

December 20, 2006
PKWD-06-059

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
 MEETING SUMMARIES**

In accordance with 18 CFR 5.15, enclosed please find the meeting summaries for Packwood Lake Hydroelectric Project's supplemental study report meetings, held on December 12 and 13, 2006. The meetings were held to review and discuss study reports for Amphibian Survey, Anadromous Salmonid Habitat and Spawning Survey, Bald Eagle and Osprey Nest Survey, Fish Passage Barriers, Fish Population Characterization Near the Drop Structure, Geomorphology and Habitat of the Tailrace Slough, Gravel Transport, Large Wood, Noxious Weed Survey, Packwood Lake Entrainment, Rare Plant Survey, and Vegetation Cover Type Mapping. Progress reports were provided for Engineering Needs for Access Routes, Fish Distribution and Species Composition, Lake Creek Instream Flow and Habitat Assessment, Recreation Resources, Tailrace Slough Instream Flow, and Tailrace Slough Use by Anadromous Salmonids. Reports for these studies are scheduled to be completed in 2007. Also discussed were revised draft study reports for Stream Connectivity in Packwood Lake Tributaries and Macroinvertebrates, which were revised as a result of discussions during the October 3, 2006 study report meeting and comments received on the initial draft reports.

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

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MEETING SUMMARIES

Respectfully,

A handwritten signature in black ink, appearing to read "J.W. Baker". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

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

- Enclosures: 1) Packwood Lake Hydroelectric Project, Study Reports, December 12, 2006, Meeting Summary
2) Packwood Lake Hydroelectric Project, Study Reports, December 13, 2006, Meeting Summary

Packwood Lake Hydroelectric Project
Study Reports
December 12, 2006
Meeting Summary¹

Presentations

The following presentations were made during the meeting, and have been posted to the Energy Northwest website at: http://www.energy-northwest.com/generation/packwood/relicensing/ferc_filings.php

Barrier Analysis
Fish Distribution and Species Composition
Fish Population Characterization Near the Drop Structure
Packwood Lake Entrainment
November 2006 Flood Event

Handouts

The Study Report Comments and Proposed Disposition, Revision 3 spreadsheet was provided to those who needed copies. Copies of tables from the macroinvertebrate study report were provided to those who needed them.

Summary of Discussions

Macroinvertebrates:

Kent Doughty explained how the macroinvertebrate draft report was revised to include an additional index and the re-organization of the discussion. Included was an explanation of how the metrics were developed, one set by Bob Wisseman and one set by Chad Wiseman. Both use fall sampling. Wisseman's included approximately 500 streams, mostly in western Oregon, but some in western Washington, including the Mt. Rainier area. Wiseman, who developed the RIVPAC model for Ecology, used 48 streams, grouped regionally. Included were streams with minimal human disturbance and those highly disturbed.

For most of Lake Creek, the creek is good to fair, similar to metrics from undisturbed creeks. It is poor right below the drop structure, which is more typical of what is expected at a lake outlet, where the temperature is naturally warmer. In response to a question on how many streams in the RIVPAC model were for lakes, Kent responded that there were only two small glacial lakes included, and one much larger. Clarification was made on what the rating system from 5 to 1 means, (e.g., 1 means that it is poor). Kent was asked if tolerant taxa would go further down Lake Creek if there was more flow from the lake; the answer was yes, the warmer lake water would most likely go further down Lake Creek.

¹ These meeting summary notes are not verbatim. They do not reflect formal decisions by Energy Northwest, any agency, tribe, non-governmental organization, or interested stakeholder.

The decision to not sample the Cowlitz River side channel was discussed. The question was asked as to what would be done with the information; the answer was the information may be needed as information is pulled together for fisheries. If a decision is made that the data is needed, it should be related to the criteria for a study, and how it will inform a license condition. Kent stated that as indicated in the study plan, the sampling sites would have changed because of the November flooding, and that it would be important to know what is really needed. Discussion ensued on various means of managing the Project affects at the tailrace slough. Dan Ross reminded everyone that Energy Northwest will be installing the permanent barrier near the end of the lined tailrace.

