhouse and a new transformer in the existing switchyard, which would increase the total installed capacity from 20 MW to 30 MW. Tyee Lake is a natural lake with a drainage area of approximately 14.4 square miles. Water from Tyee Lake supplies the hydroelectric project via a lake tap. The current regional demand exceeds the existing hydropower resources and is projected to grow over the next few years.

Construction activities would occur within the licensed project boundary on state land and would involve the following existing project facilities: powerhouse, electrical substation, maintenance buildings, access road, staging and laydown areas, airstrip, barge bulkhead, dock and ramp, and contractor housing (Figure 1). There would be no changes to the Tyee Lake outlet weir, intake structure, gate house, power tunnel, or penstocks. Construction activities would not require new ground disturbance, new roads or staging areas, removal of vegetation, or need for placement or discharge of dredged and/or fill material into waters of the U.S. There would be no modifications of the tailrace and no work conducted below the ordinary high water level of any waterbody.

Equipment and supplies would be transported during high tide via barge from Wrangell along the east side of Wrangell Island to the head of Bradfield Canal (Figure 2) and the existing barge bulkhead on site. It is expected that there would be five to six barge trips from Wrangell to the project site in late spring/early summer of 2026 to complete the Proposed Action. Barges would be off-loaded by forklift or front-end loader already present on site. Equipment and materials may be temporarily placed in the existing staging area near the barge bulkhead or transported directly to the powerhouse area using the existing road. No ground-disturbing activities or upgrades to the existing roads or staging areas are anticipated.

Up to approximately 15 workers may be on site at one time. Construction workers would be either flown to the Tyee Lake airstrip (Figure 1) or transported to the dock or barge bulkhead by private ferry. Construction crew and engineers would be housed in SEAPA’s existing onsite bunkhouse or at existing U.S. Forest Service cabins under SEAPA’s Special Use Permit. It is anticipated that commissioning would occur within a year of initiation of construction activities.

