



United States
Department of
Agriculture

Forest
Service

Alaska Region

P.O. Box 21628
Juneau, AK 99802-1628

File Code: 2770

Date: January 7, 2014

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, , DC 20426

Preliminary Section 4(e) Terms and Conditions and Comments

Sweetheart Lake Hydroelectric Project, FERC No. 13563-001

Dear Ms. Bose:

Thank you for the opportunity to submit comments on the Sweetheart Lake Hydroelectric Project, P-13563. The Forest Service Preliminary 4(e) Terms and Conditions and comments are enclosed.

Enclosure 1 contains the Preliminary 4(e) Terms and Conditions and Enclosure 2 contains our schedule for submitting the Final 4(e) Terms and Conditions. Forest Service comments regarding the DLA and PDEA are in Enclosure 3. The Certificate of Service is included as Enclosure 4.

Please contact Roger Birk, interim Regional Energy Coordinator, at (907) 586-8843 or rbirk@fs.fed.us with any questions.

Sincerely,

/s/ Beth G. Pendleton
BETH G. PENDLETON
Regional Forester

Enclosures (4)

cc: Mr. Duff Mitchell



Enclosure 2

SCHEDULE FOR SUBMITTING FINAL 4(e) TERMS AND CONDITIONS

Sweetheart Lake Hydroelectric Project
P-13563

USDA Forest Service
Alaska Region
Tongass National Forest

The following schedule is submitted pursuant to 18 CFR 4.34(b)(1)(i).

Document	Date To Be Submitted To FERC
<ul style="list-style-type: none"> Forest Plan Consistency Finding 	Within 60 days of publication in the Federal Register that the DEA or DEIS is available for public comment
<ul style="list-style-type: none"> Final 4(e) Terms and Conditions 	Within 60 days of publication in the Federal Register that the DEA or DEIS is available for public comment
<ul style="list-style-type: none"> Modified 4(e) Terms and Conditions 	Within 60 days of publication in the Federal Register that the FEA or FEIS is available for public comment.

Enclosure 4

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

IN THE MATTER OF PRELIMINARY)
4(e) TERMS AND CONDITIONS)
AND COMMENTS FOR THE)
SWEETHEART LAKE)
HYDROELECTRIC PROJECT)

Project Number: P-13563-001

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I have served the U.S.D.A. Forest Service's comments on Scoping Document 1 by electronic filing, with the Federal Energy Regulatory Commission, at www.ferc.gov, and a copy of said documents by electronic mail to the following listed parties:

Party	Primary Person or Counsel of Record to be Served	Other Contact to be Served
Juneau Hydropower, Inc.	Duff Mitchell, Business Manager Juneau Hydropower, Inc. PO Box 22775 Juneau, ALASKA 99802 duff.mitchell@juneauhydro.com	
National Marine Fisheries Service	Susan Walker Marine Resources Specialist National Marine Fisheries Service PO Box 21668 Juneau, ALASKA 99802-1668 UNITED STATES susan.walker@noaa.gov	Thomas Meyer General Counsel NOAA General Counsel PO Box 21109 Juneau, ALASKA 99801 tom.gcak.meyer@noaa.gov
Alaska Electric Light & Power Company	Scott Willis Alaska Electric Light & Power Company 5601 Tonsgard Ct Juneau, ALASKA 99801-7201 UNITED STATES scott.willis@aelp.com	
U.S. Fish and Wildlife Service	Richard Enriquez Juneau Fish and Wildlife Field Office U.S. Fish and Wildlife Service 3000 Vintage Blvd., Suite 201 Juneau, ALASKA 99801-7100 Richard_Enriquez@fws.gov	

United States Department of Agriculture	Dawn M Collinsworth Office of the General Counsel U.S. Department of Agriculture PO Box 21628 Juneau, ALASKA 99802-1628 UNITED STATES Dawn.Collinsworth@ogc.usda.gov	
United States Department of Agriculture	Roger Birk Alaska Region - Public Services PO Box 21628 Juneau, ALASKA 99802-1628 rbirk@fs.fed.us	
U.S. Fish and Wildlife Service, Juneau Fish and Wildlife Field Office	Steve Brockmann Fish & Wildlife Service, Region 1 3000 Vintage Blvd. #201 Juneau, ALASKA 99801 UNITED STATES steve_brockmann@fws.gov	

Dated this 10th day of January 2014

/s/ Barbara A. Stanley

USDA Forest Service
 Federal Building
 Ketchikan, Alaska 99901-6591

(907) 228-6262

Enclosure 1

Sweetheart Lake
FERC Project P-13563

USDA Forest Service
Alaska Region
Tongass National Forest

Preliminary 4(e) Terms and Conditions

General

License articles contained in the Federal Energy Regulatory Commission's (Commission) Standard Form L-1 issued by Order No. 540, dated October 31, 1975, cover those general requirements that the Secretary of Agriculture, acting by and through the USDA Forest Service, considers necessary for adequate protection and utilization of the land and related resources of the Tongass National Forest. Under authority of section 4(e) of the Federal Power Act (16 U.S.C. 797(e)), the following terms and conditions are deemed necessary for adequate protection and utilization of National Forest System lands and resources. These terms and conditions are based on those resources enumerated in the Organic Administration Act of 1897 (30 Stat. 11), the Multiple-Use Sustained Yield Act of 1960 (74 Stat. 215), the National Forest Management Act of 1976 (90 Stat. 2949), and any other law specifically establishing a unit of the National Forest System or prescribing the management thereof (such as the Wilderness Act or Wild and Scenic Rivers Act), as such laws may be amended from time to time, and as implemented by regulations and approved Land and Resources Management Plans prepared in accordance with the National Forest Management Act. Therefore, pursuant to section 4(e) of the Federal Power Act, the following conditions covering specific requirements for protection and utilization of the National Forest System lands shall also be included in any license issued for the Soule River Hydroelectric Project (Project).

Condition No. 1 - Requirement to Obtain a Forest Service Special-Use Authorization

The Licensee shall obtain a special-use authorization from the USDA Forest Service for the occupancy and use of National Forest System lands. The licensee shall obtain the executed authorization before beginning ground-disturbing activities on National Forest System lands or within one year of license issuance if no construction or reconstruction was proposed in the application for license.

The Licensee may commence ground-disturbing activities authorized by the License and special-use authorization no sooner 60 days following the date the licensee files the USDA Forest Service special-use authorization with the Commission, unless the Commission prescribes a different commencement schedule.

In the event there is a conflict between any provisions of the license and USDA Forest Service special-use authorization, the special-use authorization shall prevail to the extent that the USDA Forest Service, in consultation with the Commission, deems necessary to protect and utilize National Forest System resources.

Condition No. 2 – Forest Service Approval of Final Design

Prior to undertaking activities on National Forest System lands, the Licensee shall obtain written approval from the USDA Forest Service for all final design plans for project components that the USDA Forest Service deems as affecting or potentially affecting National Forest System lands and resources. As part of such prior written approval, the USDA Forest Service may require adjustments in final design plans and facility locations to preclude or mitigate impacts and to assure that the project is compatible with on-the-ground conditions. Should the USDA Forest Service, the Commission, or the Licensee determine that necessary changes are a substantial change, the Licensee shall follow the procedures of Article 2 of the license. Any changes to the license made for any reason pursuant to Article 2 or Article 3 shall be made subject to any new terms and conditions the Secretary of Agriculture may make pursuant to section 4(e) of the Federal Power Act.

Condition No. 3 – Approval of Changes

Notwithstanding any license authorization to make changes to the Project, when such changes directly affect NFS lands the Licensee shall obtain written approval from the Forest Service prior to making any changes in any constructed Project features or facilities, or in the uses of Project lands and waters or any departure from the requirements of any approved exhibits filed with the Commission. Following receipt of such approval from the Forest Service, and a minimum of 60- days prior to initiating any such changes, the Licensee shall file a report with the Commission describing the changes, the reasons for the changes, and showing the approval of the Forest Service for such changes. The Licensee shall file an

exact copy of this report with the Forest Service at the same time it is filed with the Commission. This condition does not relieve the Licensee from other requirements of this license.

Condition No. 4 – Consultation

The Licensee shall, beginning the first full calendar year after license acceptance, participate in annual meetings with the Forest Service to present Project operation and maintenance activities planned for the next calendar year. In addition, Licensee shall present results from current year monitoring of invasive plants and other resources. The goals of this meeting are to share information, mutually agree upon planned maintenance activities, identify concerns that the Forest Service may have regarding activities and their potential effects on sensitive resources, and any measures required to avoid or mitigate potential effects. The date of the consultation meeting will be between January 10 and March 15 of each year, as mutually agreed to by the Licensee and the Forest Service. Representatives from the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), Alaska Department of Fish and Game (ADF&G), interested tribes, other interested agency representatives, and other interested parties concerned with operation of the Project may attend the meeting.

Consultation shall include, but not be limited to:

- A status report regarding implementation of license conditions;
- Results of any monitoring studies performed over the previous year in formats agreed to by the Forest Service and the Licensee during development of implementation plans;
- Review of any non-routine maintenance;
- Discussion of any foreseeable changes to Project facilities or features;
- Discussion of any necessary revisions or modifications to implementation plans approved as part of this license;
- Discussion of needed protection measures for species newly listed as threatened, endangered, or sensitive, or changes to existing management plans that may no longer be warranted due to delisting of species or, to incorporate new knowledge about a species requiring protection;
- Discussion of elements of current year maintenance plans, e.g. access route maintenance; and
- Discussion of any planned pesticide use.

A record of the meeting shall be kept by the Licensee and shall include any recommendations made by the Forest Service for the protection of NFS lands and resources. The Licensee shall file the meeting record, if requested, with the Commission no later than 60 days following the meeting.

Copies of other reports related to Project safety and non-compliance shall be submitted to the Forest Service concurrently with submittal to the FERC. These include, but are not limited to: any non-compliance report filed by the Licensee, geologic or seismic reports, and structural safety reports for facilities located on or affecting NFS lands.

The Forest Service reserves the right, after notice and opportunity for comment, to require changes in the Project and its operation through revision of the Section 4(e) conditions to accomplish protection and utilization of NFS lands and resources.

Condition No. 5 - Compliance with Regulations

The Licensee shall comply with the regulations of the Department of Agriculture for activities on NFS lands, and all applicable Federal, State, county, and municipal laws, ordinances, or regulations in regards to the area or operations on or directly affecting NFS lands, to the extent those laws, ordinances or regulations are not preempted by federal law.

Condition No. 6 – Surrender of License or Transfer of Ownership

Prior to any surrender of this license, the Licensee shall provide assurance acceptable to the Forest Service that Licensee shall restore any Project area directly affecting NFS lands to a condition satisfactory to the Forest Service upon or after surrender of the license, as appropriate. To the extent restoration is required, Licensee shall prepare a restoration plan which shall identify the measures to be taken to restore such NFS lands and shall include or identify adequate financial mechanisms to ensure performance of the restoration measures.