Fish Passage Barriers:

John Blum provided a presentation summarizing the draft report that was issued in late November. The Fish Passage Barriers study included culverts and natural barriers. In response to a question on what criteria were used related to fish presence, John stated that EES Consulting looked at stream typing, slope, and whether there was water above, as well as observations for fish. It was stated that stream typing is not always accurate, gradient would be the best factor. The text discusses the wetted width and gradient; however in the final report, John will provide a table with the information. A laser level was used to measure slopes. The November slide was discussed; Energy Northwest's assessment is it was caused by excessive rainfall and resultant runoff that overwhelmed the drainage system and wetted the fill material causing it to slide. Brian Peck indicated that double culverts, which were present in the area, could be a problem. The location of Art Lake Creek was discussed. John noted that the survey of the Snyder Creek crossing was done prior to the November flooding, which caused the culvert to silt in. Dan Ross stated that Energy Northwest is trying to clear the culvert now, as emergency maintenance. Because of the options available for maintenance and relocation, a Level B analysis had not been conducted for the crossing. John will perform the Level B analysis and the results will be in the final report. It was noted that even though the culvert might be partly passable, it needs to be fully passable for weaker species.

The Lake Creek barrier analyses were discussed. If a fish factor condition of 1 is used, the potential barrier at RM 1.03 is passable for steelhead, but not for Chinook or coho, and the barrier at RM 1.95 is a barrier for all species. If a factor of 0.5 is used, the potential barrier at RM 1.03, would be a barrier to all species. However, the conservative approach was taken, so the barrier at RM 1.03 is considered passable for steelhead. EES Consulting was asked to include a review of a condition factor of 0.75. John stated that Pat Powers, who reviewed a preliminary of the draft report, indicated that the low flow was the most limiting because velocity barriers would increase past that stage, and that air entrainment would be a barrier, even if the depth were met to allow passage. Therefore, analysis was not conducted at other flows.

Fish Distribution and Species Composition:

John Blum provided a status report, as the draft report is due in 2007. The literature review is approximately 75% complete. John discussed the net sets that were done at Packwood Lake last spring and the stream surveys. It was noted that there was no data from when the fish would most likely be spawning. John responded that the streams were very turbid, and they did not

want to harm eggs or spawners by electrofishing; Energy Northwest is planning to survey again in 2007. Ken Wieman asked if the type of sculpin and lamprey were identified. John stated that he will check for additional information in the field notes. The set done last May was the test set, and after which it was decided to try another sampling method that was protective of fish.

Fish Population Characterization Near the Drop Structure:

John Blum provided a presentation on the draft report that was issued at the end of November. This is a study that Energy Northwest is recommending be continued in 2007 because weather prevented data collection in late winter and the spring of 2006. It was noted that the study did not characterize the drop structure as a barrier; this is because the study plan considered it to be a barrier. John stated that the PI calculation was completed, but that EES Consulting could not find reference to the meaning of the numerical results, and has asked for information from WDFW. Brian Peck provided some information on the meaning, the lower number means that this would not be a high priority for change. A discussion of the meaning for the numerical results will be included in the next draft report. Brian noted that a school of fish had been observed before the spill last spring. Work will resume in February if access permits, and a census will be conducted in June. When asked whether there is some spawning in this reach, as there is variability in size; John stated that he would expect that there would be some. EES Consulting should discuss the viability of the population in terms of the data collected.

Packwood Lake Entrainment:

John Blum provided a presentation summarizing the draft report that was issued at the end of November. Energy Northwest is recommending that this study be extended into 2007 because weather prevented start of the study as scheduled in 2006. The mean screen velocity as presented in the report is the same as the approach velocity. The worst case is shown in the graphs. In the work left to go, velocities will be measured using the Acoustic Doppler Current Profiler (ADCP). A discussion was held on whether there was a connection between the gill netting and the screen survey. It is possible that some of the fish captured were from the gill netting; however the condition of the fish did not allow identification of any damage from the gill nets. Marking could be conducted next year for any fish captured in the other studies.

November 2006 Flood Event:

Dan Ross provided a brief presentation on the November 2006 flood event, including pictures of the tailrace slough area.