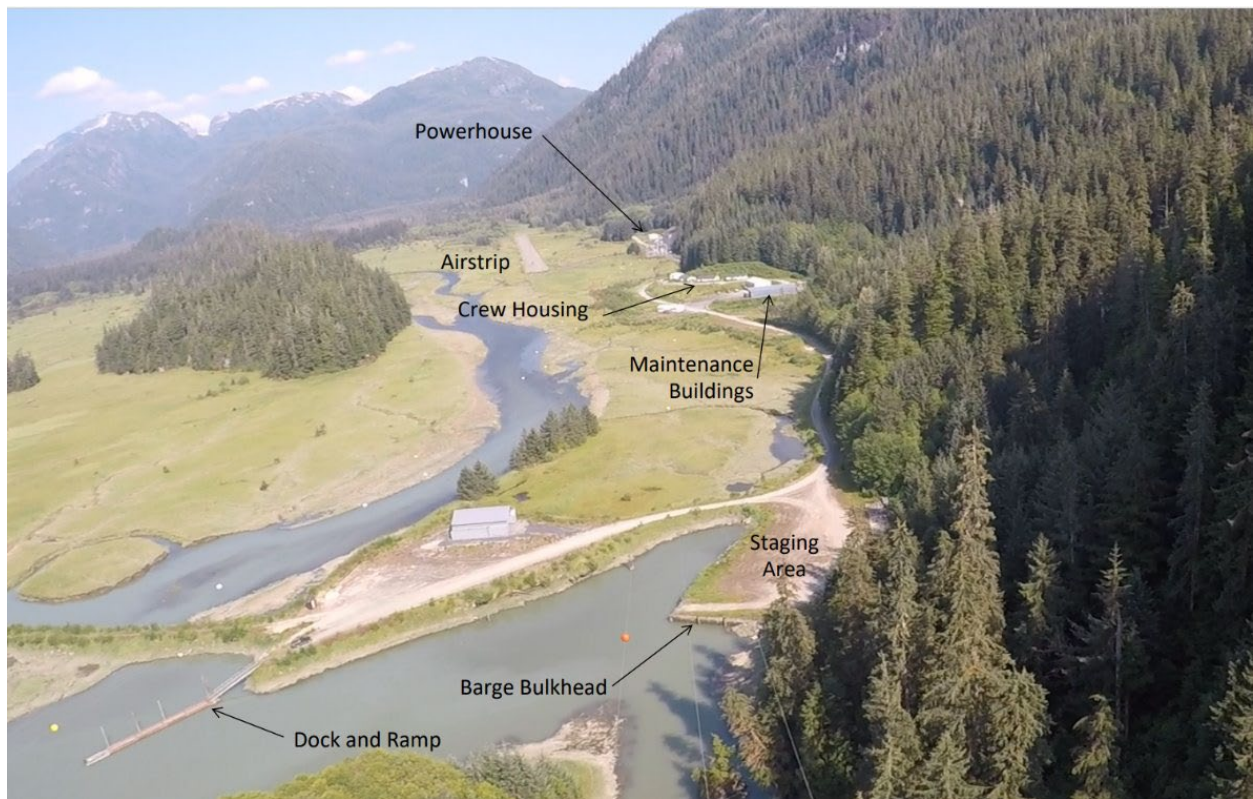


Figure 1. Tyee Lake hydroelectric project area.



Figure 2. Proposed Action Area for the Tyee Hydroelectric Project.

Action Area

The action area is defined in the ESA regulations (50 CFR § 402.02) all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The action area is distinct from and larger than the project footprint because some elements of the project may affect listed species some distance from the project footprint. The action area, therefore, extends out to a point where no measurable effects from the project are expected to occur.

The action area includes the waters from Wrangell south and east through Bradfield Canal to the base of the Tyee Lake project site (Figure 2).

Mitigation Measures

KA informed NMFS via email correspondence on Dec. 6, 2024 that the proposed action will incorporate the following mitigation measures:

For all reporting that results from implementation of these mitigation measures, NMFS will be contacted using the contact information specified in Table 2. In all cases, notification will reference the NMFS consultation tracking number (e.g., AKRO-2024-03054).

General Mitigation Measures

1. The project proponent will inform NMFS of impending in-water activities a minimum of one week prior to the onset of those activities (email information to akr.prd.records@noaa.gov).
2. Consistent with AS 46.06.080, trash will be disposed of in accordance with state law. The project proponent will ensure that all closed loops (e.g., packing straps, rings, bands, etc.) will be cut prior to disposal. In addition, the project proponent will secure all ropes, nets, and other marine mammal entanglement hazards so they cannot enter marine waters.

Project-Dedicated Vessels (vessel and crew safety should never be compromised)

3. Vessel operators will:
 - a. maintain a watch for marine mammals at all times while underway;
 - b. stay at least 91 meters (100 yards) away from listed marine mammals, except that they will remain at least 460 meters (500 yards) away from endangered North Pacific right whales;
 - c. travel at less than 5 knots when within 274 meters (300 yards) of a whale;
 - d. avoid changes in direction and speed within 274 meters (300 yards) of a whale, unless doing so is necessary for maritime safety;

- e. not position vessel(s) in the path of a whale, and will not cut in front of a whale in a way or at a distance that causes the whale to change direction of travel or behavior (including breathing/surfacing pattern);
 - f. reduce vessel speed to 10 knots or less when weather conditions reduce visibility to 1.6 kilometers (1 mile) or less; and
 - g. adhere to the Alaska Humpback Whale Approach Regulations when vessels are transiting to and from the project site: (see 50 CFR §§ 216.18, 223.214, and 224.103(b); these regulations apply to all humpback whales). Specifically, pilot and crew will not:
 - i. approach, by any means, including by interception (i.e., placing a vessel in the path of an oncoming humpback whale), within 100 yards of any humpback whale;
 - ii. cause a vessel or other object to approach within 100 yards of any humpback whale; or
 - iii. disrupt the normal behavior or prior activity of a humpback whale by any other act or omission.
4. If a whale's course and speed are such that it will likely cross in front of a vessel that is underway, or approach within 91 meters (100 yards) of the vessel, and if maritime conditions safely allow, the engine will be put in neutral and the whale will be allowed to pass beyond the vessel, except that vessels will remain 460 meters (500 yards) from North Pacific right whales.
 5. Vessels will not allow lines to remain in the water unless both ends are under tension and affixed to vessels or gear.
 6. Project-specific barges will travel at 12 knots or less.

Reporting

Unauthorized Take

7. If a listed marine mammal is injured or killed as a direct or indirect result of the action), KA will report the incident to NMFS within one business day, with information submitted to akr.prd.records@noaa.gov. These records will include:
 - a. digital, queryable documents containing observations and records, and digital, queryable reports;
 - b. the date, time, and location of each event (provide geographic coordinates);
 - c. description of the event;

- d. number of individuals of each listed marine mammal species affected;
- e. the time the animal(s) was first observed, and, if known, the time the animal was last seen, and the fate of the animal;
- f. mitigation measures implemented prior to and after the animal was taken;
- g. if a vessel struck a listed marine mammal, the contact information for individual piloting the vessel; and
- h. photographs or video footage of the animal(s), if available.