In the event of any transfer of the license or sale of the Project, the Licensee shall assure that, in a manner satisfactory to the Forest Service, the Licensee or transferee will provide for the costs of surrender and restoration. If deemed necessary by the Forest Service to assist it in evaluating the Licensee's proposal, the Licensee shall conduct an analysis, using experts approved by the Forest Service, to estimate the potential costs associated with surrender and restoration of any Project area directly affecting NFS lands to Forest Service specifications. In addition, the Forest Service may require the Licensee to pay for an independent audit of the transferee to assist the Forest Service in determining whether the transferee has the financial ability to fund the surrender and restoration work specified in the analysis.

Condition No. 7- Protection of United States Property

The Licensee, including any agents or employees of the Licensee acting within the scope of their employment, shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this license.

Condition No. 8 – Indemnification

The Licensee shall indemnify, defend, and hold the United States harmless for:

- any violations incurred under any laws and regulations applicable to, or
- judgments, claims, penalties, fees, or demands assessed against the United States caused by, or
- costs, damages, and expenses incurred by the United States caused by, or
- the releases or threatened release of any solid waste, hazardous substances, pollutant, contaminant, or oil in any form in the environment related to the construction, maintenance, or operation of the Project works or of the works appurtenant or accessory thereto under the license.

The Licensee's indemnification of the United States shall include any loss by personal injury, loss of life or damage to property caused by the construction, maintenance, or operation of the Project works or of the works appurtenant or accessory thereto under the license. Indemnification shall include, but is not limited to, the value of resources damaged or destroyed; the costs of restoration, cleanup, or other mitigation; fire suppression or other types of abatement costs; third party claims and judgments; and all administrative, interest, and other legal costs. Upon surrender, transfer, or termination of the license, the Licensee's obligation to indemnify and hold harmless the United States shall survive for all valid claims for actions that occurred prior to such surrender, transfer or termination.

Condition No. 9 - Damage to Land, Property, and Interests of the United States

The Licensee has an affirmative duty to protect the land, property, and interests of the United States from damage arising from the Licensee's construction, maintenance, or operation of the Project works or the works appurtenant or accessory thereto under the license. The Licensee's liability for fire and other damages to NFS lands shall be determined in accordance with the Federal Power Act and standard Form L-1 Articles 22 and 24.

Condition No. 10 - Risks and Hazards on National Forest System Lands

As part of the occupancy and use of the Project area, the Licensee has a continuing responsibility to reasonably identify and report all known or observed hazardous conditions on or directly affecting NFS lands within the Project boundary that would affect the improvements, resources, or pose a risk of injury to individuals. Licensee will abate those conditions, except those caused by third parties or not related to the occupancy and use authorized by the License. Any non-emergency actions to abate such hazards on NFS lands shall be performed after consultation with the Forest Service. In emergency situations, the Licensee shall notify the Forest Service of its actions as soon as possible, but not more than 48 hours, after such actions have been taken. Whether or not the Forest Service is notified or provides consultation, the Licensee shall remain solely responsible for all abatement measures performed. Other hazards should be reported to the appropriate agency as soon as possible.

Condition No. 11 – Protection of Forest Service Special Status Species

Before taking actions to construct new project features on NFS lands that may affect Forest Service special status species or their critical habitat, the Licensee shall prepare and submit a biological evaluation (BE) for Forest Service approval. The BE shall evaluate the potential impact of the action on the species or its habitat. In coordination with the Commission, the Forest Service may require mitigation measures for the protection of the affected species.

The biological evaluation shall:

- Include procedures to minimize adverse effects to special status species.
- Ensure project-related activities shall meet restrictions included in site management plans for special status species.
- Develop implementation and effectiveness monitoring of measures taken or employed to reduce effects to special status species.

Condition No. 12 - Access

The Forest Service reserves the right to use or permit others to use any part of the licensed area on NFS lands for any purpose, provided such use does not interfere with the rights and privileges authorized by this license or the Federal Power Act.

Condition No. 13 - Maintenance of Improvements

The Licensee shall maintain all its improvements and premises on National Forest System lands to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the USDA Forest Service. The Licensee shall comply with all applicable Federal, State, and local laws, regulations, including but not limited to, the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., the Resources Conservation and Recovery Act, 42 U.S.C. 6901 et seq., the Comprehensive Environmental Response, Control, and Liability Act, 42 U.S.C. 9601 et seq., and other relevant environmental laws, as well as public health and safety laws and other laws relating to the siting, construction, operation, maintenance of any facility, improvement, or equipment.

Condition No. 14 - Surveys, Land Corners

The Licensee shall avoid disturbance to all public land survey monuments, private property corners, and forest boundary markers. In the event that any such land markers or monuments on NFS lands are destroyed by an act or omission of the Licensee, in connection with the use and/or occupancy authorized by this license, depending on the type of monument destroyed, the Licensee shall reestablish or reference same in accordance with (1) the procedures outlined in the "Manual of Instructions for the

Survey of the Public Land of the United States," or (2) the specifications of the Forest Service. Further, the Licensee shall ensure that any such official survey records affected are amended as provided by law.

Condition No. 15 – Pesticide Use Restrictions on National Forest System Lands

Pesticides may not be used on NFS lands or in areas affecting NFS lands to control undesirable woody and herbaceous vegetation, aquatic plants, insects, rodents, non-native fish, etc., without the prior written approval of the Forest Service. During the Annual Consultation Meeting described in Condition 4, the Licensee shall submit a request for approval of planned uses of pesticides for the upcoming year. The Licensee shall provide at a minimum the following information essential for review:

- whether pesticide applications are essential for use on NFS lands;
- specific locations of use;
- specific herbicides proposed for use;
- application rates;
- dose and exposure rates; and
- safety risk and timeframes for application.

Exceptions to this schedule may be allowed only when unexpected outbreaks of pests require control measures that were not anticipated at the time the report was submitted. In such an instance, an emergency request and approval may be made.

Pesticide use will be excluded from NFS lands within 500 feet of known locations of Rough-skinned newt, Western Toad, or known locations of Forest Service Special Status or culturally significant plant populations. Application of pesticides must be consistent with Forest Service riparian conservation objectives.

On NFS lands, the Licensee shall only use those materials registered by the U.S. Environmental Protection Agency and consistent with those applied by the Tongass National Forest and approved through Forest Service review for the specific purpose planned. The Licensee must strictly follow label instructions in the preparation and application of pesticides and disposal of excess materials and containers.

Condition No. 16 - Modifications of 4(e) Conditions after Biological Opinion or Certification

The Forest Service reserves the right to modify these conditions, if necessary, to respond to any Final Biological Opinion issued for this Project by the National Marine Fisheries Service, United States Fish and Wildlife Service; or any Certification issued for this Project by the State of Alaska.

Condition No. 17 – Signs

The Licensee shall consult with the USDA Forest Service prior to erecting any signs on National Forest System lands relating to this license. The Licensee must obtain the approval of the USDA Forest Service as to the location, design, size, color, and message. The Licensee shall be responsible for maintaining all Licensee erected signs to neat and presentable standards.

Condition No. 18 – Additional Ground Disturbing Activities

If the Licensee proposes ground-disturbing activities on or directly affecting NFS lands that were not specifically addressed in the Commission's NEPA processes, the Licensee, in consultation with the Forest Service, shall determine the scope of work and potential for Project-related effects, and whether additional information is required to proceed with the planned activity. Upon Forest Service request, the Licensee shall enter into an agreement with the Forest Service under which the Licensee shall fund a reasonable portion of Forest Service's staff time and expenses for staff activities related to the proposed activities.

Condition No. 19 – Implementation and Modification of Forest Service Conditions

(Applies only to issuance of Special Use Permit after licensing)

The USDA Forest Service reserves the authority to modify USDA Forest Service 4(e) terms and conditions if upon completion of the USDA Forest Service administrative appeals process at 36 Code of Federal Regulations (CFR) Part 251, the Chief, USDA Forest Service, or Secretary of Agriculture directs that substantial changes to the terms and conditions submitted herein be made.

Condition 20 - Use of Explosives

In the use of explosives, the Licensee shall exercise the utmost care not to endanger life or property and shall comply with Federal, State and local laws and ordinances. The Licensee shall contact the USDA Forest Service prior to blasting to obtain the requirements of the USDA Forest Service. The Licensee shall be responsible for any and all damages resulting from the use of explosives and shall adopt precautions to prevent damage to surrounding objects. The Licensee shall furnish and erect special signs to warn the public of the Licensee's blasting operations. The Licensee shall place and maintain such signs so they are clearly evident to the public during all critical periods of the blasting operations.

The Licensee shall store all explosives on National Forest System lands and Licensee adjoining fee title property in compliance with all applicable Federal, State and local laws and ordinances.

When using explosives on National Forest System lands and Licensee adjoining fee title property, the Licensee shall adopt precautions to prevent damage to landscape features and other surrounding objects. When directed by the USDA Forest Service, the Licensee shall leave trees within an area designated to be cleared as a protective screen for surrounding vegetation during blasting operations. The Licensee shall remove and dispose of trees so left when blasting is complete. When necessary, and at any point of special danger, the Licensee shall use suitable mats or some other approved method to smother blasts.

Condition No. 21 -- Environmental Compliance Monitor

Several important watershed and visual issues will need monitoring during the construction phase of the project especially since the Soule River Hydroelectric project is in a remote location. To ensure adherence to license conditions, mitigation measures, and other environmental aspects of project construction, the USDA Forest Service will require the licensee to provide a qualified environmental compliance monitor to oversee the project during major construction activities (e.g. vegetative or land disturbing, spoil producing, blasting activities). Items to be monitored include, but are not limited to, those stated in the Resource Management Plans, listed in Condition No. 22.

The compliance monitor would be a liaison between the USDA Forest Service and Licensee. The compliance monitor should have the authority to stop work or issue change orders in the field should conditions so warrant. The compliance monitor should be either a third party contractor independent of the licensee or an agency person funded through a collection agreement, subject to approval for both the Licensee and the USDA Forest Service. Once major construction activities are complete then the compliance monitor will no longer be needed. The USDA Forest Service will require that an agency representative review and approve flagged areas or routes that will undergo land disturbing activities, and be present for clearing and blasting.

Condition No. 22 – Resource Management Plans

Within one year of license issuance, and in consultation with the Forest Service and applicable Federal and State agencies, the Licensee shall file with the Commission the following plans addressing specific resource issues covered by the Tongass National Forest Land and Resource Management Plan. The licensee shall submit the draft plans for Forest Service review and approval, prior to submitting the plans to the Commission. The licensee shall provide at least 90 days for Forest Service review and approval before the filing deadline in the license. Upon Commission approval, Licensee shall implement the Plans. The plans shall include the following:

- a) Construction Plan
- b) Spoils Disposal Plan
- c) Access and Road Management and Maintenance Plan
- d) Reservoir Management and Inundation Plan

- e) Erosion Control Plan
- f) Solid Waste and Wastewater Plan
- g) Hazardous Substances Plan
- h) Fire Prevention Plan
- i) Heritage Resource Protection Plan
- j) Scenery Management Plan
- k) Vegetation Management Plan
- l) Invasive Species Management Plan
- m) Wildlife Mitigation and Monitoring Plan
- n) Fish Mitigation and Monitoring Plan
- o) Threatened, Endangered, Proposed for Listing, and Sensitive Species Plan
- p) Stream Flow Management Plan
- q) Stream Flow Measurement Plan
- r) Aquatic Habitat Restoration and Monitoring Plan

The Plans shall include resource management objectives tied to the Tongass National Forest Land and Resource Management Plan and an implementation schedule.

