

**Kangley-Echo Lake Transmission Line Project DEIS
Appendix B – Final Wildlife Technical Report**

**Comments from Seattle Public Utilities
September 4, 2001**

DEIS Appendix citations in italics; SPU comments in normal font.

394-211 | The term “conversion” rather than “alteration” is traditionally preferred when referring to converting one habitat type to another, either permanently or temporarily.

1.1.1.2 Clearing

“A clearing advisory would be generated...”

394-212 | An example of how the clearing advisory would work is essential to understanding how variable the area of clearing outside the ROW will be.

“Merchantable timber purchased from private owners would be marketed and non-merchantable timber would be left lopped and scattered, piled, chipped, or would be taken off-site. Non-merchantable timber may or may not be burned because of air quality constraints... Additional best management practices (BMPs) for timberland would also be used... The total amount of clearing required for this project is unknown at this time... An additional amount of land would be cleared for roads that are needed off the ROW and for roads determined to be in poor condition and requiring upgrading by BPA.”

394-213 | SPU is not able to comment on this effectively because insufficient information is presented. How will the merchantable timber be valued, especially in light of the goals of the Cedar River Watershed (CRW) Habitat Conservation Plan (HCP)? That is, the value of the trees to SPU is not so much in their value as timber but in the habitat and water quality functions they provide. The DEIS and technical appendix should indicate how SPU will be compensated for the habitat and water quality values of the harvested trees and the associated opportunity costs that SPU will incur for this lost habitat over the lifespan of BPA’s constructed proposed action. The DEIS and its technical appendices need to present a complete and consistent description of the proposed action.

394-214 | Also, the DEIS and technical appendix need to commit to regarding the disposition of non-merchantable: is it going to be left or taken, burned or not? The DEIS and technical appendix should describe the BMPs that will be implemented.

394-215 | The DEIS and technical appendix should present firm estimates of the amount of land to be cleared and where clearing will occur. As evidenced by information presented in the project’s BA, BPA has sufficiently engineered the proposed action such that locations for towers and new roads have been identified. BPA should thus be able (in the DEIS and its technical appendices) to firmly estimate the total amount of clearing for the proposed action. The DEIS and the technical appendix need to present a complete and accurate environmental analysis, which includes the disclosure of such known project characteristics.

394-216 | Also, the DEIS and technical appendix should state that merchantable timber would be purchased from landowners, subject to landowner approval, and should not be stated as an absolute. Some landowners may wish to retain the logs.

“... all trees, bush and snags would be felled and stumps over 22” would be removed, including their root systems.”

Appendix B SPU Comments.doc

Page 1 of 9

09/05/01

394-211 | Comment noted.

394-212 | BPA would gladly share the data within the clearing advisory and show SPU personnel how that data is used to aid in the selection of danger trees and retention of vegetation within the ROW.

394-213 | There are but a few ways to value merchantable timber. The method most accepted within the appraisal industry is to value that timber through the Cost Approach — delivered prices less costs. There is mitigation proposed to replace any potential lost value of the CRW.

394-214 | Burning will not be allowed. See response to Comment 394-129. Disposal of nonmerchantable timber is usually part of negotiations with landowners. On some property nonmerchantable timber is treated as slash and will be disposed of through a number of possible ways including lop and scatter, chipping, mulching, piling, etc. Some landowners prefer that the timber be left for their use. In wetlands, the trees cut would be left in the wetland, or removed by helicopter.

394-215 | Some of the information needed to pinpoint the quantity of clearing needed along the streams throughout the Proposed Action area is not available at this time. More field work needs to be done to fully determine the amount of clearing that would be required.

394-216 | Comment noted. These details would be worked out with each individual landowner at the time the land rights would be acquired.

394-217 | BPA is proposing to use a new type of tower footing (micropiles) to reduce the amount of disturbance at and near each tower site. Please see Section 2.1.1.1.

394-218 | The road surface (crown) of the roads designed to accommodate cranes and track hoes normally used to construct BPA’s 500-kV towers, typically would be designed to be 16-foot wide for the linear portions of the roads and wider at turns to accommodate turning movements of the longer vehicles, such as the crane and log trucks. BPA roads typically range in width from 12 to 16 feet.

394-219 | See response to Comment 394-147.

- 394-217 | The DEIS and technical appendix should describe how far beyond the footprint of the tower will this extensive clearing extend.
- 1.1.1.3 Access Road Construction**
- "Clearing and construction activities for new access roads would disturb an area about 20' wide..."*
- 394-218 | If the road itself is 20 feet wide, the disturbed area will extend beyond this. The DEIS and technical appendix should clearly indicate if this 20' is in addition to the road itself.
- "...the roadbed would be repaired and reseeded as necessary."*
- 394-219 | The DEIS and technical appendix should specify that only native species would be used for revegetation activities in the CRW.
- 1.1.1.3 Storage, Assembly, and Refueling Areas**
- "...establish storage areas..."*
- 394-220 | The DEIS and technical appendix should address the locations for these facilities as well as related clearing/land-disturbance impacts, their adjacency to sensitive areas, and containment and fire safety design. The DEIS provides no descriptions or specifications for refueling or hazardous materials storage areas, which prevents effective review of the proposed action.
- All refueling and hazardous material usage/storage facilities would be required by SPU to be outside CRW boundary. To protect the municipal water supply, SPU has "no-tolerance" objectives for spills or leaks of hazardous materials in the CRW. The DEIS and technical appendix should indicate how all spills would be prevented in the CRW.
- 1.1.1.5 Tower Site Preparation**
- "These disturbances could be as large as 370 ft radius..."*
- 394-221 | It is confusing to switch from an average reported total area of 30,000 square feet to a maximum radius of 370 ft, which is equivalent to 430,085 square feet. Total area should be reported in all cases so reviewers can effectively evaluate the actual impact.
- "...remove selected trees in a 50-60 foot wide area on each side of the ROW."*
- 394-222 | This is inconsistent with the statements in Appendix C that a 75 ft removal zone would be used. The DEIS and its technical appendices need to present a complete and consistent description of the proposed action.
- 1.1.1.6 Tower Construction**
- "... helicopter tower erection could be used if access was not available or if sensitive resources would be encountered."*
- 394-223 | The DEIS and the technical appendix should define "sensitive resources." Is this the same as sensitive species?
- 1.1.1.9 Site Restoration and Clean-up**

- 394-220 | See response to Comment 394-139.
- 394-221 | BPA proposes using a new footing design for the proposed project. The new footing design would use what are known as micropiles instead of the standard footing design. See Section 2.1.1.1 of the SDEIS.
- BPA would likely need to locate what is called a stringing or pull site within the CRW. These areas are selected by the contractor and would need to be agreed to by the landowner prior to their use in stringing conductors through the towers. These sites are typically about 1 acre, although they could be larger. Please see response to Comment 394-141.
- 394-222 | The Final Wildlife Technical Report has been revised, as has the other technical study reports, to remove this statement that construction crews would remove selected trees in a 50 to 60 foot-wide area on each side of the proposed right-of-way. BPA would remove so-called "danger trees" off of the right-of-way that would pose a threat to the safe construction, operation and maintenance of the line. However, these trees would need to be identified on an individual basis and could be as far as 200 feet from the proposed right-of-way. See also response to Comment 394-217.
- 394-223 | Sensitive resources include both sensitive species and habitats. This was clarified in Section 1.1.1.6 of the Wildlife Technical Report (Appendix B).
- 394-224 | See response to Comment 394-147.
- 394-225 | See response to Comment 394-147.
- 394-226 | Analysis of potential impacts from habitat fragmentation within the Cedar River Watershed was expanded in Section 4.1.1.1 of the Wildlife Technical Report (Appendix B). Habitat loss is analyzed in Section 4.1.2, and is discussed by alternative.
- 394-227 | This discussion refers specifically to listed species. This was clarified in Section 1.3 of the Wildlife Technical Report

- 394-224 | *"Disturbed areas would be reseeded with grass or an appropriate seed mixture to prevent erosion."*
The DEIS and technical appendix should commit to using seed mixtures free of non-native and noxious species.
"The seed mixture would include native plant species and would be free of noxious weeds."
- 394-225 | The DEIS and technical appendix should commit to using mixtures made entirely of native plant species, not an unspecified proportion of native species.
1.2.2 Habitat Fragmentation
"Construction of the proposed project would require varying amounts of vegetation clearing, depending upon the alternative selected. This would result in the removal of habitat or potential habitat for many species, potential alteration of habitat conditions for wildlife species, and possibly habitat fragmentation, increasing the amount of edge habitat within the project area."
- 394-226 | Habitat fragmentation is only a part of habitat loss, which is generally ignored by this section (1.2 Key Issues for Wildlife). The preferred alternative will generally result in little increase in habitat fragmentation, but will result in significant habitat loss. The DEIS and technical appendix need to distinguish those components of the project that will cause habitat loss (ROW clearing; substation construction, road-building, etc.) from those that will cause habitat fragmentation (road-building, etc.) and firmly estimate the areas of habitat loss and level of new habitat fragmentation.
- 394-227 | **1.3 Major Conclusions**
"Because the project area is not known to be a high use area for listed species, the probability of mortality of listed species from collision or electrocution should be low."
The DEIS and technical appendix fail to supply data or references to support this statement. The project area (within 0.25 mile of ROW) is not an appropriate size to measure impacts to most raptor species, which typically have large home ranges. An unvalidated sighting of a northern spotted owl recently occurred near Rattlesnake Ridge, which also provides nesting habitat for peregrine falcons. The DEIS and technical report should provide data that supports this statement.
- 394-228 | **2.1 Date Sources and Study Methods**
"Field visits occurred on..."
The DEIS and technical appendix should describe the field methodology, including what data were collected.
- 394-229 | **2.2 Agencies Contacted**
None of the private landowners along the ROW were contacted.
3.2 Regional Context
"The CRW is owned by the City of Seattle and is subject to Washington State law and the policies of the Seattle City Council, as well as provisions for managing lands in the watershed acquired from the federal government. An HCP has recently been signed that governs the management of the watershed for the next 50 years."

(Appendix B) to mean species listed under the Endangered Species Act, including northern spotted owl, bald eagle, and marbled murrelets. The project vicinity is not a known high use area for any of these species, and given the habitat conditions in the project area, high use by these species is not likely, as described in Section 3.3.2 of the Wildlife Technical Report (Appendix B) and supported by available data including WDFW PHS data (2000) and in Section 3.5 of the HCP for the Cedar River Watershed (City of Seattle 2000).

As described in Section 3.2, Study Area and Approach, of the Wildlife Technical Report (Appendix B), there are two landscape levels at which impacts are analyzed. The first is defined as the project vicinity, is a large area encompassed by Kent-Kangley Road, to the south, Highway 18 to the west, Interstate 90 and Rattlesnake Ridge to the north, and the boundary between the lower and upper Cedar River Watershed, as defined in Map 6 of the Cedar River Watershed HCP (City of Seattle 2000), to the east. The second is a smaller area, 0.25 mile from the centerline of the project, and was chosen because the potential impacts of the project are expected to be focused within that area.

Potential impacts to species with large home ranges are discussed in general terms in Section 4.1.1.1 and changes in the amount of habitat available for species in the project area are discussed in Section 4.1.1.2. Impacts are presented as both a total acreage amount and as a percentage of the amount of that habitat type available within 0.25 mile on either side of the ROW project area. This latter number is provided as an index to the significance of the habitat removal, to give an understanding of how much is being removed compared to the availability in the immediate area.

Data concerning an unvalidated report of a spotted owl near Rattlesnake Ridge was not available to the authors and, given that it is unvalidated, would not change the analysis. Although Rattlesnake Ridge could provide suitable nesting habitat for peregrines, according to recent available information, specifically in the Cedar River Watershed HCP (City of Seattle 2000) and WDFW PHS data (2000), they are not known to nest there.

- 394-230 | The DEIS and technical appendix fail to mention that the primary management goal of the CRW is water quality and water production for the City of Seattle. The DEIS and technical appendix should explicitly state that the proposed action is inconsistent with the CRW HCP.
- 3.3 Study Area and Approach**
- "Wildlife species and their habitats...are discussed at two levels..."*
- 394-231 | The DEIS and technical appendix state that the broad project vicinity will be discussed to address issues related to wide-ranging species, migratory species, and species with large home ranges. However, other than a general description of the area, there was no discussion of the impacts of the project on wide-ranging species, migratory species, and species with large home ranges and their habitats. The DEIS and technical appendix should include this analysis.
- "The project area addressed in a more focused manner includes only the area within 0.25 mi. of the proposed transmission line ROWs."*
- 394-232 | A project area of 0.25 mile from the ROW is too small for the scale of home range sizes and dispersal capabilities of many wildlife species of concern (e.g. spotted owl, pileated woodpecker, northern goshawk, marten, fisher...). The DEIS and technical appendix should include a discussion of the fact that edge effects from the ROW will extend into the surrounding forest for at least 200 m. This should be considered in mitigation for removal of late successional habitat.
- "Within the ROWs, the predominant vegetation type is early seral in mid to late coniferous forest."*
- 394-233 | The DEIS and technical appendix should describe what this means.
- 3.3.1 Wildlife Habitats Within the Project Area**
- "Coniferous forest – late... CFL... Late seral second- or third-growth coniferous forest. Reaching a mature stage but not considered late-successional habitat."*
- 394-234 | The DEIS and technical appendix should describe the difference between seral and successional. There is 50-80 year old coniferous forest along much of the ROW in the CRW, which could be defined as mid-seral, mid-successional, or mature.
- 3.3.2 Species to be Analyzed**
- "For the purpose of this document, species that are federally-listed as threatened or endangered; federal species of concern; and Washington State listed threatened, endangered, sensitive or monitor species with the potential to occur on the west side of the Cascade Mountains were selected for analysis."*
- 394-235 | The DEIS and technical appendix should address all species listed in the CRW HCP.
- 3.3.2.1 Forest Community Dependent Species**
- "An historic spotted owl sighting occurred on lands owned by the Weyerhaeuser Company. This single owl reported in 1993 was over 0.5 mi. from the proposed Alternative 3 ROW and, therefore, was not within the project area."*
- 394-236 | Spotted owls have designated home ranges in the northwest Cascade province of 1.8 miles from an activity center. The 0.5 mile threshold specified here is not appropriate. An unvalidated but reliable spotted owl sighting also occurred near Rattlesnake Lake in early 2001.

- 394-228 | Section 2.1 of the Wildlife Technical Report (Appendix B) was revised to include a description of the field methodology and data collection.
- 394-229 | Comment noted.
- 394-230 | BPA does not agree that the project is inconsistent with the HCP. See Appendix U of the SDEIS and FEIS and Appendix AA.
- 394-231 | Potential impacts to species with large home ranges are discussed in general terms in Section 4.1.1.1 of the Wildlife Technical Report (Appendix B), with the greatest impact expected to be habitat fragmentation. This analysis was expanded in the section to focus on changes in habitat for these species.
- 394-232 | Please see response to Comment 394-227.
- Analysis of potential impacts from habitat fragmentation within the Cedar River Watershed was expanded in Section 4.1.1.1 of the Wildlife Technical Report (Appendix B) to include an analysis on increased edge affect. Habitat loss is analyzed in Section 4.1.2, and is discussed by alternative.
- 394-233 | This is a typographical error and the text has been revised.
- 394-234 | As stated in Section 3.3.1 of the Wildlife Technical Report (Appendix B), these terms are defined in the Vegetation Technical Report (Appendix C), specifically Section 3.4.
- 394-235 | Species that were not included in the analysis were those not expected to occur in the project vicinity, as described in Section 3.3.2 of the Wildlife Technical Report (Appendix B). Inclusion of species that are not expected to occur in the vicinity was deemed unnecessary.
- 394-236 | The spotted owl sighting in the project vicinity was of a single bird and did not have the status of residential single (WDFW 2000) and, therefore, would not be considered a site center around which a home range territory would be established. The 0.5-mile figure was provided as a reference to the proximity of the historic sighting to the project area only. Additionally, habitat for spotted owls in the location of the sighting is no longer present.

"Northern goshawks, ...pileated woodpeckers, and Vaux's swifts are also unlikely to nest within the project area."

394-237 | Though these species are known to nest in late-seral forest, specific habitat requirements for these species may occur in the proposed ROW. Goshawks are known to nest in stands with >15' dbh trees; pileated woodpeckers nest in snags >20" dbh; and swifts nest in hollow trees >20" dbh. There are likely trees/stands with these characteristics along the ROW. The DEIS and technical appendix should include an analysis that considers there will be nesting habitat in CRW in the project area in the future, and that the ROW project will significantly impact that habitat.

"Bats...associated with LS or OG forest, this habitat type is not expected to occur in the project area."

394-238 | This habitat will occur in CRW in the project area under the HCP; the DEIS and technical appendix need to acknowledge and consider this circumstance.

"...project area does not contain suitable nesting habitat for bald eagles."

394-239 | The DEIS and technical appendix should acknowledge suitable habitat will develop in the CRW under the HCP, and should discuss the possibility.

Table 3. Species with Federal or State Status Not Expected to Occur within the Proposed Project Area

394-240 | Habitats for the marbled murrelet, Canada lynx, Johnson's hairstreak, grizzly bear, and gray wolf (along with many other species) may occur in the project area in the CRW in the future.

Table 3: Peregrine falcon is not expected to occur in project area because of lack of suitable nesting and foraging habitat.

394-241 | There is suitable nesting habitat for peregrine falcon within the lower CRW, and the project area is within the home range and would provide foraging habitat. This wide-ranging species with a large home range should be included in the DEIS and technical appendix discussions, especially considering the issue of raptors and electrocution on powerlines.

Table 3: Golden eagle is not expected to occur in project area (no reason given)

394-242 | The DEIS quotes a reference which states that eagles have been observed foraging in clearcuts at moderate elevation west of the Cascade crest, so it is unclear why they eliminated this species from consideration. Further data should be provided, or the species should be included in the analysis.

"Because these characteristics are usually associated with late-successional or old-growth forest, this habitat type is not expected to occur in the project area."

394-243 | Facilitation of these habitats is a primary goal of the CRW HCP. Though these conditions do not currently exist along the ROW, they likely will in the future. The DEIS and technical appendix should consider this.

3.3.2.3 Aquatic Community Dependent Species

"Cascades frog is found... above 2,600 ft in elevation..."

394-244 | This species was found as low as 1,600 ft. elevation in the CRW. The DEIS and technical appendix analysis should be adjusted accordingly.

Data concerning an unvalidated report of a spotted owl near Rattlesnake Ridge was not available to the authors and, given that it is unvalidated, would not change the analysis. Although Rattlesnake Ridge could provide suitable nesting habitat for peregrines, they are not currently known to nest there (i.e., in the Cedar River Watershed HCP [City of Seattle 2000] and WDFW PHS data [2000]).

394-237 | Section 3.3.2.1 of the Wildlife Technical Report (Appendix B) recognizes that the project area may contain suitable foraging and dispersal habitat for these species. According to the Cedar River Watershed HCP (City of Seattle 2000), nesting habitat for Goshawk may occur in the lower Cedar River Watershed, although potential nesting stands listed did not include the types found within the ROW. The HCP also identified pileated woodpecker and Vaux's swift nesting habitat as occurring primarily in the upper watershed. The discussion of impacts was revised to include loss of recruitment habitat for forest dependent species.