Stranded, Injured, Sick or Dead Listed Species (not associated with the project)

- 8. If the individual piloting the vessel observes an injured, sick, or dead marine mammals (i.e., stranded), they will notify the Alaska Marine Mammal Stranding Hotline at 877-925-7773 (Table 2). If possible, the individual piloting the vessel will submit photos and available data to aid NMFS in determining how to respond to the stranded animal. If possible, data submitted to NMFS in response to stranded marine mammals will include date/time, location of stranded marine mammal, species and number of stranded individuals, description of the stranded marine mammal's condition, event type (e.g., entanglement, dead, floating), and behavior of live-stranded marine mammals.

Illegal Activities

- 9. If the individual piloting the vessel observes listed marine mammals or other marine mammals being disturbed, harassed, harmed, injured, or killed (e.g., feeding or unauthorized harassment), these activities will be reported to NMFS Alaska Region Office of Law Enforcement (Table 2; 1-800-853-1964).
- 10. Data submitted to NMFS will include date/time, location, description of the event, and any photos or videos taken.

Extralimital Sightings

- 11. All observations of ESA-listed marine mammal species not considered in this consultation will be reported to NMFS within 24 hours. Photographs and/or video should be taken if possible to aid in Photo ID of individual animals. Reports will include all applicable information that would be included in a final report.

Final Report

- 12. A final report will be submitted to NMFS within 90 calendar days of the completion of the project summarizing the data recorded by emailing it to akr.prd.records@noaa.gov. The report will summarize all in-water activities associated with the proposed action.

13. The final report for projects will include:

- a. dates, times, and geographic coordinates of listed marine mammals observed by the individual piloting the vessel, including water depth, species, age/size/gender (if determinable), and group sizes; and;
- b. any photos or videos taken of marine mammals.

Table 1. Summary of Agency Contact Information

Reason for Contact	Contact Information
Consultation Questions & Unauthorized Take	akr.prd.section7@noaa.gov
Reports & Data Submittal	akr.prd.records@noaa.gov
Stranded, Injured, or Dead Marine Mammals	Stranding Hotline (24/7 coverage) 1-877-925-7773
Oil Spill & Hazardous Materials Response	U.S. Coast Guard National Response Center: 1-800-424-8802 and AKRNMFSspoilResponse@noaa.gov
Illegal Activities (<i>not related to project activities; e.g., feeding, unauthorized harassment, or disturbance to marine mammals</i>)	NMFS Office of Law Enforcement (AK Hotline): 1-800-853-1964
In the event that this contact information becomes obsolete	NMFS Anchorage Main Office: 907-271-5006 or NMFS Juneau Main Office: 907-586-7236

Listed Species

Humpback Whale

The humpback whale (*Megaptera novaeangliae*) was listed as endangered under the ESCA in 1970 (35 FR 8491, June 2, 1970 (baleen whales listing); 35 FR 18319, December 2, 1970 (humpback whale listing)). Congress replaced the ESCA with the ESA in 1973, and humpback

whales continued to be listed as endangered. NMFS conducted a global status review that led to changing the status of humpback whales under the ESA and dividing the species into 14 DPSs (81 FR 62259, September 8, 2016). Of these 14 DPSs, NMFS listed four as endangered, one as threatened, and delisted the remaining nine. Three DPSs occur in waters of Alaska. The Western North Pacific DPS is listed as endangered; the Mexico DPS is listed as threatened; and the Hawaii DPS is not listed (81 FR 62259, September 8, 2016).

The Hawaii DPS population is estimated to be 11,540 animals (CV=0.04) with an annual growth rate between 5.5 and 6.0 percent. The Mexico DPS is comprised of approximately 2,913 animals (CV=0.7; Wade 2021) with an unknown, but likely declining, population trend (81 FR 62259; September 8, 2016). Approximately 1,084 animals (CV=0.09) comprise the Western North Pacific DPS (Wade 2021). Humpback whales in the Western North Pacific remain rare in some parts of their former range, such as the coastal waters of Korea, and have shown little sign of recovery in those locations.

Whales from these three DPSs overlap on feeding grounds off Alaska, and are visually indistinguishable unless individuals have been photo-identified on breeding grounds and again on feeding grounds. All waters off the coast of Alaska may contain ESA-listed humpbacks.

