ENERGY NORTHWEST

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March 5, 2009
PKWD-09-022

Ms. Kimberly D. Bose, Secretary
Office of the Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Dear Ms. Bose:

Subject: **PACKWOOD LAKE HYDROELECTRIC PROJECT**
FERC DOCKET NO. P-2244-022
DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS

Attached for your information are comments from Energy Northwest regarding the Draft Environmental Assessment issued by the Commission on February 5, 2009, for the Packwood Lake Hydroelectric Project.

If you have any questions or require additional information regarding this matter, please contact me at 509.377.8581.

Respectfully,

Dan Ross

Dan Ross
Packwood Project Manager

Attachment: Energy Northwest Comments on DEA

Attachment

Packwood Lake Hydroelectric Project No. 2244
Draft Environmental Assessment
Comments by Energy Northwest

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Packwood Lake Hydroelectric Project
Draft Environmental Assessment
Comments By Energy Northwest
March 5, 2009

This attachment contains comments on the Draft Environmental Assessment (DEA) prepared by the Federal Energy Regulatory Commission (FERC) for the Packwood Lake Hydroelectric Project No. 2244 (Project). The comments were prepared by Energy Northwest (EN), the Licensee. All significant items have been identified and discussed by subject. A list of minor comments or suggested corrections is also provided. Changes made by FERC in the DEA may also necessitate a corresponding change in the Biological Assessment (BA).

References to study plan reports can be found at the EN relicensing website:

http://www.energy-northwest.com/generation/packwood/relicensing/Aquatic_studyplan_reports.php

Expansion of Project Boundary

EN is not in agreement with FERC staff's recommendation to expand the Project boundaries and requests that the recommendation be removed from the DEA and not included in any License Condition. FERC staff proposed that the Project boundary be expanded to include several new recreation installations and selected roads and trails without considering the costs and benefits of such an action. It appears that the lifetime costs for including the proposed recreation items may exceed the value of some of these structures. To expand the Project boundaries would require extensive new land surveys, an update of the Project boundary maps, and the perpetual obligation to pay escalating land use fees over the life of the Project. After careful consideration EN has failed to identify any apparent benefit, to the Licensee or the United States Forest Service (USFS), for implementing this recommendation.

The three recreation installations (a historic sign, a trail kiosk, and a toilet) are minor structures that EN agreed to install for the USFS for the benefit of public recreation in this area. They are unrelated to Project operations. EN has accepted the obligation for continuing maintenance of these structures in the approved Recreation Plan, but considers them property of the USFS. Since these structures will be under their exclusive control, the location, continued presence, or relocation will be at the direction of USFS management, not by EN. These transitory structures do not benefit from inclusion within the Project boundary. Furthermore, contrary to FERC staff's statement in the DEA (p.117), EN does not exclusively "provide for recreational access" to the lake. Although all-terrain vehicle (ATV) access is allowed by the USFS along the road (Pipeline Road FS 1260-066) and trail (#74) used by EN to access the Project, the USFS maintains its own parallel (non-motorized) hiking trail (#78) as the primary means of public access to the lake. Unlike at many FERC licensed projects, the recreation at this lake is, and should remain, the responsibility of and subject to the authority of the USFS, since more than half the lake is surrounded by the Goat Rocks Wilderness Area and the rest by national forest. Access to the lake means access to the forest, and potential degradation of the wilderness area. Access to the wilderness, in particular, is limited by the USFS, and may be further limited in the future to prevent

overuse. It would not be appropriate for EN to assume responsibility for public access to these areas or provide recreation activities that conflict with the USFS management goals for these areas. The best solution for the circumstances is for EN to provide the road maintenance and recreation installations under the authority of the USFS.

FERC staff has also recommended that certain roads and trails be included in the Project boundary. The existing Project boundary follows the pipeline route and includes the primary access path to the lake used by EN along Pipeline Road (FS 1260-066) and connecting Trail #74. The trail diverges from the pipeline and the Project boundary at Tunnel 1 and Tunnel 2 due to the steep topography in those areas. Under the existing License, EN has performed all of the maintenance on this road and trail system and will continue to do so under the new license, as required by the approved Recreation Plan. While the road and trail centerline may not fall within the existing Project boundary in all areas, the recommendation to include all parts of the trail and road within the Project boundary provides no significant benefit to EN or the USFS and will only serve to increase Project costs.