394-238 | The discussion of impacts was revised to include loss of recruitment habitat for forest dependent species.

394-239 | See response to Comment 394-238.

394-240 | The discussion of impacts was revised to include loss of recruitment habitat for forest dependent species. This would include marbled murrelets and Johnson's hairstreak. The lower Cedar River Watershed (the project vicinity as defined in Section 3.3 of the Wildlife Technical Report) is not likely to provide habitat for lynx in the future because of the low elevation of the area and the known association of lynx with high elevation subalpine fir/spruce forests (Ruediger, et al. 2000). Future potential development of suitable habitat for gray wolf and grizzly bear is also questionable given the amount of ongoing human activity in and around the watershed.

394-241 | A discussion about peregrine falcons was added to Section 3.3.2, Species to be Analyzed, of the Wildlife Technical Report (Appendix B). The Cedar River Watershed HCP (City of Seattle 2000) does not identify potentially suitable habitat within the lower Cedar River Watershed. However, because Rattlesnake Ledge is within the described project vicinity and could

4.1.1 Alternative Transmission Line Impacts

...assuming that a 150 ft ROW is cleared....

394-245 This assumption is inconsistent with information provided in sections 1.1.1.2 and 1.1.1.5. This analysis also fails to consider impacts associated with clearing new (temporary and permanent) roads and staging areas, as well as short- and long-term impacts of the 50 ft temporary construction easement previously mentioned by BPA (but not mentioned in the DEIS). SPU believes Table 5 significantly underestimates habitat impacts. The DEIS, its technical appendices, and associated permitting documents need to present a complete, accurate, and consistent description of the proposed action.

4.1.1.1 Impacts

394-246 The DEIS and technical appendix should include a discussion of the impact of exposure to electric and magnetic fields (EMF) and the risk of decreased immune response for limited-mobility species, especially amphibians.

"Disturbance of Wildlife – Noise from blasting would...result in a low-level impact."

394-247 Blasting could result in moderate level impact if blasting is done during breeding season near a nest or den site. The DEIS and technical appendix need to discuss the impacts of blasting and other construction activity (and resulting noise and dust).

"Habitat Fragmentation—Under all of the alternatives, the amount of habitat fragmentation within the project vicinity would increase, resulting in a moderate-level impact. Fragmentation would lead to an increased amount of edge habitat in the area."

394-248 Habitat fragmentation is included here, when it should be a subset of habitat loss. Additional forest fragmentation under the preferred alternative would be small; however, habitat loss would be significant.

4.1.1.2 Mitigation Common to all Alternatives

The DEIS and technical appendix should consider all species included in the CRW HCP and should commit to compensatory mitigation designed to offset habitat loss for these species.

394-249 Most impacts were described in Section 4.1.1.1 as moderate or high, yet the mitigation proposals are primarily minimizations of impact. This is not adequate mitigation for the moderate/high impacts of permanent loss of habitat, permanent habitat fragmentation, mortality, and disturbance. The DEIS and technical appendix should acknowledge this and commit to mitigation actions that include compensatory mitigation, such as creation and protection of equivalent quality habitat of greater area than that lost due to construction of the proposed action. This needs to be habitat that would not already have occurred and/or been protected.

394-250 The fact that high quality low elevation late successional (LS) habitat will be created in CRW under HCP, and that the ROW will permanently fragment this large block of habitat needs to be addressed by the DEIS and technical appendix. Mitigation such as leaving corridors of trees maintained at a specified height through the ROW should be addressed.

Impacts on Threatened, Endangered and other Sensitive Species

394-251 Proposed mitigation would appear to be ineffective for mitigating impacts to species associated with forested and wetland/riparian habitats. Anticipated impacts will only benefit early seral-associated species.

potentially be used by peregrine falcons for nesting, the Wildlife Technical Report was revised.

394-242 Because the project is located at low elevation, it does not meet the definitions given for golden eagle habitat and so golden eagle was not included in the analysis in Section 3.3.2 of the Wildlife Technical Report (Appendix B).

394-243 The discussion about impacts was revised to include loss of recruitment habitat for late successional forest dependent species.

394-244 Elevations for Cascades frog occurrences were not included in the Cedar River Watershed HCP (City of Seattle 2000), therefore this information was not available to the author. Section 3.3.2.3 of the Wildlife Technical Report (Appendix B) was revised to show that Cascades frogs occur at these elevations in the Cedar River Watershed.

394-245 The 150-foot clearing was based on information available when the report was first prepared in late 2000. Section 4.1.2 of the Wildlife Technical Report (Appendix B) has now been revised to reflect currently available data on clearing.

394-246 Information about the electromagnetic effects of transmission lines on limited -mobility species, such as amphibians is not readily available, and the detailed discussion that would be required to address this issue would be outside of the scope of this EIS, therefore BPA will not be undertaking such a study during the environmental review.

394-247 The "low level" impact was derived from the expectation that blasting would be infrequent and that disturbance from blasting would be of short duration. This analysis was expanded in Section 4.1.1.1 of the Wildlife Technical Report (Appendix B).

394-248 Habitat loss is discussed in Section 4.1.2 of the Wildlife Technical Report (Appendix B), and is discussed at the species level by alternative. Habitat loss was added to the list of major issues and also discussed at the broader scale, in Section 4.1.1 of the Wildlife Technical Report.

- 394-252 The DEIS and technical appendix fail to include creating and leaving snags of acceptable height in cleared zones of forested riparian and wetland areas. The DEIS and technical appendix should commit to ensuring all pertinent plans would meet and be conducted by SPU standards and approval for those portions of the project constructed in the CRW.
- 394-253 Minimizing forest vegetation clearing is not adequate mitigation for forest habitat conversion to early successional habitat. The DEIS and technical appendix should acknowledge this and commit to compensatory mitigation that effectively offsets habitat conversion.
- 394-254 Commercial (or ecological) thinning will also need to be conducted. The DEIS needs to include specifics on how this would be accomplished. For example, will BPA pay for thinning on adjacent lands? How many acres? Located where?
- 394-255 Reviewers of the DEIS and this technical appendix need targets for coarse woody debris density (including diameter and decay class) to effectively evaluate the efficacy of this proposal. The species for which this will provide mitigation need to be included in the DEIS and technical appendix.
- Habitat Fragmentation**
- 394-256 Clearing only as much vegetation as necessary does not compensate for the habitat fragmentation created by construction of new ROW, roads, and substation—especially considering the major fragmentation the ROW will create in low elevation late successional forest in CRW in the future. The DEIS and technical appendix should acknowledge this and commit to appropriate compensatory mitigation.
- 394-257 Leaving coarse woody debris is unlikely to address connectivity issues for most species. Even for those species that use coarse woody debris, the microclimatic differences between a closed canopy forest environment and an open environment may prevent use. The DEIS needs to add specifics as to exactly which species will be helped by this proposal.
- 394-258 Leaving some areas intact will be inadequate to mitigate for the fragmentation the proposed action will create. Specific compensatory mitigation to offset this fragmentation need to be added to the DEIS and technical appendix.
- Bird Collision or Electrocutation**
- "...guidelines described in ...1981 report..."*
- 394-259 The guidelines BPA will use need to be described in the DEIS in sufficient detail for reviewers to evaluate their effectiveness. Also, more current techniques than from 1981 need to be reviewed and used to hazard-proof the lines from collision and electrocution, especially by raptors. A complete discussion of this issue needs to be included in the DEIS and technical appendix so reviewers can evaluate whether the methods will be effective.
- A discussion of the possibility of placing perches in safe locations and barriers to perches in unsafe location on the towers should be included in the DEIS and technical appendix.
- A complete discussion of proposed methods to minimize bird collision with ground cables should be included in the DEIS and technical appendix.
- A monitoring program to evaluate the effectiveness and longevity of the techniques to minimize/avoid both electrocution and collision should be included in the DEIS and technical appendix, with adaptive management provisions to change the procedures in case of a pre-determined level of mortality.

- 394-249 See responses to Comments 340-002 and 394-235. The details about these mitigation measures will also be included in the Mitigation Action Plan to be subsequently developed for this project.
- 394-250 The discussion about impacts in Section 4.1.2 in the Wildlife Technical Report (Appendix B) was revised to include discussion about the loss of recruitment habitat for late successional forest dependent species. See response to Comment 340-002 for a discussion of mitigation.
- 394-251 See response to Comment 394-249 above.
- 394-252 Information has been added to Section 4.7.2.10 of the SDEIS to address creating and leaving snags where appropriate. Also information has been added to address replanting tree species in areas impacted outside the ROW. Creation of snags and replantings will be done in cooperation with SPU to meet goals as set forth in their HCP.
- 394-253 See response to Comment 340-002.
- 394-254 On lands north of the CRW, BPA would be conducting some pre-commercial thinning. With the exception of a few places, much of the timbered acreage north of the CRW (not counting the plantations) is composed of trees that are about 25 years old. Stable Douglas fir is a species BPA would prefer next to its lines. The 25-year-old stands are currently overstocked with trees. By taking out the smaller, weaker, deformed trees along with the hardwoods and the Western Hemlock, a strong, stable stand of Douglas fir will be left next to BPA's line.
- 394-255 Section 4.1.1.2 of the Wildlife Technical Report (Appendix B) was revised to include information about species that would benefit from leaving coarse woody debris in the project area.
- 394-256 See response to Comment 340-002.
- 394-257 See response to Comment 394-255.
- 394-258 See response to Comment 340-002.
- 394-259 Section of 4.1.1.2 of the Wildlife Technical Report (Appendix B) was revised to reflect more current recommendations and describes techniques that are available.

Disturbance of Wildlife

"Prior to construction, verify that no new bald eagle nests have been constructed in the project area. If any are found, avoid construction within 2,600 feet of the nest during the nesting period."

394-260 | The project area, defined as only that area within 0.25 mile, or 1,320 feet, of the ROW, is insufficient to guarantee that no eagle nests will be disturbed by construction. A minimum of 2,600 ft on either side of the ROW will need to be surveyed for nests. The survey methodology needs to be included in the DEIS and technical report.

394-261 | Nests of other species should also be considered in the DEIS and technical appendix..

"Plan flight paths for helicopters..... do not fly over potential nesting habitat for either northern spotted owls or marbled murrelets in the project vicinity..."

394-262 | "Project vicinity" needs to be defined in the DEIS and technical appendix.. Also, species other than the three mentioned also need to be considered in this section.

4.1.2.1. Alternative 1

"...Alternative 1 would result in low-level impacts on forest community dependent species."

394-263 | Low elevation late successional habitat is extremely uncommon in the entire Puget lowlands. 86 acres of the 120 forested acres to be cut is in the "conifer forest – late" class, i.e., 18–36 inch dbh trees. These habitat patches in CRW will likely develop late successional habitat characteristics over the term of the HCP, which will make this functional habitat for late successional/old growth dependent species. Given the paucity of late successional habitat at low elevation, this proposed habitat conversion will have a significant future impact. The impact cannot be dismissed as low-level. The DEIS and technical appendix should acknowledge this and reclassify this impact as moderate and commit to appropriate and effective compensatory mitigation.

"Because this vegetation removal could result in a loss of productivity in adjacent aquatic habitat but could also be largely mitigated by spanning riparian corridors, this would represent a moderate to low level impact."

394-264 | This paragraph is inherently contradictory. It states that 10 ac of forested riparian habitat will be removed, yet it also says that this removal is mitigated by spanning riparian corridors. The removal of 10 ac of riparian habitat is a permanent habitat loss, for which compensatory mitigation should be required. Simply not removing all riparian vegetation is not adequate mitigation. The DEIS and technical appendix should acknowledge this and commit to effective compensatory mitigation.

Mitigation

394-265 | It is confusing that most of the mitigation proposals listed here are simply a repeat of those already listed in 4.1.1.2 as common to all alternatives. It would be clearer if the DEIS and technical appendix listed only additional mitigation specific to each alternative.

"Minimize soil disturbance within or adjacent to wetlands and stream banks to the extent possible."

394-266 | The term "extent possible" should be quantified in the DEIS and technical appendix, and should include methods for minimizing soil disturbance described. In areas where soil disturbance cannot be minimized, adequate compensation mitigation should be provided and described.

The details about these mitigation measures will be included in the Mitigation Action Plan to be subsequently developed for this project.

Section 4.1.1.2 of the Wildlife Technical Report (Appendix B) was revised to include information about methods to minimize bird collisions.

394-260 | See response to Comment 394-227. As stated in the Mitigation Measures, Section 4.1.1.2, a distance of 2,600 feet will be the standard for bald eagle nests. The bald eagle nest surveys will be conducted via aerial survey methods using a helicopter to fly above and to the side of potential bald eagle nesting habitat and visually searching for nests. These surveys will be conducted by a qualified biologist and the method has been approved by the WDFW and USFWS.

394-261 | The Wildlife Technical Report, Appendix B and Section 4.7.2.10 of the SDEIS have been revised to add mitigation measures to avoid impacting raptor nests.

394-262 | The project vicinity is described in Section 3.3, paragraph 1 of the Wildlife Technical Report (Appendix B).

394-263 | The finding of a low level impact was based on the definitions given in Section 4.0 of the Wildlife Technical Report (Appendix B), reduction of a habitat type that is very common in the project vicinity. Within the defined project area (0.25 mile either side of the proposed center line), forest removal under Alternative 1 would represent 5 percent of the habitat that is available. In the lower Cedar River Watershed, the HCP identifies 12,255 acres of second growth forest, of which 120 acres of forest clearing would represent 0.98 percent of the habitat that is available.

394-264 | See response to Comment 340-002. Section 4.1.2.1 of the Wildlife Technical Report (Appendix B) was revised so that spanning riparian reserves was no longer termed mitigation. The details about mitigation measures will be included in the Mitigation Action Plan to be developed for this project.

394-265 | Comment noted.

"Mitigation measures to minimize or reduce potential impacts to species dependent upon early seral habitats: Create snags along edges..."

394-267 | How many snags will be created? What diameter and height of trees will be used? What methods will be used to create the snags? The DEIS and technical appendices need to provide these specifics so reviewers can adequately evaluate the efficacy of the proposal.

4.1.3.1 Access Roads Impacts

"A portion of this clearing would coincide with clearing for the transmission ROW and so is not additive."

394-268 | Reviewers need to know exactly how many acres will coincide with clearing the ROW and how many will be additional in order to evaluate the impact of total cleared area. In addition, habitat converted to road (impervious surface, no vegetation) is not equivalent to habitat converted to grass/forb/shrub, so needs to be compensatorally mitigated separately.

4.1.3.2 Mitigation

"Avoid building new roads within or adjacent to wetlands."

394-269 | Is this a firm commitment to building no roads in wetlands or their buffers? If so, the DEIS and technical appendix should clarify this commitment and define buffer width. If this is not a commitment, then the area of road estimated to be built in wetlands, which wetlands will be impacted, and the appropriate compensation mitigation should be included in the DEIS and technical appendix.

4.1.5 Cumulative Impacts

"Within the CRW, vegetation removal and thus habitat alteration is expected to be minimal, as described in the HCP (City of Seattle 1998, 2000). For this reason, clearing associated with the proposed project would be the greatest foreseeable impact in this portion of the project area. The HCP also outlines plans to close certain roads within the CRW, which could potentially mitigate impacts from proposed new access roads that would be constructed in conjunction with the proposed project."

394-270 | Habitat is dynamic and is constantly changing. The DEIS does not consider how the habitat in the CRW will change over time. The road decommissioning program in the CRW HCP can be viewed as mitigation for past road-building projects in the CRW, and should not be used as mitigation for a BPA project. BPA must mitigate for their own impacts, and cannot use commitments of landowners in parts of the project area as mitigation for BPA's actions. The DEIS and technical appendix should explicitly acknowledge this circumstance and should omit this statement.

5.3.2 Cedar River Watershed Habitat Conservation Plan

"The CRW HCP (City of Seattle 1998, 2000) was prepared by SPU to establish a comprehensive management plan for long-term management of the CRW. The HCP includes numerous provisions intended to maintain the quality of wildlife habitat and the health of wildlife populations in the CRW. Objectives of the HCP include meeting the legal requirements of the ESA, contributing to the conservation of unlisted species as appropriate, providing a net benefit over current conditions to both listed and unlisted species, and developing conservation strategies for at-risk species and their habitats."

394-271 | The DEIS and technical appendix should explicitly acknowledge the CRW HCP regulating agencies (e.g. USFWS, NMFS) and the fact that the proposed action not a "covered activity" under the HCP.

394-266 | See response to Comment 340-002.

394-267 | See response to Comment 394-252.

394-268 | Section 4.1.3 of the Wildlife Technical Report was revised to address currently available data about construction of access roads. The details about these mitigation measures will be included in the Mitigation Action Plan to be developed for this project. BPA is proposing to add approximately 1.4 miles of new roads within the CRW, and abandon approximately 0.6 mile of existing roads. The net total of new access roads would be about 0.8 mile, encompassing an area of approximately 2 acres.

394-269 | No roads would be built in wetlands. Some new roads would be built in buffers.

394-270 | Section 4.1.5 of the Wildlife Technical Report (Appendix B) was revised so that it does not appear that road removal by others is being considered mitigation for the project. Road closures by the City of Seattle were included in this discussion on the basis of the definition of cumulative impacts, which is to include reasonably foreseeable actions in the project area.

394-271 | BPA acknowledges that the transmission project was not specifically contemplated by the HCP. The HCP was undertaken by the city to include activities carried out or authorized by the City of Seattle, and not for BPA. The HCP did recognize, however, that new rights-of-way may need to be given. See, for example, Chapter 4.2-73.

**Kangley-Echo Lake Transmission Line Project DEIS
Appendix C – Final Vegetation Technical Report**

Comments from Seattle Public Utilities
September 4, 2001

DEIS Appendix Citations in italics; SPU comments in normal font.

1.2.3 Removal of Forest within the Cedar River Watershed

“The HCP for the CRW proposes strict limitation of logging and other forest conversion within the watershed.”

394-272 | The proposed action is not a “covered activity” under the Cedar River Watershed (CRW) Habitat Conservation Plan (HCP). The DEIS and technical appendix should clearly disclose that the proposed action is not a “covered activity” and provide an evaluation of this circumstance.

1.3.1 Uniformity of Vegetation Communities Between Alternatives

“Because most of the project area is second-growth forest that has been actively managed since around 1920, the existing forest stands are more or less uniform, with only slight variation in age and size classes between stands.”

394-273 | Though forests in the project area have been harvested in the past, existing forest communities provide a high diversity of habitats for forest-dwelling species. More importantly, the CRW HCP provides long-term protection status to forests in the CRW. Thus, these forests will continue to age and provide increasingly unique, low elevation conifer forest habitats in the rapidly developing Puget Sound region. The DEIS and technical appendix should acknowledge the unique long-term forest protection status provided by the HCP. BPA’s environmental analysis should be conducted recognizing the increasing regional biodiversity value of the forest it proposes to permanently clearcut.

2.1 Data Sources and Study Methods

“Washington Department of Natural Resources (WDNR) Natural Heritage Program (NHP) lists of threatened, endangered, and other special-status plant species.”

394-274 | Though this database is an important resource, it relies on contributed information and should only be used as a crude guide to species distributions.