Enclosure 3

Forest Service Comments
On Draft License Application
and
Preliminary Draft Environmental Assessment
for the
Sweetheart Lake Hydroelectric Project
FERC Project P-13563

Forest Service reviewers fully appreciate the difficulty of analyzing and presenting the effects of this project on the environment. The following comments and suggestions are meant to be constructive and helpful to the applicant in improving the adequacy and clarity of the documents.

Documents

Forest Service reviewers found the current documents to be much improved over the version of the DLA and PDEA that was reviewed in November 2012. We applaud JHI for submitting this second and revised DLA and PDEA. While there are still numerous typos and examples of awkward wording and syntax, this version is a great improvement in organization and readability.

General Resource Comments

Fisheries:

- No information on zooplankton in Sweetheart Lake. How might the zooplankton respond to water fluctuations?
- Limnology section is weak with most data taken directly from a 1995 ADF&G report. No new data is presented.

Hydrology:

- Rationale for a minimum 3 cfs in the bypass channel is inadequate.
- Tailrace design information is missing.

Soils and Wetlands

- Rationale for selecting coastal road alternative rather than forest road is inadequate.

- Actual road footprint and amount of fill is not disclosed in PDEA or in resource reports.
- 25-foot road width terminology is misleading.
- Irretrievable/irreversible impacts to soils and wetlands are not adequately disclosed.
- It is not clear if the proposed quarry site impacts wetlands.

Recreation:

- Forest Service does not support the proposed recreation cabin and asks that it be deleted from plans and all future documents.
- Forest Service cannot assume maintenance responsibility and liability for the dock.
- Forest Service cannot assume maintenance responsibility and liability for mooring buoys.

Land Status

Power Site Classification 221

The DLA refers to Power Site Classification 221 and indicates that these lands are withdrawn for hydropower development.

Background

During the 1920-30s, the United States Geologic Survey (USGS) inventoried potential hydropower sites in southeast Alaska. Those sites with hydropower potential were classified as Power Site Classifications (PSCs) and were withdrawn by administrative orders under the authority of the Organic Act of March 3, 1879. (This is the USGS Organic Act; in 1983, authority for these withdrawals was transferred to the Bureau of Land Management (BLM). The intent was to set aside and protect those lands with potential water power value, until that potential could be realized or developed.

The Sweetheart Lake area was identified as having potential water power value and was withdrawn as Power Site Classification 221 on May 14, 1929. In accordance with the provisions of Section 24 of the Federal Power Act of June 10, 1920, these lands are reserved from entry, location, or other disposal under the public land laws until otherwise directed by FERC or by Congress.

Current Situation and Management

A Power Site Classification withdrawal identifies an area as having water power potential but it does not authorize water power development. It serves as an identifier for possible development and not as a right for development. The withdrawal in no way overrides Forest Service management discretion under the Tongass National Forest Land and Resource Management Plan. While the actual withdrawal has no expiration date, these are not necessarily permanent withdrawals. There is a process by which a Power Site Classification withdrawal can be revoked, if it is later determined that the area lacks water power development potential or if the PSC is incompatible with multiple use objectives. Several of the PSCs on

the Tongass NF have been revoked or relinquished over the years. At present, there are an estimated 20-25 PSCs in effect on the Tongass National Forest.

The Forest Service continues to have jurisdiction over the management and resources of these lands while recognizing that the withdrawn areas have power values which should be protected to the greatest extent possible, consistent with other land-use requirements. Forest Plan Standards and Guidelines fully apply to these lands.

Roadless Area Conservation Rule (2001 Roadless Rule)

The Roadless Area Conservation Rule (2001 Roadless Rule) was adopted on January 12, 2001 and has been the subject of numerous lawsuits since that time. At the time of adoption, the Tongass was exempted from the 2001 Roadless Rule. In May 2011, the order was vacated and the Tongass is no longer exempt. The Tongass National Forest continues to be under active Roadless litigation.

The Alaska District Court's judgment in Organized Village of Kake v. U.S. Department of Agriculture, vacating the Tongass Exemption and reinstating the Roadless Rule, states: Nothing in this judgment shall be construed to prohibit any person or entity from seeking, or the USDA from approving, otherwise lawful road construction, road reconstruction, or the cutting or removal of timber for hydroelectric development pursuant to the standards and procedures set forth in the Federal Power Act. The Court's order also states that it is not a judgment that any hydropower projects or activities do or do not violate the terms of the Roadless Rule.

The proposed Sweetheart Lake Hydroelectric Project is located within the Taku Snettisham Inventoried Roadless Area (IRA) 302 and may be inconsistent with the Roadless Rule. Currently, all projects involving road construction or reconstruction and the cutting, sale, or removal of timber in inventoried roadless areas are reviewed by the Chief of the Forest Service.

The 2001 Roadless Rule (Federal Register / Vol. 66, No. 9 / Friday, January 12, 2001) is cited in this document, and provided as a reference. The document also notes that the Roadless Rule applies to this project. However, the document only analyzes the Roadless Rule in regards to the facilities at Sweetheart Lake and does not include the transmission lines. The analysis does discuss the land use designations (Timber Production and Old-Growth Habitat) for the transmission lines but no where does it state that these LUDs are within a roadless area.

Draft License Application (DLA)

DLA Initial Statement

DLA, Exhibit A – Project Description

(1) Project Structures

Page A-2 (i) Marine Access Facilities, First Bullet -- The paragraph reads: "The toe of ramp would be near EL 15 feet MLLW" in reference to the loading ramp. This elevation should be referenced as EL -15 Feet MLLS (as in 15 feet BELOW MLLW, not above). This is based on drawings in Exhibit F-2(1).

Page A-3, ii, Quarry -- This sections lacks any mention of BMP measures. Is there a reconditioning plan for the quarry? Shot rock and rock spoil are not easily vegetated.

Page A-3 iii, Access Road -- This sections lacks any mention of BMP measures.

Page A-3, iii, paragraph 1 -- Upon completion of the Project, the road/trail will be condensed to a one-lane road, with reverse slopes sloping away from the shoreline to help mask the roadway." While masking the road from the shoreline is commendable, this assumed in-sloping of the road would require a ditch and regular maintenance. In-sloped roads can be an erosion and sedimentation concern and this may unnecessarily impact water quality. Would the pile of fill required to in-slope the road be more visually appealing than the actual road surface? This appears to attempt to solve one problem by creating two additional ones.

DLA, Exhibit B – Project Operation and Resource Utilization

(1) Alternative Sites

Page B-1(i) -- This is the first time the USGS paper is mentioned. Please include the date: USGS Water Supply Paper 1529 (1962).

(2) Alternative Designs and Operations

Page B-5, iv, paragraph 1 -- The road is placed to avoid impacting an inventoried roadless area. Instead, the road is placed in tidelands which may be more ecologically sensitive.

Page B-6, iv, paragraph 3 -- Placing the road below mean high tide will require a permit from the Corps of Engineers.

Page B-11, paragraph 1, first sentence -- The coastal road "...runs parallel to the beach at an elevation of 25 feet climbing to 50 feet near the powerhouse/tailrace." Mean high tide is usually considered 18 feet for the USFS/State tidelands boundary. Please clarify how a road could be built below mean high tide if the starting elevation is 25 feet.

Page B-11, paragraph 1, third sentence -- "Pullouts will be removed..." To clarify, will all of the shotrock that is used to construct these pullouts be removed? Where will this fill be placed?

Page B-11, paragraph 2, last sentence -- From a soils perspective, this does not provide "superior environmental attributes". Rather than build on about 1 ½ acres of very common forested wetlands, the coastal road impacts 6.29 acres of the intertidal zone. These acres are still waters of the US (like wetlands) and will require a COE permit for the entire length of road built below mean high tide.

Any fill failure of the road due to poor design, plugged culvert, or severe erosion would end up in the ocean rather than be caught and filtered through forest soils. Filling in a marine environment, even on a rocky beach such as this one, changes the coastal erosion processes. Hardening a beach or area could have the unintended consequences of forcing the wave/tidal energy onto another, possibly more erodible, surface. Or, if the road fill is the least resistant surface, it will be eroded by tidal/wave action.

Page B-12, Bullet 2 – This might not be considered an advantage by the State.

Page B-12, Bullet 3 -- The area below mean high tide may be considered more, rather than less, ecologically significant than terrestrial wetlands.

Page B-12 Bullet 4 -- All of the road fill, sometimes up to 20 feet high, in the coastal road alternative would be visible at low tide (unless the road is under water at high tide). Portions of the forest road would likely be shielded by trees.

There seems to be a Coastal road +buried lines vs. Forest road + overhead powerline fallacy. Why can't the powerlines be buried under the forest road? It appears that some of the advantages cited here really are advantages of burying the powerline and not of building a coastal road. The road location and powerline discussion should be separated for clarity.

Page B-12, Bullet 6 -- Erosion from roads may affect more than streams. Instead of sediment entering intermittent streams along the forest road, the sediment may directly enter Gilbert Bay in the coastal road alternative.

Page B-12 Bullet 6 -- Explain how the coastal road would be less of an impact on intermittent streams along Gilbert Bay and cause less soil erosion and runoff. It seems the road would be more invasive along the coast. Sediment would run directly into the ocean.

Page B-12, Bullet 8 -- Please clarify why the forest road could not be used as a trail. How would the road be converted? Would shot rock be removed? And where would it be placed?

Page B-12, Bullet 9 -- It is unclear how a road in the intertidal zone would require less maintenance than a typical shot-rock road built in southeast Alaska. Both roads could be invaded by alder and spruce and the coastal road would perhaps have the added disadvantage of coastal erosion and saltwater inundation.

Page B-13, Table B-1 -- This table underestimates the impacts to wetlands from the coastal road. This table assumes a total road width of 25 feet, much less than the actual width of the proposed coastal road. The width of the coastal road footprint is 25 feet of travel way plus tens of feet of fill. (See pages B-7 through B-10 and Exhibit F).

Page B-14, vi, paragraphs 3-5 -- The document claims that a buried line under the forest road is impossible due to "many gullies and rock embankments". In paragraph 6, the applicant states, "The coastal road would emplace a more expensive buried transmission line that would serve to eliminate avian impacts from eagles, costal birds, and seasonal waterfowl." This paragraph does not explain how the powerline will be buried in the "Rocky Intertidal" areas (Table B-1). Exhibit F shows the powerline buried in the road prism in the coastal road alternative. Why couldn't the powerline be buried in the road prism in the forest road alternative?

Page B-16, Figure B-5 TLMP Land Use Designations Port Snettisham Area -- Project area boundary is inaccurate along the creek and at lake.

