

Local Agencies



City of Seattle

Paul Schell, Mayor

Seattle Public Utilities
Diana Gale, Director

RECEIVED BY BPA PUBLIC INVOLVEMENT LOG# <u>KELT-394</u>
RECEIPT DATE: <u>SEP 05 2001</u>

September 4, 2001

Seattle Public Utilities
Dexter Horton Building, 10th Floor
710 Second Avenue
Seattle, Washington 98104

Lou Driessen, Project Manager
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

SUBJECT: Comments for the Draft Environmental Impact Statement (DEIS) for the Kangley-Echo Lake Transmission Project

Sent via e-mail to: comment@bpa.gov

Dear Mr. Driessen:

Seattle Public Utilities (SPU) is responsible for providing drinking water to 1.3 million customers in the urbanized areas of western King County and southern portion of Snohomish County. SPU takes approximately two-thirds of its drinking water from the Cedar River. SPU owns the 90,546-acre Cedar River Municipal Watershed (CRW) and manages its land and aquatic resources for water supply, the protection and restoration of fish and wildlife habitat, and the protection of cultural resources. SPU's companion utility, Seattle City Light, owns and operates a hydroelectric facility and associated transmission lines in the watershed. City Light will provide comments on the DEIS under separate cover.

This letter provides Seattle Public Utilities' (SPU) comments on the Draft EIS for the Kangley-Echo Lake Transmission Project. SPU provided comments during the scoping for this project in letters to BPA dated April 28 and October 2, 2000. Because the DEIS fails to address SPU's scoping comments, these are repeated in the appropriate sections of this letter. All of SPU's comments should be understood in the proper context: the CRW is a unique and vital resource for the citizens of Seattle and the region. This area is currently being managed to protect a safe, unfiltered source of drinking water and to protect numerous wildlife species and their habitat.

SPU considers this DEIS to be inadequate because it: 1) contains significant NEPA-procedural deficiencies, including what appears to be a lack of full-disclosure of environmental impacts; 2) fails to include important Endangered Species Act (ESA)-related analysis, coordination, and mitigation; 3) lacks commitments to compensatory mitigation; 4) fails to acknowledge the unique long-term habitat protection status provided by the HCP and to recognize the increasing regional biodiversity value of the habitats it proposes to impact; and 5) fails to appropriately acknowledge the significance of the CRW as the water

We are the source: Setting the standard for excellence in watershed stewardship

Watershed Management Division, 19901 Cedar Falls Rd. S.E., North Bend, WA, 98045
Tel: (206) 233-1510, Fax: (206) 233-1527

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394-001 BPA acknowledged these concerns and prepared a SDEIS, which was released in January 2003.

394-001

BPA Kangley—Echo Lake DEIS
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supply for 1.3 million people. We request that BPA issue a Supplemental DEIS (along with the associated public comment period) that corrects these serious flaws, clearly and accurately assesses the true environmental impacts of this project, and is compliant with NEPA regulations and guidance.

SPU has the following comments on the DEIS. Five separate attachments to this cover letter are included in this submittal. The first attachment contains general comments on the DEIS followed by specific comments on the DEIS. Each of the subsequent four attachments provide comments on each of the four BPA DEIS technical appendices (A, Fisheries; B, Wildlife; C, Vegetation; and D, Wetlands). Because the DEIS is largely a distillation of its technical appendices, SPU's comments on the technical appendices will also apply to the DEIS. In addition, there is much boilerplated text used in the DEIS and its appendices. To minimize redundancy, SPU has attempted to comment only once in such cases, but those comments would apply to other documents for which the comments are relevant.

If you have questions or require further information, please contact Jim Erckmann at (206) 233-1512 or Clay Antieau at (206) 233-3711. Regarding cultural resources, please contact SPU's staff archaeologist, Tom Minichillo at (206) 233-0032.

Sincerely,

SIGNATURE

Suzanne Flagor
Director
Watershed Management Division
Seattle Public Utilities

Attachments:

- 1) SPU comments on BPA DEIS
- 2) SPU comments on BPA DEIS Appendix A (Fisheries)
- 3) SPU comments on BPA DEIS Appendix B (Wildlife)
- 4) SPU comments on BPA DEIS Appendix C (Vegetation)
- 5) SPU comments on BPA DEIS Appendix D (Wetlands)

cc: Dennis Anderson, Muckleshoot Indian Tribe
Maria Cantwell, U.S. Senate
Craig Hansen, USFWS
Hardev Juj, Seattle City Light
Steve Landino, NMFS
Patty Murray, U.S. Senate
Seattle Mayor Paul Schell
King County Executive Ron Sims
Val Varney, EPA

Kangley-Echo Lake Transmission Line Project DEIS

**Seattle Public Utilities' Response
August 30, 2001**

GENERAL COMMENTS (GC)

GC-1: The "purpose and need" for the proposed project is neither substantiated nor clearly defined.

394-002 There is no explanation of the electrical transmission system serving the King County area that supports the necessity of the proposed line. Instead, the DEIS asserts without substantiation that this specific line is necessary to maintain system reliability. At a minimum, system plans or a regional analysis should be referenced, along with a description of other improvements BPA is considering in the near and distant future so the reader can understand why this specific (and relatively small) link in a much larger system is necessary. In SPU's conversations with BPA staff, it has also been unclear if the need to construct a redundant transmission line for system reliability and the relative location of that line are legal requirements or policy choices. The legal and policy contexts of the project should be clearly distinguished in the DEIS.

394-003 Furthermore, the "purpose and need" is the basis for defining alternatives. NEPA only requires that reasonable alternatives be considered. "Reasonable alternatives," however, include those alternatives that can meet the objectives (as defined by the purpose and need) of the proposal. Without a clearly defined purpose and need, the range of reasonable alternatives is very large—much larger than the range of alternatives considered in the DEIS (see General Comment 2, below).

GC-2: The range of alternatives evaluated in detail is too narrow.

394-004 The DEIS does not provide sufficient analysis of alternatives outside of the Cedar River Watershed to support their elimination without detailed evaluation. The DEIS cites impacts to "developed land and people living in the area." The potential for these impacts is obvious, but without further explanation there is no support for dismissing these alternatives just because they would have impacts. All of the alternatives included in the DEIS also have impacts, and yet they were not dropped from consideration. Without criteria and explanation, there is no justification for dropping certain alternatives and narrowly limiting the range of alternatives considered in the DEIS. The DEIS should evaluate the range of reasonable alternatives. This type of comparison of alternatives and impacts to the built and natural environments is precisely what an EIS is supposed to provide. Dropping certain alternatives due to cost concerns needs to be supported by detailed cost justifications presented in the DEIS.

394-005 Further, NEPA requires that federal agencies consider alternatives that can accomplish the objectives of the proposal, but at a lower environmental cost. This includes considering mitigation measures that could avoid or reduce impacts of the proposed action. The DEIS is silent on the most common types of mitigation measures that could address some of the high and significant impacts that would result from the proposed action (see General Comment 9).