It should be noted that the Dyson Pass segment of Trail #74 is still utilized to access the Project. It appears that this trail segment was mistakenly associated with a bypass route around the landslide on Latch Road (p. 147). Trail #74 splits into two separate trails to negotiate the steep topography in the Tunnel 1 area. The Dyson Pass trail segment follows the higher route along the original construction road. As authorized by the USFS, it also functions as the primary public access route for ATV travel to the lake. The two trail #74 segments will be maintained by EN under the approved Recreation Plan.

FERC staff also recommended that Latch Road (FS 1262) and Powerhouse Road (FS 1260-013) be included in the Project boundary. The inclusion of these roads is unnecessary. A maintenance agreement has been reached with the USFS that defines how the maintenance workload is to be shared. This agreement is satisfactory to both parties. Allowing EN and the USFS to deal with these road maintenance issues, by agreement, assures USFS retains control over public access, that the road and trail maintenance is performed to the standards required by the USFS, and that access is assured to Project facilities.

EN recommends that FERC staff reconsider the need to expand the Project boundary and requests that it withdraw its recommendation to include these two roads within the Project boundary. Adding the requested elements into the Project boundary is not necessary to "ensure installation, operation, and maintenance for the term of the new license" (p. 162) and will interfere with the ability of the USFS to control access and manage recreation in the forest and wilderness areas. The obligations in the approved Recreation Management Plan and the road maintenance agreement between EN and the USFS will ensure these functions continue cost effectively throughout the new license term.

The initial road and trail maintenance costs are included in Exhibit D, Table D.2, item 28 of the Final License Application (FLA). However, the additional costs that would be incurred to survey map and update Project drawings, have yet to be developed. EN will attempt to determine the FERC legal requirement for updating of the Exhibit G drawings and will provide FERC staff with an estimated cost prior to issuance of the Final Environmental Assessment (FEA).

Water Temperature Monitoring and Enhancement Plan

The DEA (p. A-3) contains a condition requiring the submittal of water temperature monitoring plan. The required plan was filed with FERC on June 6, 2008, in response to the Additional Information Request (AIR) that followed the filing of the FLA. Accordingly, the draft license conditions that call for plan submittal can be deleted and the DEA discussion should be expanded to include discussion of the measures proposed in the plan and approval of the plan as appropriate to address the issue of water temperature.

Project Influenced Water Temperatures

In the DEA (p. 61) and the Biological Assessment (p. 33), a reference is made to 19.46°C as the 7-DADmax temperature for the end of the tailrace canal. This value was obtained from the Tailrace Water Temperature Monitoring and Enhancement Plan dated June 2008 (p. 5). It should be noted that this value and the associated range of temperatures cannot be verified. The correct 7-DADmax temperatures for the end of the tailrace canal can be found in DEA tables 3-5 (2004) and 3-6 (2005). The correct 7-DADmax values for the end of the tailrace are 21.25°C for 2004 and 20.83°C for 2005.

Rare Plant and Threatened and Endangered Species (TES) Monitoring Frequencies

FERC staff discusses (p. 113) an apparent discrepancy between the monitoring schedules for the Rare Plant Management Plan submitted by the Licensee and the TES monitoring plan discussed in USFS 4(e) Condition No. 12. No changes are necessary. There are two separate monitoring schedules, one for the TES plan and the other developed specifically for rare plants. Both schedules are valid. USFS 4(e) condition No. 12 requires that the identified TES be surveyed every 2 years for 6 years and then every 3 years thereafter, unless a determination can be made at year 6 that no additional monitoring is necessary. The Rare Plant Management Plan requires a comprehensive survey of the Project area every 10 years starting in 2016. Known occurrences of rare plants (*Peltigera pacifica* and Oregon Goldenaster) are to be monitored for Project effects every 2 years for 6 years and then at 5 year intervals thereafter. Although the rare plant management plan will be a part of the overall TES plan, both monitoring schedules can co-exist without conflict. Accordingly, no change in the monitoring frequency of Condition No. 12 or the Rare Plant Management Plan is required.