(3) Proposed Operation

How will the reservoir be managed/operated with regard to submerged timber and floating debris?

Page B-23 below Table B-3 -- There is mention of the bypass reach minimum of cfs but no information about the fish habitat/population in the bypass reach. Please add information from the genetic study. One adverse effect is that fish will not be swept down from the lake into the bypass reach as they have before. The Applicant must demonstrate the effects of flow diversion on fish habitat in the bypass reach, addressing the Forest Plan Standards and Guidelines, forest wide and for this particular LUD.

DLA, Exhibit C – Proposed Construction Schedule

DLA, Exhibit D – Project Costs and Financing

DLA, Exhibit F – Design Drawings and Supporting Reports

Exhibit F-2(1), Sheet 1/7 -- Does the marine access facility really need to be this massive? Can the footprint (and visual impact) be scaled down, perhaps by providing one ramp for both barge and/or landing craft use?

Exhibit F-2(2), Sheet 2/7 -- The Typical Loading Float Section shows steel pipe for the main float supports. The Forest Service has not always had success with unprotected steel floats in marine environments. Without any reference to the type of steel and protective surfacing or cathodic protection, the lifespan of the steel floats is questionable. JHI might want to consider using High-Density Polyethylene pipe instead of steel or plan for the protection of the steel pipes.

Exhibit F-2(3), Sheet 3/7 -- This shows a profile for the coastal trail and it appears that the elevation of the travel surface is 27 feet. It appears there could be as much as 20 feet of fill (STA 14+00) and as little as about 10 feet of fill (STA 19+00). The road prism typical is on Exhibit F-2, sheet 2 of 7. It appears the powerline is placed in the road fill and not buried in the native soil. For stations 13+00 to 54+00 there is a 25 foot travel way sloped toward the beach plus the 1.5:1 to 2:1 fill slopes. This is much wider than the disclosed 25-foot road in the PDEA. The actual disturbed road corridor width should be disclosed as the entire footprint of the road including travel way plus fill slopes. At station 14+00 with 20 feet of fill, example at 1.5:1 this is an additional 30 feet for one side and 40 feet, at 2:1, for the other making the entire road footprint 95 feet. The wetland delineation only looks at the 25-foot corridor and not the entire footprint of the road.

Exhibit F-2(2) and 3(1) -- JHI mentions throughout the DLA and the PDEA that Forest Service design criteria for low-volume roads will be used for the access road construction. In the detail drawings of the road construction, the base material is shown as "NFS Gravel Base." Indeed, a Non-Frost Susceptible Gravel base would be the design intent, but at some point in the design process a reference to a specific material type from the FP-03 Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects is needed. If designing to Forest Service standards, please use specifications from the FP-03 manual.

There are no specifications for the fill material or the design criteria for sizing the fill material In the detail drawings of the aggregate bulkhead and loading pad. Again, if the intent is to use Forest Service standards, include a reference to a specific material type from the FP-03 Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects. List the design guide that the designer intends to use for the sizing of materials for this aggregate structure. The preferred manual would be the USACE Shore Protection Manual.

Exhibit F-2(7), Sheet 7/7 -- Would the proposed sediment pond near STA 51+00 be a permanent feature?

Exhibit F-2 (7), Sheet 7/7 -- The sediment pond displayed on the drawing shows a base of 20.0 ft. MLLW and an overflow elevation of 24.0 ft. MLLW. The discharge drainage CPP is shown to have an invert elevation of 19.5 ft. MLLS on the inlet end in the sediment pond. The elevation of the inlet invert should be well above the base of the pond so as to allow time for the sediment to settle. If the drainage pipe is placed above the base of the pond, the water will either seep into the soil or rise up and drain out through the pipe. Either way the sediments have a chance to settle out. If the inlet invert elevation is at the base of the pond, the sediments never have a chance to settle and the pond is useless.

Exhibit F-9 -- Please add finished grade elevations in a few spots along the top of the berm that is intended to screen the powerhouse and switchyard.

Exhibit F-11 -- It would be helpful if the Right and Left Elevations for the powerhouse included the berm between the powerhouse and creek.

DLA, Exhibit G – Project Boundary Maps

Preliminary Draft Environmental Assessment (PDEA) (Exhibit E)

Executive Summary

Pages 24-25, Aquatic Resources/Terrestrial Resources -- Consider disclosing the amount of fill to be placed in the intertidal zone.

Page 25, first bullet -- The documents mention there will be additional spawning area for pink and chum salmon. What sediment size will be conducive to spawning? How will sediment be flushed through the tailrace? How will you add sediment to the tailrace?

The PDEA does not provide adequate information about the design of the tailrace. The document only briefly mentions the design of the tailrace as 'natural appearing'. It would be helpful to see a detailed map and cross section of this design.

Page 26, Recreation Resources --

- Third bullet – The proposed interpretive material will need to be approved by Ed Grossman with Juneau Ranger District, Tongass NF and Faith Duncan with Supervisor's Office, Tongass NF. Also, please note that JHI would be responsible for installation, maintenance, and upkeep of the interpretive materials. Tongass NF does not have adequate budget at this time to support.
- Fourth bullet – Tongass NF does not have adequate budget at this time to install or maintain mooring buoys. JHI would be responsible for installation, maintenance, inspection, and upkeep of said mooring buoys and any liability associated with them.
- Fifth bullet – District Ranger Marti Marshall has indicated that she does not support JHI's moving forward with the proposal to provide a public recreation cabin on site. Please remove all references to this cabin from the documents and all project plans.
- Last bullet – Tongass NF does not have adequate budget at this time to install or maintain a dock. JHI would be responsible for installation, maintenance, and upkeep of said dock and any liability associated with it.

Page 27, Cultural Resources – There are cultural resources and historic properties within the Area of Potential Effect (APE). This section needs stronger verbiage regarding NAGPRA and inadvertent discoveries. No cultural or historical artifacts were located within the APE – however what was the intensity of the archaeological survey in the high probability area? How much of the APE is high probability? How many people worked on the survey? Describe the level of intensity of the pedestrian survey (for example the distant between transects and the distant between surveyors), and the subsurface evaluation techniques (for example, were test pits dug every 50 m, soil probes used to test for buried material?)?

Page 27, Aesthetic Resources, bullet statement 6 (of 7) -- States the beach road would be converted to trail only use. Won't the road be needed as a maintenance road for the powerhouse and switchyard during operation?

Pages 25 and 30, Terrestrial Resources -- No impacts to wildlife resources are listed. Certainly some occur as described in the analysis.

Page 31, Cultural Resources -- JHI attempts to avoid known and documented resources. However, a determination of effect to historic properties was not made, the Forest Service and the SHPO's officer were not consulted and there was no concurrence by either of these agencies.

Page 31, Aesthetic Resources -- The three bulleted statements are mitigation measures, not effects.

1.0 Introduction

1.1 Application

1.2 Purpose of Action and Need for Power

1.3 Statutory and Regulatory Requirements

Page 35, Table 1 – bottom row -- In response to sentence “On 5/24/2013 JHI received a SHPO letter agreeing to the Area of Potential Effect”: This is the first step in the Section 106 process. The next step is identification of historic properties and strategies to inventory the area of potential effect. Then there is the evaluation of properties for eligibility for the National Register of Historic Places and then comes a determination of effect. The SHPO is given an opportunity to comment on the Determination of Eligibility of historic resources and Determination of Effect to historic properties. The National Forest, as the land managing agency would like to be given the opportunity to comment on the DOEs.

1.3.5 National Historic Preservation Act, page 37 -- This is not correct – the process is correct but SHPO is not the one that makes determinations of eligibility – they provide oversight of agency determinations – commenting on the process and the determinations or concurring with those determinations. The SHPO has not concurred on the eligibility of properties on the National Forest that are occurring within the project area in this case.

1.3.8, page 38, Subsistence Resources -- At the bottom of the page, starting with “Alaska State Law...” and including the three bullets. Duplicates information that appears elsewhere on the page.

1.4 Public Review and Comment

2.0 Proposed Action and Alternatives

2.1 No Action Alternative

2.2 Applicant's Proposal

2.2.1.13 Marine Access Facilities, page 59, second paragraph -- The paragraph reads: “The toe of ramp would be near EL 15 feet MLLW” in reference to the loading ramp. This elevation should be

referenced as EL -15 Feet MLLS (as in 15 feet BELOW MLLW, not above). This is based on both drawings shown on Exhibit F-2(1).

2.2.1.14 Quarry, page 60 -- It is not clear if the proposed quarry site impacts wetlands.

2.2.1.15 Coastal Road/Trail -- Why is the filling of 6.83 acres of tidelands plus 0.54 acres of wetlands environmentally preferable to the filling of 1.62 acres of forested wetlands?

It is not clear that the forest road would have greater adverse effects than the coastal road. Please consider adding a table that compares the effects of the two road routes.

Disclose the entire coastal road footprint. The wetland report analyzes the road as a 25-foot corridor, when in reality the road footprint would include the 25-foot travel surface plus fill slopes. This could add as much as 70 feet to the road footprint. As a result, the wetland report underestimates the impacts to wetlands with the coastal road alternative. Typically the USFS analyzes a 40 foot corridor: this incorporates a 14-foot running surface plus fill and pullouts.

Please clarify how much fill would be placed below mean high tide and what type of marine habitats would be impacted.

Additionally, It is unclear where the road will be placed. The documents says the road begins at an elevation of 25 feet (Page B-10 of the DLA), which would be above the 15 foot mean high tide boundary typically used between USFS uplands and State tidelands in this area. The drawings in Appendix F show the mean high tide elevation and the road placement. It would be very helpful if this information was also included in the PDEA.

Consider disclosing how filling below mean high tide will affect coastal erosion processes.

Impacts to wetlands can be from activities other than filling. Sometimes a road can hydrologically separate a wetland from its waterbody. It appears this is the case for the coastal road. The CFRs require maintaining flow, reach and circulation for water in the wetland. How will this be achieved for the coastal road?

How many culverts per mile are planned? What size culverts will be used for stream crossings? Have these streams been verified to contain fish?

2.2.1.16 Facilities – Please remove all references to the proposed Forest Service cabin from the documents.

2.2.2.1 Construction Camp -- JHI will need to submit a camp management plan (for primary and secondary camp) prior to permit issuance. The plan must include details on management of potable water, human waste, strategy for minimizing bear-human interactions, trash disposal, etc.

2.2.2.2 Caretaker Facility and Proposed Forest Service Cabin

Page 68 -- Please remove all references to the Forest Service cabin from the documents and from all project plans. The Forest Service does not support proposed cabin, due to severely declining recreation program budgets.

Page 68 -- JHI refers to "seasonal fish barge workers". How many seasonal workers are anticipated? During what timeframe? For what duration? These details would need to be addressed in JHI's operations and maintenance permit.

2.2.5.3 Aquatic Resources

Page 70 -- Include references to BMPs related to reservoir management, access road construction and maintenance, transmission line construction and maintenance in relation to aquatic resources.