Humpback whales produce a variety of vocalizations ranging from 20 Hz to 10 kHz (Silber 1986; Richardson et al. 1995; Au 2000; Erbe 2002; Au et al. 2006; Vu et al. 2012). NMFS categorizes humpback whales in the low-frequency cetacean functional hearing group, with an applied frequency range between 7 Hz and 35 kHz (NMFS 2018).

Southeast Alaska

Relatively high densities of humpback whales occur throughout much of Southeast Alaska and northern British Columbia, particularly during the summer months. The abundance estimate for humpback whales in Southeast Alaska is estimated to be 5,890 (CV= 0.08) animals, which includes whales from the unlisted Hawaii DPS (98 percent) and threatened Mexico DPS (2 percent; Wade 2021; Table 3). Although migration timing varies among individuals, most whales depart for Hawaii or Mexico in fall or winter and begin returning to Southeast Alaska in spring, with continued returns through the summer and a peak occurrence in Southeast Alaska during late summer to early fall. However, there are significant overlaps in departures and returns (Baker et al. 1985; Straley 1990).

Table 2. Percent probability of encountering humpback whales from each DPS in the North Pacific Ocean (columns) in various feeding areas (on left; Wade 2021).

Summer Feeding Areas	North Pacific Distinct Population Segments (DPS) (percent)			
	Western North Pacific (endangered)	Hawaii (not listed)	Mexico (threatened)	Central America (endangered)
Kamchatka	91	9	0	0
Aleutian I / Bering / Chukchi Seas	2	91	7	0
Gulf of Alaska	1	89	11	0
Southeast Alaska / Northern BC	0	98	2	0
Southern BC / WA	0	69	25	6
OR/CA	0	0	58	42
Note that in the past iteration of this guidance, upper confidence intervals were used for endangered DPSs. However, the revised estimates do not have associated coefficients of variation to cite. Therefore, the point estimate is being used for each probability of occurrence.				

Additional information on humpback whale biology and natural history is available at:

[Humpback Whale Species Description](#)

[Marine Mammal Stock Assessment Reports: Cetaceans-Large Whales](#)

[Humpback Whale Critical Habitat](#)

[Occurrence of Listed Humpback Whales off Alaska](#)

Humpback whales in the action area

Given their widespread range, relative abundance, their opportunistic foraging strategies, and frequent near-shore occurrence, Mexico DPS humpback whales may occur in the vicinity of the project covered in this consultation. The closest Mexico DPS humpback whale critical habitat is in the Prince William Sound area, more than 500 miles from the closest action area (Wrangell) in Southeast Alaska, therefore Mexico DPS humpback critical habitat will not be discussed any further.

Effects of the Action

“Effects of the action” are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (50 CFR § 402.02). The applicable standard to find that a proposed action may affect but is “not likely to adversely affect” listed species or critical habitat is that all of the effects of the action are expected to be insignificant, extremely unlikely to occur, or completely beneficial. “Insignificant effects” relate to the magnitude of the impact and are those that one would not be able to meaningfully measure, detect, or evaluate; insignificant effects should never reach the scale where take occurs.

While the ESA does not define “harass,” NMFS issued guidance interpreting the term “harass” under the ESA as to: “create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering” (Wieting 2016). NMFS considers the following steps to assess whether proposed activities are likely to harass.

1. Whether an animal is likely to be exposed to a stressor or disturbance (i.e., an annoyance);
2. The nature of that exposure in term of magnitude, frequency, duration, etc. Included in this may be type and scale as well as considerations of the geographic area of exposures (e.g., is the annoyance within a biologically important location for the species, such as a foraging area, spawning/breeding area, or nursery area).
3. The expected response of the exposed animal to a stressors or disturbance (e.g., startle, flight, alteration [including abandonment] of important behaviors); and;
4. Whether the nature and duration or intensity of that response is a significant disruption of those behavior patterns which include, but are not limited to, breeding, feeding, sheltering, resting, or migrating.

The potential effects of the proposed action on listed species include vessel noise, vessel strike, and entanglement in vessel lines and marine debris.

Vessel Noise

Vessel noise associated with the proposed action will include vessels transiting between Wrangell and the Tyee Lake project site. Barges will be used to deliver materials to the project site, and workers may be transported via private ferry.

Smaller vessels like the tugs associated with the proposed action have higher speed engines and propellers than larger fueling vessels or barges. The smaller vessel noise spectra peak around 300 Hz with a source level ranging from 145-170 dB re 1 μ Pa depending on if the tug is pulling an empty or loaded barge. Depending on the type of engines on the fueling vessels, the overall

source level of 175 dB re 1 μ Pa is expected (Richardson et al. 1995). This noise is expected to attenuate quickly due to reduced low frequency propagation in shallow water.