Entrainment

In the DEA, FERC staff elected not to adopt the Washington Department of Fish and Wildlife (WDFW) recommendation to impose the State approach velocity criteria for the Packwood Lake intake screens. As an alternative, FERC staff found that the EN proposal utilizing biological threshold levels would provide adequate protection for the resident trout population. This issue was discussed with the agencies (USFS, National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NFMS), WDFW and Washington Department of Ecology (WDOE)) at a Project relicensing meeting on February 11, 2009. At that meeting the USFS presented a revised 4(e) Condition No. 9 that provides a biological monitoring element. The condition provides specific details regarding the goals and objectives of the proposed monitoring program and establishes monitoring parameters and timelines for future actions. Should the monitoring data indicate that the biologic impingement criteria is not met, or if there is a decline in lake population directly attributable to Project operations and a major screen modification is required, it will be designed to meet the WDFW screen criteria.

It should be noted that EN is continuing to monitor the intake screens for fish entrainment. In 2008, 60 fish were entrained on the screens, similar to the 63 fish found in 2006, the first year of monitoring. Approximately 84% of the fish in 2008 were entrained on the screens between June 12 and July 23. The timing of this peak is consistent with the late and post-spawn periods for rainbow trout in Packwood Lake (Packwood Lake Intake Screen Velocity Test Report, November 2008). It is hypothesized that naturally weak or dead fish that occur following spawning are being drawn into the intake and impinged on the screens rather than the suggestion that healthy fish are being impinged solely as a result of screen velocity.

This low number (relative to the total lake population) is in contrast to the 357 fish that were entrained in 2007 when natural conditions combined to cause extremely high lake inflows and substantial erosion in the lake tributaries that created sustained high levels of turbidity. These natural factors coupled with possible debris screen misalignment likely resulted in higher recorded mortalities. The 2008 results are consistent with those of 2006 and support the proposal to utilize a biological threshold and additional observations to determine the Project impact on the fish population in Packwood Lake. EN supports using this approach prior to making any decisions regarding physical modifications to the intake screens. EN endorses the USFS revised 4(e) Condition No. 9 and FERC's recommendations concerning entrainment, and requests that FERC staff revise the DEA and its discussion to include and approve the new condition.

Mandatory Condition No. 9 requires a periodic determination of Packwood Lake fish populations using spawner surveys, fry outmigration or hydroacoustic surveys. EN endorses and recommends that FERC staff adopt the hydroacoustic method. The technology is widely used and has been proven to provide an accurate, cost-effective method to determine fish populations. It has been utilized at the Project and produced

relatively stable results in Packwood Lake (Supplement to Fish Distribution and Species Composition Report (Outmigration and Hydroacoustics), EES Consulting, October 2007).

Cost information provided in Appendix D of the FLA details the cost of monitoring the traveling screens only ($17,596 per year). The additional cost for hydroacoustic monitoring is estimated at $14,000 per survey (based on the EN cost for the 2007 survey), compared to several months of spawner/fry surveys at a cost $31,000 (based on survey costs in 2007).

National Environmental Policy Act (NEPA) Adequacy

The DEA is not consistent in its analysis of the alternative actions. The DEA does not clearly carry the analysis of each of the 4 distinct alternatives identified in Chapter 1 throughout the document. In particular, the staff alternative with mandatory conditions (the selected alternative) is not analyzed in Chapter 5 and is difficult to recognize in the other chapters.

EN is concerned about its implementation of the required elements of the new license being delayed by inadequate environmental analysis in the FERC EA. EN would like to request that FERC staff verify that its environmental assessment is comprehensive with respect to NEPA analysis for all of the required actions, including the USFS 4(e) mandatory conditions, associated with license conditions being considered for implementation. This analysis will be of benefit when EN is seeking final approval from the USFS or the State of Washington to conduct work on Project lands. Inadequate or incomplete analysis will result in additional financial burdens and time delays.

Snyder Creek Restoration Schedule

In the FLA, EN proposed to reroute Snyder Creek as a fish passage corrective action for the existing Snyder Creek culvert under the tailrace canal. In consultation with the agencies, it was determined that a 5-year schedule was appropriate for rerouting Snyder Creek, given the limited passage that currently exists. The schedule was to prepare a plan for stream restoration and relocation by year 2 and complete the physical work in year 5 (see USFS 4(e) Condition No. 10). This schedule is in conflict with the FERC DEA, which states (p. 18 and p. 200) that EN should, “develop and implement a plan (within 2 years of license issuance).” The EA should acknowledge the schedule adopted by the agencies and EN.