2.2.5.8. Aesthetic Resources

Page 72, 6th bullet statement (2nd from bottom) -- "Upon completion of construction" appears twice in one sentence.

3.0 Environmental Analysis

3.1 General Description of the River Basin

Page 79 -- Why is climate discussed in this section rather than Land Management Plan designations, land uses, and consistency with current management direction? Please change the section title or change the content.

3.2 Scope of Cumulative Effects Analysis

3.3 Proposed Action and Action Alternatives

3.3.1 Geology and Soils

Please consider disclosing the number of acres of soils taken out of productivity, i.e. the footprint of the proposed facilities. How many acres of productive lands are lost due to the various activities? (Includes all footprints of buildings, roads, and inundated areas of the dam). These acres should be disclosed in this section and under irreversible/irretrievable commitments of resources.

Thanks for including the BMP discussion and other minimization efforts throughout this section.

The Erosion and Sediment Control Plan must be approved by the Forest Service prior to construction. Further testing for Acid Rock Drainage potential must be completed prior to construction. If potential is found to exist, a plan to address ARD must be approved by the Forest Service prior to ground disturbance.

Page 86, last paragraph — Karheen soils are not mapped in the project area nor are they included in the Chatham area inventory. (There may be Karheen soils in the project area, however). Please consider describing the important properties of the soils rather than giving their series.

Page 87-Subgroup Typic Cryaquods— Wadleigh soils are not mapped in the project area nor are they included in the Chatham area inventory. There is probably not a Typic Cryaquod in the Chatham area that meets the properties described here. Wadleigh soils are not formed in the described uplifted intertidal or marine glacial silt, but are formed on dense glacial till. Wadleigh soils are shallow to a dense contact, which is not the case as described here. This paragraph refers to photo 1 but it is not included in the report. (This picture was found in the Wetland Delineation Reports). The pictured soil is not really a Wadleigh, it is probably a Chichagof. Please consider describing the important properties of the soil rather than their series.

Pages 101 and 102: last paragraph -- “The Project is within the Sumdum Glacier mineral belt [...] The following discussion of the 12 areas starts at the north end.” This paragraph is largely just copied from USGS Bulletin 1525 and pasted here. The result is that some sentences are inaccurate or irrelevant within the context of this report. There are 12 mineralized areas in the Sumdum Glacier mineral belt discussed in USGS Bulletin 1525, but only one of them is discussed (copied and pasted) in this report. It is true – but irrelevant – that the Sumdum Chief gold mine is located to the west of the belt.

Pages 102 and 103: Sweetheart Lake to Tracy Arm Elbow -- “A prominent, partly iron stained linear depression [...] although a later fire assay did not indicate gold or silver.” All of this section is a quote from a 1984 report. Why? Why are you including a discussion of table 25 and figure 59 from the 1984 report that you did not reproduce here? Why are you quoting a discussion about stream-sediment samples and chip samples? This would be far easier to read and understand if you just state the key points in your own words. Some of the key points are: There has been historic mining activity in this area dating to the early 1900s. Historic claims located in the area include the Cook prospect reported near Sweetheart Lake, “Goldnest” claims reported near the pass, and the Arm claims group near the Tracy Arm elbow. Potential mineral resources of the area include gold, lead, silver, zinc, arsenic, molybdenum, copper, and iron.

Page 102: Figure 28 -- This figure should be deleted; it is the same as figure 16.

Pages 104 to 107: Additional Mining Claims -- “This section briefly describes additional mining claims in the area.” Most of this material has been cut from Appendix B and pasted here. There is no reason to duplicate material. In this section, you should briefly describe the active mining claims in the area and reference appendix B as needed.

Page 105: bottom of the page -- “The construction, operation, and maintenance of the Project will not affect the access to this mining claim.” Are you certain of this? Claimants are entitled to access in connection with mining operations (36 CFR 228.12). How have the Sweetheart Lake Area claims historically been accessed? Are there any existing access roads, trails, bridges, landing areas, etc.? Figures 30 and 31

do not provide adequate detail. A good map like figure 3 with the Sweetheart Lake Area Claims and any historic access features should be provided.

Page 108: 2nd paragraph -- "The Project will pass through Snettisham Iron Ore claims at the north end of the Snettisham Peninsula, but will be on the surface and not impact the subsurface ore deposits." Could this project interfere with access to the Snettisham mining claims? Claimants are entitled to access in connection with mining operations (36 CFR 228.12). Are there any existing claim access roads, trails, bridges, landing areas, etc. that would be interfered with? Figure 29 does not provide adequate detail. A good map like figure 4 with the Snettisham claims and access features should be provided.

3.3.2 Hydrology and Water Quality

The document mentions the project will release 3 cfs for instream flow release. How will this cfs be monitored? At the dam?

Page 116 -- The flow velocity of 10m³/s should be in cubic feet/second.

Page 118, first complete paragraph -- Is information available on the size and flow of the tributaries?

Page 120, Figure 35 -- Consider adding a sub-title to clarify that this figure represents the average flow from Years 1915-1927.

Page 121 Table 10 -- The table title may be misleading. Clarify by indicating that the table also includes Sweetheart Creek below Sweetheart Falls.

Page 130, Table 15 -- This table is unreadable and the title is deceiving. The table appears to contain data from 1989 only.

Page 131 -- Table 16 and Table 17 are both unreadable.

Page 133, paragraph 4 -- How is this a replicate of the testing that was performed in 1989-1993? There is one date that water samples were taken. This is hardly a representative sample. There should be multiple dates that water samples are collected to be analyzed.

Page 134, Table 19 -- This table is unclear. Please provide a better explanation. Does it display the mean, etc. for the 1989-1993 data and display one row of numbers for the 2013 data? Also, what does the one number represent for the 2013 data? Is it a mean or is it just one measurement?

Page 137, Figure 41 -- The location dots are not all in the lake. Does this mean the lake level was higher or are the dots on tributary streams? The dots do not clearly line-up with the tributary streams. Please improve the map display.

Pages 149, 150, and 151 – Multiple references to “aquatics section (4.3.3) of this document”. That section number is NOT correct. It should be section 3.3.3.6 and 3.3.3.7.

Page 150, second paragraph -- Please clarify what the authors mean by ‘short time’. Weeks?

Page 150, fifth paragraph -- “less than a small fraction of a 1 degree C”. Please cite your sources for this assumption.

3.3.3 Fish and Aquatic Resources

There appears to be no zooplankton information for Sweetheart Lake. Research is needed to find data from other lakes/reservoirs with water fluctuations. How did the zooplankton respond?

The limnology section is weak. The majority of data is taken directly from the 1995 ADFG report . Other than one day of water collections, no new data has been presented. The ADFG data is over 20 years old. It would be better if more than one day of new data was available to look at.

Page 221, fourth paragraph “...however, currently inaccessible habitat suitable for spawning will become available and should increase over time”. Please explain. Why would that increase over time?

Page 222, Bypass Reach. The PDEA does not address the rationale for a minimal 3 cfs in the bypass channel. The document mentions the project will release 3 cfs for instream flow release. How will this cfs be monitored? At the dam? How was the cfs derived?

Page 222, first paragraph -- This may occur, however, this type of productivity is short lived and since it is short lived, it will not support additional numbers of fish. It may be that the fish already in the lake will grow faster during the higher productive years since there could be more food sources available. This phenomenon has been seen in reservoirs in the southeast portion of the United States. It does not last long. The organic matter could also cause DO drops that could cause a fish kill. I would expect that the DO in the lake would probably be high enough to not cause a fish kill, but it could and should be closely watched if/when the hydro project starts.

Page 223, second paragraph – “However, gravel quantity and quality can be monitored to ensure the percentage of fines in the gravel is not impaired over time.” How will the gravel quantity be monitored? With high-flow events from the dam? How will the project address the loss of sediment supply input from the lake? The authors should address that the bypass reach will become winnowed without the input of the lake sediment. The authors should address how much sediment is being added from hillsides that could contribute to the sediment flushes for spawning habitat downstream.

Page 225, third line – Missing footnotes. Footnote numbering appears in the text but the actual footnotes appear to be missing. Where are these references?

Page 226, fourth paragraph – “Current water quality conditions at Gilbert Bay showed that the bay overall has lower The proposed change in flow regime for Sweetheart Creek” Missing words, incomplete sentence.

Page 231 Analysis -- “Additionally, removal of barrier falls at the lower level of Inlet 1 could open spawning reach for rainbow trout.” Will the barrier be inundated? Consider inserting “due to inundation”. Has this habitat above the barrier been studied in detail to show it could actually provide spawning habitat for rainbow trout? How many feet of habitat are expected to be added?

3.3.4. Terrestrial Resources

Page 238 – Insert above Botrychium tunux: “ Botrychium spathulatum – Human disturbance/historic well drained, maritime beach, upper beach meadow, well drained open areas, alpine/subalpine, calcareous. Known on Kruzof Island and w Chichagof Island.”

Page 238 -- Delete from Cyripedium montanum section: “just north of the mouth of Endicott River, Chilkat Peninsula,”

Page 239 – under “Lobaria amplisima (lichen): Delete the lengthy discussion relating to the lichen. Insert “Beach/old-growth forest ecotone facing large bodies of ocean. Known on Mitkof, Kuiu, Baranof, Coronation, Warren and s. Prince of Wales Islands, and Yakutat.”

Page 240, no. 4, last word of second line -- Replace “...with..” with “at”

Page 242, under Botanical Study Results, line 3 -- Replace “(Alder.. with “(Unalaska mist-maid”

Page 242, same paragraph, line 4 -- Replace “..beach/forest” with “..beach-estuary/forest”

Page 242, same paragraph, line 5 -- Insert “Botrychium spathulatum,” between the other 2 Botrychium species.

Page 242, same paragraph, line 8 after the first 2 words – “these areas)” -- Insert “(Unalaska mist-maid),”

Page 242, same paragraph, line 8 after “..wet meadows” -- Insert “(Lg. yellow lady’s slipper),”

Page 242, same paragraph, line 8 after “..lakeshores” -- Insert(B. tunux, B. spathulatum, B. yaaxudakeit, Pale poppy),”

Page 242, next-to-last paragraph, 2nd line -- Delete the last 2 sentences beginning with “One...”. Replace with “Three Tongass National Forest rare plant species were found along the shores of Sweetheart Lake: two-colored sedge (Carex bicolor), northern golden saxifrage (Chrysosplenium tetrandrum) and boreal bedstraw (Galium kamtschaticum).

Page 242, Potential Project-related Effects.....section – Please rewrite this section to reflect adjusted analysis made to the Botany Resource Report for Plants when that is completed and reviewed.

Page 243, section Proposed Measures to Address....., 1st paragraph, 1st sentence -- Replace “ 5 years..” with “3 years for the life of the project”.

Page 243, section Proposed Measures to Address....., 1st paragraph, second sentence -- Delete sentence beginning with “Once either native vegetation....”

Page 243, same section, 2nd paragraph 2nd sentence -- Insert “weed free” between “..apply” and “protective..”