Amphibian Survey:

Discussion centered on a review of the comments received and the initial responses provided by Energy Northwest in the spreadsheet. Comments 100-101: The need for DNA analysis was discussed. Stephen Nyman, the consultant who performed the survey, did not think that DNA testing was needed because there was a good fit for the coastal giant salamander. Tom Kogut agreed that DNA analysis was not required in the study plan; however, if the study plan was being written today, it would be required for specimens smaller than 55 mm. Energy Northwest

is willing to provide samples to a lab doing an analysis project; however we do not believe that we need to analyze the samples. If there is a need, it should be clearly identified in the January filing, with the reasons why it is needed and how the information will inform a license condition. Comment 108: The Upper Lake Creek survey was conducted above the back water influence from the lake in an area where the creek was flowing. Comment 109: The need for a spring survey was discussed; Energy Northwest does not believe that a new study is warranted. Larvae of one of the species listed in the comment were found, therefore the eggs of that species would be there in the spring. Two of the species listed in the comment are completely terrestrial, and would not be where there is flooding. Comment 110: the adaptive protocols were discussed. Comment 113: Distribution of amphibians, including tailed frog, was determined as required by the study plan. Snorkeling was considered to be a back up method, but it was felt that this was not needed. Because adults were observed, larvae had to be present. In the final report, other possibilities as to why larvae were not observed should be discussed. Comment 114: There will be a minor wording change to clarify that a variety of features are needed for Van Dyke habitat. Comment 115: A placeholder will be provided to the Packwood Lake Drawdown study. Comment 116: The area where most of the larvae were found really was an extension of the lake; only northwestern salamanders would be affected. Comment 112: Figure 4.1 will be redone (a preview was provided). Comment 118: Energy Northwest stated that there are no significant seeps from Project features; therefore no survey is needed. Comment 120: An appendix will be added with the information on dates, lifestages, and sizes of individual organisms that were reported for all surveys, including opportunistic surveys. Comments 125-126: Energy Northwest explained why it is difficult for the Project to ramp up flows; the ramping rate plan was followed for decreasing flows; however even then, the Project lost ground in reducing lake level because of inflows from snow melt and precipitation. The final report is scheduled to be issued on January 10.

Bald Eagle and Osprey Nest Survey:

Discussion centered on comments received and the initial responses provided by Energy Northwest in the spreadsheet. Comment 107: It was decided that the map would be deleted from the final report, and that UTM coordinates for osprey nests would also be deleted from the location table. Comment 106: The distance the survey was conducted from the lake shore was discussed. Per the study plan, the distance was 1000 feet, and the consultant did not see the need to survey further. USFWS suggests that the distance should have been one mile, consistent with foraging. If only one eagle was seen at a time, then maybe the other would be on the nest. Two eagle sightings were noted by Energy Northwest and USFWS; the dates of observations will be included in the final report. It was agreed that a ground survey to determine whether there might be a nest would not be practical. The question was asked if we need to find the nest to inform a license condition. Tom Kogut agreed to provide contact information for other researchers performing other aerial surveys in the area. Energy Northwest agreed to try to piggyback on another aerial survey; however, if this is not possible, Energy Northwest does not believe additional surveys are warranted. John Blum will ask Bob Lucas, who has performed spawner surveys for WDFW for many years, if he has observed bald eagles during those surveys. The final report is scheduled to be issued on January 15. If an additional survey is conducted, the data can be included in the Biological Assessment that will be included with the Preliminary License Proposal.

Vegetation Cover Type Mapping:

This was a descriptive report that generates maps. Forest Service descriptions were used. A comment was made that the key was not very readable when printed; an extra page will be added to the final report that provides only the key (legend). There is no recognized plant association based on the noxious weed Herb Robert; however, this species is common along lower Lake Creek. Comments were not due on the draft report until later in December; however, an extension was granted at the request of the Forest Service to January 15. The report will be finalized after comments have been received, in late January to early February.