“It was also assumed...that vegetation in an additional 75 ft zone on either side of the cleared area would be partially cleared ...”

394-275 | This is inconsistent with the statement in Appendix B and information provided in Section 1.1.1.5 of this report that indicate 50 to 60 ft would be partially cleared. The DEIS, its technical appendices, and associated permitting documents need to present a complete and consistent description of the proposed action. Such inconsistencies make this DEIS difficult to review and evaluate. In any case, if this approach applies to Alternative 1, as the text suggests, does this mean that both sides of the 300 ft total ROW will be treated in this way, resulting in a 450 ft wide managed ROW? The DEIS and technical appendage should be explicit about this.

394-276 | This analysis also apparently fails to describe impacts associated with clearing new (temporary and permanent) roads and staging areas, as well as short- and long-term impacts of the 50 ft temporary

Appendix C SPU Comments.doc

Page 1 of 6; 09/05/01

394-272 | See response to Comment 394-271.

394-273 | Comment noted.

394-274 | Comment noted.

394-275 | The distance used was changed from 60 feet to 75 feet. Partial clearing within the additional 75-foot zone (on the east side of the ROW) would be focused in those trees with sufficient height to strike the transmission line and/or towers in the event of a fall.

394-276 | Approximately 2 acres would be cleared to accommodate the new access roads within the CRW, all of which would be located within the new or existing right-of-way. No impacts have been ascribed to any staging areas, since it is not known at this time where those areas would be located. Typically, BPA’s construction contractors select the necessary staging areas and arrange their use in concert with the property owner. No staging areas would be located within the CRW at the request of the landowner.

- construction easement previously mentioned verbally by BPA to CRW staff (but not mentioned in the DEIS). The DEIS and its technical appendices should explicitly discuss impacts associated with temporarily disturbed areas. SPU believes Table 5 underestimates habitat impacts.
- 2.2 Agencies Contacted**
- 394-277 | No private landowners were contacted.
- 3.1 Regional Overview**
- “The project area lies almost entirely within second-growth forests that have been maintained in timber production for most of the last 150 years.”
- 394-278 | This is true. However, there is no mention that the CRW HCP effectively places CRW forests in long-term protection status. The DEIS and technical appendix should acknowledge the unique long-term forest protection status provided by the HCP. BPA’s environmental analysis for this project should be conducted recognizing the increasing regional biodiversity value of the forest it proposes to permanently clearcut.
- The DEIS and technical appendix indicate the most prevalent plant communities in the project area are TSHE/POMU and TSHE/TITR communities. However, paragraph 4 of this section indicates vegetation in the project area is dominated by PSME (Douglas-fir). The DEIS and technical appendix need to present a complete and accurate analysis of vegetation and potential impacts.
- 3.2 Regulations, Standards, and Guidelines**
- “The CRW HCP outlines proposed regulation of activities within the watershed.”
- 394-279 | Again, there is no mention that the CRW-HCP effectively places forests in the CRW in protection status and that forest management activities in the CRW are for restoration purposes. The DEIS and technical appendix should acknowledge the unique long-term forest protection status provided by the HCP. BPA’s environmental analysis for this project should be conducted recognizing the increasing regional biodiversity value of the forest it proposes to permanently clearcut.
- 3.3 Project Area and Approach**
- “The project area for vegetation is a 0.5 mi. corridor centered on the ROWs of the proposed alternatives.”
- 394-280 | The definition of project area is inconsistent with Final Wildlife Technical Report, which describes the project area as being within 0.25 mile of the ROW. The DEIS and technical appendices need to indicate why the study area or project area for this environmental analysis varies among disciplines.
- 3.4 Transmission Line Alternatives**
- “Twelve major vegetation cover types were defined and mapped for this project (Figure 3). Their relative areas are shown in Figure 4. The 12 cover types are described below:
- **Coniferous forested, early seral** ...generally less than 20 years old...
 - **Coniferous forested, mid-seral** ...range in size from 12 to 20 in. DBH and ... generally in the range of 15 to 35 years...
 - **Coniferous forested, late seral** ...tends to be 36 to 75 years old... range in size from 18 to over 36 in...”
- 394-281 | These definitions of seral classes are not accurate. While many variables are involved in the identification of seral class, most professionals in this field would not consider a 40- or 60-year-old west-Cascadian Douglas-fir forest as late-seral. The DEIS and technical appendix should use standard definitions of seral class.
- Appendix C SPU Comments.doc Page 2 of 6: 09/05/01
- 394-277 | Comment noted.
- 394-278 | The plant associations given in the report are correct. TSHE/POMU, TSHE/TITR and other *Tsuga heterophylla* associations are frequently dominated by Douglas fir (*Pseudotsuga menziesii*). Plant associations are based on regeneration and climax communities, not on current dominance. True Douglas fir plant associations in the Pacific Northwest are much drier than the Cedar River Watershed sites. A true PSME (Douglas fir) plant association in the west Cascade low forests is extremely uncommon, and is not found within the project area.
- 394-279 | Comment noted.
- 394-280 | A “0.5-mile [wide] corridor centered on the ROW” and an area “within 0.25 miles [extending from each side the centerline] of the ROW” are descriptions about an equivalent area.
- 394-281 | The definitions of “seral” and specific class labels are detailed within the text. While the terms used may not fall within standard forestry practice, that does not preclude the use of the words. The definition and explanation of the terms’ use provide a clear understanding of the intended meaning.

"Forested communities within the project area have been further sorted into one of four age classes. Due to the history of timber management in the project area, the age classes chosen reflect typical rotation and/or thinning intervals in timber production."

394-282 Timber production schedules are no longer relevant in CRW. The DEIS and technical appendix should acknowledge the unique long-term forest protection status provided by the HCP. BPA's environmental analysis for this project should be conducted recognizing the increasing regional biodiversity value of the forest it proposes to permanently clearcut, not on typical rotation or thinning intervals for timber production.

394-283 The DEIS and technical appendix fail to distinguish the distinct, regenerated forest habitat that lies in a strip adjacent to and west of the preferred option. This narrow strip of forest appears to have been cleared of vegetation during construction of the original ROW, but has been allowed to regenerate. As a result, there is an approximately 50 ft band of younger mixed forest (approximately 30 to 50 years old) immediately adjacent to roughly 60 percent of the existing ROW in the CRW. SPU can provide maps delineating this strip. This forest strip coincides with the location of the proposed preferred alternative. The forest outside this strip is generally approximately 60 to 80 years old. The DEIS and technical appendix fail to accurately describe existing conditions. BPA's environmental analysis for this project should be conducted using accurate observations of the forest resources it proposes to permanently clearcut.

3.7.2 Survey and Manage Species

"Therefore, Survey and Manage requirements are not applicable to this project."

394-284 This is not clear. If BPA owns land "in fee," then that land is federally owned and managed. The DEIS and technical appendix should clarify why such ownership allows BPA to avoid Survey and Manage requirements?

3.8 Noxious Weeds...

"Scotch broom commonly occurs in the highly disturbed areas of clear-cuts, as well as along the existing transmission line..."

394-285 This statement suggests BPA has actively allowed noxious weeds to invade and persist in their existing ROWs. In fact, this is the case along BPA ROW in the CRW. The DEIS and technical appendix should recognize and explain this existing management approach, and then describe exactly how BPA proposes to manage its existing and proposed ROWs for noxious weeds in the future. If BPA intends to neglect active and effective management of noxious weeds in its ROW, as it does now, then the DEIS and technical appendix need to disclose this information.

The DEIS and technical report should acknowledge that two new noxious weeds have been located in the lower portion of the CRW: yellow hawkweed (*Hieracium caespitosum*) and spotted knapweed (*Centaurea maculosa*). The environmental analysis should take these species into consideration.

4.0 Environmental Consequences and Mitigation

"Table 3" and "Table 4"

394-286 These tables include redundant information; the numbers contained therein do not correlate between tables. The DEIS and technical appendix need to present pertinent data clearly.

4.1.1.1 Impacts

"We have used 75 ft on either side of the ROW as an assumption for the analysis."

394-282 With regard to the first point, commercial logging in the Cedar River Watershed HCP is now strictly limited; however, the age distribution of trees within the project area still reflects logging practices in the recent past. The characterization of the present-day stands is based on past practice, with no implication or inference for future management practices.

394-283 The reviewer agrees with your comment and the age-class mapping of the referenced area was reevaluated.

394-284 A revision is not required because Survey and Manage requirements apply to USDA/U.S. Forest Service and USDI/Bureau of Land Management lands only (see *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl, USDA/USFS and USDI, BLM, April 1994*).

394-285 See response to Comment 394-193.

394-286 The reviewer agrees with your comment and reevaluated data collected for Table 3 to make the acreage totals in that table consistent with acreage totals elsewhere in the document.

- 394-287 This number is not consistent through the DEIS. In 4.1.3.1 of this technical appendix the width is 45 ft; 50 ft was widely referenced in the DEIS. The environmental analysis used in the DEIS and its technical appendices needs to be based on complete and consistent description of the proposed action.
- "In some cases, forested stands, even within the maintained ROW, would not require clearing."*
- 394-288 The DEIS and technical appendix should specify where these cases occur in the CRW, especially relative to the Cedar River.
- This section also fails to mention that an acre or less of wetland habitat will be permanently converted due to filling, as is described in the Final Wetland Technical Report.
- 4.1.1.2 Mitigation**
- 394-289 The DEIS and technical appendix make no commitment to mitigate for the loss of forest habitat, or other vegetated habitat. While the feasibility of meaningfully mitigating for the loss of forest habitat is debatable, BPA should commit to mitigating the permanent loss of the 150 to 200 acres of long-term forest it proposes to clearcut.
- "Develop and implement aggressive vegetation management programs to limit colonization by non-native species and eradicate noxious weeds within the transmission line ROW."*
- 394-290 The DEIS and technical appendix should describe methods for maintaining native plants and managing noxious weed species without the use of herbicides (which are not allowed in the CRW) so reviewers can evaluate their potential efficacy. Statements indicating "an aggressive vegetation management program" will be developed and implemented are inadequate and not able to be evaluated by reviewers. The DEIS and technical appendix should describe the noxious weed management program (without herbicides) that will be implemented. A monitoring program (including adaptive management) needs to be part of that program.
- Also, this statement implies BPA implements active and effective noxious weed management programs. In fact, however, the BPA ROW in (and outside of) the CRW is a significant avenue of dispersal and location of infestation for noxious weeds. The DEIS and technical appendix should recognize and explain this existing management approach, and then describe exactly how BPA proposes to manage its existing and proposed ROWs for noxious weeds in the future. If BPA intends to neglect active and effective management of noxious weeds in its ROW, as it does now, then the DEIS and technical appendix need to disclose this information.
- "Use only certified weed-free straw..."*
- 394-291 Weed-free straw will typically have been treated with herbicides. The DEIS and technical appendix need to address this situation, including the specific herbicides and their quantities that would be introduced to the CRW. The DEIS and technical appendix need to evaluate such contamination and the associated risks to water quality as part of this environmental analysis. Also, SPU is aware that certified weed-free straw is difficult to obtain locally. The DEIS and technical appendix should describe exactly what "certification" means in this case, who certifies that straw, and under what conditions that straw will need to have been grown to be certified.
- 4.1.3.1 Alternative 1 Mitigation**
- 394-292 BPA proposes to permanently convert 118 ac of forest to early successional habitat. This forest would otherwise have been managed to achieve late successional characteristics in CRW. The DEIS and technical appendix should commit to compensatory mitigation for such conversion.

- 394-293 Consistently throughout the DEIS and its technical appendices, there is no acknowledgement that the CRW HCP effectively places forests in the CRW in protection status and that forest management activities in the CRW are for restoration purposes. The DEIS and technical appendix should acknowledge the unique long-term forest protection status provided by the HCP. BPA's environmental analysis for this project should be conducted recognizing the increasing regional biodiversity value of the forest it proposes to permanently clearcut.
- 4.1.3.6 Access Roads**
- "For the purposes of assessing new access road impacts, a 20-ft road cross section was assumed. Existing access roads are generally 24 ft across, and the actual new access road width would be 16 ft."*
- 394-294 This information is not consistent within the DEIS. In Chapter 2 (2.1.1.5), new roads outside of the ROW would require a 50 ft easement, which includes 16-22 ft of road surface and 10 ft of drainage ditches on either side. The environmental analysis in the DEIS and its technical appendices should be based on consistent dimensions of the project features. The DEIS and technical appendices should commit to compensatory mitigation for permanently converting forest and other vegetated habitats to impervious road surfaces. The DEIS and technical appendix should also evaluate the impacts of constructing mitigation (such as stormwater ponds) for water quality and quantity that will likely be required by the National Marine Fisheries Service for constructing 1 to 2 miles of new impervious surface in basins tributary to waters that support threatened species such as Chinook and coho salmon. Also, in this section, the DEIS and technical appendix should specifically consider BMPs for preventing erosion and protecting water quality. This section also fails to discuss or account for temporary roads and staging areas.
- 4.1.3.7 Cumulative Impacts**
- 394-295 Cumulative impacts are incompletely evaluated. The DEIS and technical appendix should present a complete evaluation of cumulative impacts. Commitments to compensatory mitigation should be included in that evaluation.
- 4.2.2.1 Impacts**
- "Any such spills or leaks could kill or injure vegetation in the immediate vicinity of the spill."*
- 394-296 To protect the municipal water supply, SPU has "no-tolerance" objectives for spills or leaks of hazardous materials in the CRW. The DEIS and technical appendix should indicate how all spills will be prevented in the CRW.
- 4.2.1.2 Operation and Maintenance Mitigation**
- "Mitigation would follow policies and procedures adopted by BPA..."*
- 394-297 These policies and procedures should be summarized. It is not reasonable to expect reviewers to obtain and review the EIS referenced here, especially considering the short duration of the public comment period.
- 4.2.2.1 Access Roads Impacts**
- 394-298 Impacts of potential spills of hazardous materials were considered to be low to adjacent vegetation. However, any spill of a toxic substance in CRW should be considered a high impact because of the risks to water quality. To protect the municipal water supply, SPU has "no-tolerance" objectives for spills or leaks of hazardous materials in the CRW. The DEIS and technical appendix should indicate how all spills will be prevented in the CRW.

- 394-293 Comment noted.
- 394-294 Road information has been updated in the SDEIS. See Sections 2.1.1.5 and 4.4.2.1 of the SDEIS. See response to Comment 340-002.
- 394-295 See response to Comment 340-002.
- 394-296 See response to Comment 394-139.
- 394-297 See response to Comment 394-193.
- 394-298 See response to Comment 394-139.

5.6.1 Cedar River Watershed Habitat Conservation Plan

"The CRW HCP (City of Seattle 1998, 2000) was prepared by SPU to establish a comprehensive plan for long-term management of the CRW. The HCP includes numerous provisions intended to maintain the quality of fish habitat and the health of fish populations in the CRW. Many of these provisions apply to management procedures such as fish hatchery operation or manipulation of instream flows and thus are not directly relevant to this analysis. Other provisions address the effects on fish and their habitat that can result from forest removal and forest road construction and maintenance."

394-299 | With regard to forest resources, the proposed action is inconsistent with the CRW HCP. The DEIS and technical appendix should disclose that the proposed action is not consistent with the CRW HCP.

5.6.4 Washington Department of Natural Resources Forest Practices Rules

"The WDNR Forest Practices Rules (WAC 222) describe the types of forest practices allowed under the State of Washington Forest Practices Act (RCW 76.09). They divide forest practices into four classes, based on potential impact to public resources, and outline the processes for permitting of each class."

394-300 | The DEIS and technical appendix should describe riparian buffer requirements as contained in the Forest Practice Rules.

6.0 Individuals and Agencies Contacted

394-301 | This section is redundant with Section 2.2. of this technical appendix.

394-299 Please see response to Comment 394-230.

394-300 You are correct in identifying that this information was not provided in the Vegetation Technical Report (Appendix C). However, we do not feel it is necessary to collect or present the information because it would not substantively contribute to the impact analysis, or the identification of potential significant impacts as required under the National Environmental Policy Act.

394-301 Comment noted.

**Kangley-Echo Lake Transmission Line Project DEIS
APPENDIX D Final Wetlands Technical Report**

Comments from Seattle Public Utilities
September 4, 2001

DEIS Appendix Citations in italics; comments in normal font.

1.1.1.9 Site Restoration and Clean-up

"Disturbed areas would be reseeded with grass or an appropriate seed mixture to prevent erosion. The seed mixture would include native plant species and would be free of noxious weeds."

394-302 The DEIS needs to be more specific regarding "restoration." Restoration is more than just reseeding with an "appropriate" seed mixture. The DEIS and technical appendix should commit to restoring the native plant communities disturbed by the construction and operations. The plantings and seed mixtures should include only native plants.

1.3 Major Conclusions

"Potential fill and excavation impacts from the construction of towers and roads would be avoided by strategically locating towers and roads outside of wetland areas where possible and by spanning wetlands."

394-303 The DEIS should provide more detailed description of these project features. Impacts to wetlands can not be evaluated until location of towers and roads are specified. Given this lack of detail and considering other constraints on tower locations (e.g., staggered location with existing towers, stream crossings, topographic constraints, spacing), it appears that placement of towers in wetlands is probable. However, as evidenced by information presented in the project's biological assessment (BA), BPA has identified locations for towers and new roads and so should be able (in the DEIS and its technical appendices) to estimate such impacts. The DEIS and the technical appendix need to present a complete and accurate environmental analysis, which includes the disclosure of such known project characteristics. The DEIS should discuss these fill impacts and the compensatory mitigation BPA proposes.

**2.0 Study Scope and Methodology
2.1 Data Sources and Study Methods**

"A basemap of potential wetland locations was created by superimposing the transmission alternatives over the wetlands location data provided by the aforementioned data sources. This map was used to aid the field survey of wetlands within the ROWs. The wetland reconnaissance survey focused on field-verifying selected areas of the wetland basemap that may be impacted. The approximate wetland boundaries were then field-mapped on the orthophotos provided by BPA. Due to the size of the wetlands and their readily apparent signature on the aerial photographs, the boundaries were sketched on 1:24,000-scale aerial photographs and subsequently digitized..."

394-304 This methodology fails to mention what criteria were used to identify and delineate wetlands. Presumably, Section 404 jurisdictional wetlands are the subject of interest, but this is not clear. Additionally, the remote sensing approach to wetland identification and the scale at which they were mapped (1:24,000) indicates this exercise resulted in crude approximations of wetland boundaries, not jurisdictional wetland delineations. Also, an important source of wetland information, the SCS soil survey, was not listed as one of the data sources. In contrast, SPU observed flags delineating more precise wetland boundaries in the proposed corridors, but these flags are not mentioned in the methodology and the delineated boundaries do not conform

394-302 See response to Comment 394-147.

394-303 A detailed description of potential impacts to wetlands associated with Alternative 1 is provided in Section 4.9.2 of the Supplemental Draft EIS. Following the release of the draft EIS, BPA conducted a wetland delineation of the wetlands within the proposed right-of-way and substation expansion area. Although a total of 35.63 acres of wetlands and 20,277 linear feet of streams were delineated in the project area, no permanent fill material would be placed within waters of the United States, including wetlands, during construction of the proposed project.

See also response to Comment 340-002.