Vessels associated with the proposed action will have a transitory and short-term presence within the action area; the potential overlap with listed marine mammals is relatively small for the project period. However, even during peak occurrence in the summer, only a fraction (~ 6%) of humpback whales present in Southeast Alaska are listed Mexico DPS humpback whales. Moreover, Mexico DPS humpback whales routinely encounter vessels and may be habituated to associated noise of transiting vessels. We do not expect that the effects from vessel noise could be meaningfully measured or detected, and therefore we consider such effects to be insignificant.

Vessel Strike

Vessels transiting the marine environment have the potential to collide with, or strike, marine mammals (Laist et al. 2001; Jensen and Silber 2004). The probability of strike events depends on the frequency, speed, and route of the marine vessels, as well as distribution of marine mammals in the area. Humpback whales are especially susceptible to ship strike injury and mortality in narrow bottleneck passages (Williams and O'Hara 2010). Laist et al. (2001) found that while all sizes and types of vessel can strike a whale, ships greater than 80 meters and those going faster than 14 knots were most likely to cause severe or fatal injuries.

The number of barge and ferry vessels associated with operations of the proposed action will be small. The overlap of humpback whales in the action area will be limited. Implementation of mitigation measures make the probability of vessel strike very low, therefore, we conclude that the potential risk for vessel strikes to humpback whales is extremely unlikely to occur.

Entanglement

The project has the potential to increase risk of entanglement of humpback whales by use of lines to secure the vessel and potential marine debris resulting from materials being barged to the project site. Humpback whales are known to entangle in net and lines within the water column and are particularly susceptible when gear co-occurs with foraging opportunities. In 2018 there was 76 confirmed humpback whale entanglements nationwide (NMFS 2020). However, the limited number of barge and ferry vessels transiting to the project site and the implementation of the mitigation measures for this project will reduce the potential for entanglement to occur, making entanglement of Mexico DPS humpback whales extremely unlikely to occur.

Conclusion

Based on this analysis, NMFS concurs with your determination that the proposed action may affect, but is not likely to adversely affect the ESA-listed Mexico DPS humpback whale. Reinitiation of consultation is required where discretionary federal involvement or control over the action has been retained or is authorized by law and if (1) take of listed species occurs, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered, (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this

concurrence letter, or (4) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR § 402.16).

Please direct any questions regarding this letter to Kim Raum-Suryan at kim.raum-suryan@noaa.gov, 907.586.7424 and to akr.prd.section7@noaa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Anne Marie Eich".

Anne Marie Eich, Ph.D.
Assistant Regional Administrator
for Protected Resources

cc: Betsy McGregor Betsy.McGregor@KleinschmidtGroup.com

Mark Hilson mhilson@seapahydro.org

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THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

Department of Fish and Game

Division of Sport Fish
Research & Technical Services

333 Raspberry Road
Anchorage, Alaska 99518-1565
Main: 907.267.2100

November 27, 2024

Betsy McGregor
Senior Scientist and Regulatory Consultant, Kleinschmidt
555 Don Finney Lane
Ketchikan, Alaska 99901

Subject: Tyee Lake Hydroelectric Project (P-3015)
Comments on Draft Application for Capacity Amendment to License, Preliminary
Draft Environmental Assessment for the installation of Third Unit in Existing Bay
At Powerhouse

Dear Ms. McGregor:

On October 9, 2024, the Southeast Alaska Power Agency filed a Draft Application for Capacity Amendment License with the Federal Energy Regulatory Commission for the Tyee Lake Hydroelectric Project (P-3015) and solicited stakeholder comments for the Project's Draft Amendment Application.

Alaska Department of Fish and Game (ADF&G) staff have reviewed the Draft Amendment Application. ADF&G supports SEAPA's request to waive second-stage consultation per 18 CFR 4.38(e). ADF&G also supports use of the PDEA in lieu of the Exhibit E in the Final Amendment Application.

The requested action will require an amendment to Fish Habitat Permit FH10-I-0160 issued by the Habitat Section of ADF&G. This permit amendment is required for annual maintenance and emergency shut-downs and increasing the tailrace discharge by way of adding the third turbine. For this action, please contact Claire Delbecq, Habitat Biologist 2 in Juneau at claire.delbecq@alaska.gov.