Rare Plant Survey and Noxious Weed Survey:

Discussion centered on comments received and the initial responses provided by Energy Northwest in the spreadsheet. Comment 103: No maintenance activities are planned; however the permanent barrier will be installed that should be away from the rare plant area, which may have been affected by the November 2006 flood. Comment 104: A statement will be added to the noxious weed report on ground disturbing activities and the need to control against noxious weed propagation. Comment 117: The Forest Service survey forms were sent out via email and will be included in the final report. Comment 122: The map of noxious weed locations was sent out via email and will be included in the final report. Comment 123: A preliminary map of rare plant locations was sent out via email. It was decided that larger dots will be used on the map in the final report. A GIS map will be provided electronically to the Forest Service. Comment 131: The map and language in the final report will clarify what is within the Forest Survey boundary, and what is outside the boundary. Comment 132: The 2006 Forest Service list will be substituted for the 2005 list. It was noted that Katy Beck would have observed the two species that were added to the list, if they had been present. Comment 133: The final noxious weed report will include mention of the Forest Service standards and prescriptions in the report. Laura Schinnell agreed to send Linda Swartz the current plan, which has previously been sent to the Lewis County Weed Control Board. Comments can be provided to Laura. The plan is revised in the spring. Laura will be reviewing the Forest Service requirements and will include as appropriate in the next revision. It is likely that Energy Northwest will need to document consultation with the agencies on the plan, and that the plan may need to be submitted to the Commission. Comment 134: A biosketch providing Katy's qualifications will be included in the final reports.

General Discussion:

The schedule for submittals was reviewed; the meeting summary is due on or before December 28, and the agencies responses and requests related to studies are due on or before January 29. Requests for modification to studies should include why the information is needed to inform a license condition. Energy Northwest's response to filings on the first group of studies is due on or before December 20. Energy Northwest is planning on filing the meeting summary before the holiday. Energy Northwest is asking for comments on the draft reports sooner than January 29. The study plans stated that agencies, tribes, and stakeholders would

have 30 days after a draft report was issued for review and comment; Energy Northwest has provided more time for review, but would like comments as soon as possible.

Actions from the Meeting

John Blum will include a table in the Fish Passage Barriers report that provides stream gradient and wetted width.

John Blum will perform the Level B analysis for the Snyder Creek crossing of the tailrace.

John Blum will provide an analysis using a fish factor of 0.75 for the Lake Creek barrier analysis.

John Blum will include discussion related to Pat Powers' review on flows and why the low flow was the most limiting in the final Fish Passage Barriers report. John will also include correspondence with Powers as an appendix to the report.

John Blum will check on information related to identification of the sculpin and lamprey observed during data collection for the Fish Distribution and Species Composition study.

EES Consulting will include a discussion on the viability of the population in terms of the data collected when the next draft report for the Fish Distribution and Species Composition study is issued.

Stephen Nyman will include an expanded discussion of why larvae may not have been observed in the final Amphibian Survey report.

Stephen Nyman will provide a minor wording change to explain that a variety of features are needed for Van Dyke habitat in the final Amphibian Survey report.

Stephen Nyman will redo Figure 4.1 in the final Amphibian Survey report.

Stephen Nyman will delete UTM coordinates and the map for osprey nests from the final Bald Eagle and Osprey Nest Survey report.

Stephen Nyman will include dates of eagle observations in the final report.

Tom Kogut will provide contact information for researchers who may be performing other surveys (done). Stephen Nyman will contact the researchers to determine whether an additional bald eagle survey can be performed at the same time to look for nests a mile around the lake shore.

John Blum will contact Bob Lucas regarding any bald eagle observations during spawner surveys (done; awaiting response).

Stephen Nyman will add a page to the Vegetation Cover Type Mapping report appendix that provides a full-page version of the key (legend).

Katy Beck will add a statement to the final Noxious Weed Survey report related to ground disturbing activities. Survey forms and a map of noxious weed locations, identifying the forest service boundary will also be included. The final report will also include mention of the Forest Service standards and prescriptions, and a biosketch with Katy's qualifications.

Laura Schinnell agreed to send Linda Swartz the current Noxious Weed Control Plan for Packwood, which is based on Lewis County's weed list and prescriptions (done).

