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February 26, 2007  
PKWD-07-009

Ms. Magalie R. Salas  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, D.C. 20427

Dear Secretary Salas:

Subject: **PACKWOOD LAKE HYDROELECTRIC PROJECT  
FERC DOCKET NO. 2244-012  
RESPONSE TO FILINGS**

- References:
- 1) Letter dated September 18, 2006, J.W. Baker to Magalie R. Salas, "Study Progress Report"
  - 2) Letter dated December 20, 2006, J.W. Baker to Magalie R. Salas, "Meeting Summary"
  - 3) Letter dated December 19, 2006, J.W. Baker to Magalie R. Salas, "Response to Filings"
  - 4) Letter dated November 20, 2006, Charlene Andrade to Magalie R. Salas, "Comments on Initial Draft Study Reports for FERC Docket No. P-2244, Packwood Lake Hydroelectric Project, Energy Northwest"
  - 5) Letter dated November 20, 2006, Claire Lavendel to Magalie R. Salas, "Forest Service Response to Packwood Lake Hydroelectric Project No. 2244 Initial Study Report Findings"
  - 6) Letter dated January 24, 2007, Ken S. Berg to Magalie R. Salas, "U.S. Fish and Wildlife Service (Service) Comments on the Supplemental Study Report Meeting Summaries, held on December 12 and 13, 2006 for the Packwood Lake Hydroelectric Project, Federal Energy Regulatory Commission Project #P-2244-012"
  - 7) Letter dated January 29, 2007, Claire Lavendel to Magalie R. Salas, "Forest Service Response to Packwood Lake Hydroelectric Project (No. 2244) Initial Study Report Findings"

In accordance with 18 CFR 5.15 (5), enclosed please find Energy Northwest's responses to comments filed by the U.S. Fish and Wildlife Service (Reference 6) and the USDA Forest Service (Reference 7). Also included are responses to comments Energy Northwest has received through January 31, 2007 from agencies, tribes, and stakeholders on the draft study reports. Following is a summary discussion related to

Ms. Magalie R. Salas

Page 2

February 26, 2007

**FERC DOCKET NO. 2244-012  
RESPONSES TO FILINGS**

the comments received, study requests, and Energy Northwest's commitment to additional studies. Detailed responses to comments on the study reports are provided in Enclosure 2.

**Comments on the Study Report Meeting Summary for December 12, 2006**

Energy Northwest has revised the meeting summary for the December 12, 2006 meeting based upon comments received from the U.S. Fish and Wildlife Service (USFWS). Enclosure 1 is the revised meeting summary, with the changes shown in redline form and with the changes accepted.

**Phase I Studies Deferred to Phase II:**

**Macroinvertebrates:** In the Study Progress Report (Reference 1), Energy Northwest proposed that sampling of the Cowlitz River side channel be deleted from the macroinvertebrate study, which is part of the Revised Water Quality Study Plan. As discussed in the revised study report, it was not possible to collect the data using the methodology provided in the study plan because the side channel was dry, and even if the data had been collected at some other time, it would no longer be relevant because of Cowlitz River channel changes, which occur independent of the Project. The revised draft report addressed the concerns raised by the agencies for the Lake Creek portion of the study, and provides sufficient information on why using a fall sampling period is appropriate. No comments on the revised draft macroinvertebrate report have been received by Energy Northwest, and no requests for additional study were made in the January filings by the agencies. Energy Northwest does not believe that additional sampling is required in Lake Creek and we request that the Commission concur with our decision to delete sampling in the side channel from the macroinvertebrate portion of the Revised Water Quality Study Plan.

**Stream Connectivity in Packwood Lake Tributaries:** In response to comments received from the agencies on the draft report in October 2006, a second draft was issued for review and comment on December 4. No comments have been received by Energy Northwest on the revised report, and no requests for additional study were made in the January filings by the agencies. At the December 13, 2006 study report meeting, Energy Northwest committed to having the consultant review the tributaries to determine if headcutting occurred as a result of the November 2006 precipitation event. The consultant will complete the review in Spring 2007. The results will be provided in the synthesis report that will be issued in early summer.

**Phase II Studies:**

Following are responses to comments and study requests received on the Phase II study reports, and information on studies for which Energy Northwest has proposed additional study.

Ms. Magalie R. Salas

Page 3

February 26, 2007

**FERC DOCKET NO. 2244-012  
RESPONSES TO FILINGS**

**Amphibian Survey:** WDFW requested additional study in their November 20, 2006 filing (Reference 4) and comments from the Forest Service and USFWS were received on the draft study report. Detailed responses to comments received are provided in Enclosure 2. As stated in Reference 3, Energy Northwest believes that the objectives of the study plan were met and that no additional study is required. Consistent with the schedule discussed at the December 12, 2006 study report meeting, the final report was issued on January 15, 2007.