Fish Rescue in Stilling Basin and Tailrace Canal

The DEA and the draft license conditions state that following the cessation of flow resulting from a scheduled annual maintenance outage, the Licensee shall collect salmonids by electrofishing in the tailrace canal and seining the stilling basin. These conditions have been written to require that they will be performed annually for the life of the license. However, the performance of these tasks is no longer necessary due to the installation of a fish barrier in fall of 2007. The efficacy of this barrier is currently in its second year of testing under a

multi-year schedule (below) as ordered by FERC and NOAA/NMFS and described in the Biological Assessment, Biological Opinion (dated September 25, 2007) and FERC Order (dated September 27, 2007) that granted approval to construct the Packwood tailrace fish barrier. The FERC DEA and license conditions should reflect the limited seining and electrofishing schedule currently in force at the Project.

EN proposed, and the consulting agencies agreed, to use an adaptive approach to determining the efficacy of the tailrace barrier. The stilling basin will be seined following the Project's maintenance shutdown period (currently October) to determine if fish are bypassing the barrier. If two consecutive years of seining during this period document few (<50) fish (total of all salmonid species and life stages) are captured, then the program can go to every 3rd year of sampling and termination of the program in year 8. If adult salmonids are captured during this annual seining program or more than 50 fish (total of all salmonid species and life stages) are captured, then seining will be conducted again the following year. The tailrace will also be checked at these times and any fish will be rescued.

The one exception to this schedule is when Cowlitz River flooding results in water backing up in the lower terminus of the Project tailrace to an elevation of 1044 ft MSL or greater (a ¼ in opening mesh flat panel extends from the top of the drum screens (elevation 1040.75 ft MSL) to elevation 1044 ft MSL, the assumed top of west levee elevation). If water surface elevations meet or exceed the height of the fish exclusion racks on the barrier (1044 ft MSL) or water is observed to be flowing into the tailrace canal upstream of the barrier, a seining operation will be conducted in the Project stilling basin during the next annual shutdown. In this one instance, fish captured in the seining effort will be considered displaced by the flood event. The tailrace will also be checked at this time.

EN recommends that the FERC DEA analysis and draft license conditions reflect the previously approved fish rescue and seining schedule specified in the table below for those waters upstream of the tailrace fish barrier. Following the successful termination of the screen efficiency tests, fish rescue above the fish barrier will not be necessary.

Proposed Seining Schedule for Packwood Lake Stilling Basin After Installation of Fish Barrier		
Time (Year After Tailrace Barrier is Installed)	**If < 50 fish are captured [1, 2/]**	**If > 50 fish are captured [1, 2/]**
Year 1 (2008)	Yes	Yes
Year 2 (2009)	Yes	Yes
Year 3 (2010)	No- Skip to Year 5	Yes - consider modifications to the tailrace barrier design
Year 4 (2011)	No	Yes
Year 5 (2012)	Yes	Yes
Year 6 (2013)	No - Skip to Year 8	Yes - modify tailrace barrier design and continue seining until 2 consecutive years of < 50 fish criterion is reached.
Year 7 (2014)	No	Yes
Year 8 (2015)	Yes – Terminate Seining Program	Yes
Year 9 (2016)		Yes
If two adult salmonids are captured during the seining effort, then seining would occur the following year, regardless of overall fish total. Seining is required during the year following any tailrace flooding that bypasses the screens. Fish recoveries of greater than 50 fish shall not change the previously established monitoring frequency.		

Ramping Rate Condition

The imposition of ramping rates recommended by FERC staff (DEA p. 89-90; BA p. 29) will have little effect on water levels in lower Lake Creek due to the inability of the Project to effect large changes. Contrary to the conclusion in the BA (Table 6-1, p. 74), surface flows in Lake Creek are not "highly manipulated" by Project operations. Based on experience gained during the study plan spill flows, and from a review of the calculations discussed below, EN and the agencies determined that ramping rates were not necessary for this Project and thus did not include them in the FLA or in the mandatory conditions. It is recommended that FERC staff acknowledge the position taken by EN and the agencies and withdraw the recommendation for ramping rates.

According to WDFW, spill flows greater than bankfull (285 cfs) are not a concern of the agency, since fish that are deposited beyond the bankfull channel are considered lost to the population (Project relicensing meeting, February 11, 2009). Flow down Lake Creek is achieved either by gravity flow through a 24-inch bypass pipe (0 to 30 cfs) or, at high lake levels, by uncontrolled spill flows over the drop structure (there are no spillway gates). Spill over the drop structure at this Project is an infrequent event. The Project has no distinct tailwater and changes in flow at the drop structure can take up to 5 hours to affect the lower reaches of this small channel, high to moderate gradient stream. The new license instream

flow schedule (DEA Table 2-1) will cause small step decreases in bypass flow (3 and 5 cfs increments) that will result in minimal hourly changes in Lake Creek stage. Those changes will be moderated by natural accretion flows into the main stream channel.