Katy Beck will add a map to the final Rare Plant Survey report to show the locations in a general way (large dots). The 2006 Forest Service list will replace the 2005 list. A biosketch with Katy's qualifications will be included in the final report.

Attendance

Laura Schinnell, Energy Northwest
Dan Ross, Energy Northwest
Bernice Kasko, Energy Northwest
Bill Kiel, Energy Northwest
John Blum, EES Consulting
Kent Doughty, EES Consulting
Brian Peck, USFWS
Tracey Scalici, USFWS
Stephen Nyman, Devine Tarbell & Associates
Katy Beck, Beck Botanical Services
Ken Wieman, US Forest Service
Karen Thompson, US Forest Service
Ruth Tracy, US Forest Service
Tom Kogut, US Forest Service
Linda Swartz, US Forest Service
Aaron Liberty, FERC
Ken Hogan, FERC
Jason James, Lewis County Weed Control Board
Bill Wamsley, Lewis County Weed Control Board

Packwood Lake Hydroelectric Project
Study Reports
December 13, 2006
Meeting Summary²

Presentations

The following presentations were made during the meeting, and have been posted to the Energy Northwest website at: http://www.energy-northwest.com/generation/packwood/relicensing/ferc_filings.php

Recreation Resources Study Summary
Summary of Engineering Needs for Roads – Preliminary Results
Gravel Transport Study
Packwood Anadromous Salmonid Habitat and Spawner Survey Report
Study Update, Tailrace Slough Use by Anadromous Salmonids
Tailrace Slough Instream Flow Study
Lake Creek Instream Flow Study Status Update

Handouts

The Study Report Comments and Proposed Disposition, Revision 3 spreadsheet was provided to those who needed copies.

Summary of Discussions

Recreation Resources:

Debby Howe provided a presentation with preliminary data, primarily for the spring off-season and peak season. Data collection for the fall off-season was completed on November 30. The survey was modified in November because of weather conditions, first flooding and then snow. Data includes wilderness data from the Forest Service, on-site surveys, survey data from the Forest Service taken in 2005, observations from Howe Consulting staff, Energy Northwest and contractor visits to the lake, recreation inventory, and traffic counts. The question on what people would like to see was an open question. There were many large groups visiting the lake. The use by ATVs was low, however, the majority of the people did not want to see them eliminated. There were no specific questions on people with disabilities. Debby asked that if there are other ways agencies would like to see the information presented, to let her know, so she can prepare the draft report to accommodate the request. The draft report is scheduled to be issued on February 1, 2006.

² These meeting summary notes are not verbatim. They do not reflect formal decisions by Energy Northwest, any agency, tribe, non-governmental organization, or interested stakeholder.

Engineering Needs for Access Routes:

Kathy Dubé provided a presentation with preliminary data, as data collection was completed on November 30. Data collection included road condition, culvert condition, and mass wasting sites. All roads are classified as maintenance level II by the Forest Service, meaning that they are maintained for use by high clearance vehicles. In response to a question on ruts; Kathy indicated that the ruts are created when vehicles try to get up the slope, and that this is really a grading issue. The slide, which occurred during the November floods, was discussed. The material that slid was fill material placed when the pipeline was constructed. The cause of the slide cannot be fully determined; however, saturated soil is most likely. There were four culverts in the area; three no longer exist. The one remaining is working; the area on the upstream side of the culvert was cleared and re-constructed to direct runoff to the culvert. The culverts in this area were rated high for maintenance, meaning that they needed attention within the year. Energy Northwest does not believe that culvert blockage caused the slide. However, Brian Peck stated that culvert condition could be a factor. Karen Thompson indicated that it did not appear that runoff was washing over the trail. The slide stopped about 1100 feet from Lake Creek, probably in the upper edge of Reach 3 or lower portion of Reach 4. Energy Northwest stated that repair of the slide is being handled outside the re-licensing process with the Forest Service and FERC. Access to the lake via snowmobile has been re-established; final repairs will wait until after the snow melts.