If you have any questions, please contact me at ann.larquier@alaska.gov or (907) 267-2311.
Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Ann Marie Larquier".

Ann Marie Larquier
FERC Hydropower Coordinator
Alaska Department of Fish and Game
(907) 267-2311

Cc: J. Klein, ADF&G
J. Sowa, ADF&G
J. Rice, ADF&G

K. Kanouse, ADF&G
C. Delbecq, ADF&G
M. Hilson, SEAPA

L. Townson, FERC
J. Rosset, NMFS
C. Mahara, USFWS



**FISH HABITAT PERMIT FH10-I-0160
AMENDMENT #1**

ISSUED: January 21, 2025
EXPIRES: Life of Project

Southeast Alaska Power Agency
ATTN: Robert Siedman
55 Don Finney Lane
Ketchikan, Alaska 99901

RE: Tyee Lake Water Use, Turbine Addition
Tyee Lake and Hidden Creek (Stream Number 107-40-10538)
Tailrace Creek (Stream Number 107-40-10537-2008)
Section 21, T 65 S, R 090 E, CRM (Bradfield Canal A-5)
Location: 56.217662 N, 131.4905191 W (WGS 84)

Dear Robert Siedman:

Pursuant to the Anadromous Fish Act at AS 16.05.871(b) and the Fishway Act at AS 16.05.841, the Alaska Department of Fish and Game (ADF&G) Habitat Section reviewed your proposal to install a third turbine at the Tyee Lake Hydroelectric facility to withdraw up to your allotted 135,000 acre feet of water per year from your existing lake-tap intake in Tyee Lake. The proposed updates to the facility, which was built in 1983, will provide more hydroelectric power to Southeast. Please refer to the original permit FH10-I-0160 for additional information on the project.

Project Description

The addition of a third turbine would increase the maximum discharge through the powerhouse into Tailrace Creek from 234 ft³/s to 351 ft³/s, when all three turbines are running. The increase in streamflow is likely to change channel morphology in Tailrace Creek. However, impacts to fish habitat and fish use of the creek are expected to be minimal given the low fish use of the area. Kanouse and Timothy (2018) found low adult and juvenile fish use of the creek due to salinity concentrations from tidal influence, studies which fulfilled the monitoring program described in the original permit FH10-I-0160^a.

^a Kanouse, K.M. and J. Timothy. 2018. Pink salmon use of the Tyee Lake hydro tailrace. Alaska Department of Fish and Game. Technical Report No. 17-01, Douglas, AK.

To install the third unit, you will shut down the plant for approximately two weeks which will stop streamflow from the powerhouse to Tailrace Creek. This work is planned between May 1 and July 31 when adult and young-of-year pink salmon will not be present in Tailrace Creek. Additionally, you will shut down the plant for annual routine maintenance between May 1 and July 31 each year (historical duration of maintenance activities has been 10 days or less annually).

Anadromous Fish Act

Tailrace Creek (Stream Number 107-40-10537-2008) has been specified as being important for the spawning, rearing, or migration of anadromous fishes pursuant to AS 16.05.871(a). The water body provides habitat for rearing coho, and a few spawning pink and chum salmon.

Downstream of the anadromous fish barrier, Hidden Creek (Stream No. 107-40-10538) is specified as important for the spawning, rearing, or migration of anadromous fishes pursuant to AS 16.05.871(a). The creek provides habitat for chum, coho, and pink salmon. Dolly Varden char and cutthroat and rainbow trout have also been observed in the creek.

Fishway Act

Tyee Lake supports Arctic grayling and the outlet stream supports rainbow trout upstream of the anadromous fish barrier in Hidden Creek.

In accordance with AS 16.05.871(d) and 16.05.841, your request to increase streamflow in Tailrace Creek is approved subject to the project description, permit terms, terms of the original permit FH10-I-0160, and the following stipulation:

1. You will complete shutdown maintenance activities May 1–July 31.

Permit Terms

This letter constitutes a permit issued under the authority of AS 16.05.871 and AS 16.05.841 and must be retained on site during project activities. Please be advised that this determination applies only to Habitat Section regulated activities; other agencies also may have jurisdiction under their respective authorities. This determination does not relieve you of your responsibility to secure other state, federal, or local permits. You are still required to comply with all other applicable laws.

You are responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project. Prior to engaging in any activity that significantly deviates from the approved plan, you shall notify the Habitat Section and obtain written approval in the form of a permit amendment. Any action that increases the project's overall scope or that negates, alters, or minimizes the intent or effectiveness of any provision contained in this permit will be deemed a significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is a Habitat Section responsibility. Therefore, it is recommended the Habitat Section be consulted immediately when a deviation from the approved plan is being considered.