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394-002 BPA performed a regional system analysis that supported the need for the project. This joint study was coordinated with Seattle City Light, Snohomish County PUD, Tacoma City Light and Puget Sound Energy. BPA also received letters of support stating the project is the right choice from Seattle City Light, Tacoma City Light and Snohomish County PUD. The technical studies that are part of the analysis include computer simulations of projected power flow. (See SDEIS Appendix H, available on request.) The DEIS did contain the salient issues with regard to why this project is needed.

Other improvements BPA is considering in the area are: a new 230/500-kV transformer at Sno King Substation; and system additions at Bothell, Monroe, Sno King and Snohomish substations. In addition, the need for a 500-kV transmission line from Echo Lake Substation north to Monroe Substation is being studied. No decision about this project has been made. These projects are proposed in response to growing Puget Sound area load and the Treaty return to Canada. Also see Section 1.2.1 and Appendix M of the SDEIS and the response to Comment 1942-006.

394-003 The description of the purpose and need for the project is greatly expanded in Chapter 1 of the SDEIS.

394-004 See response to Comment 411-006.

394-005 Comment noted.

GC-3: The description of alternatives is insufficient to support evaluation of impacts or mitigation measures.

Several key aspects of the proposed transmission line are not described in sufficient detail to support an evaluation of impacts, even though these details may have been known at the time of the issuance of the DEIS (as evidenced by the issuance of BPA's Final Biological Assessment for this project during the public comment period for the DEIS). For example, the DEIS description of clearing requirements, tower locations, and access roads is general and vague. This information is critical to understanding potential impacts because in many aspects the alternatives are reported to have very similar impacts. For example, the difference in vegetation affected by the alternatives 1 and 2 is less than two percent. Given the uncertainty regarding the project, the difference may or may not actually exist. The importance of clearing is supported by the DEIS, which describes removal of trees on the Cedar River as "high" impact (p. 4-36).

Failure to adequately describe the project compounds the vagueness of proposed mitigation measures, making it impossible to evaluate the effectiveness of mitigation. The net result is a level of uncertainty of the proposal's impacts that significantly reduces the usefulness of the DEIS to reviewers and decision-makers. The fact that specific, known design information for the proposed action was omitted from the DEIS indicates this DEIS does not fully disclose environmental impacts. The fact that BPA issued a Final Biological Assessment (BA) for this project during the public comment period for the DEIS indicates that BPA failed to provide full-disclosure of project impacts. The BA contains specific, known design information (for the proposed action) that is not included in the DEIS. SPU does not expect a proposed action to be fully designed for purposes of environmental impact assessment. However an EIS either needs to commit to specific project details or evaluate all reasonable approaches to those components of the proposed action.

The landowner most affected by this project is the City of Seattle, and the impacts of the project are potentially greatest and certainly most complex for the Cedar River Municipal Watershed (CRW), especially considering 1) the area is the region's major drinking water supply, and 2) the land is being managed under a complex Habitat Conservation Plan (HCP) and associated legal commitments to the federal government. However, BPA's proposed actions and their impacts are described so minimally that it is not possible for the City or the public to evaluate project impacts. Simply stated, the DEIS does not fully disclose environmental impacts. In addition, the DEIS contains numerous inconsistencies among analysis assumptions, as described elsewhere in this comment letter. The reader is not able to effectively evaluate impacts of the proposed actions for all disciplines because sufficient project information is missing, the DEIS contains conflicting analysis assumptions, and BPA does not commit to specific design/construction specifications.

GC-4: Specific information related to project impacts will only be provided in the Final EIS and therefore not subject to public review and comment.

Information on clearing requirements in the CRW (p. 2-6) and access roads (p. 2-7) is not provided in the DEIS, but instead notes the information will be available for the Final EIS. This information is critical to evaluating project impacts and mitigation measures and therefore should be provided as part of the DEIS. Also, the DEIS does not describe tower locations, which would have substantial impacts. Again, the fact that specific, known design information for the Proposed Alternative was omitted from the DEIS indicates this DEIS does not fully disclose environmental impacts. Again, the Final BA for this project contains specific, known design information (for the proposed action) that is not included in the DEIS. The fact that specific, known design information for the proposed action was omitted from the DEIS indicates this DEIS does not fully disclose environmental impacts. The fact that BPA issued a Final BA

394-006

394-007

394-006 Comment noted. Information that has become available since the DEIS was published was included in the SDEIS. The Proposed Action is described in more detail in Section 2.1 of the SDEIS, including a variety of mitigation measures. Design information used for the biological assessment was not available when the DEIS was being produced. BPA typically uses site-specific information and information gained from past transmission line development to estimate and fully disclose potential impacts.

394-007 Please see response to Comment 394-006.

394-008 BPA has submitted a consistency determination under the Coastal Zone Management Act to the Washington Department of Ecology. The Department of Ecology concurred with BPA's determination that the proposed project was consistent with the Coastal Zone Management Act. See Section 5.11.2 and Appendix V of the SDEIS.

394-009 BPA intends to provide compensatory mitigation for project impacts, including permanent protection of adjoining lands. Please see response to Comment 340-002. The USFWS and NMFS have assessed the proposed project's impacts on the HCP and have concluded that the HCP will retain its value and function (see Appendix U and Appendix AA of the FEIS).

394-010 On March 16, 2001, BPA met with representatives of federal agencies with ESA jurisdiction (USFWS and NMFS) to discuss the purpose and need for the project, alternatives considered, potential impacts and NEPA and HCP processes. A SPU representative was present at this meeting. BPA prepared a biological assessment to evaluate the potential effects of the Proposed Action on listed and candidate threatened and endangered species, and designated or proposed critical habitat. The BA was prepared pursuant to the final rules for interagency cooperation under the Endangered species Act (ESA) (50 CFR 402.12; June 3, 1986). BPA initiated formal consultation with the USFWS on the northern spotted owl. NMFS has concurred with BPA's determination that there will not be any adverse impacts to federally-listed anadromous fish (see Appendix U of the SDEIS and FEIS).

for this project during the public comment period for the DEIS suggests BPA could have provided more complete disclosure of project impacts.

GC-5: The DEIS does not discuss consistency with federal, state, and local regulations and policies.

394-008 | NEPA regulations require that an EIS discuss possible conflicts between the proposed action and the objectives of federal, state, and local land use plans, policies and controls. Where inconsistency exists (as for example regarding King County's sensitive areas and Shoreline Management provisions), the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law [40 CFR 1506.2(d)].

394-009 | In its scoping letter, SPU identified the need for BPA to address effects of the project on the federally sanctioned and approved HCP. BPA indicates that USFWS [and NMFS] will have to "decide if the transmission line facilities require any change to the existing Habitat Conservation Plan..." The DEIS does not discuss the proposed action's impacts on the CRW HCP. SPU is stating its position clearly: 1) SPU will not accept any need to modify the HCP as a consequence of BPA's activities; and 2) BPA must provide mitigation for any impacts that reduce the conservation value of the City's HCP that, at a minimum, compensates for that reduction in value.

394-010 | BPA also failed to coordinate with federal agencies on Endangered Species Act prior to releasing the DEIS. The DEIS fails to fully assess impacts on endangered and threatened species such as Chinook salmon, coho salmon, and marbled murrelet (see specific comments elsewhere in this comment letter).