Kathy was asked if she identified perennial streams for the culvert analysis. This was not a part of the study plan, nor was performing a calculation to determine whether the culverts meet the standards for passing a 100 year event. Culverts would not normally be replaced until there is need for a new culvert, and then the new culvert would be required to meet current standards. Bank full data was not collected because it was not part of this study plan. Fish passage was conducted as part of the Fish Passage Barriers study. Kathy was asked if she had looked at the rust line inside the culverts. Information on rusting was collected; however, the rust line was not measured. Karen indicated that the Forest Service will use the traffic count data as input to a formula that will determine shared responsibility for the roads and trails.

The draft report is scheduled to be issued on January 19, 2007.

Gravel Transport:

Kathy Dubé showed photographs of various locations in Lake Creek and previewed a figure she had developed in response to comments received from WDFW and the Forest Service on the draft gravel study report. Kathy stated that she would be putting together a slide show that will include pictures taken during the inventory of Lake Creek every 100 feet, so that viewers can “walk down” the creek. Kathy responded to questions on how the study sites were selected and how painted rocks were placed in the channel. Confined, wetted width and bank full channels were discussed. Kathy stated that because Energy Northwest agreed to have her resurvey the large wood sites to determine what may have happened after the 1000 cfs overtopping, she could also inventory Lake Creek Reaches 1 and 2. Ruth Tracy stated that lack of large wood is not a Project effect. There may be changes in gravel transport as a result of hydraulic changes caused by the Project. Generally the previewed graph was well-received; although it was noted that

there is some loss in resolution of channel slope because it was based on the USGS map contours (40 foot contours). Hal Beecher stated that he would send Kathy the SalmonScape program that may provide a higher resolution. Concerns were expressed about Reach 2 and the lack of data.

We discussed the need for additional data at intermediate flows. Energy Northwest has limited ability to control flows above about 35 cfs because the drop structure does not have gates. When Lake inflow results in overtopping, the Project can only slightly influence the spill flow with power generation. The concern was that information may have been missed at the 35 cfs release flow because of the high precipitation event. The actual flow in the lower reach may have been 140 cfs. We agreed to revise the report to provide additional information on actual flows, where available. Kathy will also add an explanation about notation for Appendix B. Discussion was held on why the painted rocks were placed in the wetted channel and not the bank full channel; they were placed in the wetted channel as there did not appear to be much difference in area. The Forest Service is concerned that this may be a data gap. Kathy will provide more explanation of why she placed painted rocks as she did.

A discussion was held on what is meant by baseline conditions and on-going affects. Ken Hogan explained that it is okay to want to determine how the Project affects the natural hydrograph. However, the baseline is the Project in place (e.g., the drop structure is there). Energy Northwest has reviewed pictures of the lake outlet taken before the Project, and it looks like a typical lake outlet, which was formed by a landslide. This information will be provided in the lake drawdown study report. Ken Hogan stated that it has to be measurable in order to correct an on-going effect.

Discussion on the comments and proposed resolution in the spreadsheet was conducted. Generally, the revised report will include additional information and withdrawal of conclusions that are not appropriate. Laura Schinnell will be revising the spreadsheet with more language regarding possible resolution; however the spreadsheet will remain generic, as the actual resolution will not be developed until the report is revised. Related to Comment 157, the Forest Service remains concerned that insufficient data was collected.

Geomorphology of the Tailrace Slough:

Kathy Dubé provided a summary of the information in the report. The November 2006 flood occurred after the report was prepared. The riprap stayed in place, but there were significant changes in the tailrace slough and Cowlitz side channel. The final report will include information on the November 2006 flood. If aerial photographs are available in the near-term, they will be included in the discussion. Brian Peck mentioned that he liked the way the discussion was presented in the report. Energy Northwest responded that we had heard the concerns expressed at the October meeting, and reports issued after that date took those concerns into account.