Page 251, third paragraph -- It is not clear whether “Forested Wetlands (PFO4/PEM1)” refers to the floodplain forest or the toe-of-slope forested wetlands.

Page 251 and page 252-253 -- Paragraphs 1, 2, and 5 from page 251 are duplicated on pages 252 and 253. Please correct.

Page 255, figure 101 -- shows a photo of the shoreline where the coastal road is proposed. Although this is not salt-marsh, or uplifted beach meadow, or shrub zone, it is still intertidal zone.

Page 256 -- On this map, It appears that the coastal road crosses several drainages. The table in Volume 1 B-13 seems to indicate that the coastal road only crosses 25 feet of stream. The coastal road crosses the outlets to the same streams that the forest road would cross. After looking at the shore zone, it appears that the coastal road would be placed at the outlet of several streams. The discussion of “only affecting 25 feet of stream” appears to be inconsistent with this map.

Page 261, Analysis and Measures to Address Potential Effects, paragraph 1, first sentence -- Should this be Section 404?

Page 263, third bullet -- After looking at the shore zone maps, it appears there are several stream outlets along the coastal road route. How is this factored into the “25 feet of stream” affected by the coastal road?

3.3.4.1. Wildlife

Please subject this entire section to a thorough proofreading and editing. The many misused word forms, missing words, and extraneous words detract from its readability and add confusion.

Page 268 – Consider deleting all references to the Forest Road alternative since it is no longer considered an alternative, and is not developed in the Alternative section of this document.

Page 273 -- Delete "Management Indicator Species" from the heading. MIS are only one subcategory of wildlife resources analyzed in this section.

Page 273 -- Project Effects Analysis, Sensitive Species, the entire section, starting on page 273 -- This entire section is cut and pasted from the Biological Evaluation. While this is not "incorrect", it is unnecessary. The environmental assessment should be a concise document that focuses on issues and impacts. Much of this information is unnecessary and should be summarized in the EA. For example, focus on the determinations and species for which impacts are expected (e.g., goshawks) and reference the BE for more details. You have the BE as an appendix, you don't need to repeat it word for word in the PDEA. Because this is the same verbiage as the BE/wildlife report, the comments here reflect comments addressing the BE/wildlife report. The BE/wildlife report should be edited, then summarized as appropriate in the Environmental Analysis document.

For each sensitive species there should be a final determination on overall effects to the species for each alternative. As written, there are quasi-determination statements for each type of effect (habitat manipulation, disturbance, construction, operation/maintenance, etc). This is acceptable but I find it rather confusing. I would prefer that there would be an analysis of effect for each of the actions described (e.g., acres affected, disturbance, etc) and a determination statement for the alternative as a whole. The appropriate statements for sensitive species are:

- The (proposed action/alternative) will have no impacts to the (species).
- The (proposed action/alternative) will have beneficial impacts to the (species).
- The (proposed action/alternative) may adversely impact individuals but not likely to result in a loss of viability in the Planning Area, nor cause a trend toward federal listing for the (species).
- The (proposed action/alternative) is likely to result in a loss of viability in the Planning Area , or in a trend toward federal listing for the (species).

Page 273, table 45 -- For the Aleutian tern, insert "breeding" before range for clarification. They most certainly migrate south of Glacier Bay. Same comment for Aleutian tern paragraph following Table 45 on same page.

Page 273, Aleutian Tern, Analysis of Project Effects -- Just because a species doesn't breed in the project area does not automatically mean there will be no effects to the species. The analysis needs to demonstrate they do not occur in the area throughout the year, e.g., breeding, migration, wintering. Then it's possible to state they don't occur there and therefore, the project will not affect the species.

Page 275, line 1 -- The statement: "...the Project would have no effect on black oystercatchers." is not consistent with the analysis presented and the earlier summary table.

Page 275, Dusky Canada Goose -- Delete "coast mudflats of the". These birds nest in the marshes, not in the mudflats of the Copper River Delta.

Page 275, Dusky Canada Goose, Analysis of Project Effects -- The conclusion is no effect because the geese would only be present during migration. Based on information presented in this document, construction work would be ongoing during the migration season (April/May, September/October). Thus, this is not sufficient rationale for a finding of no effect. The analysis for this species should discuss the construction season in relation to expected migration and discuss why the construction would not disturb the species.

Page 275, Queen Charlotte Northern Goshawk -- Delete "Northern". Correct terminology is either northern goshawk or Queen Charlotte goshawk. Correct this in the section title and first sentence.

Page 276, Analysis of Project Effects, 3rd paragraph -- The final sentence says the Project would have no effect on goshawks. This is inconsistent with the analysis. The proposed action will have an effect on goshawks.

Page 277, Management Indicator Species, entire section -- MIS analyses consist of two parts. The individual species analyses meet these two parts to varying degrees but should be consistently done. The first part is an analysis of project effects (i.e., acres of habitat changed, disturbance created, etc.). This has generally been done pretty well. The second part is a determination of whether the project meets Forest Plan direction for the species. MIS are the FS method of meeting species viability requirements for the NFMA. However, project areas are too small to address species viability directly. Thus, the Forest Plan provides a conservation plan to maintain viability through its standards and guidelines. If the project meets FP standards and guidelines, we can assume viability will be maintained. The Forest Plan consistency determination is generally missing from the species analyses and should be included.

Page 278, last paragraph -- "If construction starts prior to the denning season... the impacts... would not be significant." What if this condition is not met? I suggest rephrasing this statement something along the lines of "effects are not expected to be substantial because...". I would suggest also addressing effects if the work schedule is extended outside the proposed dates, because that often happens, (for any one of a variety of reasons) and then a change analysis wouldn't be required.

Page 281, Bald Eagle, Analysis of Project Effects, second paragraph, last line -- "If active nest exist within the 1,000 shore line buffer... a permit... required." Not an accurate statement. If the National Bald Eagle Management Plan guidelines are followed, a permit is not required. It might be beneficial to discuss an incidental take permit with the FWS for the project, but based on the distances in the BEMP. The 1000 foot beach buffer in the Tongass Forest Plan is not based on the National Bald Eagle Management Plan guidelines. The BEMP has varying distances depending on the type of disturbance.

Page 281, last sentence -- These distances are backward for activities visible and not visible from the nest; should be 330' buffer when activity cannot be seen and 660' buffer when it can be.

Page 283, first paragraph -- The inundation will remove suitable habitat so it will impact black bears; it's just unlikely to drown any in the den.

Page 284, first paragraph -- "...increased human access and use of the area..."

Page 284, first paragraph -- "The proposed coastal road... not in accordance to standards and guidelines in the Tongass Forest Plan..." I think you are referring to Wildlife S&G IX.B which says to "evaluate the need" for additional buffers for bears. This is a guideline (suggestion) rather than a standard (requirement). Thus, while the impacts to the riparian area are not consistent with the intent of preferred riparian management, the Forest Plan does not prohibit it, i.e., the proposed action is consistent with the Forest Plan.

Page 285, first paragraph under Brown Creepers... -- Change "size class code of SD67" to "size density code..."

Page 286, first paragraph under Analysis of Potential Effects -- Seems like if vegetation removal is going to happen during ~April – July, there is also the potential for destruction of active nests.

Page 288, last paragraph -- I disagree with the statement: "mountain goats are expected to be more closely associated with alpine areas during construction seasons." The document states that construction is expected to begin in April when goats will be on winter range. This should continue through at least mid June before alpine areas are sufficiently snow free for goats to begin to access them. It may turn out that the project proponent will want to work on dam construction during low flows during winter months as well. Dam construction would occur immediately adjacent to winter habitat. Therefore, a negligible effect finding seems unsupported.

Page 295, second paragraph, last sentence -- "Vegetation would be removed... and maintained in a mid-serial stage." Mid-seral in southeast Alaska would correspond to "stem exclusion" or pole stage forest. Based on other transmission lines I've seen in SE AK, I suspect the vegetation in the transmission line corridor will be maintained in an early-seral or shrub/sapling stage. Note that "mid-serial" should be "mid-seral".

Page 296, second paragraph -- Confusing sentence: "Further mitigation measures ..., particularly associated with the potential electrocution of raptors and large birds...". This document had already stated the intent to follow APLIC guidelines to address this. It would be beneficial to discuss in more detail the APLIC guidelines intended to address the electrocution problem. Is there any information to indicate the level of effectiveness (i.e., is it 100% effective? If not we would still expect some level of impact.)

Page 296, third paragraph under Subsistence -- "The Project falls within Game Management Unit (GMU) 1C for federal subsistence regulations." The federal subsistence program simply uses the term Unit. Please remove GMU and use Unit.

Page 296, last sentence -- "Subsistence harvest of marine mammals primarily includes harbor seals and sea otters..." This is accurate, but it should also be mentioned that this is limited to coastal Alaska Natives and is

not managed under ANILCA. It is managed under the Marine Mammal Protection Act, and thus, not subject to the regulations that govern this analysis.

Page 298, Marbled Murrelet -- The ADF&G did a study of Marbled Murrelets in Port Snettisham in the early 2000's that could be referenced here. Also, given the large number of murrelets that use the area, it seems likely that nesting habitat will be removed, but very unlikely a nest would actually be discovered.

Page 298, Great Blue Heron -- Why is this section here? There is no effects analysis. Is suitable habitat being removed? Are TLMP standards and guidelines for Herons being met? Please provide an analysis or delete.

Page 299, Beaver – Comments are the same as for Herons, above. This was a species that the ADF&G requested be included in the analysis, based on project effects to the species.

3.3.5. Threatened, Endangered, and Candidate Species

Page 299 and entire section -- This entire section has been cut and pasted from the Biological Evaluation. While this is not "incorrect", it is unnecessary. The environmental assessment should be a concise document that focuses on issues and impacts. Much of this information is unnecessary in the EA (but necessary in the BE) and should be summarized in the EA. Please focus on the determinations and summarize species information/impacts for species for which impacts are expected (humpback whales, sea lions) and reference the BE for more details. The BE is included as an appendix and doesn't need to be repeated word for word in the PDEA. Because this is the same verbiage as the BE/wildlife report, the comments here reflect comments addressing the BE. The BE should be edited, then summarized as appropriate in the Environmental Analysis document.

Additionally, Candidate species are not Listed species under the ESA (listed species include threatened, endangered, and proposed species and their designated critical habitats). Therefore, Forest Service policy is that we do not address them in the biological evaluation as candidate species. They are automatically considered Forest Service Sensitive species based on their candidate status and analyzed in the BE as sensitive species. It is fine to mention that they are candidates but should be addressed in the analysis as sensitive species per FS policy.

For each T/E species there should be a final determination on overall effects to the species for each alternative. As written, there are quasi-determination statements for each type of effect (habitat manipulation, disturbance, construction, operation/maintenance, etc). This is acceptable but it is confusing. An analysis of effect for each of the actions described (e.g., acres affected, disturbance, etc) and a determination statement for the alternative as a whole would be preferable and clearer. The appropriate statements for T/E species are:

- The ...proposed action/alternative... will have no effect to the ...species...
- The ...proposed action/alternative... is not likely to adversely affect ...species...
- The ...proposed action/alternative... is likely to adversely affect... species...