GC-6: The DEIS does not disclose whether or not impacts are significant.

394-011 | The DEIS is largely silent regarding any determination of the significance of impacts. The DEIS uses the terms "low, medium, and high" to describe impacts. This assists making relative comparisons among the alternatives considered, but it avoids identifying whether or not these impacts are "significant." Based on the NEPA regulations definition of "significant," many of the impacts identified in the DEIS would qualify. However, the DEIS fails to disclose this information. Thus, the public and other agencies, as well as decision-makers, do not have adequate information to review. Because of the importance of "significant impacts" in the NEPA process, failure to disclose this information undermines the very intent of NEPA itself.

GC-7: The DEIS fails to discuss the Decision-making Process

394-012 | The DEIS says very little about the decision-making process regarding this proposed action. It says almost nothing about the decision BPA has already made regarding narrowing the range of alternatives and the currently preferred alternative (including who made these decisions, when, how, and why). This is important because NEPA regulations prohibit federal agencies from limiting the choice of reasonable alternatives until a Record of Decision (ROD) has been issued [40 CFR 1506.1(a)]. The fact that specific, known design information for the Proposed Alternative has been developed (and was omitted from the DEIS) suggests that BPA has limited the choice of reasonable alternatives prior to the ROD, and indicates this DEIS does not fully disclose environmental impacts.

394-013 | The DEIS also says very little about the remainder of the process. What happens after the DEIS, and what criteria will be used? For example, will BPA confirm a preferred alternative after the DEIS? Will all of the alternatives be reviewed in greater detail in the FEIS, or will it just cover the preferred alternative? When will BPA take final action? How will that decision be made?

394-011 | BPA believes that presenting the extent of the potential impacts in four defined impact levels (no impacts, low impacts, moderate impacts, and high impacts) provides helpful information to the reader and the decision maker since each level is defined and specific to the resource impacted. Readers are then able to evaluate the "significance" of the impact based on the potential change to the resource.

394-012 | Please see responses to Comments 411-006 and 394-006. The expanded range of alternatives in the SDEIS allows BPA to determine which course of action best meets the purpose and need described in the SDEIS. The fact that BPA chose to more fully analyze additional alternatives shows that BPA has not limited the choice of reasonable alternatives prior to the Record of Decision.

394-013 | BPA disclosed its preferred alternative in the SDEIS and has included more information on the various alternatives. Alternative 1 remains BPA's preferred alternative. BPA's Administrator will make a decision on this project using the information developed during the NEPA process. The Administrator will make a final decision in a Record of Decision at least 30 days after the publication of this FEIS, as required by Council on Environmental Quality regulations. If the Administrator decides on one of the action alternatives, BPA would initiate action after the Record of Decision is signed and after all required permits and other legal obligations are met.

394-014 | It was BPA's intention to respond to all scoping comments in the DEIS. Many of the comment examples raised have been addressed in more detail in the SDEIS. Please see responses to individual comments from letter 394 to determine how and where additional information on specific issues raised during scoping were addressed in the SDEIS.

394-015 | Mitigation 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.

BPA has purchased land that could replace that lost within the Cedar River Watershed and is in the process of purchasing more

GC-8: Scoping comments from the City of Seattle were not addressed in the DEIS.

394-014 Scoping letters from SPU and SCL (October 2, 2000) raised several specific points that are not addressed in the DEIS. These issues include the purpose and need for the project, alternatives outside of the CRW, effects on the drinking water supply during construction, and effects of the proposed transmission line on the HCP, among others. Such omission is contrary to CEQ guidance that states “Every issue that is raised as a priority matter during scoping should be addressed in some manner in the EIS, either by in-depth analysis, or at least a short explanation showing that the issue was examined, but not considered significant for one or more reasons” (CEQ 1981).

GC-9: The DEIS lacks mitigation for unavoidable impacts.

394-015 “Mitigation measures” cited in the DEIS are actually standard best management practices (BMPs) and not really project mitigation measures. That is, they do not offset, reverse, or rectify the impacts of constructing the proposed action. Mitigation measures cited in the DEIS never include proposed compensatory mitigation. If “maintaining environmental quality” (p. S-2) was, in fact, one of BPA’s purposes in developing this project, then compensatory mitigation would have been integral to that purpose. For example, although the DEIS states that impacts on ESA-listed species of fish are “high,” BPA fails to commit to any mitigation that would offset those impacts.

GC-10: Although impacts to cultural resources could be substantial, the DEIS describes no mitigation.

394-016 Some areas in the project area and within the CRW have a high likelihood of containing cultural resources or Traditional Cultural Properties, and thus potential for significant impacts. The DEIS omits specific results of archaeological and CMT surveys that have been conducted for this project. Survey results should have been considered in the DEIS. The technical report for this discipline should have been included in the DEIS. The DEIS should have included proposed mitigation actions for any identified sites (if any). Also, the DEIS should recognize that SPU has archaeological standards for the CRW that need to be (and were) followed.

394-017 The DEIS’s assertion that impacts will be “low” for the proposed action are unsupported by the existence of substantial uncertainty regarding impacts on archaeological resources or Traditional Cultural Properties, for which no assessment has been completed. Given the location of the project, these impacts could be significant. The DEIS should explain this uncertainty, qualify the description of impacts, and provide the needed information for public review.

GC-11: The DEIS does not address regulatory requirements related to drinking water.

394-018 In general, the DEIS seems to largely ignore the fact that the Cedar River Watershed is a high quality, unfiltered source of water for 1.3 million people in the Puget Sound region. A casual reader would obtain the impression the CRW is primarily a nature reserve, with a secondary, incidental role as a municipal water supply source.

394-019 The DEIS fails to adequately describe potential impacts to the drinking water supply for 1.3 million people. Incidents such as turbidity plumes and diversion shut-downs are critical and significant events in the management of SPU’s water supply systems in the CRW. The DEIS needs to address the regulatory requirements related to drinking water and the potential environmental impacts of their proposed action on the drinking water supply.

for the purpose of compensatory mitigation. Please see response to Comment 340-002.

394-016 Comment noted. The DEIS omitted the results of the cultural resource survey since the survey had not yet been completed at the time the DEIS was released. HRA performed a thorough survey of the preferred route and located a logging feature and a trench feature, neither of which appears to be eligible for the National Register of Historic Places. The contractor conducted further work at the trench feature, at the request of OAHP and the Muckleshoot Tribe. SPU protocols for cultural surveys were followed. Appendix X has standards of protection required for any new finds during construction.

394-017 The statement that impact to cultural resources is expected to be low was based on a sensitivity study of the project (DeBoer 2000). The *Draft Cultural Resource Survey Technical Report* (Bialas 2001), based on an intensive survey with subsurface testing, located only two cultural resources and determined both as not eligible for listing in the National Register of Historic Places.

394-018 Additional information regarding the Cedar River Watershed and its importance as a source of drinking water was included in the SDEIS.

394-019 Additional information regarding the Cedar River Watershed and the potential impacts of the proposed project to the drinking water supply was included in the SDEIS.