394-304 and -305 Additional information regarding methods used to identify wetlands has been added to the Wetlands Technical Report (Appendix D) in Section 2.1, Data Sources and Study Methods. For the purposes of preparing the initial Wetland Technical Appendix, no waters of the United States were "delineated;" subsequently no jurisdictional wetland boundaries were established for the purposes of the DEIS. Wetland biologists located wetlands, including waters of the United States within the 500-foot survey corridor as regulated by the U.S. Army Corps of Engineers (Section 404), the Washington State Department of Ecology, and King County. Methods used for identifying and locating waters of the U.S. are listed in Section 2.1, Data Sources and Study Methods, of the Wetland Technical Report (Appendix D).

Wetland and stream boundary flags observed by SPU were established in April 2001 for the purposes of guiding the placement of tower and access road locations, and to minimize the potential for wetland and stream impacts due to road and tower construction. The wetland and stream boundaries flagged in April 2001 occurred after the drafting of the Wetlands Technical Report (Appendix D) in late 2000. These boundaries were a reconnaissance of approximate jurisdictional wetland and stream boundaries, using the 1997 Washington State Wetlands Identification and Delineation Manual, the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual, and King County's Environmentally Sensitive Areas Ordinance (King County Code, Chapter 21A.24). Official wetland boundaries

394-305 to those presented in the technical appendix. SPU is also skeptical that signatures on the 1:24,000 aerial photographs were adequate to delineate wetland boundaries. Red alder-dominated wetlands could be evident, but conifer- (e.g., redcedar) dominated boundaries are likely to be obscurely evident. The DEIS and its technical appendix need to discuss these methodological short-comings and provide a complete discussion of the wetland methodology used to support the environmental analysis.

3.3 Study Area and Approach

394-306 This section is primarily a summary of the results. This technical appendix should better describe the vegetation, soils, and hydrology of all wetlands. For example, it is never clear if PFO-dominated wetlands are dominated by deciduous or coniferous species. This technical appendix also needs to describe buffer habitats and anticipated impacts to buffers. There is no analysis or table showing impacts to wetland and buffer habitats, where temporary and permanent impacts are examined by habitat class for each alternative. The DEIS and the technical appendix need to present a complete analysis of wetlands and potential impacts.

Table 1. Summary of Wetlands Present within the 150 ft ROW by Transmission Line Alternative

394-307 Wetlands tributary to waters bearing Chinook and/or coho would be classified as Class 1 wetlands, not Class 2, as per the King County wetland rating system, Criterion 1a. Thus, essentially all such tributary wetlands in the project area would be considered Class 1 wetlands. Also, wetlands should be rated using the Washington State Department of Ecology Wetland Rating scheme. Rating forms should be appended to the technical appendix, and this rating added as a new column in Table 1. The "Total Acres" column in Table 1, as well as the entirety of Table 2, are not informative. Rather, the total wetland acreage that will be impacted by the proposed action is of interest; this should be broken out by temporary and permanent impacts, by Cowardin habitat class, by King County rating, and by Ecology rating—for each alternative. The DEIS and technical report need to present an organized, clear analysis of existing conditions and potential impacts to wetland habitats and their buffers.

"Commonly these wetlands were associated with depressional areas that receive water from overland runoff and precipitation."

394-308 This is an incorrect assumption. Many wetlands in the project area have hydrology supported by groundwater discharge. For example, most of the wetlands on the south side of Brew Hill are supported by groundwater discharge, rather than overland flow and precipitation. Pertinent environmental analyses (as should be contained in the DEIS and its technical appendix) are based on accurate field observations rather than on speculation or assumption. Sound information on natural resources in the CRW is easily obtained through consultation with SPU Cedar Falls biologists.

3.4 Transmission Line Alternatives 3.4.1 Alternative 1

"Species diversity is low within the overstory and understory. The depressional wetlands occupying the south bench area of Brew Hill provide flood storage and flood flow moderation functions and wildlife habitat."

394-309 The standard underlying this conclusion is not stated. Species diversity is low relative to what standard? SPU observations of the wetlands in and near the ROW in the CRW indicate there is considerable diversity in these wetland areas. These wetlands also provide significant water quality and quantity functions to Rock Creek. Wetlands in the riparian area along the Cedar River are not identified in Figure 3 or in the report. The DEIS and its technical appendix present such scant site-specific information for the individual wetlands that accurate review and evaluation of BPA's conclusions is not possible. Also, the map scale is too small to verify boundaries. The DEIS and its technical appendix should contain sufficient site-specific information and specific boundary information such that an accurate and pertinent environmental analysis is possible.

4.0 Environmental Consequences

Appendix D SPU Comments.doc

Page 2 of 5; 09/05/01

were not "delineated" during this reconnaissance. See response to Comment 394-303.

The 1:24,000-scale orthophotos were used as an aid for the creation of a base map of approximate wetland locations. This field map was then used in the field by wetland biologists to guide the reconnaissance of approximate wetlands locations. The map was then altered to reflect wetland boundaries as observed in the field. The orthophotos were not used to determine the vegetation community composition of wetlands; this was determined through a ground reconnaissance.

394-306 Brief descriptions about wetland community types and buffer habitats have added the information to the Wetlands Technical Report (revised Appendix D), Section 3.3, Study Area. See also response to Comment 394-303.

394-307 King County Environmentally Sensitive Areas (Chapter 21A.06.1415 A.1.) states that Class 1 wetlands are those "which have present species listed by the federal or state government as endangered or threatened or outstanding actual habitat for those species." Concerning fisheries, the Landsburg Diversion Dam on the Cedar River currently presents a passage barrier to all anadromous fish species including bull trout (Coastal/Puget Sound DPS [Threatened]), chinook salmon (Puget Sound ESU [Threatened]), and coho salmon (Puget Sound/Strait of Georgia ESU [Candidate]). (Please refer to the Final Biological Assessment for the Kangley-Echo Lake Transmission Line Project 2001 for more information). Thus, no wetlands within the Cedar River Watershed and within the Alternative 1 construction corridor meet provision 21A.06.1415 A.1 as presumed by your comment. We understand that a fish ladder at the dam is being constructed and these species may be present in the future. Wetlands located within the Raging River Watershed may provide riparian habitat for threatened anadromous fish species.

To ensure proper rating and protection of wetlands, prior to permitting and construction all wetlands will be delineated and rated using both King County's Environmentally Sensitive Areas Ordinance (King County Code, Chapter 21A.24) and the Department of Ecology's *Washington State Wetlands Rating System for Western Washington, Second Editions, August 1993*,

394-310	<p>“...clearing vegetation within the 150 ft wide ROW...”</p> <p>This assumption is inconsistent with information provided in sections 1.1.1.2 and 1.1.1.5. This analysis also fails to consider impacts associated with clearing new (temporary and permanent) roads, as well as short- and long-term impacts of the 50 ft temporary construction easement previously mentioned by BPA (but not mentioned in the DEIS). There is no table that describes areal impacts for all these (and other) potential disturbance activities.</p> <p>4.1 Construction Impacts 4.1.1 Impacts Common to All Action Alternatives 4.1.1.1 Impacts Wetland Impact Avoidance and Minimization—</p>	<p>Publication 93-74. While this information will be used for the impacts analysis and compensatory mitigation planning, we do not feel it is necessary to collect or present the additional ratings information at this time because it would not substantively contribute to the impact analysis, or the identification of potential significant impacts as required under the National Environmental Policy Act. However, additional information concerning potential impacts to wetlands from the construction of the transmission line corridor has been provided in Section 4.1, Construction Impacts, of the Wetlands Technical Report (revised Appendix D). (Please also see response to Comment 394-303.)</p>
394-311	<p>According to Chapter 2 of the DEIS, avoidance of wetlands was not a factor in selecting the alternative ROWs, although Alternative 1 does have less clearing. Given the constraints in locating a high-voltage transmission line within any of these alternatives, flexibility in location to avoid wetlands is unlikely. Careful siting of transmission towers is perhaps one way to minimize wetland impacts, but neither the DEIS or technical appendix has sufficient information to determine if this is feasible or was evaluated in the environmental analysis. The DEIS and technical appendix should have sufficient information to be able to assess the feasibility of minimizing wetland impacts by siting towers outside of wetlands.</p>	394-308 Comment noted.
394-312	<p><i>Vegetation Impacts</i></p> <p>This document fails to mention that these permanent alterations would be considered a moderate impact to wetlands, using criteria presented in Section 4.0.</p>	394-309 You are correct in identifying that this information was not provided in the Wetlands Technical Report (Appendix D). However, we do not feel it is necessary to collect or present the information because it would not substantively contribute to the impact analysis, or the identification of potential significant impacts as required under the National Environmental Policy Act. See response to Comment 394-303.
394-313	<p><i>Hydrology Impacts and Wildlife Impacts</i></p> <p>The DEIS and technical appendix should describe the level of intensity characterizing these impacts, using criteria presented in Section 4.0.</p>	394-310 Please see response to Comment 394-303.
394-314	<p>4.1.1.1 Mitigation</p> <p>This list of best management practices is meaningless in terms of mitigating impacts. What is BPA really committing to here? There is no discussion of compensatory mitigation.</p>	394-311 You are correct in identifying that specific tower sites were not provided in the Wetlands Technical Report for Alternatives 2-4B (revised Appendix D). However, we do not feel it is necessary to present the information because it would not substantively contribute to the impact analysis, or the identification of potential significant impacts as required under the National Environmental Policy Act. See response to Comment 394-303. A detailed description of potential impacts to wetlands associated with Alternative 1 (the Proposed Action) is provided in Section 4.1, Construction Impacts, of the Wetlands Technical Report (revised Appendix D). This approximation of wetland impacts was made using the wetlands reconnaissance information and BPA's current roads and tower siting plan (Figure 5 in the Wetland Technical Report).
394-315	<p>4.1.1.2 Mitigation</p> <p>This laundry list of “standard” mitigation measures is relatively meaningless, and even conflicting. What is BPA really committing to here? As with other mitigation measures recommended for this project, there is no compensatory mitigation mentioned, despite a range of impacts identified in Section 4.1.1.1. The DEIS and technical appendix should describe meaningful mitigation actions, including compensatory mitigation that will offset unavoidable impacts to wetlands and their buffers.</p>	
394-316	<ul style="list-style-type: none"> • <i>Delineate wetlands before final design and flag for avoidance during construction.</i> <p>Wetlands need to be delineated for the DEIS to assess potential impacts. Delineation of wetlands is not a mitigation measure.</p>	

- *Ensure noxious weed infestations do not become a problem in wetlands by washing all construction vehicles and conducting a weed inventory one year after construction to verify that weeds have not been introduced.*

394-317 | How will BPA respond if weeds are introduced? There is no weed management plan or commitment in the DEIS. Herbicides are not allowed in the CRW, which makes weed management in the CRW particularly challenging. Considering that BPA's existing ROW is a major present-day corridor for weed dispersal and location of infestation in the CRW, SPU is obviously concerned that new or expanded weed infestations will go unchecked—as is the situation with current weed infestations in the BPA ROW.

4.1.1.3 Cumulative Impacts

"Filling or adverse modification of wetlands.... This could be offset through mitigation and restoration of degraded wetlands within the affected watersheds."

394-318 | Because there are no unacceptably degraded or filled wetlands, there are essentially no significant opportunities for wetland creation, restoration, or enhancement in the subbasins of the CRW.

4.1.3 Alternative Transmission Line Impacts

4.1.3.1 Alternative 1

Impacts—

"The 150-ft. wide cleared ROW would impact a total of 25 ac. of wetlands (Table 2). Wetlands surveyed within the Alternative 1 ROW consisted primarily of palustrine scrub-shrub and palustrine forested types. The majority of wetlands were low-gradient, depressional wetlands. Major streams and rivers associated with wetlands within the Alternative 1 ROW include the Raging River, Rock Creek, and Cedar River.

Clearing would cause a moderate-level impact to forested wetlands and their buffers. Wildlife habitat, flood flow and flood storage, and water quality functions could be degraded. Scrub-shrub and open water wetlands would experience moderate, low, or no impact assuming the wetlands could be avoided or spanned and that soils, hydrology, and vegetation were maintained."

394-319 | There is no site-specific information regarding wetland impacts in this section or those for the other alternatives, thus this impact evaluation is inadequate. Using definitions presented in the introduction to Section 4, clearing of forested wetlands would constitute a high—not a moderate—impact (impairing the ecological integrity of a wetland). These comments apply to the description of impacts for all alternatives. The DEIS and technical appendix should have a meaningful evaluation of potential impacts that is based on sufficient real information.

Mitigation—*Mitigation measures specific to the wetland resources along Alternative 1 would include: "Minimize road construction and strategically site towers to avoid wetlands 1-3 and 1-4 to minimize impacts to wetlands within the headwaters of Rock Creek."*

394-320 | Wetlands 1-1 and 1-2 are also in Rock Creek headwaters and impacts to these wetlands would need to be compensatorally mitigated. Potential clearing in riparian wetlands along the Cedar River would be a significant impact, but these wetlands were not identified. However, in text two paragraphs above this section this technical appendix states: *"Major streams and rivers associated with wetlands within the Alternative 1 ROW include the ...Cedar River."* The DEIS and its technical appendices need to present a complete and consistent description of the proposed action. Also, this section lacks mention of compensatory mitigation. The DEIS and technical appendix should contain a discussion of compensatory mitigation to which BPA would commit.

4.2 Operation and Maintenance Impacts

Appendix D SPU Comments.doc

Page 4 of 5; 09/05/01

394-313 | Please see response to Comment 394-303.

394-314 | Please see response to Comment 340-002.

394-315 | Please see response to Comment 340-002.

394-316 | Please see response to Comment 394-303.

394-317 | See response to Comment 382-017.

394-318 | Comment noted.

394-319 | See response to Comment 394-303.

394-320 | Please see response to Comment 340-002.

4.2.1 Impacts Common to All Action Alternatives

4.2.1.1 Impacts

"Moderate-level wetland impacts would also occur where the forest cover was removed and permanently maintained as scrub-shrub or emergent vegetation."

394-321 | This statement conflicts with previous statements. Conversion of forested to scrub-shrub or emergent wetlands constitutes a high wetland impact, according to definitions presented at beginning of Section 4.0.

Mitigation

394-322 | As King County requires of other public utilities, such as Puget Sound Energy, BPA should commit to compensatorily mitigating every tree removed from wetland and riparian habitats during operation and maintenance activities.

5.1.3 Section 404

"This project, with mitigation measures as stated, would meet the standards outlined by the CWA."

394-323 | This is an incorrect statement. Without compensatory mitigation "mitigation measures as stated" would not meet the standards currently used by the Army Corps of Engineers, or by King County, in mitigating for unavoidable wetland impacts. However, due to a lack of site-specific information and the subsequent inadequate impact analysis no firm conclusions can be obtained regarding where or how much wetland would be filled or otherwise impacted by any alternative. The DEIS and technical appendix should contain sufficient information about potentially impacted wetlands such that a meaningful impact analysis can be conducted, at which point these documents can then realistically evaluate the required compensatory mitigation and the project's ability to comply with federal, state, and local wetland regulations.

5.2 Other Standards and Guidelines

5.2.1 Cedar River Watershed Habitat Conservation Plan

"Specifically, the HCP allows timber harvest and road construction within wetlands and wetland buffers only in limited circumstances. For activities in wetlands and their buffers, the City of Seattle would consult with the state and federal agencies regarding measures to minimize and mitigate the impacts."

394-324 | These statements are wrong. The HCP does not allow timber harvest or road construction in wetlands. The City of Seattle would not be responsible for mitigating impacts to wetlands and their buffers due to construction of BPA's project, nor for any consultation or financial obligation necessary thereto.

394-321 | See response to Comment 394-303.

394-322 | Please see response to Comment 340-002.

394-323 | Your comment regarding mitigation is noted and will be addressed in the appropriate detail in the Mitigation Action Plan to be prepared for this project, and in association with permitting discussions with the appropriate federal, state, and local regulatory agencies. Please see responses to Comments 340-002 and 394-303.

394-324 | A revision is not required because though the HCP (April 2000) has committed to not harvest timber within aquatic and riparian ecosystem components, this does not prevent the City from conducting operations and activities associated with watershed management. The restriction alluded to by your comment only applies to the commitment not to harvest timber for "commercial purposes." (Cedar River Watershed HCP, April 2000: pages 4.2 6-7 and 4.2 45-46). BPA did not intend to imply that the City of Seattle would be responsible for any impacts created as a result of the proposed project.



King County
Department of Development
and Environmental Services
900 Oakesdale Avenue Southwest
Renton, WA 98055-1219

RECEIVED BY BPA PUBLIC INVOLVEMENT LOG#: KELT-395
RECEIPT DATE: SEP 05 2001

September 4, 2001

Communications
Bonneville Power Administration – KC-7
P.O. Box 12999
Portland, OR 97212

Re: Kangley – Echo Lake Transmission Line Project
KEC – 4

Dear Sir/Madam:

Thank you for the opportunity to provide comments on the Draft Environmental Impact Statement (DEIS) for the proposed Kangley-Echo Lake Transmission Line Project. The comments that are enclosed focus on whether this proposed project is consistent with King County's Comprehensive Land Use Policies and zoning and related regulations affecting development within environmentally sensitive areas.

King County has developed its Comprehensive Plan land use policies pursuant to Article 11, Section 11 of the Washington State Constitution and the Washington State Growth Management Act (GMA), R.C.W. 36.70A. The King County Comprehensive Plan is the principle planning document used by King County for the orderly physical development of the county. Policies set forth in the County's Comprehensive Plan are implemented through County land use regulations including, but not limited to, the King County Zoning Code, KCC Title 21A (including limitations upon development within environmentally sensitive areas); Surface Water Management Code, KCC Title 9 (including provisions for the protection of surface and groundwater); Building and Construction Standards Code, KCC Title 16 (including general clearing and grading standards) and Shoreline Management Code, KCC Title 25 (including restrictions upon development within designated shorelines). Each of these land use regulations was likewise adopted pursuant to authority of Article 11, Section of the Washington State Constitution and the Washington State Growth Management Act.

The proposed transmission corridor crosses two general zone classifications within unincorporated King County. These are the Forest and Rural Residential Zones. Utility facilities are permitted uses within these zone classifications but only to the extent that

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BPA – KEC-4
September 4, 2001
Page 2

these facilities comply with all applicable provisions of the zoning code, including the development standards for environmentally sensitive areas. The DEIS does not evaluate whether this project complies with these regulations but concludes on page 5-15 that by complying with the Endangered Species Act, Section 404 of the Clean Water Act, Coastal Zone Management Act, et. al., the project will comply with the substantive intent of these regulations. As noted in Section 5.11.2 of the DEIS, BPA will be providing information to the Department of Development and Environmental Services for later review to determine consistency with the County's Shoreline Master Program. This review covers a very small portion of the project route and there is no similar evaluation of how these other federal statutes meet or exceed the other applicable local regulations. In addition, the DEIS does not include the level of detailed technical analyses or design detail to determine this project's compliance with applicable King County Policies or adopted zoning or development regulations. For these reasons and others that are discussed in more detail in the attached comments, we do not agree with the DEIS conclusion relative to whether the proposed Kanasket-Echo Lake Transmission Project complies with applicable County policies or codes.

Thank you again for the opportunity to comment.