Large Wood:

Kathy Dubé went through the report, and stated that as a result of the November 2006 overtopping of approximately 1000 cfs, Energy Northwest had agreed that she should return to

the large wood study sites and survey the large wood. Wood at the boom has not been inventoried since the November event because of access; however, Kathy will be able to compare before and after photographs. Concern was expressed that there is only one piece of wood in Study Site 1. Kathy explained that she selected the wood study sites to be representative of the reach. However, as there are few pieces in Reaches 1 and 2, Energy Northwest agreed to have Kathy inventory all wood in Reaches 1 and 2. Energy Northwest does not believe the entire inventory needs to be conducted again. A question was asked on how wood classes were determined; Kathy referred to Tables 3.1-3.3. Energy Northwest was asked if they had considered a trolley or skyline/highline logging in the management plan. Ruth Tracy will provide Energy Northwest with a Forest Service contact to discuss moving large wood around the drop structure. Energy Northwest believes that although wood could be moved around, that it will not go far once it has been placed in Reach 5 below the drop structure. It was suggested that a table that compares methods, with costs, etc. be provided in the final draft report.

Anadromous Salmonid Habitat and Spawner Survey Report:

John Blum provided a presentation summarizing the draft report that was issued at the end of November. EES Consulting is pulling together the trap and haul data for 2006, and will include that in the final report. John was asked if additional data collection would be performed as the 2005/2006 was not as good a data collection as the 2004/2005 data collection. Energy Northwest answered no; however, additional data is being collected at the tailrace slough as part of another study. A fourth variable will be added to the discussion in the final report; i.e., Lake Creek flow.

Tailrace Slough Use by Anadromous Salmonids:

John Blum reviewed the goals and objectives for this study, which is scheduled to be completed in 2007. A summer survey was made; the fall survey is now scheduled for December 14, if river conditions allow. A winter survey will be done in late January or in February, and a spring survey in April or May. The draft report will be issued in early July.

Tailrace Slough Instream Flow:

John Blum reviewed the changes that had occurred in the Cowlitz River side channel since 2004, and how much flow the Cowlitz River contributed to the tailrace slough area until the latest channel changes. Because of the November 2006 floods, Energy Northwest has agreed to have EES Consulting generate a new correlation of flows between the Cowlitz River and the Project. Because of the channel changes, the data collected this summer does not match the current conditions. John asked how the agencies would like to proceed. It was decided that Transect 8 could be used, as it appears to be about the same as when data was collected; Transect 7 will be used as it appears to be close with a change in substrate from sand to gravel; Transects 1, 2, and 6 could be used as surrogates; EES Consulting will look at Transects 3 and 4 to determine if they can be used; and data from Transect 5 will not be used. Information on the bed profile both before and after the flood will be needed to determine how close the transects are before and after. As an option, ramping rates for the Project could be considered, as the channel changes frequently, or it may be possible to find a minimum flow that gives sufficient depth to encourage or discourage spawning.

Lake Creek Instream Flow:

John Blum reviewed the information collected for the study, and the species for which preference curves will be used. Next steps include model calibration, input transect weighting, input study site weighting, develop inflow relationships for study sites, and input preference curves. Each step will have its approval before proceeding to the next. Hal Beecher will be the primary reviewer; however, anyone can participate. John was asked about modifying preference curves; he stated that the group previously had decided to use WDFW curves.

Stream Connectivity in Packwood Lake Tributaries:

Kathy Dubé reviewed the extensive revisions made to the report. Kathy, Karen Thompson, and a botanist visited Upper Lake Creek and Beaver Bill Creek after the October study report meeting. The cedars appear to be dying because of a silt layer that was deposited prior to Project construction. As the creek has moved through the silt layer, some of the downed trees have become exposed. Beaver Bill Creek is discussed in Section 4.6 of the revised report. Appendix A provides photographs taken of the tributaries. Section 4.7 was also added. Ken Hogan suggested that because the lake was drawn down to about elevation 2854 ft MSL, and the November precipitation raised the lake level so quickly, perhaps we could look to determine if there was headcutting; this may answer the question. Kathy explained the information related to the end point for Upper Lake Creek is in the report and that it was based on the longitudinal profile, width to depth ratios, and visual observations. Kathy explained that Beaver Bill Creek was down cutting in the area of an alluvial fan and a big event in the past destabilized the area, but that there did not appear to be any specific cause that she could pinpoint.