394-020 BPA created an extensive mailing list based on the mailing list developed for the Cedar River Watershed HCP. The purpose of the mailing list was to identify elected officials and individuals and groups who could be affected by the project. The mailing list included local, state and federally elected officials, tribes, environmental groups, landowners and others.

394-021 Please see response to Comment 382-011.

394-022 Use of existing crossings of major rivers and streams is proposed as follows:

GC-12: BPA failed to provide public notice to that group of citizens most affected by the proposed action: the people who rely on the CRW for their drinking water.

394-020

Public notices and public meetings related to the NEPA scoping and DEIS comment periods have not been directed to the most affected group of citizens: the 1.3 million people who rely on the CRW for their drinking water. This is a violation of NEPA guidance and regulation.

SPECIFIC TECHNICAL COMMENTS ON THE DEIS

NOTE: Regarding the remaining comments in this comment letter and its attachments, SPU does not expect a proposed action to be fully designed for purposes of environmental impact assessment. However an EIS either needs to commit to specific project details or evaluate all reasonable approaches to those components of the proposed action.

SUMMARY

394-021

S2.1.3 The DEIS is not clear why all “woody vegetation” would need to be cleared on the ROW. Also, failing to estimate the area of clearing outside the new (150-ft) ROW results in an understatement of impacts. The DEIS is also inconsistent as to the clearing zone width, as described elsewhere in SPU’s comment letter. Further, in conversations with SPU, BPA said they would need to clear an average of 200 ft.

S2.1.5 See comment below under 2.1.1.8.

394-022

S2.1.4 BPA says that new roads may cross rivers and streams, but that no new bridges will be built. If a road crosses a river, a bridge would be required. For SPU and the public to evaluate potential impacts, BPA must specify which rivers and streams will be crossed and what type of structure will be constructed at each crossing.

394-023

S3.8 The DEIS consistently fails to clarify potential for impacts from vegetation clearing outside the 150 ft ROW.

394-024

S3.10.1 The DEIS should state explicitly that some of the areas in the project area and in the CRW have a high likelihood of containing cultural resources or Traditional Cultural Properties and thus a strong potential for significant impacts.

394-025

S.4.2 Transportation impacts should include the impacts of hauling timber and moving equipment and materials to and from the project area, unless those impacts are clearly addressed elsewhere, which does not seem to be the case.

394-026

S.4.6 In its DEIS scoping letter, SPU identified the need for BPA to address effects of the project on the drinking water supply. The DEIS fails to adequately discuss the risks to the drinking water supply during project construction for any of the alternatives. These risks include the risk of spills that could contaminate the water and the risk of turbidity events that could have very serious regulatory and public health consequences for SPU.

394-027

Also, the DEIS neglects to reveal potentially significant impacts on water temperature, which is inconsistent with the conclusion on page 4-30 that impacts on listed fish species would be “high” a result, in part, of unavoidable, increased water temperature in streams and wetlands.

- Rock Creek — existing county road crossing and BPA access road.
- Raging River — no access road crossings.

One temporary bridge may be needed for construction. No water-crossing culverts need to be replaced or installed for construction. BPA is in the process of pursuing permits for replacing some existing culverts to allow for fish passage. See Section 2.1.1.5 of the SDEIS.

394-023

The DEIS does clarify potential for impacts from vegetation clearing both within the 150-foot ROW and outside. In many cases, however, this is classified as vegetation clearing and not specific to whether that clearing is inside or outside the ROW. The clearing of vegetation, no matter where it occurred, would have similar impacts.

394-024

Please see response to Comment 394-017.

394-025

Construction equipment and log trucks would need to be brought into the project area, if a decision were made to build the project. These vehicles would operate under the weight requirements as identified by the State of Washington, and if those weight limitations would be exceeded, permits would need to be obtained prior to any work being undertaken.

394-026

Vehicles and other construction equipment that use diesel, gasoline and/or hydraulic systems would be used to construct the project. In addition, maintenance and refueling of the equipment would be required. Oil or fuel spills could impact the Cedar River water quality. However, substantial construction activities, such as tower placement or road construction, would not be in proximity to water bodies such that a spill, which would involve a relatively small volume (such as from a hydraulic hose breaking) would impact the water supply. A detailed Stormwater and Pollution Prevention Plan (SWPP), or similar document, such as a Water Quality Control Plan (WQCP), would include a Spill Prevention and Contingency Plan. These plans would be prepared and approved by regulating agencies, including Seattle Public Utilities (SPU) and the Washington State Department of Health (DOH) prior to project construction. BPA would also hire an

394-028 S.4.10 The area to be cleared for the stated 150 ft ROW should be about 160 acres (for the 9-mile length), not counting trees cleared beyond the ROW, yet BPA states that 152 acres will be cleared. BPA indicates on page 2-5 that trees may be cut as far as 200 ft from the edge of the ROW. Further, BPA has informed SPU that an average of 200 ft will be cleared for the proposed action. The DEIS fails to reveal the actual amount of clearing that will occur for the project. Also, the DEIS mentions that a high impact from noxious weeds could be mitigated, but does not indicate how this will be done.

394-029 S.4.11 The DEIS concludes that impacts to wetlands would be moderate to low and that impacts to forested wetlands would be moderate are not supported. SPU disagrees. Clearing vegetation and operating equipment in wetlands will produce significant and unavoidable impacts, and clearing trees in a forested wetland destroys its normal ecological functioning. Furthermore, the DEIS proposes no compensatory mitigation, which violates the intent of state and local sensitive areas provisions (such as the King County Sensitive Areas Ordinance). The DEIS needs to correctly state that impacts to wetland resources will be significant.

394-030 S.4.16 The DEIS fails to identify potentially significant impacts on public health as a result of potential effects on the drinking water supply during construction and operation (see comments on S.4.6 above, and elsewhere in this comment letter).

PURPOSE AND NEED (Chapter 1)

1.1 Paragraph 2: "Anticipated peak use could now exceed existing system capacity as soon as the winter of 2002-2003."

394-031 1.3 "... a new 500-kV transmission line and other transmission equipment would be required by the 2002-2003 winter season...."

These and other statements are not substantiated by citation of data, studies, or other information. The DEIS needs to explicitly provide or cite the data and assumptions on which these claims are based.

PROPOSED ACTION AND ALTERNATIVES (Chapter 2)

394-032 Route variations described in this section warrant a detailed discussion in terms of how BPA intends to use these variations to address short-, medium-, and long-term regional power transmission needs. For example, if BPA plans to build a new 50-kV line from Stampede Pass in the future (which could serve the subject project's present-day purpose and need), the cost savings of doing so now may negate the simplistic current-dollar cost difference between that variation and the Proposed Action. In this regard, the DEIS needs to present a complete cost justification (which would include cost analyses of BPA's future transmission line projects) if cost is the main justification for distinguishing among alternatives. Such analyses should include full consideration of opportunity costs and the inflated costs of building these variations in the future. In addition, it appears BPA does not include all foreseeable or projected costs in their cost estimate of the proposed action, which biases their cost comparisons among possible alternatives. Not all project planning costs are included in this analysis, nor are costs for adequate mitigation of unavoidable adverse impacts from the proposed action. For example, there is no discussion of the nature or cost of the mitigation for stormwater runoff quality or quantity that federal agencies would likely require (under regional implementation of the ESA) for the 1.5+ mile of new impervious road surfaces BPA is proposing.

independent inspector with stop-work authority to monitor ongoing construction activities. Logging activities, which include the use of log trucks, yarding towers, and ground-based yarding equipment, have previously been allowed within portions of the Cedar River Watershed. In addition, SPU maintenance vehicles also operate within the Watershed. If SPU maintains a WQCP and/or SWPPP or similar plan regarding contingencies for spills within the Watershed, including their prevention and response, the BPA's SWPPP for the proposed project would include similar contingencies.