Sincerely,

Randy M. Sandin, Supervisor
Site Development Services Section

Wetlands, Streams, Wildlife, and Shorelines

1.0 Wetlands/Streams and Rivers

1.1 Wetlands

According to the DEIS, a total 10 wetlands, totaling 242 acre, were identified within the 500-ft transmission line study corridor under the proposed alternative. Most wetlands were low-gradient, depressional forested wetlands. Major streams and rivers associated with wetlands within the ROWS include the Raging River, Rock Creek, and Cedar River.

395-001

According to the Draft Environmental Impact Statement (DEIS), establishment of the cleared ROW would impact a total of 16 acres of wetland (please note that the wetland Appendix identified 25 acres of impact, under the proposed alternative-please clarify). The majority of wetlands that may be effected are associated with forested habitats that would be permanently altered, by the removal of trees, with construction of the transmission line. Impacts would include clearing shrubs, trees, and herbaceous vegetation from wetlands and wetland buffers. Direct and indirect impacts that could occur within or outside of the cleared ROW include, vegetation alteration, water quality degradation, sedimentation, introduction of invasive species, wildlife impacts, and changes in wetland hydrology. Permanent impacts on wetlands, buffers, and their functions and values may occur from fill associated with road access or widening for tower construction. New access roads would be sited to avoid wetland impacts where possible, however, road construction and use could carry sediment into wetlands, affecting water quality and biological productivity. Expansion of the substation is expected to impact less than 1/10 acre of wetland. Operation and maintenance of the ROW (vegetation removal) would include periodic impacts on wetlands and their buffers.

The following Comprehensive Plan policies apply to the siting of facilities in and around wetlands:

395-002

Wetlands are valuable natural resources in King County. They include shallow or deep marshes, bogs, ponds, wet meadows, forested and scrub-shrub communities and other lands supporting a prevalence of vegetation adapted to saturated soils. Many of the larger wetlands in King County are mapped in the County's Sensitive Areas Map Folio, and their vegetation, hydrology and wildlife are briefly described in the King County Wetlands Inventory.

E- 130 King County shall use as minimum standards, the Washington State Wetlands Identification and Delineation Manual, 1997 or its successor which is adopted by the King County Council and is the scientifically accepted replacement methodology based on better technical criteria and field indicators.

Wetlands are productive biological systems, providing habitat for fish and wildlife. They may serve as outdoor classrooms for scientific study. Some are used for hiking, hunting,

395-001 At the time the wetland technical study report was prepared, the amount of wetlands was estimated to be 25 acres within the proposed right-of-way. Further refinement of the amount of wetland impacts was made for the DEIS which stated 16 acres of wetland impact. Additional refinement of the level of wetland impact contained in the SDEIS is 14 acres. For more information please see the revised Appendix D.

395-002 BPA recognizes the value that wetlands contribute to the environment, and agrees with King County that these areas are productive biological systems, providing habitat for fish and wildlife. BPA also recognizes that King County allows alteration of wetlands for utility development (King County Comprehensive Plan Policy E-139), as included in the comments provided by King County, provided that all wetland functions are evaluated, the least harmful and reasonable alternatives are pursued, affected significant functions are appropriately mitigated and mitigation sites are provided with monitoring. BPA is committed to complying with this King County Comprehensive Plan policy, as well as other applicable King County policies.

BPA has selected Alternative 1 as its Preferred Alternative. It parallels an existing high voltage transmission line and takes advantage of the existing clearing that has already taken place, the existing access road system, avoids a separate crossing of the Cedar River downstream of the existing crossing, and also avoids paralleling the Cedar River as Alternatives 4A and 3 would do. Furthermore, BPA has sited its substation expansion, transmission towers and access roads in uplands to avoid filling any wetlands.

BPA proposes to provide compensatory mitigation to satisfy King County regulations to mitigate for the 14 acres of forested wetlands that would be converted to scrub/shrub wetlands within the proposed transmission line right-of-way. See response to Comment 340-002.

and fishing. Wetlands also store flood waters and control runoff, thereby reducing flooding, downstream erosion and other damage. Further, wetlands protect water quality by trapping sediments and absorbing pollutants. They discharge ground water, making it available to plants and animals. Wetlands store peak flows and discharge to streams in dry periods, thus enabling fish and other riparian animal populations to survive. These wetland functions need consideration from a watershed perspective.

- E- 132 **King County's overall goal for the protection of wetlands is no net loss of wetland functions within each drainage basin. Acquisition, enhancement, regulations, and incentive programs shall be used independently or in combination with one another to protect and enhance wetland functions.**
- E- 133 **Development adjacent to wetlands shall be sited such that wetland functions are protected, an adequate buffer around the wetlands is provided, and significant adverse impacts to wetlands are prevented.**

The functions and values of a wetland will change as land use surrounding the wetland changes. Fragmentation of habitat is considered the greatest threat to native biodiversity. Protecting native species biodiversity depends upon maintaining biological linkages and preventing fragmentation of wetland habitats. Small wetlands strategically located between other wetlands may provide important biological links between other, higher quality wetlands. Wetlands adjacent to habitat networks also are especially critical to wildlife functions and should receive special consideration in planning land use.

- E- 134 **Areas of native vegetation that connect wetland systems should be protected. Whenever effective, incentive programs such as buffer averaging, density credit transfers, or appropriate non-regulatory mechanisms shall be used.**
- E- 135 **The unique hydrologic cycles, soil and water chemistries, and vegetation communities of bogs and fens shall be protected through the use of incentives, acquisition, Best Management Practices, and implementation of the King County Surface Water Design Manual to control and/or treat stormwater within the wetland watershed.**
- E- 138 **Enhancement or restoration of degraded wetlands may be allowed to maintain or improve wetland functions provided that all wetland functions are evaluated in a wetland management plan, and adequate monitoring, code enforcement and evaluation is provided and assured by responsible parties. Restoration or enhancement must result in a net improvement to the functions of the wetland system. Technical assistance to small property owners should be considered.**
- E- 139 **Alterations to wetlands may be allowed to:**
a. Accomplish a public agency or utility development;
b. Provide necessary utility, stormwater tightline and road crossings; or
c. Avoid a denial of all reasonable use of the property, provided all wetland functions are evaluated, the least harmful and reasonable alternatives are pursued, affected significant functions are appropriately mitigated, and mitigation sites are provided with monitoring.

395-003

395-004

395-003 BPA understands that King County's goal is "no net loss of wetlands." BPA will work with King County to develop acceptable mitigation that meets both agencies' needs.

BPA would use best management practices when constructing its facilities so that wetland functions are protected, buffers are protected to the extent practicable and significant adverse impacts to wetlands are prevented.

395-004 BPA understands that the King County Code provides for the alteration to wetlands to accomplish a public agency or utility development such as the proposed project, provided that all wetland functions are evaluated, the least harmful and reasonable alternatives are pursued, the affected significant functions are appropriately mitigated and mitigation sites are provided with monitoring.

BPA has prepared a wetland report that it has submitted to the King County Department of Development and Environmental Services in compliance with King County requirements, and also intends to provide compensatory mitigation to mitigate for the alteration of forested wetlands to scrub/shrub wetlands that would be necessary to construct the project.

Please see the revised Appendix D and the Wetland Delineation Report (sent to the County under separate cover).

395-005 BPA understands that when adverse impacts cannot be avoided, such as hand clearing of tall-growing vegetation in forested wetlands in the proposed transmission line right-of-way, compensatory mitigation may be allowed. See response to Comments 395-003 and 395-002.

395-006 BPA understands that King County zoning guidelines prohibit development from occurring within wetlands except where the minimum requirements are satisfied, and when there are no

395-005

When adverse impacts cannot be avoided, compensatory mitigation may be allowed. This means the replacement of project-induced losses of wetland functions and values will be permitted through wetland creation, restoration or enhancement.

- E- 141 **Mitigation sites should replace or augment the functions to be lost as a result of the project proposal. Wetland mitigation proposals should be approved if they would result in improved overall wetland functions within a drainage basin. All wetland functions should be considered. Mitigation sites should be located strategically to alleviate habitat fragmentation, and avoid impacts to and prevent loss of farmable land within Agricultural Production Districts.**
- E- 142 **Mitigation projects should contribute to an existing wetland system or restore an area that was historically a wetland. The goal for these mitigation projects is no net loss of wetland functions per drainage basin.**
- E- 143 **Land used for wetland mitigation should be preserved in perpetuity. Monitoring and maintenance in conformance with King County standards should be provided by the project proponent until the success of the site is established.**

The foregoing Comprehensive Plan provisions for evaluating proposed uses within wetlands are implemented by pertinent zoning code provisions paraphrased below. King County zoning guidelines prohibit development from occurring within wetland except where these minimum requirements area satisfied.

KCC 21A.24.320-Wetland Development standards defined.

KCC 21A.24.330- (B), (E), and (N)

(B) –Special study required (see KCC 21A.24.100, 110, and 120)

(E)- Utilities may be allowed in wetland buffers if no practical alternative location is available and the utility corridor meets any additional requirements set forth in administrative rules.

(N)-Wetland road crossings

395-006

KCC 21A.24.130 Mitigation required: mitigation, maintenance, monitoring, and contingency.

KCC 21A.06.750 Mitigation defined. In descending order of preference, avoidance, minimization, rectification, reduction or elimination over time, compensation by replacing, enhancement, etc., and monitoring.

KCC 21A.24.340 (C) Replacement is required when a wetland or buffer is altered. Restoration of wetland shall be met by replacement.

direct impacts to jurisdictional wetlands as a result of the proposed project. BPA has sited all of the proposed facilities, e.g., transmission towers, access/spur roads and the substation expansion, on uplands.

BPA intends to satisfy the minimum standards as identified in King County's comments to the DEIS. To wit:

KCC 21A.24.320 Wetlands — Development Standards. BPA recognizes that all wetlands within King County are protected by buffers from 25 feet to 100 feet, and that the buffer widths are dependent on the classification of their associated wetland. BPA also understands that buffer widths can be increased by King County when necessary to protect wetlands.

KCC 21A.24.330 (B) — BPA understands that King County allows alterations to wetlands and wetland buffers pursuant to K.C.C 21A.24.075 or if the proposed development will (a) protect, restore or enhance the wildlife habitat, natural drainage or other valuable functions of the wetland resulting in a net improvement to the functions of the wetland system; (b) develop a plan for its design, implementation, maintenance and monitoring prepared by a civil engineer and a qualified biologist; (c) perform the restoration or enhancement under the direction of a qualified biologist; and (d) will otherwise be consistent with the purposes of this chapter. BPA also understands that to establish baseline conditions, detailed studies "may be required," such special studies, should they be required, shall include specific recommendations for mitigation which may be required as a condition of any development proposal (approval); and that these recommendations (if made) may include specific design and construction techniques.

In complying with the King County Code, BPA has prepared a wetland delineation report that identifies the direct and indirect impacts to the sensitive areas, and how they can be reduced. Additionally, BPA agrees to provide compensatory mitigation to offset the unavoidable impacts to the sensitive areas as a result of the proposed project.

While BPA has successfully cited all of its proposed facilities in uplands, some buffer areas would be affected. BPA

KCC 21A.24.340 (D) Enhancement may be allowed, but the wetland biologic and hydrologic functions shall be improved.

KCC 21A.24.340(F)- Off site mitigation allowed if within the same sub-basin, and greater hydrologic and biologic functions are achieved.

395-007

KCC 21A.24.070- Exceptions to the wetlands standards are allowed if no practical alternative exists with less impact on the sensitive area and the proposal minimizes impacts on sensitive areas.

1.2 Streams/Rivers

395-008

The DEIS stated that the preferred transmission line alternative would cross nine fish-bearing streams and an unknown number of non-fish-bearing streams. Impacts on stream resources from the proposed action would include the clearing of 12 acres within 100 feet of potentially fish-bearing streams and 33 acres within 300 feet of potentially fish bearing streams. Approximately 2,900 feet of stream would be within the cleared ROW. Clearing within 100 feet of the stream could reduce riparian shading and bank reinforcement by roots, and increase fine litter contributions to the stream. Clearing within 300 feet of the stream could affect LWD recruitment to the stream and stream microclimate. It is also possible that during construction, surface water runoff containing sediment, fuel spills, herbicide runoff and other contaminants could impact streams.

395-009

During the construction of the transmission line, the DEIS identifies that the BPA may need to install some culverts to provide or upgrade stream crossings for access roads. Improper culvert installation may impact stream hydrology, increase sediment delivery to streams, increase peak flows, and/or create a fish passage barrier. Road construction and road use could cause sediment delivery to streams.

395-010

Although specific locations have not been determined yet, it is stated that the BPA would need to blast bedrock to install some tower footings. Detonating explosives in or adjacent to fish habitat could cause disturbance, injury, or death to fish and destruction or alteration of their habitat.

Operation and maintenance activities in of the ROW (vegetation removal) would include periodic impacts on streams and riparian areas. It is stated that the BPA has prepared a programmatic EIS for its vegetation management program associated with transmission lines, roads, and related facilities.

395-011

Comprehensive Plan policies apply to the siting of facilities in and around streams are identified below and in the Comprehensive Plan policies identified Under Fish and Wildlife and Shoreline sections in this letter.

Our use and modification of water resources and the surrounding terrestrial environment affects how the hydrologic cycle functions and can cause unintended detrimental impacts such as flooding, erosion, degradation of water quality, loss of fish and wildlife habitat,

understands that this section of the King County Code allows for utilities such as transmission lines to be located in wetland buffer areas "if no practical alternative location is available and the utility corridor meets the additional requirements set forth in the administrative rules." The rules say that utilities may be allowed if: (1) King County determines that no practical alternative location is available, and (2) the utility corridor meets any additional requirements set forth in the administrative rules including, but not limited to, requirements for installation, replacement of vegetation and maintenance.

BPA has undertaken an environmental review of the Proposed Action and several alternatives, including the No Action Alternative, under the National Environmental Policy Act of 1969, as amended. BPA has reviewed a range of alternatives that included alternatives that circumvented the Cedar River Municipal Watershed as well as those that crossed the Watershed and non-transmission alternatives. Alternative 1 was selected as the proposed action since it would create the least impacts to the human environment, which includes both the social environment as well as the natural environment. It avoided a second separate crossing of the Cedar River, which is protected under the Washington State Shoreline Management Act; would avoid clearing riparian habitat along the Cedar River; was the least likely to affect cultural resources; would require the least amount of clearing in that it would be located immediately adjacent to BPA's existing 500-kV transmission line, and would also require the least amount of new access/spur roads. Additionally, the alternative was the one that the King County Comprehensive Plan (ET-203) suggests should be looked at first when attempting to site additional utility lines, and that is in existing utility corridors. The Proposed Action was the shortest line under review, and therefore would have the least line losses. It also is the least costly to construct, including material, land and mitigation costs.

Two alternatives, Alternatives 3 and C, would likely impact fewer wetlands than the Proposed Action. Implementation of these alternatives, however, would create many other impacts to other environmental resources. Both alternatives would require more clearing and more access roads and have a higher risk of impacting cultural resources and scenic quality. Alternative 3

and loss of archeological and traditional cultural resources that depend upon but do not damage natural resources. In order to minimize adverse impacts on the water resources of King County and ensure our continued ability to receive the benefits they provide we need to promote responsible land and water resource planning and use.

E- 116 King County shall use incentives, regulations and programs to manage its water resources (Puget Sound, rivers, streams, lakes, freshwater and marine wetlands and ground water) and to protect and enhance their multiple beneficial uses-including fish and wildlife habitat, flood and erosion control, water quality control and sediment transport, water supply, energy production, transportation, recreational opportunities and scenic beauty. Use of water resources for one purpose should, to the fullest extent practicable, preserve opportunities for other uses.

395-012

E- 117 Development shall support continued ecological and hydrologic functioning of water resources and should not have a significant adverse impact on water quality or water quantity, or sediment transport and should maintain base flows, natural water level fluctuations, ground water recharge in Critical Aquifer Recharge Areas and fish and wildlife habitat.

395-013

E- 126 Stormwater runoff shall be managed through a variety of methods, with the goal of limiting impacts to aquatic resources, protecting and enhancing the viability of agricultural lands and promoting groundwater recharge. Methods of stormwater management shall include temporary erosion and sediment control, flow control facilities, water quality facilities as required by the Surface Water Design Manual, and Best Management Practices as described in the Stormwater Pollution Control Manual. Runoff caused by development shall be managed to prevent adverse impacts to water resources and farmable lands. Regulations shall be developed for lands outside of the Urban Areas that favor non-structural stormwater control measures when feasible including: vegetation retention and management; seasonal clearing limits; limits on impervious surface; and limits on soil disturbance.

395-014

E- 128 River and stream channels, stream outlets, headwater areas, and riparian corridors should be preserved, protected and enhanced for their hydraulic, hydrologic, ecological and aesthetic functions, including their functions in providing woody debris sources to salmonid-bearing streams.

The foregoing King County Comprehensive Plan stream policies are implemented by the zoning code provisions paraphrased below. King county zoning precludes development from occurring within rivers, streams and associated buffers unless these minimum requirements area satisfied.

KCC 21A.24.360-Zoning Code (SAO) Development Standards for Streams.

KCC 2A.24.370: (A), (D), (G), and (J)

(A)- Special study required (see KCC 21A.24.100; 110; and 120.

395-015

(D)- Utilities allowed in stream buffers if no practical alternatives exist and provisions of KCC 21A.24.220 are met.

would require a separate right-of-way through the Watershed and a separate crossing of the Cedar River at a point where the river would have shorter banks, requiring riparian vegetation to be cleared. Alternative C would impact a large number of residences outside of the Watershed and wells on private lands. These impacts seriously handicap these alternatives when compared to the Proposed Action.

Since BPA is prepared to meet any additional requirements set forth in administrative rules including requirements for installation, replacement of vegetation and maintenance, so long as these requirements would allow BPA to meet NESC (National Electric Safety Code) requirements and its own maintenance standards for safe operation and maintenance of the line, BPA believes that it complies with the King County Code.

BPA understands that Section KCC 21A.24.330 (N) of the King County Code allows constructing roads in wetlands as long as certain conditions are met.

Since BPA has sited all of its facilities in uplands, no roads would be constructed in wetlands.

All jurisdictional wetlands would be avoided as a result of BPA's proposal to construct the transmission line using a helicopter instead of a boom as much as possible. Doing so eliminates the need to construct 16-foot wide access roads to reach the proposed tower sites and the need to fill wetland areas.

BPA has submitted a wetlands report to King County that addressed the impacts that its facilities would have on the storage capacities of the wetlands, if any, and the degree that the proposed project would impact the hydrology of these sensitive areas as well. The agency agrees to mitigate the effects of these impacts on these sensitive areas, as required by the King County Code.

BPA understands that (as determined by King County) mitigation, maintenance and monitoring measures shall be in place to protect sensitive areas and (their) buffers from alterations occurring on the development proposal site.

(G)- Stream crossings

(J) Stream channels may be stabilized if stream movement threatens an existing structure, does not impact the floodplain, and consistent with the Guidelines for Stream Bank Stabilization.

KCC 21A.24.130- Mitigation required.

KCC 21A.06.750-Mitigation defined.

KCC 21A.24.380(D) Replacement or enhancement is required when a stream or buffer is altered. Replacement or enhancement shall result in no net loss of stream functions and result in no impact to streams.