General Discussion:

The Forest Service expressed concern about the synthesis of data. Ken Hogan acknowledged that this could be a potential flaw in the ILP; however, the agencies could state that based on the results of study x and y, we need to study x, y, and z. Laura Schinnell stated that Energy Northwest has decided to prepare a synthesis document, perhaps with a preliminary draft and/or meeting in the April time frame and a final with discussions in July, when we could petition FERC to allow a study report meeting to discuss second season data and the synthesis report.

Ken Hogan reviewed language related to the Preliminary License Proposal and the due date and comment period. It would require extraordinary circumstances to require additional studies at that point, with the agencies needing to provide specific information that is needed and why it was not possible to collect the data previously.

Brian Peck expressed concern about conclusions made by Energy Northwest in the reports. His concern was that if the agencies did not comment now on a conclusion drawn by Energy Northwest, would it put them at a disadvantage when it came time to comment on the Preliminary License Proposal. Ken Hogan agreed to take the question back to his office and get an answer.

Discussion was held on the form comments should take and the difference between providing comments on the study reports to Energy Northwest versus filing comments with FERC. Laura Schinnell stated that per the study plans, comments are due to Energy Northwest 30 days after the draft has been issued, but that Energy Northwest had been extending the dates, and specifically had granted the Forest Service request to have comments back by January 15. The FERC filing is due on or before January 29. It was suggested that the agencies could summarize concerns related to study adequacy and need for additional study, and also provide detailed comments on the individual study report so that they are in the record. Energy Northwest does not have to file the draft reports with FERC; however Ken Hogan will place them in the record so they can be used in preparing the Director's study determination.

Actions from the Meeting

Kathy Dubé will develop a slide show that includes pictures taken during the inventory of Lake Creek every 100 feet.

Kathy Dubé will inventory Reaches 1 and 2 for gravel and large wood when access permits next spring. Kathy will also resurvey all five of the wood study sites.

Hal Beecher will send Kathy Dubé the SalmonScape program that may provide better resolution to use in a graph showing stream gradient. (Web link has been provided.)

Kathy Dubé will prepare a revised draft Gravel Transport report to include information on actual flows and methodology, and a revised discussion.

Ken Hogan will discuss the issue of what the agencies should do in response to an Energy Northwest conclusion, and if it puts the agencies at a disadvantage if they do not respond now, rather than during the Preliminary License Proposal comment period (done).

Information on the lake outlet will be provided in the draft Packwood Lake Drawdown report to be issued in 2007.

Kathy Dubé will include information on the November 2006 flood in the final Geomorphology of the Tailrace Slough report. This will include aerial photographs, if available.

Agencies and tribes will try to have comments back to Energy Northwest on the remaining study reports by January 15, 2007.

Ruth Tracy will provide Energy Northwest with a Forest Service contact to discuss use of a trolley and/or skyline/highline logging for moving wood around the drop structure (name provided; Karen Thompson asked to provide contact information).

Kathy Dubé will review before and after photographs of wood at the log boom in the final Large Wood report.

Kathy Dubé will review the tributaries as a result of the November 2006 precipitation event to determine if headcutting occurred.

EES Consulting will include 2006 trap and haul data in the final report for Anadromous Salmonid Habitat and Spawner Survey.

EES Consulting will review and obtain as needed, information on the bed profile both before and after the flood to determine which transects to use in the analysis.

EES Consulting will add discussion of a fourth variable, i.e., Lake Creek flow, to the Anadromous Salmonid Habitat and Spawner Survey final report.

Laura Schinnell will revise the comments spreadsheet with more language regarding possible resolution, as part of the response to comments filed with FERC (done).

Attendance

Laura Schinnell, Energy Northwest
Dan Ross, Energy Northwest
Bernice Kasko, Energy Northwest
Bill Kiel, Energy Northwest
Hal Beecher, WDFW
John Blum, EES Consulting
Brian Peck, USFWS
Kathy Dubé, Watershed Geodynamics
Debby Howe, Howe Consulting
Ken Wieman, US Forest Service
Karen Thompson, US Forest Service
Ruth Tracy, US Forest Service
Diane Bedell, US Forest Service
Margaret Beilharz, US Forest Service
Aaron Liberty, FERC
Ken Hogan, FERC
Shana Murray, FERC (by conference line)