No substantial earth-disturbing construction projects, such as road building or tower construction, are anticipated immediately adjacent to or near water bodies that drain into the Cedar River drinking water supply. Clearing of most timber within the ROW will be required. Riparian areas would be spanned, however, some clearing would be required in riparian areas. Much of the proposed alignment is along low- to moderate-sloping ground and in soils that have a low susceptibility to surface erosion, such that there is a low potential for project-related mass wasting events and soil erosion; hence, a low probability of impacts to drinking water supplies. An Erosion and Sediment Control Plan (ESCP), or similar document, such as a WQCP, will be prepared and approved by the regulating agencies prior to project construction. The ESCP will include Best Management Practices (BMPs) that will be implemented as needed to reduce the potential for turbidity events. Where the project crosses steeper ground and/or more sensitive soils, more strict BMPs, including seasonal work restrictions and sediment barriers, can be implemented.

394-027 Section 3.4 of the revised Fisheries Technical Report (Appendix A) discusses the role of shade as a control on stream temperature in the streams that would be affected. Section 4.6.2.1 of the SDEIS discusses how stream temperature would likely be affected by construction of the transmission line. Likely effects on stream temperature are also discussed in the biological assessment for the proposed transmission line.

394-028 The length of the preferred route is just a little less than the stated 9 miles thus accounting for the 152 acres stated in the DEIS. Please see responses to Comments 366-002, 382-011 and 394-108.

2.1.1.1 Transmission Structures

394-033 | To minimize impacts of tower construction, the DEIS should commit to using helicopters to the extent possible for delivering and assembling the towers.

2.1.1.4 Right-of-way Clearing

...danger trees could be taken as far as 200 ft from the ROW....

394-034 | This is not consistent with Table 2-1 (page 2-6), which indicates clearing distances of 153 ft (horizontal distance) and 163 ft (slope distance) from the edge of the 150 ft ROW. Also, there is no mention of the temporary 50 ft construction easement BPA previously mentioned in conversations with SPU. The DEIS, its technical appendices, and associated permitting documents need to present a complete, accurate, and consistent description of the proposed action and its environmental impacts.

394-035 | Also, based on Table 2-1, BPA would clear an additional 90 ft beyond the 150 ft ROW where trees are about 120 ft tall (as in the CRW). This calculation indicates that the DEIS significantly underestimates the acreage to be cleared. Apparently, 145 acres or more would be cleared in the CRW alone, making the total figure of 152 acres for the 9-mile ROW in the CRW impossibly low.

394-036 | The DEIS refers to the possibility of developing and using different criteria for tree removal in the CRW that would reduce the number of trees to be removed, stating that the decision will be in the FEIS. The DEIS should provide information on those criteria for public comment prior to releasing the FEIS. The DEIS, its technical appendices, and associated permitting documents need to present a complete, accurate, and consistent description of the proposed action and its environmental impacts.

Also, see comments on S.4.10 above.

2.1.1.5 Access Roads

394-037 | The DEIS fails to present sufficiently detailed road plans or data, making evaluation of the DEIS impossible. If such data are expected to be included in the FEIS, they should have been included in the DEIS.

"A disturbance width of 20 feet was used to calculate disturbance acreages."

394-038 | Also, this section indicates new road ROWs will be 50 ft and that disturbance widths between 36 and 40 feet will be routine. Disturbance acreages in the DEIS should have been calculated using accurate and worst-case widths (i.e., 40 ft for temporary and permanent roads within and outside of the ROW, not 20 ft). Also, it is unclear from this discussion if impacts from temporary roads and permanent and temporary staging areas were considered in the analysis of impacts from access roads.

394-039 | In addition, the DEIS fails to mention or assess new roads in the context of their being new impervious surfaces, which has important ESA implications. In fact, it is our understanding all new impervious surface (such as is proposed in the proposed action) inside the region of critical habitat for Chinook and coho is required to be mitigated for stormwater runoff quantity and stormwater runoff quality before the federal Services are able to consider a project such as this one to be in compliance with the ESA. The DEIS needs to discuss this situation and address the required and appropriate mitigation for new impervious surfaces, as mandated by the ESA and its regional implementation. The DEIS should assess the impacts caused by construction and operation of required mitigation facilities.

394-029 | BPA disagrees that impacts would be greater than those stated in the EIS. Please see response to Comment 340-002 for information about mitigation.

394-030 | BPA does not expect any major impacts to public health and the drinking water supply during construction and operation of the proposed project. Mitigation is proposed to reduce the risk of impacts. Impacts to surface water and ground water would be low.

394-031 | The data used for these studies is a compilation of all customers load forecasts, the existing transmission system, expected generation condition forecasts and expected interchange of power among utilities. BPA prepares this study annually and it is also used by other Northwest utilities. For the particular study that led to this proposed project, in addition to the forecasts, these assumptions were used: extreme cold weather load in the Northwest (similar to the Arctic Express of 1989); all available thermal generation in the Puget Sound Area is running (at lower generation levels the project would be needed earlier) and Intalco Load on (Intalco presently holds a transmission contract with BPA to serve the smelter although the smelter is not currently operating. However, BPA has included the load in studies because the transmission capacity has to be available because the load could return at any time). At the time of the studies, the joint study utilities (Seattle City Light, Snohomish County PUD, Tacoma City Light and Puget Sound Energy) approved these assumptions. See Section 1.2.1 of the SDEIS.

394-032 | Cost estimates have been expanded in the SDEIS. See Sections 2.1.4, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5.12, 2.2.6.12, 2.2.7.12, and 2.2.8.12. The mitigation that would be included with each alternative and an estimate of the costs are included in these sections.

394-033 | Helicopter construction techniques would be required for the proposed action if BPA decides to build a transmission line.

394-034 | Table 2-1 has been expanded in the SDEIS to clarify the areas where full clearing is likely within the right-of-way, and where

2.1.1.6 Stream Crossings

394-040 Omission of information here and in Section 4.6.2.2 renders evaluation of impacts resulting from new stream crossings impossible. This is a significant and fatal flaw in the DEIS. The DEIS should provide specific information on where new crossings will be constructed, what structures will be used, and how such construction could proceed.

2.1.1.8 Staging Areas

394-041 The DEIS refers to staging areas for construction, but does not specify where those might be located. Staging within the CRW would pose substantial risks to the drinking water supply and would have significant and complex impacts, and the magnitude and nature of those risks and impacts will depend on the location of those areas. To protect the municipal water supply, SPU has "no-tolerance" objectives for spills or leaks of hazardous materials in the CRW. Staging areas in the CRW are not consistent with these objectives.