Page 301-302, Table 48 -- There is some inconsistency in the way information is presented in the Location Description column. For some species location information is presented and for others, a determination type statement is presented. Consider deleting the determination language or adding a separate column that includes this information for all species and alternatives. It would be preferable to include a separate determination summary table.

Page 302, Table 48 continued, Beluga whale -- Rather than stating that this is the southernmost known population, which provides no information relative to the location of the project, it would be better to state where the species occurs. Also, it would be good to indicate that it is only the Cook Inlet Distinct Population Segment that is listed, not the whole species.

Page 302, Table 48 continued, sea turtles -- It would be more pertinent to include information on occurrence in southeast Alaska. All species have been sighted in SE AK, but they are considered rare, and outside their normal range here.

Page 302, Table 48 continued, Steller sea lion, Western AK DPS -- "There may be an occasional occurrence by the western DPS". Please clarify where this occurrence would be. Is it within the project area?

Page 304, fourth complete paragraph -- "...the misnamed Mist Island haulout..." and "...the minimum number of sea lions at Mist Island...". There has been some confusion about the location of this haulout, but information from NMFS refers to this as the "Mist" haulout. Please refer to the haulout as Mist rather than Mist Island and delete the wording as indicated above.

Page 304, last paragraph -- "Activities...no effect on Steller sea lion." Move this paragraph to the Analysis of Project Effects section.

Page 305, Construction -- There is no discussion of possible construction effects (sedimentation? etc.) on herring (which should be discussed under Sensitive Species).

Page 305 Humpback Whales, first paragraph, last sentence -- "Aircraft and aircraft noise are not expected to have an effect on humpback whales or stellar [sic] sea lions." The analysis needs to demonstrate why this is a true statement.

Page 306, Table 49 -- "Anticipated underwater noise" column. At what distance from the source are these dB levels anticipated?

Page 306 -- Generally a good discussion of sound exposure and impacts. However, in the Port of Anchorage study it would be good to know the sound level at the source and whether this would be similar to what is expected for this project, i.e. are similar equipment and techniques being used? Are water conditions similar?

Page 307, first paragraph -- How was the safety zone of 50 yards developed? It does not seem consistent with the sound isopleths discussed earlier. Please provide more rationale for this distance. It would not seem to provide sufficient distance to prevent effects as stated in the first paragraph.

Page 307, Steller Sea Lions -- "Therefore, the project construction noise would have no effect on Stellar [sic] sea lions." This may be true, but I don't think the analysis substantiates this conclusion. A discussion similar to the whale discussion above would be helpful if the information is available. What about aircraft noise in relation to hauled-out sea lions, i.e. Mist haul-out which could be along the flight path between project and Juneau.

Page 308, first paragraph -- "...vessel landing days...". It would be helpful to define what a vessel landing day is. Days during which fish were off-loaded?

Page 311, Pacific Herring -- Move this entire section to the sensitive species section.

Page 312-313 -- Delete the duplicated paragraphs and information.

Page 313, Action Area, second paragraph -- "This however, is expected to be temporary because once construction is completed conditions would be similar to prior to construction." This may be true, but has not been demonstrated in this analysis. What is the current habitat type? Is there aquatic vegetation associated with the sites that may be important for spawning and would not grow back quickly? etc.

Page 313, Action Area, last sentence -- "It is expected that Project construction and operations would have no effect on Pacific herring." Probably, but this determination has not been demonstrated sufficiently in this analysis.

3.3.6. Recreational Resources

Pages 323-340 -- The comparison of land use designation (LUD) standards and guidelines with projects actions in this section is well done. It would be nice to see the same type of comparison in other sections of the document.

Page 340 -- The Inventoried Roadless discussion should include the name and size of the IRA (302-Taku Snettisham, 685,704 acres). The number of acres can then be used for comparison of effects to IRA 302.

Page 343, second bullet statement -- "Manage a coastal road/trail as the one primary trail thoroughfare... from Gilbert Bay to the Sweetheart Creek fishing grounds... channeling human traffic would help avoid potential bear encounters." Bears are likely to prefer the trail built and maintained for humans.

Page 344, bullet statement at top of page -- "...with proper measures... effects would be minimized and make bear viewing activities more safe and enjoyable."

Page 346, Potential Increased Visitors -- "...Sweetheart Creek could become a bear viewing location..."

Please consider consulting with John Neary, MGVC manager, regarding site design ideas intended to manage bear-human interactions and to provide bear viewing opportunities so it's done correctly from the start. He's a terrific resource, and there are right and wrong ways to approach this. He not only is managing the bear-human issues at Mendenhall, but also managed Pack Creek (a brown bear viewing site) for many years.

3.3.7 Land Use and Ownership

Pages 337-341, TUS, PSC, and Roadless Rule discussion – The Transportation and Utility System overlay (TUS) is a management prescription and Forest Plan land use designation (LUD). A Forest Plan amendment would be needed to apply this LUD to the Sweetheart Lake project area. It is unclear if there would be any advantage in requesting a Forest Plan amendment for the project. The current LUD designations for the project area do not prohibit hydropower development.

Please see our comments regarding Power Site Classifications on page 2 of this document.

Page 357, Figure 128 -- Since the Court no longer allows for the Tongass National Forest Roadless exemption, Figure 128 is incorrect. We do not have IRAs where road construction and reconstruction is allowed.

Page 359, Figure 129 -- The project area boundary along the creek and near the lake is misleading. Please correct it to include all areas within the project boundary.

Pages 360-368 – This section is mostly a repeat of the information presented on pages 337-341. It is unclear if the PSC withdrawal "trumps" the Roadless Rule and from a purely practical standpoint, it probably doesn't matter.

The Forest Service and JHI have had numerous conversations about impacts of the Roadless Rule on the project. The Forest Service has an internal administrative process in place for seeking approval of projects that require the construction of roads or the cutting and removal of timber within Inventoried Roadless Areas. To date, all energy-related projects have been approved.

Page 368, first paragraph and throughout the entire document – Repeated typo: "Tavoidance". Please correct. Should be "TUS avoidance".

Page 368 -- The Inventoried Roadless discussion should include the name and size of the IRA (302-Taku Snettisham, 685,704 acres). The number of acres can then be used for comparison of effects to IRA 302.

Any project effects analysis must include the transmission line as well as the facilities at Sweetheart Lake. On page 368, the roadless discussion is limited to onsite facilities and does not mention that the transmission line is also with the roadless area.

3.3.8 Cultural, Archaeological, and Historical Resources

Page 373, Table 56 and text -- The Forest Service has not made determinations of eligibility and effect on the site within the area of potential effect. The SHPO has not concurred with the determination of eligibility and effect for the sites listed on Table 56. The SHPO has concurred with the identification of the area of potential effect. We are now in the identification phase of the Section 106 process and need to consult about the identification efforts and methodology.

Page 375, Proposed Measures to Address Project-related Effects, first paragraph -- The concurrence for a determination of "no historic properties affected" for this project undertaking is not complete, consultation has not yet occurred.

Page 375, Ground Disturbance During Construction and Operation, last sentence - - The federal land management agency would need to be notified in the event of a discovery of a previously undocumented historic resource.

Page 376, Human Remains/Burials -- In the event that human remains are inadvertently discovered on federal lands during project construction all work in the project area must stop for 30 days and federal officials are required to give notice of discovery by phone, followed by written confirmation within three working days of notification of the discovery. JHI would be required to contact the federal land managing agency if on federal land. The federal agency must protect and secure the discovered items and initiate the consultation process.

3.3.9. Aesthetic and Scenery Resources

These comments are intended to supplement, not replace, a separate Forest Service review of Corvus Design's Scenery Resource Report. Those review comments were transmitted via email to the proponent and to Corvus Design on 11/5/2013.

In the interests of completeness, it may be helpful to briefly mention the temporary facilities proposed near Sweetheart Lake (road, camp, "laydown areas," etc.) and state no long-term scenery-related concerns (or similar wording), as these will be submerged post-construction.

Page 376, Description of Aesthetic and Scenery Resources: Regarding the analysis area boundaries, this paragraph states that: "In evaluating the Aesthetic Resources all facilities not on Forest Service lands are located on State managed lands... For the purpose of analyzing scenery resources, the area of analysis consists of all of the Sweetheart Lake Hydroelectric Facility... within Forest Service lands..."

Does this statement mean that the State land was only excluded when producing numbers for tables (acres, and % of area)? The written analysis includes the effects of facilities built on State land, so why make this distinction?

Page 380, Special Consideration VCU 610, second paragraph -- The reference to "landscape character type description for Region 3" is confusing because it's not explained here. Either define, or drop the region

number and leave it at, "...for this landscape region" or similar wording. Otherwise you appear to mistakenly be referencing Region 3 of the FS.

Page 384, bullet statements: These bulleted statements could be eliminated in favor of the table on page 385. They say the same thing, and a table is easier to read and refer back to than this bulleted format.

Somewhere in this section please add a map showing SIOs adopted by the Forest Plan for the LUDs currently assigned within the project area (not for a TUS LUD since that would all be the same SIO). The ESI map could be dropped in favor of the adopted SIO map if necessary; the ESI is so homogenous across most of the project area, it can be easily described in words.

Page 384, top paragraph, 4th line down -- "Within the Tcorridor...": Typo? Same with the next line down, "superseded by the Tonly..." A couple more, same paragraph: "Tdevelopment..." and "Tdesignation."

Pages 387-390, Figures 135-141 -- Some photo pairs lack the time frame of "After 1 Year" or "After 5 Years." Please make sure this appears with each pair – very helpful. The simulations are quite nice.

Figure 135 -- are we seeing the roof of the powerhouse, or a wall? Will the walls of this structure need to be darkened (in addition to the later statement about the roof), or is that already planned?

Figure 140 -- Is this area seen in the foreground or the middleground? Does trolling take place along this shoreline? This cleared corridor does not appear to meet the standards of a Low SIO, and I agree with your statement (page 391) that the proposed facility does not take advantage of existing landscape patterns and textures. This area in particular needs the cleared edges to be less linear. If that is unlikely to be maintained by shaping the vegetative clearing limits over time (expensive), then please consider making a short dogleg in the alignment so it's less linear in this location.

Page 393, Proposed Measures to Address Project-Related Effects on Aesthetic and Scenery Resources -- While these are all good mitigation suggestions, it's unclear whether any or all or none of them would be applied, judging from the wording (i.e., JHI will "consider" options for coloring...). Therefore, it's impossible to say whether this project would be consistent with Forest Plan direction as the proponent states at 5.5. Consistency with Comprehensive Plans, Table 69, List of Comprehensive Plans Relevant for the Project (page 417).

4.0 Developmental Analysis

5.0 Conclusions and Recommendations

Page 416, Unavoidable Adverse Effects -- There are unavoidable adverse effects to wetlands, the shoreline coastal process, and soils with this proposed action. These effects should be disclosed in the document.