395-016

KCC 21A.24.380 (F)- Mitigation shall be on site and in-kind unless on site mitigation is not possible, mitigation occurs within the same sub-basin and greater biologic and hydrologic functions are achieved.

395-017

KCC 21A.24.070- Exceptions to the stream standards are allowed if no practical alternative exists with less impact on the sensitive area and the proposal minimizes impacts on sensitive areas.

1.3 Proposed projects consistency with King County’s land use land use plans and zoning regulations for wetlands and streams/rivers

395-018

Upon review of the DEIS, King County has determined that the proposed project is not consistent with King County’s land use plans and zoning regulations affecting streams and wetlands. Provisions are available in King County’s zoning regulations to deviate from certain of its sensitive area development standards if an applicant can demonstrate that through an alternative evaluation there are no practical project alternatives or locations (21A-24-005 D.) to the proposal that would minimize and mitigate impacts on sensitive areas (Public Rules 21A-24-025). There are practical alternatives and mitigation that have not been evaluated in the DEIS that are available and that may preclude use of such and exemption or which would further reduce project impacts to sensitive areas to the point that an exemption could be granted.

The alternative analysis in the DEIS does not demonstrate that there are no practical alternatives to the proposal that would minimize impacts on sensitive areas. The development of alternative appears to be primarily driven by cost, residence and subdivision avoidance, and WSCC reliability criteria. An alternatives evaluation will need to be performed that demonstrates avoidance, or where avoidance is not feasible, minimization of impacts to stream and wetland resources.

Section 4.9.2.4 of the DDES identifies standard mitigation measures to minimize wetland impacts and Section 4.5.21 and Section 4.6.2.11 of the DDES identifies standard mitigation measures to minimize impacts on streams and associated fish resources.

BPA will be complying with EPA’s National Pollutant Discharge Elimination System in developing a storm water pollution permit and filing the permit with EPA prior to the onset of construction activities. BPA also will be initiating water turbidity monitoring before, during and following its construction activities to ensure that no adverse impacts would be created to sensitive areas and their buffers, including Seattle Public Utilities drinking water.

King County requires that mitigation be offered in the following order of preference: Avoidance, minimization, rectification, reduction or elimination over time, compensation by replacing, enhancement, etc., and monitoring.

BPA has successfully avoided the need to fill any wetlands. However, some forested wetlands within the proposed right-of-way would need to be cleared of tall-growing vegetation. BPA would minimize this impact by removing that vegetation that would be a hazard to the safe construction, operation or maintenance of the line. Additionally, BPA would work with King County and anticipates that it can provide the appropriate level of compensatory mitigation to satisfy King County requirements.

Section KCC 21A.24.340 of the King County Code states that restoration shall be required when a wetland or its buffer is altered in violation of law or without any specific permission or approval by King County. BPA understands this section of the King County Code, and does not anticipate any activities that would be found to be a violation of law, or that would be found to be out of compliance with King County regulations.

Section KCC 21A. 24.340 of the King County Code states that replacement shall be required when a buffer is altered pursuant to an approved development proposal or a wetland is used for a regional flow facility or other approved use. Requirements for the restoration of wetlands may be met by replacement wetlands.

BPA intends to avoid all wetland and stream buffers where it can (avoidance) and minimize any disturbance where it cannot (minimization). Where impacts cannot be avoided, BPA will work with the County to develop acceptable mitigation that meets both agencies’ needs.

- 395-019 Although these mitigation measures do identify measure to minimize impacts on stream and wetland resources, they are not comprehensive and do not identify specific steps that will be taken to avoid, reduce, or mitigate impacts on sensitive areas. Per King County zoning codes KCC 21A.06.750 and the Public Rules 21A-24.031, the proposed project must demonstrate all impacts on streams and associated buffers are avoided or reduced through mitigation. The following mitigation actions are listed in descending order of preference: 1) avoiding the impact by not taking a certain action, 2) minimizing the impact by limiting the degree or magnitude of the action by using appropriate technology or by taking affirmative steps to avoid or reduce the impact, 3) rectifying the impact by repairing, rehabilitating or restoring the affected sensitive area or buffer, 4) reducing or eliminating the impact over time by preservation or maintenance operations during the life of the development proposal, 5) compensating for the impact by replacing, enhancing or providing substitute sensitive areas and environments, and 6) monitoring the impact and taking appropriate corrective measures. Mitigation should include site specific analysis of each sensitive area that would be affected by the proposed project. Specific project siting alternatives should then be developed to avoid or minimize impacts on sensitive areas (specifically, avoiding all impacts on Class 1 and 2 wetlands and streams). This should include identifying all sensitive areas where impacts could be avoided or reduced through alternative siting methods such as using existing topography to span sensitive areas that would alleviate the need to remove existing vegetation. The analysis should also include identifying locations along the proposed ROW where the proposed utility corridor or roads and other associated facilities could be shifted to avoid impacting sensitive areas. A sensitive area clearing plan should also be prepared as part of the design of the project to minimize vegetation impacts on wetlands, streams, and associated buffers. The plan should identify and evaluate specific sensitive areas that could not be avoided through the siting alternatives evaluation, and determine the permissible height of existing vegetation that could remain at these locations.
- 395-020
- 395-021 As stated above, enhancement, restoration, or creation will be required for all unavoidable wetland, stream, and buffer impacts. The DDIS did not identify sufficient mitigation measure to rectify sensitive area impacts by repairing, rehabilitating or restoring the affected sensitive areas. The mitigation should include compensating for the impacts by creating substitute sensitive areas or enhancing sensitive areas. This will include mitigation for all temporary construction-related sensitive area, and permanent sensitive area impacts, such as modifying forested wetlands to other vegetation types, will require replacement of the functions of those sensitive areas through enhancement, restoration, or creation of altered sensitive area resources. Monitoring must also be competed and remedial actions should be identified to assure enhancement, restoration, or creation mitigation measures are successful. Mitigation sites should be on land that is owned either by the BPA, King County, or other ownership acceptable to King County, and shall be permanently protected from future development or alteration.
- The following bulleted items identify additional wetland and stream zoning code non-consistency issues that should be addressed within the final EIS.
- 395-007 BPA understands Section KCC 21A 24.340 (D) of the King County Code. Enhancement may be allowed, but the wetland biologic and or hydrologic functions shall be improved.
- KCC 21A.24340 (F)** — Replacement or enhancement off site may be allowed if the applicant demonstrates to the satisfaction of King County that the off-site location is in the same drainage subbasin as the affected wetland and that greater biologic and hydrologic functions would be achieved. BPA understands this section of the King County Code, and intends to provide compensatory mitigation.
- 395-007 **KCC 21A.24.070** — Exceptions to the wetland standards are allowed if no practical alternative exists with less impact on the sensitive area and the proposal minimizes impacts on sensitive areas.
- BPA understands this section of the King County Code. As mentioned above, BPA believes there is no practical alternative to the Proposed Action with fewer environmental impacts, and the Proposed Action is designed to minimize impacts to the sensitive areas that could not be avoided.
- 395-008 BPA did identify these impacts in the DEIS and also identified mitigation measures that would reduce these impacts. Please see Section 4.6.2.11 of the DEIS and Section 4.6.2.10 of the SDEIS.
- 395-009 Please see response to Comments 394-084, 394-188 and 394-132.
- 395-010 Potential blasting impacts are detailed in Section 4.1.1.1 of the Fisheries Technical Report (Appendix A). That discussion also states that no in-water blasting would occur, and that blasting within 400 feet of fish-bearing streams would not occur when sensitive life history stages of fish are present in the blasting area.
- 395-011 Comment noted. BPA understands that King County precludes development from occurring within rivers, streams and associated buffer areas unless minimum requirements are satisfied. BPA has sited its proposed facilities to avoid all of these sensitive areas, and agrees to provide compensatory mitigation to offset impacts where they could not be avoided.

Wetlands

- 395-022
- All wetland sites within or outside of the proposed ROW that may be impacted by project activities would need to be delineated using methodology outlined Ecology’s State of Washington Wetland Identification and Delineation Manual (1997).
- 395-023
- All wetlands would need to be classified per 21A.06.1415 (A-C).
- 395-024
- Per the KCC 21A.24.320, all class 1 wetlands shall have a 100-foot buffer, Class 2 wetlands shall have 50-foot buffers, and Class 3 shall have 25-foot buffers. Buildings and other structures shall be setback 15-feet from the wetland buffer (21A.24.200).
- 395-025
- Sensitive area buffers are mandated for the purpose of protecting wetlands. Buffers of native vegetation help wetlands to maintain both hydrological and biological functions and values. These include storm water conveyance and food chain support, as well as flood prevention and salmon production. In order for buffers to perform these duties they must remain in an undisturbed condition as a “setback area” in which native plants are allowed to grow; non-native species are not allowed to be introduced into this area (KCC21A.24.330).
- 395-026
- Utilities and/or removal of vegetation for a proposed utility corridor may be allowed within established wetland buffers only if the development would protect, restore or enhance the wildlife habitat, natural drainage or other valuable functions of the wetland resulting in a net improvement to the functions of the wetland system (21A.24.330 E).
- 395-027
- The filling of non-isolated wetlands for construction of structures is not permitted under King County code. Alteration of isolated wetlands (21A.06.1410) may be permitted under some circumstances (21A.24.330 K).
- 395-028
- Alteration to wetlands and wetland buffers from road crossings must be mitigated (21A.24.330 (A.2) and N). Additionally, crossings must not change the overall wetland hydrology, must minimize wetland impacts, and must be constructed during summer low water periods. Alterations of wetlands shall be replaced or enhanced on the site or within the same drainage basin using the following formulas: Class 1 and 2 wetlands on a 2:1 basis and class 3 wetlands on a 1:1 basis with equivalent or greater biologic functions including, but not limited to, habitat functions and with equivalent hydrologic functions including, but not limited to, storage capacity (21A.24.340 C., D., and E). Replacement or enhancement off the

395-012 Chapter 4 and Appendices A, C, and D of the SDEIS describe the potential effects and mitigation for the Proposed Action regarding water quality, fish habitat, and wildlife habitat.

See response to Comment 394-044 for a reference to response to comments with additional information on impacts to water quality, fisheries, and wetlands.

See response to Comments 394-062, 394-088, 394-096, 394-098, 394-100, 394-101, 394-102, 394-227, 394-236, 394-237, 394-240, 394-241, 394-242, 394-247, and 395-006 for additional information on impacts to wildlife.

395-013 The BPA, as specified under the EPA rules pertaining to stormwater discharges into surface water bodies (40 CFR 122–124), shall obtain an National Pollutant Discharge Elimination System (NPDES) permit for construction activities, including clearing, grading, and excavation, that disturbs one or more acres of land. Under Section 402 of the Clean Water Act, federal facilities (or projects) are subject to these permitting requirements; administration of this program has been delegated to the state, however, for federal projects, EPA administers this program. BPA, as a federal agency, will obtain a general NPDES permit from EPA Region 10. BPA will prepare a project specific Storm Water Pollution Prevention (SWPP) Plan. This plan helps ensure that erosion control measures would be implemented and maintained during construction. It also addresses best management practices for stabilization, stormwater management, and other controls. Additionally the SWPP plan contains a site-specific Spill Prevention and Control (SPC) Plan that covers the project scope of work (including equipment, materials, and activities).

395-014 Comment noted. See response to Comment 395-011.

395-015, -016 and -017 ***KCC 21A.24.360 Streams: Development Standards*** — BPA recognizes that King County has adopted development standards for sites near streams, and that the streams have buffers depending on how they are classified. Class 1 streams have 100-foot buffers, Class 2 streams containing salmonids also have 100-foot buffers, Class 2 streams (without salmonids) have 50-foot buffers, and Class 3 streams have 25-

395-028 | site may be allowed if the applicant demonstrates that the off-site location is in the same drainage sub-basin as the original wetland and that greater biologic and hydrologic functions will be achieved.

395-029 | • The use of herbicides in wetlands and buffers will not permitted (KCC 21A.24.320 D).

Streams

395-030 | • Site specific analysis of all proposed streams to be crossed would need to be performed to identify and evaluate streams for the presence of fish (KCC 21A.24.100; 110; and 120) and classify the streams. As noted within the DEIS Fisheries Appendix, the DEIS relied upon remote methods to identify potential fish-bearing streams.

395-031 | • Per the KCC21A.24.360, Class 1 streams and Class 2 stream used by salmonids shall have 100-foot buffers. Non-fish bearing Class 2 streams shall have a 50-foot buffer and Class 3 streams (ephemeral) shall have a 25-foot buffer. Alteration, such as vegetation clearing, is typically not permitted within stream buffers.

395-032 | • Sensitive area buffers are mandated for the purpose of protecting streams and rivers. Buffers must remain in an undisturbed condition as a “setback area” in which native plants are allowed to grow; non-native species are not allowed to be introduced into this area (KCC21A.24.330).

395-033 | • Utilities may be allowed in stream buffers if no practical alternative is available and the utility corridor meets any additional requirements set forth in administrative rules including, but not limited to, requirements for installation, replacement of vegetation and maintenance (21A.24.330 E.).

395-034 | • Crossings of streams and encroachment on the otherwise required stream buffer may be allowed if all crossings use bridges or other construction techniques which do not disturb the stream bed or bank, except that bottomless culverts or other appropriate methods demonstrated to provide fisheries protection may be used for Class 2 or 3 streams if the applicant demonstrates that such methods and their implementation will pose no harm to the stream or inhibit migration of fish (21A.24.370 G). All crossings must be constructed during the summer low flow and be timed to avoid stream disturbance during periods when use is critical to salmonids. Crossings can not occur over salmonid spawning areas unless King County determines that no other possible crossing site exists. Bridge piers or abutments are not placed within the FEMA floodway or the ordinary high water mark. Crossings do not diminish the flood-carrying capacity of the stream.

foot buffers. BPA also understands that King County can increase buffer widths when necessary to protect streams.

KCC A.24.370 Streams: Permitted Alterations — (A) Alterations may only be permitted if based on a special study see KCC 21A.24.100; 110; and 120.

BPA has sited its proposed transmission facilities to avoid sensitive areas like streams and wetlands and their associated buffer areas. While all streams would be spanned, tall-growing vegetation would likely need to be removed in buffer areas to comply with the National Electric Safety Code.

KCC 2A.24.370 D — This section of the King County Code allows utilities to be located within stream buffers if:

1. No practical alternative exists; and
2. The utility corridor meets any additional requirements set forth in the administrative rules including, but not limited to, requirements for installation, replacement of vegetation and maintenance.

BPA is undertaking this environmental review to determine the best alternative to meet the purpose and need of the proposed project. The Proposed Action was selected as the preferred alternative because it meets the project’s purpose and need, creates the least environmental impact, is technically superior to the other alternatives and has the least cost. The Proposed Action would parallel an existing transmission line, therefore taking advantage of an existing access road system, minimize the amount of clearing that would be required (because of the adjacent transmission line right-of-way), require the least amount of new conductor, and avoid a second separate crossing of the Cedar River.

With respect to meeting the additional requirements set forth in the administrative rules, BPA could not comment without knowing what these additional “requirements” would be. In building, operating and maintaining its high voltage system, BPA must conform to the National Electric Safety Code to construct, operate and maintain its facilities in a safe and reliable manner.

395-035

- The use of herbicides in stream buffers will not permitted (KCC 21A.24.360 D).

2.0 Fish and Wildlife

A number of wildlife species, including invertebrates, were identified as potentially occurring within the project area. Species that are federally-listed as threatened or endangered; federal species of concern; and Washington State-listed threatened, endangered, sensitive or monitor species with the potential to occur on the west-side of the Cascade Mountains were selected for the BPAs analysis. Species were sorted by their primary habitat associations, defined as forest communities, aquatic communities, riparian communities, early seral communities, and special or unique habitats.

395-036

Two wildlife habitat corridors designated as wildlife Network in the King County Comprehensive Plan occur within the project area. One of the wildlife corridors follows the Cedar River and another traverses the project area to the north of the river. Two wildlife corridors converge west of Rattlesnake Lake. Both corridors would be crossed by the project alternatives.

395-037

Impacts on wildlife species associated with the preferred alternative include physical loss of habitat, or disturbance of wildlife from the construction activities or ongoing facility use and maintenance. Temporary construction impacts would be associated with noise and human presence.

395-038

The proposed action could potentially impact three federally listed salmon species, the Chinook salmon, bull trout, and Coho salmon. Bull trout and Chinook salmon have not been recorded to use streams in the project area of any of the proposed alternative, however, all stream accessible to anadromous fish in the project area are regarded by the USFWS and NMFS as having potential to support Chinook salmon and bull trout. Chinook salmon have been recorded in the Raging River less than one mile downstream of the Segment D crossing, and their apparent absence in the project area may only be due to inadequate surveying. The Cedar River contains suitable Chinook salmon spawning habitat and such use is expected to occur after the Landsburg Dam fish ladder is completed. Reduced LWD recruitment potential and impacts on stream thermal regime were identified to be the primary issues of concern.

The following Comprehensive Plan policies and those identified under streams/rivers, Wetlands, and the Shoreline section of this letter apply to the siting of facilities in sensitive fish and wildlife species:

It is King County's goal to conserve fish and wildlife resources in the County and to maintain countywide biodiversity. This goal may be achieved through implementation of several broad policy directions that form an integrated vision for the future. Each of the pieces is necessary for the whole to be successful. The policy objectives are to 1) identify

KCC 2A.24.370 G — Stream crossings may be allowed and may encroach on the otherwise required stream buffer if:

1. All crossings use bridges or other construction techniques which do not disturb the stream bed or bank, except that bottomless culverts or other appropriate methods to provide fisheries protection may be used for class 2 or 3 streams if the applicant demonstrates that such methods and their implementation will pose no harm to the stream or inhibit migration of fish;
2. All crossings are constructed during the summer low flow and are timed to avoid stream disturbance during periods when use is critical to salmonids;
3. Crossings do not occur over salmonids spawning areas unless King County determines that no other possible crossing site exists;
4. Bridge piers or abutments are not placed within FEMA floodway or the ordinary high watermark;
5. Crossings do not diminish the flood-carrying capacity of the stream;
6. Underground utility crossings are laterally drilled and located at a depth of four feet below the maximum depth of scour for the base flood predicted by a civil engineer licensed by the State of Washington; and
7. Crossings are minimized and serve multiple purposes and properties whenever possible.

BPA understands these conditions. No new stream crossings are proposed. BPA would use its existing access/spur road system to cross any streams associated with the proposed project.

KCC 2A.24.370 J — A stream channel may be stabilized if: (1) Movement of the stream channel threatens existing residential or commercial structures, public facilities or improvements, unique natural resources or the only existing access to property; and (2) the stabilization is done in compliance with the requirements of the King County Code 21A.24.230 through 21A.24.270 and administrative rules promulgated pursuant to this chapter.

and protect critical fish and wildlife habitat conservation areas, 2) link those critical habitat areas and other protected lands through a network system, and 3) integrate fish and wildlife habitat and conservation goals into new and existing developments. Conservation of biodiversity is necessary if wildlife benefits currently enjoyed by residents of the County are to be enjoyed by future generations.