It is unclear if the staging areas were considered in the analysis of impacts (such as the clearing analysis). The DEIS should be explicit if staging areas were included in the impact analyses.

2.1.4 Cost Estimate

394-042 The DEIS should include pertinent details of the cost estimates for the proposed project and all other alternatives (including those that were eliminated), particularly if costs were the basis for dropping certain alternatives. In addition, the DEIS should include citations of where fully detailed cost estimates and analyses may be obtained. All project alternatives (including those that were eliminated) need to be evaluated on the same projected cost bases.

2.3.2 Local Generation

394-043 The DEIS fails to mention several local hydroelectric projects that have recently connected to the power grid, or that are being built in partnership with Puget Sound Energy. These projects include Black Creek (rated 3700 kW at 1247 ft), Calligan Creek (rated 5500 kW at 1045 ft), and Hancock Creek (rated 6300 kW at 1129 ft). The DEIS needs to present a detailed discussion of how these power sources fit into regional power planning and how they were considered in the BPA decision-making process regarding the proposed project's purpose and need.

Table 2-2

SPU has the following comments on this table and related DEIS sections:

Land use: The DEIS neglects to mention effects on HCP.

Transportation: The DEIS should include discussion of access roads

394-044 Water quality: The DEIS neglects impacts during construction regarding drinking water supply (see comments above)

Fisheries: The DEIS should include assessment in Chapter 4 that impacts to listed fish species would be potentially high. Failing to mention this here fails full public disclosure.

partial clearing would be evaluated (the removal of danger trees). In the areas identified as partial clearing, the remaining trees will be protected as much as practicable. Figure 4 has also been added to the SDEIS to graphically show the difference between horizontal distance and slope distance. The range of clearing shown in Table 2-1 is an example based on the average height of trees given, of the distances from centerline to the furthest tree to be cut as a danger tree. This is merely an example. There may be instances where the trees are taller than the average and individual trees could be removed at distances even farther than those listed in the table, but these instances would be few.

The 50-foot easement is a road easement. Please see response to Comment 382-009.

394-035 See response to Comment 394-034.

394-036 See response to Comment 340-004.

394-037 The description of the types of impacts that could be expected from constructing and maintaining access roads, and an approximation of their acreage were included, as that was the best available information BPA had in its possession. Information was updated in the SDEIS.

394-038 The 20-foot width was used for calculations because it would be closer to the average disturbed width. The 50-foot width is used for acquisition purposes outside of the purchased power line right-of-way. Many of the proposed access roads to be constructed are spur roads from existing power line or watershed system roads and would be short. This type of access road is not constructed to the same standard as a longer system access road. The road would be constructed using an in or out-slope type of design that does not require ditching. The typical disturbed width would be less than 20 feet.

Typically all temporary road and staging areas are re-vegetated. Staging areas were not included in the analysis.

394-039 BPA access roads are not impervious. While it is true that the roads have rocked surfaces, the surface is not impermeable.

- 394-045 | Wetlands: Impacts are much greater than stated, especially to extensive forested wetlands in the CRW.
- Cultural Resources: Potential for impacts to archaeological resources or Traditional Cultural Properties are uncertain but could be substantial.
- Public health and safety: The DEIS fails to mention potential public health issues associated with impacts on the drinking water supply during construction and operation.

CHAPTER 3—AFFECTED ENVIRONMENT
3.1 Land Use

- 394-046 | The DEIS should disclose that land use impacts would be “high” in the CRW, as the proposed project would substantially reduce conservation measures in the City’s HCP, which is a primary land-use commitment in the project area.
- 394-047 | Also, the DEIS does not adequately describe project details for (and subsequently, potential impacts of) road construction and maintenance, rock source, and construction staging. Clearly, there will be impacts to the transportation system in the CRW; most CRW roads and transportation structures are not adequately constructed to carry large volumes of timber or construction equipment and materials. For example, the DEIS does not identify haul routes for rock or timber; rock source for roads; location of new access roads; location of upgrades to existing roads for bridge crossings, turning radii, width, slope (and other geometry), and surface; location of staging areas; and compensatory mitigation for unavoidable adverse impacts caused by these facilities and activities. The DEIS does not mention the new DNR rules for road BMPs. Also, the DEIS does not address who will bear the cost of on-going maintenance of new access roads and transportation structures (such as bridges and gates). Also, SPU has important safety concerns with drilling, shooting, and transport of explosives in the CRW; these proposed activities are not adequately described. The DEIS also fails to specify timber haul routes, yet selection of routes will have a major influence on the magnitude and nature of impacts both in the CRW (on habitats and species) and outside the CRW (on public roadways).

3.1.2 Cedar River Watershed

- 394-048 | *“...Seattle owns title to all but a small portion of the Cedar River Watershed.”*
- This is stated ambiguously. The City of Seattle owns only that portion of the Cedar River watershed that lies upstream of Landsburg. The DEIS should state this unambiguously.

3.4.8 King County

- 394-049 | The DEIS should acknowledge that the Taylor Mountain site (Manke Property) is used by hikers and equestrians.

NOTE: In general, most of the subsequent sections in Chapters 3 and 4 pertaining to fisheries, wildlife, vegetation, and wetlands were condensed versions of the text in the corresponding Technical Reports. Thus, all SPU comments on appendices A, B, C, and D (which see) can be considered to apply to sections in these Chapters as well. Statements from the DEIS are shown in

BPA roads are not constructed like the system roads within the CRW or tree farms in the region. Those roads are built to withstand heavy traffic while BPA access roads (unless they are to become part of a private ownership road system) are built for line construction then limited line maintenance. The roads are designed and constructed to a standard consistent with existing drainage design practices.

Existing standards are used to design erosion control measures and are employed as soon as construction begins. An erosion control plan is filed prior to start of construction.

- 394-040 | At the time of publishing the DEIS, sufficient line design information was not available, i.e., tower locations. Some preliminary information was noted but site-specific data was not possible without the tower locations. All stream crossing information is now available and structure design has been completed. See response to Comment 394-022. The map presented in Figure 5 of the Wetlands Technical Report (revised Appendix D) shows where all the proposed towers and new roads would be located.
- 394-041 | The location of staging areas are determined by BPA’s construction contractors and are not known at this time. No staging areas will be allowed on the Cedar River Watershed. Staging areas were not included in the analysis because they will be chosen by the contractor, if a contract is awarded.
- 394-042 | Overall cost estimates are included in the SDEIS for each alternative. The costs are based on “typical per unit” costs. Those costs are modified with any additional information available. See response to Comment 394-032.
- 394-043 | In total these three hydroelectric plants generate 15.5 MW maximum. The total Puget Sound area load in 2003 for extra heavy cold weather is about 10,000 MW. The three plants could serve only about 0.155 percent of the total area load or in other words could serve about 8 percent of one year’s load growth. These are very small generators and as such are usually netted with load near the generator. Although the generators are rated for 15.5 MW, the actual generation available during extreme winter cold weather may be much

italics. SPU comments are shown in normal font below the subject DEIS statement (if any). Typically, SPU's comments pertain only to those lands owned and managed by the City of Seattle within the project area.