Page 417, Table 69 -- "TLMP... 2008... Applicant Determination - ...consistent" This conflicts with many statements found in 3.3.9.3. Potential Project-related Effects on Aesthetic and Scenery Resources, pages 391-393. For example: VCU 570, where the 2nd bullet statement reads, "This SIO will not be accomplished within one year after completion. This is not consistent with the Forest Plan."

6.0 Finding of No Significant Impact

7.0 Literature Cited

8.0 List of Preparers

9.0 Consultation Documentation

Technical and Study Plan Documents

Appendix D: Aquatic Resource Report

Page 16 -- "This is fairly common for chemical data in environmental samples*. Using a log-normal distribution to develop" ... There is no information in the footnotes for * in the sentence.

Page 22 -- "The proposed flow levels will not adversely affect the migration of sockeye salmon or the subsistence fishery on Sweetheart Creek." Should be changed to: The proposed flow levels will not adversely affect the return migration of sockeye salmon adults or the personal use fishery on Sweetheart Creek.

Page 23 -- "Similarly there is no evidence to suggest an adverse impact on the stocked sockeye salmon reared at Sweetheart Lake either," -- No studies were conducted on the food source of sockeye salmon fry that are reared in Sweetheart Lake. Therefore the conclusion of "no adverse impact" does not have merit.

General -- It is interesting that a benthic macroinvertebrate study was conducted but a zooplankton study was not conducted.

Appendix G: Fisheries Report

Page 9 -- "Yanusz and Barto (1995) described Sweetheart Lake as having low productivity due to phosphate limitation, deep light penetration, a good heating regime with heating down to 66ft (20m) and a peak in zooplankton populations once a year in July or August; i.e. Lower Sweetheart Lake was concluded to have a

good environment for rearing sockeye fry.” Does the applicant think that this will continue to be the case? This study is almost 20 years old. I think some follow-up of zooplankton density is in order. I suggested a study to be conducted in fall 2012.

Figure 22A—The graphs are very confusing. Some of them have months and years on them and some seem to be duplicates of other graphs in the same figure with different numbers in the Length Frequencies. This needs a lot of work to make it understandable. Either separate all the figures by place/date, or give more details in the title of the graph.

Figure 22B—Same issue as Figure 22A. Missing data for the titles of individual graphs. Needs work to make it understandable.

Page 96, 8.0 Conclusions section—States that “the increase in lake level should allow a larger number of sockeye salmon fry to rear in the lake”. There is no data to support this conclusion. In fact I don’t see any data collection that was completed that will support this conclusion. No food source analysis was completed other than looking in ADFG reports from the 90’s. Even then, I haven’t seen any analysis of what species of zooplankton are present in the lake itself or the densities of the zooplankton. Since sockeye salmon are dependent on zooplankton for their food source, this is a major omission. I commented last year on the need for zooplankton studies.

General - I don’t see any data on whether zooplankton and sockeye salmon fry densities will change or not change with the fluctuation in water level. Information may be available in published papers (need to find someone on other hydro projects), but nothing is currently in the report to make me think there will not be changes in the dynamics of food source and sockeye salmon fry.

Appendix I: JHI Water Reservation Request...

Page 7 of JHI’s August 27, 2012 letter to Mr. Monte Miller --- “JHI’s reservation of water will have a neutral or arguably a positive effect on stream habitat for salmonids...”

- If JHI wants to use a similar statement in other studies or documents, please consider changing the wording to “may have a positive effect on stream habitat for salmonids.” I think it is very premature to state that a positive effect will occur. No conclusions can be made until after the project is implemented.
- Where will the positive effect occur? In previous portions of this document, Sweetheart Creek was split into two sections -- the bypass section and the anadromous section. It would be helpful if the document was consistent when referring to the creek.
- A positive effect will only occur, according to the USFWS document, if the salmonids are spawning and the eggs and fry are still in their redd. It is stated earlier in the document that salmonids only use Sweetheart Creek in the bypass section when they are flushed down from the lake and are unable to swim back into the lake. I don’t see any information

on spawning of salmonids in Sweetheart Creek itself except in the anadromous section. Clarification is needed.

- If referring to the anadromous section, the salmonid species that will benefit are the ones that currently spawn in that area. How will this project improve the overall spawning success of the salmonids already spawning in the anadromous reach?

Appendix J: Botany Resource Report for Plants

9.0. Environmental Consequences

Pages 20 -24, entire section and Table -- The table does a good job of identifying the habitat types and locations, and what activities might cause vegetative disturbance, but does not discuss or specify what the actual effects on the ground and to the vegetation would be as a result of those actions. Some examples of DIRECT EFFECTS could be trampling, burying, uprooting, etc. Some examples of INDIRECT EFFECTS could be alteration in hydrologic dynamics, increased erosion, increased/decreased shading, exposure of bare mineral soil (improving conditions for potential invasives), etc.

The Effects Analysis by Alternative summary needs to include: Direct, indirect, and cumulative effects for:

- General vegetation- effects analysis for general vegetation
- Rare plants – with effects analysis for each species found
- Sensitive plants – with effects analysis for each species found

10.0 Cumulative Effects, Geographic Scope

Page 25 -- Since the rare plants found are rare on the Tongass, ideally, the cumulative effects area should be based on the plant's natural known or suspected range within the TNF.

A summary of these effects by Alternative could be added to the rare plant descriptions p.20, but the specifics of the effects still need to be stated somewhere – i.e. the table.

- Overall, the effects analysis needs to be more specific about what the actual physical effects would be and how they would affect each of the 3 plant categories; general vegetation, rare plants found, and sensitive plants, keeping in mind their distribution and rarity in SE Alaska.
- If this can be worked into the current table, that would be fine. Otherwise a narrative for each would be needed.
- The subsequent EA summary should include a summary of this analysis.
- The Forest Service botanist can provide a couple of examples, if the authors wish.

Appendix L: 2012 Wetland Delineation Report: Gilbert Bay

Page 25, Photo 14 -- This photo shows Carex lyngbyei along the proposed dock site and the section of the coastal road. Carex lyngbyei is an obligate wetland species in the intertidal zone. Any fill in this area is wetland fill. Was this included in the wetland acres?

It appears that the wetlands impacted by the coastal road are higher value than those impacted by the forest road. Was this taken into consideration?

Page 38, Section 6.0 Wetland Conclusion, Number 3 -- The coastal route is described as " ...crossing a beach meadow to the intertidal salt march (E2EM1) and then north along the beach in the rocky intertidal (E2RS2) and intertidal salt marsh to the dock site." It is not clear if any of the E2EM1 salt marsh is filled. Only the E2RS2N is described in the table as filled. Would any of the wetland be isolated/dammed off by building the coastal road?

It appears that the ES3, or Gilbert Bay Coastal Estuarine wetlands, north of the Sweetheart Creek delta may be affected by the coastal road even if not filled as the wetlands would be cut off from salt water. (refer to figure 11 on page 41)

Appendix P : 2013 Recreational Resources Report

Page 18, paragraph 1 -- Dock maintained by JHI? Due to severely declining recreation budgets, the FS is unwilling to assume the maintenance of a dock in Gilbert Bay. JHI would be solely responsible for the maintenance of dock and would also assume all associated liability.

Page 19, last paragraph -- Buoys maintained by JHI? Due to severely declining recreation budgets, the FS is unwilling to assume the maintenance of buoys in Gilbert Bay. JHI would be solely responsible for the maintenance of the buoys and would also assume all associated liability.

Page 48, JHI Analysis and Response, second paragraph -- The shape and regularity of the rock mounds can either contribute to a natural look or detract from it. Symmetric mounds with level tops creating straight lines will look unnatural, but random scattered mounds with rounded tops could look more natural. Mimic the profiles found in the natural setting to create mounds that appear more natural.

Page 63, Trails – The Forest Service supports trail improvements and may request that JHI upgrade the user-made trails along Sweetheart Creek to a single, hardened path that is designed to reduce resource damage caused by fisherman accessing sockeye salmon in the creek.

Page 65, Cabin – After much discussion, the Forest Service has determined that it does not support the placement of a public recreation cabin in Gilbert Bay. Forest Service recreation budgets are declining precipitously and cabins and other recreation facilities are being closed. It would be short-sighted to assume the administration of a new recreation cabin in a remote location – even if the cabin was built and

maintained by JHI. The Forest Service appreciates JHI's generosity in making the offer, but, regrettably, must decline.

Page 66, Tail Race -- During the early planning stages of the tail race area, it might be worth talking with specialists who deal with establishing and managing bear viewing areas. In cases where site development has the potential to attract large numbers of people for the purpose of bear viewing, design elements can either contribute to bear/human conflicts, or facilitate successful bear-viewing management. It has been noticed in past developments that bear viewing is more difficult to manage and to adapt a site after development occurs. Bear viewing can become a recreation activity at a site regardless of whether this was intended in the design of the facility. If the possibility of bear viewing is considered early on in the planning process and development occurs in a way that considers ways to manage bear/human interactions, design elements can facilitate successful bear viewing management should that activity become prevalent. Consider the movement of people and bears and avoid creating areas where bears become crowded by people.

Appendix O: Draft Project Effects Analysis on Threatened, Endangered, and Candidate Species; Sensitive Species; Management Indicator Species; Migratory Birds; and Subsistence Species

The comments related to the Wildlife and Threatened, Endangered, and Candidate Species sections in the PDEA also apply to this Wildlife analysis report (Appendix O) because report sections were directly cut and pasted into the PDEA. In practice, the recommended changes should be made to the Appendix O Wildlife report and then pertinent information should be summarized as appropriate in the PDEA.

Appendix T: Plans

Plan P-4, Scenery Management & Monitoring Plan

General comment -- Thank you for including and presenting specific concerns raised during analysis; this will help future users of this document understand the concerns. Often the original intent or concern gets lost in old files.

Page 5, Marine Access Facilities -- A discussion of the quarry pit effects should be included here.

Page 6, Powerhouse, second bullet statement -- This says the structure may be visible, but only recommends modifying the roof color and reflectivity; the structure should receive the same treatment.

Page 6, Powerhouse, third bullet statement -- "...may create a visual that can be seen..." Awkward wording. Consider re-wording.

Pages 6-8, C. Proposed Mitigation Measures: Again, while these are all good mitigation suggestions, it's unclear whether any or all or none of them would be applied, based on the wording. Therefore, it's difficult to say whether this project would be consistent with Forest Plan direction.

Plan P-8. Wildlife Mitigation and Monitoring Plan

The FS wildlife biologist is requesting a Wildlife Mitigation and Monitoring Plan as a 4(e) condition. However, it is premature to provide a detailed review of the draft plan. It is likely that much of the information currently included in the draft plan will be useful, but many changes are likely to be needed as well.

Document Content(s)

FS_transmittal letter.DOC.....	1-1
Encl 2 -- Schedule Final 4(e)s Sweetheart Lake.DOC.....	2-2
Encl 4 -- Certificate of Service Sweetheart_Lake.DOC.....	3-4
Encl 1 -- 4e Terms and Conditions.DOCX.....	5-14
Encl 3 -- FS Comments Sweetheart Lake DLA and PDEA.DOCX.....	15-45