**Anadromous Salmonid Habitat and Spawning Survey:** Detailed responses to comments received on the draft study report are provided in Enclosure 2. There were no requests for additional study. Energy Northwest will finalize the report, incorporating the comments received from the agencies.

**Bald Eagle and Osprey Nest Survey:** Although Energy Northwest does not believe that additional survey is needed, we have made arrangements with biologists from WDFW and the Puyallup Tribe to scan for bald eagles and nests while performing unrelated aerial surveys in late spring or early summer 2007. The results of these surveys will be provided in the synthesis report. Detailed responses to comments received on the draft study report are provided in Enclosure 2.

**Engineering Needs for Access Routes:** The draft report is currently being reviewed by agencies, tribes, and stakeholders. Energy Northwest believes that field work associated with this study has been completed.

**Fish Distribution and Species Composition:** Energy Northwest has proposed to continue this study through June 2007, in order to collect data for the spawning period, corresponding to the period in which field conditions did not allow data collection in 2006. The Oneida traps will be redeployed in Packwood Lake and the fyke nets will be reset in the tributaries when conditions allow. There is currently 38 inches of snow at the lake, and the lake is partially frozen.

**Fish Passage Barriers:** Comments on the draft study report were received at the December 13, 2006 study report meeting, and the USFWS filed comments noting that the Level B assessment and stream simulation analysis are required by the approved study plan. At the December meeting, Energy Northwest committed to have the consultant complete the following: perform a Level B analysis and stream simulation analysis for the Snyder Creek crossing of the Project's tailrace with results provided in the final report; include a table that provides stream gradient and wetted width data; provide an analysis using a fish factor of 0.75 for the Lake Creek barrier analysis; include a discussion related to Pat Power's review on flows and clarification of why the low flow was the most limiting; and include as an appendix correspondence with Powers. No additional field work is needed to complete the study.

**Fish Population Characterization Near the Drop Structure:** Detailed responses to individual comments on the draft study report are provided in Enclosure 2. Energy

February 26, 2007

**FERC DOCKET NO. 2244-012****RESPONSES TO FILINGS**

Northwest has proposed continuing this study through July 2007 and agrees with the USFWS comment that the study did not fully follow the protocol laid out in the study plan. The reason was higher than normal flows and water clarity issues experienced in 2006. Another fish species composition survey encompassing the entire 1464 foot reach will be conducted in the latter part of July, to allow for incubation and emergence of in-gravel rainbow trout eggs. Efforts to capture fish in the basins below the drop structure will continue through June using multiple techniques, including seining, gill netting, and electrofishing. Decisions on techniques used to capture fish directly below the drop structure will be made after evaluation of these techniques in early March. Following is a schedule for additional field work proposed for 2007; work will resume in March 2007, weather permitting.

Survey	Location	Methods	Start	Finish
Fish Species Composition Survey	Entire 1464 ft. reach between drop structure and 1 <sup>st</sup> barrier	Electrofishing	July 2007	July 2007
Fish Capture Below Drop Structure	Concrete basins below drop structure	Seining, gill netting, electrofishing	March 2007	June 2007
Aging of Fish	All fish captured	Espinosa 1988	March 2007	July 2007
Spawning Surveys	Entire 1464 ft. reach between drop structure and 1 <sup>st</sup> barrier	Visual Observations	April 2007	June 2007
Draft Final Report	N/A	N/A	June 2007	July 31, 2007

**Geomorphology and Habitat of the Tailrace Slough:** No comments have been received on the draft study report. At the December 13, 2006 study report meeting, Energy Northwest committed to include in the final report information on the November 2006 flood. If aerial photographs are available, they will be included in the discussion. No additional field work is needed.

**Gravel Transport:** Detailed responses to individual comments on the draft gravel transport study report are provided in Enclosure 2. WDFW requested additional study at different flows (Reference 4). Energy Northwest believes that additional data on accretion flows will be sufficient to provide data needed to evaluate what could occur at release flows between 34 cfs and 300 cfs (see Reference 3). The Forest Service also requested additional study (Reference 7). Although Energy Northwest is agreeing to additional study, we do not believe that all of the Forest Service's request should be approved by the Commission. For continuity and understanding, Energy Northwest is providing the Forest Service's request, followed by our response, as Enclosure 3.