- E- 165 The County shall strive to maintain the existing diversity of species and habitats in the County. The County should maximize wildlife diversity in the Rural Area.**
- E- 166 Fish and wildlife should be maintained through conservation and enhancement of terrestrial, air, and aquatic habitats.**
- E- 167 Habitats for species which have been identified as endangered, threatened, or sensitive by the state or federal government shall not be reduced and should be preserved. In the Rural Area and Natural Resource Lands, habitats for candidate species identified by the county, as well as species identified as endangered, threatened, or sensitive by the state or federal government shall not be reduced and should be preserved.**

The Growth Management Act requires jurisdictions to designate Fish and Wildlife Habitat Conservation Areas for protection. The Washington Administrative Code (WAC) sets out guidelines that jurisdictions must consider when designating these areas. As set forth in the WAC guidelines, Fish and Wildlife Habitat Conservation Areas include:

- a) Areas with which endangered, threatened, and sensitive species have a primary association;
- b) Habitats and species of local importance;
- c) Commercial and recreational shellfish areas;
- d) Kelp and eel grass beds; herring and smelt spawning areas;
- e) Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat;
- f) Waters of the state;
- g) Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity; or
- h) State natural area preserves and natural resource conservation areas.

It is important to note that for some species, mere presence is not considered significant. Significant habitats, for some species, are those areas that may be limited during some time of the year or stage of the species life cycle. King County has reviewed these guidelines and has developed policies E-168 through E-172 that address the various species included in the WAC guidelines. These policies recognize the tiered listing of these species and their habitats as defined by the United States Fish and Wildlife Service and the Washington State Department of Fish and Wildlife. These policies also recognize the need to regularly review the information developed on species and habitats and amend the tiered listing as appropriate.

- E- 168 King County shall designate and protect, through measures such as regulations,**

Comment noted. BPA does not anticipate the need to stabilize any stream channels associated with the Proposed Action.

KCC 21A.24.130 — As determined by King County, mitigation, maintenance and monitoring shall be in place to protect sensitive areas and buffers from alterations occurring on the development site.

BPA has identified the environmental impact of the proposed project along with a list of mitigation measures that are designed to eliminate, or at least minimize, the resulting environmental impacts. BPA proposes to undertake monitoring activities to ensure that any impacts are minimized.

With respect to maintenance activities, BPA would maintain the proposed transmission line and related facilities to ensure safe and reliable transmission of high voltage electric power over the life of the facility, and also to comply with the easement BPA would have with the underlying landowners.

KCC 21A.06.750 — Mitigation defined.

KCC 21A.24.380 (D) — Replacement or enhancement is required when a stream or buffer is altered. Replacement or enhancement shall result in no net loss of stream functions and result in no impact to streams.

BPA anticipates no alteration to streams as a result of the proposed project, however, stream buffers would be affected. Approximately 14 acres of wetland buffers and stream buffers would be affected by the Proposed Action (see revised Appendix D).

KCC21A.24.380 (F) — Mitigation shall be on site and in-kind unless on site mitigation is not possible, mitigation occurs within the same subbasin and greater biologic and hydrologic functions are achieved.

BPA understands this King County ordinance and will work with the County to develop acceptable mitigation that meets both agencies' needs.

incentives, capital projects or purchase, the following Fish and Wildlife Habitat Conservation Areas found in King County:

- a) Habitat for federal or state listed Endangered, Threatened or Sensitive species.
- b) Habitat for Salmonids of Local Importance: kokanee/sockeye/red salmon, chum salmon, coho/silver salmon, pink salmon, coastal resident/searun cutthroat, rainbow trout/steelhead, bull trout, Dolly Varden, and pygmy whitefish, including juvenile feeding and migration corridors in marine waters;
- c) Habitat for Raptors and Herons of Local Importance: red-tailed hawk, osprey, black-crowned night heron, and great blue heron;
- d) Commercial and recreational shellfish areas;
- e) Kelp and eelgrass beds;
- f) Herring, sand lance and smelt spawning areas;
- g) Wildlife habitat networks designated by the County, and
- h) Riparian corridors.

King County shall also protect the habitat for candidate species, as listed by the Washington Department of Fish and Wildlife, found in King County outside of the Urban Growth Area.

- E- 169 King County should protect the following species of local importance, as listed by the Washington Department of Fish and Wildlife and listed by King County, on lands outside of the Urban Growth Area, where they are likely to be most successful. Protection should be accomplished through regulations, incentives or purchase. Species of local importance are:
 - a) mollusks - Geoduck clam and Pacific oyster;
 - b) crustaceans - Dungeness crab and Pandalid shrimp;
 - c) echinoderms- Red urchin;
 - d) fish - white sturgeon, Pacific herring, channel catfish, longfin smelt, surfsmelt, Pacific cod, Pacific whiting, black rockfish, copper rockfish, quillback rockfish, yelloweye rockfish, lingcod, Pacific sand lance, English sole, and rock sole;
 - e) birds - Trumpeter swan, Tundra swan, Snow goose, Band-tailed pigeon, Brant, Harlequin duck, Blue grouse, Mountain quail, and Western bluebird;
 - f) mammals - marten, mink, Columbian black-tailed deer, elk, and mountain goat.
- E- 170 King County should protect the following priority habitats listed by the Washington Department of Fish and Wildlife that are not otherwise protected by policies and codes. Protection should be accomplished through regulations, incentives or purchase. Priority habitats are: caves, cliffs, consolidated marine/estuarine shorelines, estuary, old growth/mature forest, unconsolidated marine/estuarine shorelines, snag-rich areas, and talus slopes.
- E- 171 Development proposals should be assessed for the presence of species of local importance. A comprehensive assessment should follow a standard procedure or guidelines and shall occur one time during the development review process.

Existing buffer requirements for streams and wetlands are not intended to, and do not, always adequately protect wildlife resources in those sensitive areas. Areas with critical wildlife resources may need larger buffers to protect the resource.

- E- 173 Stream and wetland buffer requirements may be increased to protect species of local importance, as listed in this chapter, and their habitats, as appropriate. Whenever possible, density transfers and/or buffer averaging should be allowed.

KCC 21A.24.070 — Exceptions to the stream standards are allowed if no practical alternative exists with less impact on the sensitive area and the proposal minimizes impacts on sensitive areas.

BPA understands this exception to the stream standard, adopted by King County Code.

395-018, -019, and -020 Comments noted. At the time the DEIS was released, BPA had not yet designed the proposed project. BPA routinely uses the environmental process to design its facilities. If BPA were to complete the design of its facilities prior to initiating the environmental review, the affected/interested publics could not provide meaningful and timely input into BPA's decision-making process. Therefore, the design of a project typically parallels the environmental process, with the environmental review out front.

BPA has now delineated all of the sensitive areas within the proposed right-of-way and has sited all of its facilities (substation expansion, tower sites and access/spur roads) on uplands. No wetlands would be filled as a result of the project. To do so, BPA would implement extraordinary measures to construct the project, including requiring the contractor to construct most towers with a helicopter instead of a truck mounted boom. Doing so would reduce the road width normally needed. Additionally, BPA would be using a new footing design (micropiles) to reduce the disturbance area at each tower site. See Section 2.1.1.1 of the SDEIS.

BPA disagrees with the County's evaluation of its proposed project being inconsistent with its land use plans and zoning ordinance. In designing its projects, BPA tries to be consistent with all federal, state and local plans and programs to the extent practicable, while still meeting the National Electric Safety Code requirements, and its own right-of-way maintenance criteria for safe construction, operation and maintenance of its facilities. While BPA is not an "applicant" here, since it is a federal agency and Congress has not waived federal supremacy, it tries to meet or exceed state and local plans and programs to the extent practicable.

Salmon are particularly important because of their significance to local and regional character, federally recognized tribes and the fisheries industry. Several salmon stocks within King County and other areas of Puget Sound are in a serious state of decline. Several salmon stocks within King County have been or are about to be listed under the Endangered Species Act. The most effective way to protect and enhance native fish populations is through protection of those river and stream channels, riparian corridors, lakes, wetlands, headwaters and watersheds that provide or impact spawning and rearing habitat, food resources and fish passage. Intermittent streams also can be critical to native fish populations. Fish enhancement facilities currently are still critical to the maintenance of salmon stocks and the fisheries industry.

E- 174 King County should protect salmonid habitats by ensuring that land use and facility plans (transportation, water, sewer, electricity, gas) include riparian and stream habitat conservation measures developed by the County, cities, federally-recognized tribes, service providers, and/or state and federal agencies. Development within basins that contain fish enhancement facilities should consider significant adverse impacts to those facilities.

Protection of isolated blocks of habitat will not adequately protect wildlife in King County. Critical wildlife habitats and refuges need to be connected across the landscape through a system of habitat networks. Some areas may be important because they connect other areas together.

Network width is related to requirements of desired wildlife species, length of network segment and other desired uses within the network. Wider corridors will be required for larger species if the distance between refuges is great or if multiple uses, such as public access and trails, are desired. Since it may not be possible to protect wide corridors in the Urban Growth Area, it may not be possible to accommodate larger wildlife species in all areas. Networks will address some of the problems of habitat fragmentation for smaller species within the Urban Growth Area.

Potential linkages are identified on the Wildlife Network and Public Ownership Map. Open spaces set aside during subdivision of land should be located to make connections with larger off-site systems. This approach will also benefit other open space goals.

E- 175 Dedicated open spaces and designated sensitive areas help provide wildlife habitat. Habitat networks for Threatened, Endangered and Priority species of local importance, as listed in this chapter shall be designated and mapped. Habitat networks for other Priority Species in the Rural Area should be designated and mapped. Planning should be coordinated to ensure that connections are made with adjacent segments of the network. King County should provide incentives for new development within the networks to incorporate design techniques that protect and enhance wildlife habitat values.

King County shall also protect the habitat for candidate species, as listed by the Washington Department of Fish and Wildlife, found in King County outside of the Urban Growth Area.

See response to Comment 395-006.

Having proposed extraordinary measures to avoid sensitive areas and mitigate potential impacts, BPA believes that the proposed project is consistent with the King County's land use plans and zoning regulations to the maximum extent practicable.

Construction specifications would be developed before construction that would show sensitive areas and clearing required.

395-021 Comment noted. BPA agrees to provide the appropriate level of compensatory mitigation for all unavoidable impacts to sensitive areas, as provided by the King County Code.

395-022 through -028 BPA has prepared a wetland report (see revised Appendix D) and a Wetlands Delineation Report (sent under separate cover). These reports identify the location of the sensitive areas, the measures BPA has taken to avoid the sensitive areas to the extent that it can, and what measures would be taken to reduce impacts to the maximum extent practicable.

395-029 Herbicides would not be used anywhere on the Cedar River Watershed. Outside the Watershed, it is unlikely herbicides would be used in wetlands and wetland buffers.

395-030 through -034 Please see responses to Comments 394-022, 395-009, -014, -015, -016, and -017.

395-035 See response to Comment 395-029.

395-036 Potential impacts to these corridors are discussed in Section 4.1.1.1 of the Wildlife Technical Report (Appendix B).

395-037 This source of disturbance is included in construction activities and is described in Section 4.1 of the Wildlife Technical Report (Appendix B).

395-038 Impacts to these species are analyzed in the Fisheries Technical Report (revised Appendix A) and Wildlife Technical Report (Appendix B).

The foregoing King County Comprehensive Plan stream and shoreline policies are implemented by the zoning code provisions paraphrased below and as outlined within the Wetland and Streams/Rivers Sections of this letter. King county zoning precludes development from occurring within wildlife corridors unless these minimum requirements area satisfied.

21A.14.260- Wildlife habitat corridors-applicability.

21A.14.270-Wildlife habitat corridors- Design standards.

(A) The wildlife corridor shall be meet the following conditions:

1. Forms on contiguous tract that enters and exits the property at the points the designated wildlife habitat network crosses the property boundary
2. Maintains a width, wherever possible of 300 feet. The network width shall not be less than 150 feet wide at any point.
3. Be contiguous with and may include sensitive area tracts and their buffers, and where feasible, the corridor shall connect isolated sensitive areas or habitat and connect with wildlife habitat corridors, open space tracts or wooded areas on adjacent properties.

The Washington Administrative Code (WAC) 197-11 includes the State Environmental Policy Act (SEPA) regulations. WAC 197-11-660 states that local government shall base mitigation measures on policies, plans, rules or regulations formally designated by the appropriate legislative body. King County's Comprehensive Plan is substantive authority under the SEPA rules. The policies to protect wildlife habitat are found in Section VI, A and B, of the Natural Environment chapter. To protect this habitat, King County must adequately condition development permits.

In order to implement Policy E-175, a draft set of Wildlife Study Guidelines was prepared in August 1993. Wildlife studies prepared by consultants and submitted with permit applications are expected to follow these Guidelines.

Under the King County Wildlife Study Guidelines, projects that are greater than 5 acres located within the rural area and having no special wildlife criteria present, at a minimum, will require a habitat survey. If areas contain special wildlife criteria, additional studies may be required. Special wildlife criteria in rural developments include the presence of threatened or endangered species, site location within a wildlife management area (WMA), or the presence of priority habitats and/or species.

Specific surveys may include a habitat survey, wildlife survey, and threatened or endangered species report for the proposal, as described in the 1993 "Wildlife Study

395-039 and -040 Comment noted.

395-039

- 395-040 Guidelines for SEPA”, Draft by King County Resource Planning. The proposed project must assess impacts on raptors and other King county Priority avian species including eagle and red-tailed hawks, great blue heron and pileated woodpecker. Include nesting and habitat impacts, as well as flightway disruptions and perch safety. Additionally, per the King County Code, site specific special study may be required to evaluate impacts on salmonids of local importance as specified in the Comprehensive plan, as well as bull trout and Chinook salmon (see Streams/Rivers).
- 2.1 Proposed projects consistency with King County’s land use land use plans and zoning regulations for Fish and Wildlife**
- 395-041 Based on the information obtained in the required studies and reports, additional fish and wildlife studies/evaluations and mitigation will be required to assure that significant impacts do not occur to priority King County Species or Habitats (also see wetlands and streams/Rivers) and that the project is consistent with King County land use and policy regulations.
- 395-042 As noted within Appendix B, Wildlife Technical Report, of the DEIS, wildlife species and their habitats occurring or potentially occurring within the project area were discussed at two levels. The first was a very general discussion of a broad project area. The second included a more specific discussion of species and habitats within 0.25 mile of the proposed transmission line ROWs. The information used to identify potentially occurring species or habitats within this study area relied on the WDFW priority habitats database, the HCP for the Cedar River Watershed, other literature, habitat types identified through aerial photography interpretation, and limited habitat field reconnaissance. Based on the proposed project description, the 0.25 mile evaluation corridor on either side of the proposed ROW does not appear to be a sufficient width to accurately evaluate potential impacts to wildlife species. For example, the blasting of bedrock to install tower footings has the potential to effect wildlife species within 1 mile of these activities. Nesting pairs of bald eagles (and wintering populations), spotted owls, northern goshawks, red-tailed hawks, great blue heron colonies, and other avian species could be impacted by the noise disturbance. To more accurately identify species, potential impacts, and associated mitigation measures, the remote habitat evaluations and databases and other literature should be used to identify where sensitive species (federally listed and King County Priority species) occur or are likely to occur within 1 mile of the ROW. Standard or modified survey protocols for sensitive species should be conducted in potentially effected habitats (habitats associated with sensitive species) or areas where significant noise disturbance would occur (blasting) to determine species presence. The location of surveys, size of the survey areas, and survey intensities should be determined/justified based off of the proposed project activity and associated habitats and species sensitivity to project disturbances. Habitat removal, noise disturbance, habitat fragmentation, and bird collision potential (description of flyway needed and nearby high bird concentration areas) with towers should all be considered in identifying species to be surveyed. In areas where species are determined to be present that could be significantly effected/adversely effected by project activities, mitigation measures should be developed
- 395-041 Appendix B and Section 4.9 of the SDEIS have been expanded to provide additional information on impacts to wildlife. BPA has been in formal consultation with the U.S. Fish and Wildlife Service and has completed informal consultation with NOAA Fisheries (see Appendix U).
- See response to Comments 394-062, 394-088, 394-096, 394-098, 394-100, 394-101, 394-102, 394-227, 394-236, 394-237, 394-240, 394-241, 394-242, 394-247, and 395-006 for additional information on impacts to wildlife.

- 395-042 | to avoid or reduce impacting these species (e.g. seasonal construction restrictions, ROW siting modification or/or facility siting modification, etc.). King County typically relies on management recommendations outlined in the Washington Department of Fish and Wildlife Management Recommendations for Washington's Priority Habitats and Species and other internal documents to identify mitigation for sensitive species.
- 395-043 | Per King County land use plans and zoning regulations, wildlife corridor networks must maintain a width, wherever possible of 300 feet. The network width shall not be less than 150 feet wide at any point. Clearing of the two wildlife corridors would therefore not be consistent with King County land use plans and zoning regulations. The proposed project would need to demonstrate that the wildlife corridors would be maintained in their existing conditions. The project should evaluate the use of alternative ROW siting or transmission line spanning techniques to avoid impacting existing wildlife corridors. If it is found that the wildlife corridors cannot be maintained at their existing locations, an analysis should be performed to determine if alternative and appropriate habitat corridors could be established in the immediate vicinity. The corridors would need to meet the design standards in KCC 21A.14.270.
- 395-044 | As stated within Appendix A, Final Fisheries Technical Report, of the DEIS, the impact assessment for the analysis relied upon remote methods to identify potential fish-bearing streams. As identified in Section 1.3 of this letter under Wetlands and Streams/Rivers, to be consistent with King County land use plans and zoning regulations, site specific stream analyses will need to be performed to accurately identify and classify all streams that occur within the identified ROW. For all streams that may be directly effected by ROW crossing, a Level 1 stream survey should be conducted. The survey must include two reaches equal to 20 times the average stream width both up and downstream of the crossing. For all Class 1 and 2 stream crossings that would require work within the OHWM (roads, culverts, other facilities), a Level II analysis may need to be completed. This would include 1) a list of all fish, including their life histories, that are know to inhabit the stream, 2) spanner counts for all anadromous salmonids that use the particular stream where the crossing occurs (WDF format), 3) redd surveys for all anadromous salmonids that use the streams, 4) electrofish the crossing sites during April and May to determine juvenile rearing use.
- Mitigation including an alternative evaluation (see Wetlands and Streams/Rivers) would need to be identified for potentially impacted streams and rivers.
- 395-045 | **Shorelines**
King County's Shoreline Management Master Program (Title 25 of the King County Code) is a functional plan developed in compliance with the Washington State Shoreline Management Act of 1971. The Master Program protects streams with a mean annual flow of 20 cubic feet or more per second, lakes that are 20 acres or more in size, the marine shoreline of Puget Sound and wetlands associated with these systems.
- E- 124 Development within designated Shoreline Environments shall preserve the resources**

- 395-042 | See response to Comment 394-065. In addition, the potential for noise disturbance outside of the 0.25-mile corridor is recognized and discussed in Section 4.7.2.5 and mitigation described in Section 4.7.2.10 of the SDEIS.
- 395-043 | As mentioned in Section 4.1.1.1 of the Wildlife Technical Report (Appendix B), the proposed transmission line would span the Cedar River and so it is expected that the corridor in that area would remain largely intact. The other corridor would likely be impacted. See response to Comment 340-002 for information about compensatory mitigation.
- 395-044 | Please see response to Comment 394-022. All streams would be spanned.
- 395-045 and -046 | Comments noted. BPA's proposed project would cross over two Class 1 Streams (the Cedar and Raging rivers), however, the proposed project would not involve any ground disturbing activities within 200 feet of these streams; therefore, BPA would not be considered to be directly affecting the coastal zone, and no substantial development permit from King County is needed.

and ecology of the water and shorelines, avoid natural hazards, promote visual and physical access to the water, protect ESA listed species and their critical habitat, and preserve archeological, traditional cultural resources, shellfish resources, and navigation rights. Protection of critical areas shall take priority over visual values and physical access.