With negligible changes produced by the required instream flow changes, the discussion of ramping rates must focus on the Project's ability to influence the rate of spill over the uncontrolled spillway. Lake elevation calculations were performed utilizing static conditions, no lake inflow, and a plant flow that exceeds Project capabilities, in order to create a worst case scenario. This methodology showed that plant operations can only result in a maximum lake level change of approximately 0.05 feet per hour (1.2 feet per day based on 260 cfs plant flow plus 20 cfs maximum bypass flow for a total outflow of 280 cfs). This amount of Project caused lake level change (0.05 ft/hr) during spill conditions (high inflow) is known to be equivalent to approximately 1 inch of change at study sites in lower Lake Creek (based on measured transects at different flows; see the Packwood Lake Drawdown Plan and Lake Creek Ramping Rate Plan, December 15, 2005). Lake Creek ramping rates of 2 inches per hour require a lake level change of 0.10 feet per hour, which is beyond the capability of the Project.

Under these hypothetical conditions, the Project influenced changes can equal but not exceed the ramping rate of 1 inch per hour in lower Lake Creek as specified by FERC staff. Natural inflows into Packwood Lake and accretion flows into lower Lake Creek will further mitigate the static Project effect calculated in this analysis and collectively eliminates the need for ramping rates. Given that the Project cannot physically exceed the recommended ramping rates and that spillway flow is an infrequent event, no Project ramping rates are needed.

If it is determined that a ramping rate is required, the only Project limitation that would be relevant is the zero ramping rate called for during daylight hours between February 16 and June 15. If this is determined to be the desired scenario, EN recommends that FERC staff revise its ramping rate recommendation to eliminate the development of a plan and monitoring requirements, eliminate the numerical standards, and specify only that no Project-induced decreases in lake levels are to occur during spill events that occur during the daylight hours between February 16 and June 15. Project changes in plant flow could be allowed during daylight hours, especially during periods of high inflows, in order to control a rising lake level. As recommended by WDFW, any ramping rates would only apply to bankfull (285 cfs) or smaller spill flows.

A dedicated monitoring station for ramping rates is not necessary, since sufficient stream information will be recorded by the new Lake Creek gage station (15-minute intervals) proposed by the Licensee for installation at the Lake Creek road bridge. The new gage will be located at the middle of Study Site 1 (Lake Creek RM 0.1 – 0.3) at the old USGS gage location.

Minor Comments

Page 30 Water Quality – The list of tributaries should include the unnamed tributary SE of Trap Creek.

Page 51 Packwood Lake Tributaries – The list of tributaries should include Crawford Creek.

Page 53 and 71 – The length of Lake Creek below the drop structure is 5.3 miles not 5.4.

Page 56 Lake Creek – "No carcasses were observed during any of the surveys." This is incorrect. Coho carcasses were observed during the surveys; on one survey alone, nearly 20 coho carcasses were observed in lower Lake Creek at the site of the temporary gage.

Page 60 Monitoring of Instream Flows / Point of Compliance – It is noted that no infrastructure changes will be necessary at the intake building to accommodate the new instream flows. It should be emphasized that the instream flows proposed by EN and approved by the agencies will be those measured at the discharge end of the bypass pipe (just below the drop structure) using the existing monitoring instrumentation. Thus, the point of compliance for the instream flow is the bypass flow in cfs measured at the drop structure by the Licensee and <u>not</u> the flow measured at the Lake Creek gage located near the mouth.

Page 60 Monitoring of Flows – "*Consultation with USGS and the resource agencies re: compliance with USGS standards and use of weirs to not hinder salmonid fish passage."* Consultation will not be necessary. The site of the proposed gage is the location of the previous USGS gage. The gage will be installed to USGS standards. There is no need for a weir or other stage control device at this site.

Page 61 Temperature Mitigation – The list of possible temperature mitigation actions includes using shade tree plantings upstream on the Cowlitz. This sentence should refer to shade tree plantings along the tailrace canal (not the Cowlitz River).