3.6.3 Groundwater

394-050 | The DEIS fails to mention the groundwater influence on the lower Cedar River mainstem and its relationship to the water supply system.

3.6.4 Water Quality

394-051 | The DEIS fails to address the protection of drinking water. This section also seems to imply that, because there are currently no water quality problems in the Cedar River Watershed, that some degradation of the water quality would be acceptable. This is not correct. Also, the DEIS fails to mention that Washington State classifies the Cedar River above Landsburg as being in a special category where no waste discharges are permitted. The DEIS should correct these deficiencies.

394-052 | BPA may not be aware of how the regulation of drinking water supplies has increased over the last few decades. The existing BPA transmission line through CRW was constructed at a time when regulation of drinking water supplies was much less strict. This is especially true of the regulation of supplies from unfiltered surface supplies, such as at CRW. Therefore, construction of the proposed action would occur in a much different regulatory environment than existed at the time the first line was constructed.

394-053 | This regulatory environment results from the federal Safe Drinking Water Act and its amendments, and is defined by detailed regulations adopted by EPA and Washington Department of Health (WDOH). Supplies with unfiltered sources must show adequate source protection through development and implementation of a Watershed Control Program (WCP) that has been approved by WDOH. To remain compliant with WDOH regulations, the WCP would have to be modified to address the construction of the proposed action. On previous construction projects in the watershed, this has been accomplished through a Water Quality Control Plan (WQCP) specific to the project.

Development and implementation of an effective WQCP for a construction project of this magnitude is not a trivial matter. It must identify detailed management practices specific to the methods, materials, and equipment likely to be used on the project, and these practices must be integrated into the plans and specifications given to the construction contractor. The dispersed nature of the construction and its relative proximity to the intake make a WQCP critically important.

394-054 | The DEIS should acknowledge and discuss this regulatory environment for the protection of drinking water supplies (including Safe Drinking Water Act and Surface Water Treatment Rule). A spill contingency plan is mentioned as mitigation for fisheries on page 4-34, but such plans must expressly deal with drinking water as well.

3.7 Fisheries

394-055 | The DEIS incorrectly assumes that Chinook and coho salmon will not likely be present for any of the alternatives. The Cedar River will have Chinook salmon in the future. Coho salmon are likely to be in Rock Creek in the future. The Cedar River and its tributaries in the project area are tributary to waters that do support Chinook and coho salmon. The DEIS should address this circumstance. The DEIS should also address potential impacts of permanent and temporary habitat modifications on federally listed fish species. Under the Endangered Species Act and Northwest Power Act, BPA has important

less due to freezing and reduced runoff due to the cold weather. These projects were not considered in the decision making process because their impact is minor.

394-044 and 394-045 | Table 2-2 is a summary table of impacts. Table 2-2 was updated and incorporated into the SDEIS as Table 2-3. The DEIS and the SDEIS addressed these specific issues in more detail in their chapters on effects, Chapter 4.

See the list of issues and related comment numbers at the end of the chapter. This list includes comments and responses that address HCP impacts, access roads, water quality, fisheries, wetlands, and cultural resources. Additional information on fisheries is found in Appendices A, N and U of the SDEIS. Additional information for Appendix A is in the FEIS. Additional information about wetlands is in Appendix D (also revised for the FEIS), and Appendix Q of the SDEIS.

394-046 | Comment noted.

394-047 | At the time the DEIS was being assembled, BPA had not conducted a field review of the existing access road system including drainage structures. During the field review of the road system within the CRW, a review that included both previously-acquired system roads (roads for which BPA has acquired rights of use) and unspecified roads, road quality was evaluated. BPA concluded that with few exceptions the existing watershed system roads were capable of withstanding the travel of line construction vehicles because the roads were originally constructed for logging activities. In most cases rock depths exceeded 12 inches and all roads were ditched and drained and kept in good serviceable condition. The exceptions would be the weight limitation placed on the Cedar River Bridge east of the existing power line right-of-way and some "soft" spots on some roads that would require additional rock. Existing drainage structures were adequate; removing and or replacing them would only add to disturbance and siltation.

394-056 | responsibilities as part of the effort to protect, mitigate, and enhance regional salmon runs. However, it appears (as evidenced in the fisheries technical report and Section 2.1.15) this proposed action's adverse impacts on salmon and their habitats are not adequately mitigated. Also, the DEIS should discuss potential impacts to steelhead (an HCP species) beyond the very limited and inadequate discussion presented.

"The fish resources in the study area include resident and anadromous species."

394-057 | This is a correct but imprecise statement. In the CRW, not all of the tributaries are inhabited by both resident and anadromous species. Also, neither the mainstem Cedar River nor its tributaries currently have anadromous species, but are expected to in coming years. Only basins or tributaries that do not contribute water to the water supply system currently are inhabited by anadromous species (e.g., Walsh Lake Drainage Basin).

Map 8 (and other if appropriate)

394-058 | Upper Williams Creek and Steele Creek should be shown as potential anadromous fish habitat.

3.7.2.1 Proposed Action

"...cross nine fish-bearing (Type 1, 2, or 3) streams and an unknown number of non-fish-bearing (Type 4 or 5) streams."

394-059 | Type 4 streams should no longer be considered non-fish-bearing unless extensive sampling has been conducted to determine if that is the case.

Segment C

394-060 | The DEIS should include a discussion of steelhead trout at the end of this section along with Chinook and coho salmon.

Segment D

"...is used by cutthroat trout and, where it joins with the Walsh Lake diversion ditch,...."

394-061 | This statement is incorrect and misleading. The Walsh Lake Diversion Ditch does not join Rock Creek except under emergency overflow conditions, which occur rarely during peak flow events. The relationship between Walsh Ditch and Rock Creek needs to be clarified in the DEIS; more detail for overflow conditions and operation needs to be presented in the DEIS.

"...the river and its floodplain are wide enough that the existing forest can provide only about 10 percent riparian shade, so that riparian shade is not a primary control on stream temperature in this reach."
(page 3-23)

and

"...the river and its floodplain are wide enough that the existing forest can provide only about 20 percent riparian shade, so that riparian shade is not a primary control on stream temperature in this reach."
(page 3-23)

BPA does not plan to construct any additional through access roads. While there will be new road construction, all roads within the CRW will be dead-ended. Most new roads will be short, accessing only one or two towers and most are being constructed because the existing route to travel along the existing right-of-way has been designated as a wetlands or wetlands buffer. Some existing routes would be closed and allowed to revegetate naturally. All material will move along designated routes approved and acquired if in private ownership by BPA. Movement of materials on public roadways is the responsibility of the construction contractor.

Rock sources have not been identified. Location and material acceptability are the responsibility of the contractor. BPA provides specifications only.

Staging areas are the responsibility of the contractor. BPA does acquire the main materials yard where steel and conductor may be picked up.