You shall give an authorized representative of the state free and unobstructed access to the permit site, at safe and reasonable times, for the purpose of inspecting or monitoring compliance

with any provision of this permit. You shall furnish whatever assistance and information the authorized representative reasonably requires for monitoring and inspection purposes.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. You shall mitigate any adverse effect upon fish or wildlife, their habitats, or any restriction or interference with public use that the commissioner determines was a direct result of your failure to comply with this permit or any applicable law.

You shall indemnify, save harmless, and defend the department, its agents, and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or your performance under this permit. However, this provision has no effect if, and only if, the sole proximate cause of the injury is the department's negligence.

You may appeal this permit decision relating to AS 16.05.871 in accordance with the provisions of AS 44.62.330-630.

Please direct questions about this permit to Habitat Biologist Claire Delbecq at (907) 465-4275 or claire.delbecq@alaska.gov.

Sincerely,
Doug Vincent-Lang
Commissioner



By: Kate Kanouse
Regional Supervisor

Enclosure: Fish Habitat Permit FH10-I-0160

Email cc:

Al Ott, ADF&G Habitat, Fairbanks
ADF&G Habitat Staff, Douglas
Ann Larquier, ADF&G SF, Anchorage
Kelly Reppert, ADF&G SF, Ketchikan
Scott Walker, ADF&G CF, Ketchikan
Frank Robbins, ADF&G WC, Petersburg
Jeff Rice, ADF&G SF, Petersburg
Kathryn Taylor, ADF&G CF, Petersburg
Mike Salyer, USACE, Soldotna
Andy Stevens, USFWS, Anchorage
Habitat Conservation Division, NMFS, Juneau
Betsy McGregor, Kleinschmidt
Tory Houser, USFS, Wrangell
Melissa Dinsmore, USFS

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

DIVISION OF HABITAT

SEAN PARNELL, GOVERNOR

Douglas Island Center Building
802 W. 3rd Street, Douglas
P.O. BOX 110024
JUNEAU, AK 99811-0024
PHONE: (907) 465-4105
FAX: (907) 465-4759

FISH HABITAT PERMIT FH10-I-0160

ISSUED: October 28, 2010

Southeast Alaska Power Agency
ATTN: Dave Carlson, CEO
PO Box 110987
Anchorage, AK 99511

RE: **Tyee Lake Water Use**
Tyee Lake and Hidden Creek (Stream No. 107-40-10538)
T 65 S, R 90 E, Sec 28, CRM, USGS Quad Bradfield Canal A-5
Intake Location: N 56.1967 W 131.4939

Dear Mr. Carlson:

Pursuant to Alaska Statutes (AS) 16.05.841 and 16.05.871(b), the Alaska Department of Fish and Game (ADF&G) Division of Habitat reviewed your proposal to withdraw 135,000 acre feet of water per year from your existing intake in Tyee Lake to generate hydropower at the Tyee Lake Hydroelectric facility. The project has operated since 1983 under capacity due to low electrical demand, however demand will increase when the intertie to Ketchikan is complete. The proposed water use would allow the project to operate at capacity, generating up to 26MW.

Fish Resources and Anadromous Fish Act

Tyee Lake supports Arctic grayling and the outlet stream supports rainbow trout upstream of the anadromous fish barrier in Hidden Creek. Your project as proposed has the potential to obstruct the efficient passage and movement of fish in Tyee Lake and Hidden Creek.

Downstream of the anadromous fish barrier, Hidden Creek (Stream No. 107-40-10538) is specified as important for the spawning, rearing, or migration of anadromous fishes pursuant to AS 16.05.871(a). The creek provides habitat for chum, coho, and pink salmon. Dolly Varden char and cutthroat trout have also been observed in the creek.

Determination and Coastal Consistency Requirements

The proposed water use from Tyee Lake will impact the aquatic ecosystem in both the lake and Hidden Creek. Peak lake draw-down will occur in early-spring when grayling will be searching for stream spawning habitat. Historical bathymetry data for Tyee Lake suggest that fish access to spawning streams will be restricted at capacity operations during spring due to the steep-gradient

shore, if not prevented altogether. Therefore, the proposed water use may eradicate the grayling if successful reproduction necessary to sustain the population does not occur.