Page 62 Temperature Mitigation – In its discussion of why EN moved the outage to August 15, FERC should include the mention of temperature mitigation. Moving the maintenance outage to the last two weeks of August provides temperature mitigation by avoiding the discharge of naturally warmed surface water from Packwood Lake.

Page 67 Lake Levels – FERC refers to a fall drawdown after mid-September. It should be noted that the rapid drawdown that occurs prior to the outage under the current license will no longer occur. The fall drawdown under the new license will be gradual, since the goal is to provide uninterrupted Project operations to maintain an uninterrupted tailrace flow for spawning and incubating fish in the tailrace slough. This drawdown will continue until the onset of winter rainfall, when lake inflows will more closely match Project operations to maintain a relatively stable (slowly changing) lake level.

Page 91 Entrainment – FERC staff should change the text to note that the Washington State velocity criteria are expressed as "less than or equal to" values (not less than). The velocity criteria are ≤0.80 and ≤0.88 ft/sec, not < 0.80 ft/sec and < 0.88 ft/sec.

Page 93 Entrainment – The approach velocities determined for Packwood Lake by the State were changed from 0.33 ft/sec (velocities for fry in lakes) to the ≤0.80 and ≤0.88 ft/sec values.

Page 94 Entrainment – It should be noted that EN has continued its program of monitoring the intake screens for entrainment. In 2008, 60 fish were entrained on the screens similar to the 63 fish recorded in 2006, the first year of monitoring. In 2008, approximately 84% of the fish were entrained on the screens between June 12 and July 23. The timing of this peak is consistent with the late and post-spawning periods for rainbow trout in Packwood Lake (Packwood Lake Intake Screen Velocity Test Report, November 2008). The discussion of the 2006 and 2007 data should be revised to include the 2008 data.

Page 96 Entrainment – FERC states that "*Properly functioning fish screens would likely eliminate or substantially reduce entrainment related mortality at this site and its associated effects on the Packwood Lake fishery*." EN disagrees with this statement. EN believes it is more likely that naturally weak or dead fish that occur following spawning are being drawn into the intake and impinged on the screens rather than that healthy fish are being impinged solely as a result of screen velocity. EN expects that the current level of entrainment would continue even if new, compliant screens were installed. The use of biological criteria to provide for continued monitoring and additional studies should help resolve this issue so an informed decision can be made about the screens.

Pages 158-159 Project Operations and Reservoir Levels – FERC staff's analysis of the proposed changes in reservoir levels includes discussion of the effect on boat ramps. Packwood Lake does not have any boat ramps because there is no public vehicle access to the lake. Public access is by a 4 mile hiking trail or ATV, which limits boats to small portable boats or inflatable types. Motors are prohibited and boats are rarely seen on Packwood Lake. It is recommended that the discussion be revised to eliminate the reference to boat ramps and to deemphasize boating as a significant form of recreation.

Page 178 New Project Facilities – FERC indicates that the proposed locations for the construction of a new toilet, historical interpretation sign and trail kiosk are Project-related facilities and should be included in the Project boundary. EN disagrees that the facilities are Project related, since recreation is managed exclusively by the USFS and not by the Licensee. The discussion above explains why the USFS should maintain its control over access and activities within the forest and wilderness areas that surround the Lake. The Recreation Plan requires that EN construct and maintain these structures as a part of its recreation obligations.

Page 179 New Project Facilities – FERC recommends that the new recreation facilities and certain roads and trails be included within the Project boundary. As noted in comments above, EN maintains that expanding the Project boundary is not necessary and would interfere with the USFS authority. In addition, in its analysis, FERC staff does not estimate the cost of expanding the Project boundary. The cost estimate should include the cost of new land surveys by a contractor, and the revisions of Project-related maps. Furthermore, the cost estimate should include an estimate of the annual land fees that will be charged by FERC and by the Forest Service for occupation of the new land and the escalation of those costs over time. The land use fees for small Projects located on federal land are escalating into very significant Project costs without consideration of the public benefit provided by the Project.

Page 187 Cost of Environmental Measures – FERC staff does not provide cost estimates for items 23 (water conveyance monitoring) or 24 (fire prevention plan) in the DEA (p. 187). EN lumped the costs to develop these items in its estimate for the Resource Coordination Plan (item 13) in Table D-2 of the Licensee's FLA. It is also recommended that FERC prepare a cost estimate for having the Project facilities evaluated for formal National Register of Historic Places eligibility in 2014.