**FERC DOCKET NO. 2244-012  
RESPONSES TO FILINGS**

Energy Northwest is proposing the following additional data and analysis that will help to determine the transport and stability of gravels in lower Lake Creek, including:

- Repeat the gravel and large wood inventories in Reaches 1 and 2. This will provide additional information on the re-distribution and retention of gravel following the large flow event of November 2006 that is likely to have been large enough to move gravel in all the stream reaches.
- During the gravel re-inventory in Reaches 1 and 2, the characteristics of areas where gravel occurs in the stream will be noted (e.g., patch behind boulder, gravel distributed across channel, behind large woody debris jam, behind large wood). This will provide more quantitative data to support the observations made during the initial gravel inventory regarding the conditions that are conducive to retaining gravel.
- Provide detailed data with gravel inventory data from the original (2005) and new (2007) inventory for comparison. Additional detail on large wood in these reaches will be incorporated from the large wood inventory.
- Provide photos of each 100 foot long inventory unit taken during the 2005 inventory and the 2007 inventory to provide a visual representation of channel conditions throughout the stream.
- Provide additional photos of each of the study sites to show site characteristics.
- Provide additional analysis of the magnitude of accretion flows both during the flow releases and during other times of the year.
- Provide additional analysis of the ongoing effects of the Project on flows in lower Lake Creek to address concerns about the effects of the Project on mid-level flows.
- Re-work the gravel transport report to provide a direct discussion of each of the critical questions/objectives in the discussion section as agreed to at the October 3, 2006 meeting (this meeting occurred after the draft gravel report was prepared).

**Large Wood:** Detailed responses to comments received on the draft report are provided in Enclosure 2. Energy Northwest has committed to re-inventory Reaches 1 and 2 in Lake Creek for all large wood, return to the five large wood study sites to collect data, and develop a slide show that will include pictures taken during the 2005 inventory of Lake Creek and the re-inventory that will be performed in 2007. Collection of data at the log boom will continue through summer 2007, as provided in the study plan. Before and after photographs at the log boom will also be reviewed.

**Noxious Weed Survey and Rare Plant Survey:** Detailed responses to comments received on the rare plant and noxious weed survey reports are provided in Enclosure 2. Energy Northwest has committed to mapping the rare lichen population and providing the Threatened, Endangered and Sensitive Plant Element Occurrence Field forms to the Forest Service for their use. We will also map and complete weed forms for the Packwood Lake reed canary grass and Canada thistle populations using

Ms. Magalie R. Salas

Page 6

February 26, 2007

**FERC DOCKET NO. 2244-012  
RESPONSES TO FILINGS**

the same methodology delineated in the study plan. These forms will be provided to the Forest Service and Lewis County Noxious Weed Control Board (LCNWCB). Energy Northwest will comply with the standards of the LCNWCB and guidelines for weed prevention and treatment given in Gifford Pinchot National Forest Site Specific Invasive Plant Treatment Project Final Environmental Impact Statement (FEIS) when it is issued, as well as the more general guidelines for the prevention and management of invasive plant species as given in the Region 6 Invasive Plant FEIS and Record of Decision. Consistent with our practice of updating the plan annually to include the current weed list, Packwood's Noxious Weed Control Plan will be updated with the 2007 noxious weed list and action levels, and the next update will include information regarding Forest Service guidelines and treatment standards

**Packwood Lake Entrainment:** Detailed responses to comments received on the draft report are provided in Enclosure 2. Energy Northwest has proposed continuing this study through June 2007. Additional field work includes: velocity measurements using the Acoustic Doppler Current Profiler (ADCP), videotaping, net sampling, and collection of data regarding fish found on the rotating screens. Methodology will be as provided in the approved study plan.

**Recreation Resources:** The draft report is currently being reviewed by agencies, tribes, and stakeholders. Energy Northwest believes that field work associated with this study has been completed.

**Tailrace Slough Instream Flow:** Because of the November 2006 floods, Energy Northwest has agreed to have a new correlation of flows between the Cowlitz River and the Project prepared. Bed profiles from the 2006 field season will be compared with current conditions to determine what information from the transects can be used in the modeling. However, because the Cowlitz River frequently changes channels, an option may be to consider ramping rates for the Project, or to determine if it is possible to find a minimum flow that gives sufficient depth to encourage or discourage spawning.

**Tailrace Slough Use by Anadromous Salmonids:** This study was scheduled for completion in 2007. Additional field work includes either snorkel or electrofishing surveys for anadromous salmonids.

**Vegetation Cover Type Mapping:** One comment was received on the draft report during the December 12, 2006 meeting, which was to add a full page on the map legend for readability. A full page legend will be included in the final report, which will be issued in March 2007.

If you have any questions or require additional information regarding this matter, please contact Ms. Laura Schinnell at (360) 673-3350.

Ms. Magalie R. Salas

Page 7

February 26, 2007

**FERC DOCKET NO. 2244-012  
RESPONSES TO FILINGS**

Respectfully,



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602

J.W. Baker, Vice President  
Energy/Business Services

- Enclosures:
- 1) Packwood Lake Hydroelectric Project, Study Reports, Revised Meeting Summary, December 12, 2006, Redline and Changes Accepted Formats
  - 2) Packwood Lake Hydroelectric Project, Study Report Comments and Proposed Disposition, Revision 5
  - 3) Energy Northwest Response to the January 29, 2007 Concerns and Study Request from the Forest Service Regarding the Draft Gravel Transport Study