The proposed water use is expected to reduce flow in Hidden Creek up to 92%. The resident rainbow population upstream of the anadromous migration barrier in Hidden Creek has not been studied, therefore we do not know to what extent that population will be impacted. Downstream of the barrier, pink and chum spawning habitat and juvenile salmonid rearing habitat will be abandoned due to significantly reduced water flow.

During FERC licensing the original project owner, Alaska Power Authority (APA), evaluated several options to mitigate adverse impacts to resident and anadromous fish populations in Tyee Lake and Hidden Creek. Among the options considered were altering project design, transplanting grayling to a nearby lake, and constructing a fish hatchery in Bradfield Canal, however these options proved impractical during feasibility studies. In 1983, federal and state agencies approved APA's final proposed fisheries mitigation plan, which included 1) funding construction of public recreation facilities and a trail to Long Lake on Wrangell Island, and 2) constructing and monitoring an experimental spawning channel in the project tailrace.

AS 16.05.851 provides ways to compensate for impacts to fish passage. ADF&G biologists stocked Tyee Lake with eyed grayling eggs and fry on several occasions during the 1960s to provide a sport fishery, however few anglers fish Tyee Lake due to the lake's remote location and difficult terrain. The Long Lake recreational mitigation provides accommodations and angler access to rainbow trout that were previously underutilized. Though this mitigation does not meet the specific requirements of AS 16.05.851, the Division of Habitat determined APA thoroughly investigated transplant and hatchery feasibility, and concurs that the Long Lake mitigation substitutes for lost recreational fishing opportunity at Tyee Lake. Therefore, the Long Lake mitigation meets the intent of AS 16.05.851 and no additional mitigation is required.

Construction of the tailrace spawning channel was complete in 1983. Contract biologists studied the channel four years (1983 – 1987) during operating loads of 4-6MW, but not during full project operations as required in the approved monitoring plan as electrical demand was low at the time. The current project owner, Southeast Alaska Power Agency, has agreed to partially fund ADF&G Habitat biologists three years to complete the monitoring program and study salmonid productivity in the spawning channel. This agreement satisfies and completes the anadromous fish mitigation requirements for AS 16.05.871.

This project is consistent with the Alaska Coastal Management Program (State ID AK1008-14J).

In accordance with AS 16.05.841 and 16.05.871(d), project approval is hereby given subject to the project description above.

You are responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project. For any activity that significantly deviates from the approved plan, you shall notify the Division of Habitat and obtain written approval in the form of a permit amendment before beginning the activity. Any action that increases the project's overall scope or that negates, alters, or minimizes the intent or effectiveness of any stipulation contained in this permit will be deemed a significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of the Division

of Habitat. Therefore, it is recommended you consult the Division of Habitat immediately when a deviation from the approved plan is being considered.

For the purpose of inspecting or monitoring compliance with any condition of this permit, you shall give an authorized representative of the state free and unobstructed access, at safe and reasonable times, to the permit site. You shall furnish whatever assistance and information as the authorized representative reasonably requires for monitoring and inspection purposes.

This letter constitutes a permit issued under the authority of AS 16.05.841 and 16.05.871 and must be retained on site during project activities. Please be advised that this determination applies only to activities regulated by the Division of Habitat; other agencies also may have jurisdiction under their respective authorities. This determination does not relieve you of your responsibility to secure other permits; state, federal, or local. You are still required to comply with all other applicable laws.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. The department reserves the right to require mitigation measures to correct disruption to fish and game created by the project and which was a direct result of the failure to comply with this permit or any applicable law.

You shall indemnify, save harmless, and defend the department, its agents, and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or your performance under this permit. However, this provision has no effect if, and only if, the sole proximate cause of the injury is the department's negligence.

The AS 16.05.871 permit decision may be appealed in accordance with the provisions of AS 44.62.330-630.

If you have any questions regarding this permit, please contact Habitat biologist Kate Kanouse at (907) 465-4290 or email kate.kanouse@alaska.gov.

Sincerely,



Denby S. Lloyd, Commissioner

By: Jackie Timothy
Regional Supervisor
Division of Habitat

Email cc:

Al Ott, ADF&G Habitat, Fairbanks
Troy Thynes, ADF&G Comm Fish, Petersburg
Doug Fleming, ADF&G Sport Fish, Petersburg
Shawn Johnson, ADF&G Sport Fish, Douglas
Robert Piorkowski, ADF&G Sport Fish, Juneau

Ted Deats, ADNR DMLW, Juneau
William Groom, ADNR DCOM, Juneau
Dennis Reed, USFS, Wrangell
David Rak, USFS, Wrangell