- Utility construction should be encouraged to locate where water quality will be maintained or improved.
- Utility corridors should be encouraged to consolidate or share rights of way.
- Public access should be encouraged.
- Utility routes should be designed to minimize visual impact from the water and upland areas.
- Utility facilities and rights of way should be selected to preserve the natural landscape and minimize conflicts with present and future land uses.
- Utility facilities and rights of way should be selected to preserve the natural landscape and minimize conflicts with present and future land uses.
- Utility facilities should be located to not require extensive shoreline protection nor to restrict water flow, circulation or navigation.

The shoreline policies and Comprehensive Plan policies referenced above are both implemented through code provisions paraphrased below.

KCC 25.04.030 Scope. (A) and (C).

(A) No development shall be undertaken by any person on the shorelines of the state unless such development is consistent with the provisions of this title and the goals, policies and objectives of the master program.

(C) Development proposed on property adjacent to water bodies or wetlands under the jurisdiction of the Shoreline Management Act shall be evaluated in terms of the goals, policies and objectives of the master program. (Ord. 3688 § 103, 1978).

KCC 25.04.050 Relationship to other King County programs. A. When provisions of this chapter conflict with the sensitive areas code, K.C.C. Chapter 21A.54, that which provides more protection to the sensitive area shall apply.

KCC 25.20.110 Utilities. Utility facilities may be permitted in the rural environment subject to the utilities requirements (Section 25.16.160) of the urban environment and the general requirements (Section 25.20.030) of this chapter. (Ord. 3688 § 511, 1978).

25.20.030 General requirements. (A), (C), (D), (E), (F), and (G)

(A) Nonwater related and residential development shall not be permitted waterward of the ordinary high water mark.

(C) All development shall be required to comply with K.C.C. chapter 9.04 to control runoff and to provide adequate surface water and erosion and sediment control during the construction period.

D. Development shall maintain the first fifty feet of property abutting a natural environment as required open space.

E. Parking facilities except parking facilities associated with detached single-family and agricultural development shall retain existing vegetation or be planted in conformance with the landscape standards enumerated in the general requirements (K.C.C. 25.16.030) of the urban environment.

F. Water quality treatment in compliance with K.C.C. chapter 9.04 shall be required where stormwater runoff would materially degrade or add to the pollution of recipient waters or adjacent properties.

G. The regulations of this chapter have been categorized in a number of sections; regardless of the categorization of the various regulations, all development must comply with all applicable regulations.

25.20.140 Excavation, dredging and filling. (A) Excavation, dredging and filling may be permitted in the rural environment subject to the provisions of K.C.C. 25.16.190.

25.24.030 General requirements (A), (C), (D), and (G).

(A). Nonwater related, water related and residential development shall not be permitted waterward of the ordinary high water mark.

(C) All development shall be required to comply with K.C.C. chapter 9.04 to control runoff and to provide adequate surface water and erosion and sediment control during the construction period.

(D). Development shall maintain the first fifty feet of property abutting a natural environment.

(G). The regulations of this chapter have been categorized in a number of sections; regardless of the categorization of the various regulations, all development must comply with all applicable regulations.

25.24.140 Excavation, dredging and filling.

A. Excavation below the OHWM is allowed in the conservancy environment only to mitigate public safety concerns and fisheries impacts.

C. Excavation or dredging of marshes, swamps or bogs shall not be permitted

25.16.160 Utilities. Utility facilities may be permitted in the urban environment subject provided that:

A. Utility and transmission facilities shall:

1. Avoid disturbance of unique and fragile areas;

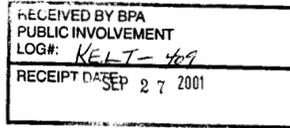
- 2. Avoid disturbance of wildlife spawning, nesting and rearing areas;
- 3. Overhead utility facilities shall not be permitted in public parks, monuments, scenic recreation or historic areas.
- B. Utility distribution and transmission facilities shall be designed so as to:
 - 1. Minimize visual impact;
 - 2. Harmonize with or enhance the surroundings;
 - 3. Not create a need for shoreline protection;
 - 4. Utilize to the greatest extent possible natural screening.
- C. The construction and maintenance of utility facilities shall be done in such a way so as to:
 - 1. Maximize the preservation of natural beauty and the conservation of resources;
 - 2. Minimize scarring of the landscape;
 - 3. Minimize siltation and erosion;
 - 4. Protect trees, shrubs, grasses, natural features and topsoil from drainage;
 - 5. Avoid disruption of critical aquatic and wildlife stages.
- D. Rehabilitation of areas disturbed by the construction and/or maintenance of utility facilities shall:
 - 1. Be accomplished as rapidly as possible to minimize soil erosion and to maintain plant and wildlife habitats;
 - 2. Utilize plantings compatible with the native vegetation.
- E. Solid waste transfer stations shall not be permitted within the shorelines of the state.

395-046

“Shorelines of the State” which appear to be associated with the preferred alternative include the Cedar River, Raging River, and other streams with flows of more than 20 cfs, and their associated wetlands. Since the proposed alternative appears to cross several shorelines of the state and constitutes a substantial development, a shoreline substantial development permit from King County would be required. Therefore, to be consistent with King County Comp Plan policies and zoning regulations, the BPA would need to submit information that demonstrates the project is consistent with the King County Shoreline Master Program as outlined above.



King County Executive
RON SIMS



September 10, 2001

Lou Driessen, Project Manager
Bonneville Power Administration
PO Box 3621
Portland, Oregon 97208

Dear Mr. Driessen:

Thank you for the opportunity to review the Draft Environmental Impact Statement for the Kangley-Echo Lake Transmission Line Project. Ample and reliable electrical power service is of course necessary for our region; however, locating and constructing new transmission lines inevitably creates substantial impacts. For this reason, the EIS must clearly demonstrate why a new transmission line corridor is necessary to ensure system reliability and, if so, include thorough analysis of potential impacts and adequate mitigation for those identified impacts.

The foothills of the Cascades are a high value forest resource. The Cedar River Watershed encompasses a unique lowland forest that will be protected in perpetuity, thanks to the City of Seattle's vision and commitment. Together, the Cedar River Watershed and the Raging River valley form a critical ecological connection between the Cascade Mountains, Tiger Mountain State Forest, Taylor Mountain and Rattlesnake Ridge, providing a crucial wildlife corridor between the foothills and the higher elevation forests of the Cascades. King County has been making tough choices to ensure compliance with the Endangered Species Act, and has been implementing a variety of programs to maintain the forest land base for its economic and habitat values. The City of Seattle is working to implement their Habitat Conservation Plan for the Cedar River Watershed. A new transmission line through the forest lands of the Raging River valley and the Cedar River Watershed will affect these efforts, and we anticipate that as a public agency, BPA will seek to work cooperatively with us and with the City of Seattle to make sure our efforts are not diminished.

National Environmental Policy Act regulations require that an EIS discuss possible conflicts between the proposed action and local land use plans and policies. The 2000 King County Comprehensive Plan includes policies encouraging energy conservation and calling for the use of existing transmission corridors first:

KING COUNTY COURTHOUSE 516 THIRD AVENUE, ROOM 400 SEATTLE, WA 98104-3271
(206) 296-4040 296-0194 FAX 296-0200 TDD E-mail: ron.sims@metrokc.gov

King County is an Equal Opportunity/Affirmative Action Employer and complies with the Americans with Disabilities Act

409-001 Comment noted.

409-001

F-303 Efficient energy consumption, conservation, the use of renewable technologies, and energy responsible land use decisions should be a priority in King County. King County promotes the maximum use of energy conservation and renewable energy resources now, while leaving options for increasing conservation and renewable technologies in the future.

F-310 When new, expanded or upgraded transmission is required, use of existing corridors that have above-ground utilities should be evaluated first. King County should facilitate appropriate corridor sharing among different utility types and owners.

409-002 The EIS should include a more in-depth analysis of how the proposal complies with these policies. Specifically, the EIS should include an explanation of the electrical transmission system serving the King County area, and an analysis that shows the current situation, how conservation could alleviate future needs and other improvements BPA is considering in the future. The analysis should demonstrate why an increase in service is necessary.

409-003 Further, it appears possible to double service by rebuilding the existing transmission towers within the current corridor to accommodate two sets of circuits, but the DEIS dismisses this alternative as too difficult in the short term. A broader analysis of the regional system should be included in the EIS to demonstrate whether or not the system has sufficient flexibility to allow for this alternative, which best meets policy F-310, above. Constructing a new transmission line adjacent to the existing corridor as proposed is less disruptive than the other alternatives and therefore preferred, but should only be considered if rebuilding in the existing corridor is clearly demonstrated to be unworkable.

409-004 The 2000 King County Comprehensive Plan also includes a body of policies addressing protection of forest resources and environmental features that have not been considered in the DEIS. Transmission lines have had substantial impacts on forests, related wildlife, streams and wetlands. The proposal would result in further loss and fragmentation of active forest land and wildlife habitat, and the impacts of construction and operation could adversely affect compliance with the Endangered Species Act and diminish efforts to recover salmon and other listed species. The proposal also brings added risks to protecting water quality in a watershed that supplies drinking water for much of the county. These impacts are significantly downplayed in the DEIS, and the proposed mitigation measures are inadequate to offset the impacts.

409-005 If use of the existing corridor proves to be unworkable, the proposal will be a substantial project consisting of nine miles of new 500kV transmission line, with a cleared swath at least 150 feet wide through mature forest and crossing rivers, streams and wetlands. It also includes construction of at least a mile and a half of new road, three staging areas of undetermined size and location, plus a three-acre expansion of an existing substation. None the less, the project is described as affecting only "...relatively small areas..." and resulting in "...only a low impact." The DEIS also fails to discuss the cumulative impacts of transmission lines criss-crossing the forests of this region, rating the impact of forest loss as low.

409-002 and -003 Please see response to Comment 349-001 for more information about conservation. Please see the response to Comment 340-003. A new alternative discussing potential non-transmission alternatives was added to the SDEIS to fully disclose current non-transmission options. Additional information about the purpose and need for the project have been added to Chapter 1 of the SDEIS. Alternative actions that were considered but dropped, including double-circuiting in the existing right-of-way through the Cedar River Watershed, are described in Section 2.3 of the SDEIS.

409-004 See response to Comment 340-002.

409-005 See response to Comment 340-002.

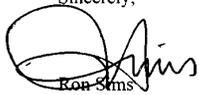
Lou Driessen
September 10, 2001
Page 3

409-006 As a partner in the region, we expect an earnest analysis of the impacts of the proposal on forest resources, habitat and water resources, and look forward to working with BPA to identify appropriate mitigation. The most reasonable mitigation for any permanent damage or loss of forest land and habitat is replacement. Within King County, any lost wetland habitat must be replaced at a 2:1 ratio. King County has worked to assemble blocks of forest land in the vicinity of the project; there are several parcels adjacent to King County's assembled lands and the City's Watershed, as well as parcels in the upper Rock Creek valley and along the Green River that would be excellent candidates for forest land and habitat replacement for land lost through the project.

409-007 Further, the Raging and Cedar River riparian areas provide especially important habitat for terrestrial species. As the forest in the Cedar River Watershed grows, this area could provide significant habitat for spotted owls and marbled murrelets, and murrelets may be using the upper Watershed today. Transmission lines crossing the Raging and Cedar Rivers should be high enough to allow coniferous forests to grow to maturity in the riparian zone of the river and adjacent slopes.

408-008 At this time, the EIS inadequately addresses the need to construct a parallel transmission line, the full range of impacts of the preferred alternative, conflicts with King County policy and the appropriate mitigations for the full range of impacts. We look forward to working with you to resolve these deficiencies, and to help you select replacement lands for lost forest resources and habitat. For assistance, please contact Lori Grant, King County Office of Regional Policy and Planning, at 206-296-3458.

Sincerely,



Ron Sims
King County Executive

cc: Pam Bissonnette, Director, Department of Natural Resources
Stephanie Warden, Director, Office of Regional Policy and Planning
ATTN: Lori Grant, Office of Regional Policy and Planning

409-006 See response to Comment 340-002.

409-007 Comment noted.

409-008 Comment noted.



**King County
Rural Forest Commission**
201 S Jackson Street, Suite 600
Seattle, WA 98104
Phone (206) 296-7805
FAX 296-0516

RECEIVED BY BPA PUBLIC INVOLVEMENT LOG#: <i>KELT-413</i> RECEIPT DATE: OCT 15 2001
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Doug McClelland
Chair
Washington State Department of
Natural Resources

October 5, 2001

Ken Konigsmark
Vice Chair
Open Space/Trails Advocate

Lou Driessen, Project Manager
Bonneville Power Administration
PO Box 3621
Portland, Oregon 97208

Jean Bouffard
Rural Cities Representative

Dear Mr. Driessen:

Gordon Bradley
University of Washington
College of Forest Resources

On behalf of the King County Rural Forest Commission, I would like to comment on the proposed Kangley-Echo Lake Transmission Line Project. The Rural Forest Commission is an advisory body appointed by the King County Executive and Council to make recommendations on issues pertaining to forestland and forestry in the County. As such, our comments are limited to the issue of the project's impact on forestland in King County.

Rudy Edwards
Mt. Baker/Snoqualmie
National Forest

Louis Kahn
Landowner

Steven H. Ketz
Weyerhaeuser Company

Bill Kombol
Forest Landowner

Matt Mattson
Snoqualmie Tribe

Fred C. McCarty
Forest Landowner

Andrew W. Schwarz
Forest Landowner

David Warren
Pacific Forest Trust

While we understand the need to provide the region with an adequate and reliable supply of electrical power, we have serious concerns about the impacts on forestland of the proposed alternative outlined in the Draft Environmental Impact Statement for this project. The forests of the Cascade foothills are a very valuable resource to this region. They are ecologically different from the higher elevation forests of the Cascades and provide habitat for a large variety of wildlife and fish species. They provide us with a source of clean drinking water, and they help clean the air. Much of the privately owned forestland also supports timber production as well as any forestland in the world.

This valuable resource is extremely threatened by encroaching development, and King County has allocated substantial resources to keeping the forest landscape forested and to establishing a critical ecological connection between the Cascade Mountains, Tiger Mountain State Forest, Taylor Mountain, Rattlesnake Ridge, and the Cedar River Watershed. The City of Seattle has also invested in the future of the region's forest landscape by ensuring the preservation of the Cedar River Watershed and developing a Habitat Conservation Plan that will restore old growth forests to the watershed that provides 1.5 million people with their drinking water.

413-001 Comment noted.

413-001

Lou Driessen, Project Manager
October 4, 2001
Page 2

The National Environmental Policy Act requires that an EIS address possible conflicts with local land use plans and policies. The King County Comprehensive Plan outlines the following policies focused on the conservation of forestland:

R- 506 Land uses, utilities and transportation facilities adjacent to Designated Agriculture and Forest Production Districts and Designated Mineral Resource Sites, shall be sited and designed to ensure compatibility with resource management.

R- 523 Structures within the Forest Production District should be sited to maintain the productivity of the district. Site plan requirements should limit impervious surface, provide for fire control, protect domestic water supply and prevent conflicts with forest management.

R- 531 King County promotes forest management that achieves long-term forest health, protection of watersheds, sensitive areas and habitat to support fish and wildlife populations, protection of threatened and endangered species, and preservation and economic viability of working forests.

413-002 | The DEIS does not adequately address how the proposed alternative complies with these policies. The expansion of the existing power line will result in the elimination of as much as 300 acres of forestland to accommodate the right-of-way, the expansion of the sub-station, and the staging areas. This clearing not only results in lost forestland, but also contributes to the fragmentation of the landscape. The DEIS states that the impact to forestland would be low, but we believe the loss of those acres in a forest ecosystem as threatened as this one is not an insignificant impact. Indeed, it is quite significant and is not in line with the King County policies outlined above.

413-003 | The DEIS also fails to explain the need for an additional power line or account for the cumulative impact of BPA's power lines throughout the region. BPA power lines have resulted in the loss of a substantial amount of forestland in eastern King County, and we question not only whether this line is necessary, but also how it fits with BPA's future plans to address the growing population in the County. The DEIS needs to evaluate the impact of this project in the larger scope of BPA's work Countywide.

Based on the above concerns, the Rural Forest Commission makes the following recommendations:

- 413-004 |
- BPA needs to publish a supplemental DEIS that addresses the true impact of clearing up to 300 acres of forestland and how that contradicts policies laid out in King County's 2000 Comprehensive Plan. The supplemental DEIS should also address the cumulative impacts on forestland of BPA's projects throughout the County and better explain the need for this project.
- 413-005 |
- BPA should give more serious consideration to other alternatives, including rebuilding the existing transmission towers and adding a second circuit within the current corridor. While this alternative may be more costly in the short term, we question whether it may in fact be more appropriate when the long term cost of lost forestland is taken into account.

413-002 Please see responses to Comment Letter 395.

413-003 Please see response to Comment 339-001.

413-004 See response to Comments 411-006, 349-001, and 394-090.

413-005 Please see the response to Comment 340-003.

Lou Driessen, Project Manager
October 4, 2001
Page 3

413-006

- If Alternative 1 does prove to be the best alternative after a more thorough analysis, then we suggest that BPA mitigate the loss of forestland by acquiring and protecting similar forest land in the vicinity that is threatened with conversion to non-forest uses. Such mitigation is similar to the county's requirements for mitigating development of wetlands. If mature forests such as those that would be impacted in the Cedar River Watershed cannot be found, then the agency's mitigation should be discounted, or additional acreage should be acquired to offset the reduced quality of the forest. As mentioned, the forests in King County's foothills are a threatened resource, and the County is working hard to prevent the conversion of this forestland to non-forest use. There are several parcels adjacent to the Cedar River Watershed, on Taylor Mountain, and in the Rock Creek Watershed that are quite threatened, and it would be very appropriate for BPA to mitigate the impact caused by this project by conserving forest in these areas.

413-007

- Finally, BPA needs to better address the management of the land within its power line right-of-ways. While we do not condone the loss of forestland, the impact of BPA corridors on the ecological health of the region, and on the species that thrive in the foothills, could be lessened by managing the right-of-ways to control noxious weeds and planting native species that contribute to the health of the landscape.

We thank you for considering these comments, and we look forward to working with BPA and King County in efforts to develop a constructive solution.

Sincerely,



Doug McClelland
Chair, King County Rural Forest Commission

cc: Ron Sims, King County Executive
Larry Phillips, King County Councilmember
David Irons, King County Councilmember
Suzanne Flagor, Seattle Public Utilities, Watershed Management Division
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Benj Wadsworth, Forestry Program Analyst

413-006 See response to Comment 340-002.

413-007 Please see response to Comment 382-017.