BPA bears all maintenance responsibility for roads and facilities it constructs whose sole function is construction and maintenance of the power line and right-of-way. If BPA acquires a right of easement along an existing road it will be responsible for maintenance during the construction period, and will pay for damage caused by BPA's use after construction. If BPA constructs a gate or installs a drainage structure along an existing privately owned road, BPA may accept full responsibility for maintenance of the unit depending on formal agreement with the fee owner of the property.

394-048 | This sentence has been changed.

394-049 | This information has been added.

394-050 | In addition to surface water sources, water in the Cedar River, which provides drinking water to 1.3 million people, is also partially derived from groundwater sources. As such, contamination of the groundwater could impact the drinking water supplies. Project construction- and operation-related waste discharges, such as turbid water, spills, and project-related sanitation, would be strictly controlled. Construction and

394-062 | SPU disagrees with these unsupported statements. The DEIS should present data that support this contentions.

"Once passage around the Landsburg Diversion Dam has been established (scheduled for 2002 or 2003), it is likely..." (page 3-23 and 3-25)

394-063 | This statement is incorrect. This reach will support anadromous fish now prevented from upstream migration by the Landsburg Diversion Dam, including Chinook and coho, and excepting sockeye. The environmental analysis in the DEIS needs to be based on correct assumptions.

3.7.2.3 Alternative 3

"...Taylor Creek is known to contain resident rainbow trout...."

394-064 | SPU data indicate Taylor Creek has predominately cutthroat trout. Relatively small numbers of rainbow trout are also present.

3.8 Wildlife

394-065 | The "project area" as defined in the DEIS is an area within 0.25 mile of the ROW. This is too small for the scale of home range sizes and dispersal capabilities of many wildlife species of concern (for example, spotted owl, pileated woodpecker, northern goshawk, marten, and fisher). Also, several wildlife species were eliminated from analysis because habitat is not currently present within 0.25 mile. This limit is arbitrary, especially considering the large home ranges of many species. The DEIS should be based on a wildlife analysis that uses larger areas such that wide-ranging species with large home ranges are included.

394-066 | Also, the DEIS incorrectly states that marbled murrelet is not expected to occur in the project area. In fact, murrelets have been detected in the upper watershed, where they are possibly breeding. Murrelets are known to fly along major water courses (like the Cedar River) as they travel between marine feeding sites and their terrestrial nest sites. Murrelets can be expected to fly along the Cedar River—through the project area—to and from these areas. Thus, this species is at risk from additional power lines. The DEIS should address the impacts to this ESA-listed species.

3.8.2.1 Forest Community Dependent Species

"... merlins, pileated woodpeckers, and Vaux's swifts are also unlikely to nest within the project area (see Appendix B.)"

394-067 | Pileated woodpeckers are known to forage regularly in the riparian zone of the Cedar River in the watershed. Suitable nesting habitat is also available in the riparian zone.

Table 3-7

394-068 | Peregrine falcons nest in the Cedar River Watershed within approximately 5 miles of the proposed ROW corridor.

3.9.3 Vegetation Cover Types

operation of the proposed project should not result in a detectable degradation of the ground water quality. This information has been added to the SDEIS. See also Appendix Y.

394-051 | Comment noted. This information is found in Section 3.6.4 of the SDEIS.

394-052 | Comment noted. Every reasonable effort would be employed to avoid potential impacts from project construction and operation to the drinking water supplies.

394-053 | BPA understands that this WQCP is an instrument used to modify the Watershed Control Program (WCP) that has been adopted by state and federal agencies to maintain the water quality in the Cedar River Watershed. BPA would work with the City to help prepare a modification to the WQCP.

394-054 | If BPA decides to build a line, it would strive to meet the requirements of all regulations to maintain a clean and safe drinking water source. As previously stated, appropriate plans will be designed, approved and implemented to avoid impacts, such as spills and turbidity plumes, to the drinking water source.

394-055 and -056 | Impacts to Chinook and coho salmon are addressed in Section 3.2.4 of the Fisheries Technical Report (Appendix A) and further detail is provided in the Biological Assessment for the proposed transmission line. The results of informal consultation with NOAA Fisheries on these species are described in Section 5.2 and Appendix U of the SDEIS. Appropriate compensatory mitigation for habitat impacts is planned. See response to Comment 340-002. Impacts to steelhead are discussed in Sections 3.0 and 4.0 of the Fisheries Technical Report.

394-057 | Comment noted.

394-058 | The distribution of streams providing potential anadromous fish habitat is based on maps presented in the Final Cedar River Watershed HCP (City of Seattle 2000).

394-059 | Type 4 streams are defined as non-fish-bearing under the Washington Forest Practices Rules (WFPB 2000). The Final Cedar River Watershed HCP (City of Seattle 2000) does not identify any streams classified as Type 4 as being fish-bearing.

3.9.4.1 Proposed Action

394-069 | The DEIS needs to describe the age and size of affected trees in Cedar River riparian zone in the Watershed, especially the Sitka spruce and their history.

3.10.1 Regional Overview (wetlands)

"A total of 23 wetlands were identified within the ROWs of the alternatives." and "Wetland buffers were generally intact and forested."

394-070 | These statements are misleading. Wetland buffers may be intact within the proposed ROW alternatives. In the existing ROW, wetland buffers are not "intact and forested."

"Wetland buffers provide....."

394-071 | The DEIS needs to discuss the positive effects of intact stream and wetland buffers on water quality and the water supply, as well as a discussion of the positive effects of intact stream buffers on stream temperature, bank stability, etc., and the associated benefits for fish, amphibians, and other species.

CHAPTER 4—ENVIRONMENTAL CONSEQUENCES

4.4. Geology and Soils

394-072 | DNR's Watershed Analysis procedures suggest that all alternatives go through High and Moderate Landslide Potential areas (for example, inner gorges). However, the DEIS contains no discussion about this or the ancient, deep-seated landslide in the Rock Creek/Steel Creek basins, or the project's potential for causing mass-wasting events and the associated catastrophic channel disturbances. The DEIS should include this. Also, the DEIS should include discussion or analysis of soil erodibility and soil erosion BMPs.

4.5.2 Water Quality

394-073 | The DEIS fails to address the protection of drinking water. The DEIS should acknowledge this regulatory environment for the protection of drinking water supplies (see comments under Section 3.6.4). A spill contingency plan is mentioned as mitigation for fisheries on page 4-34, but such plans must expressly deal with drinking water as well.

"the City of Seattle and some surrounding water districts"

394-074 | The DEIS should replace this phrase with "about 1.3 million people in the City of Seattle and 27 suburban cities and water districts."

4.5.2.1 Proposed Action

"...it is possible that surface water runoff containing fuel spills, herbicide runoff and other contaminants could reach the main stream..."

394-075 | The DEIS mentions here the Proposed Action could result in herbicides entering the Cedar River. This is inconsistent with statements elsewhere in the DEIS that herbicides will not be used in the Cedar

394-060 | This information has been added to the SDEIS.

394-061 | The relationship between the two streams has been clarified in the SDEIS and the revised Fisheries Technical Report (Appendix A).

394-062 | Methodology for analysis of riparian shade is based on that presented in revised Appendix D of the Watershed Analysis Manual, Version 4, published by the Washington Department of Natural Resources. Model predictions were further verified using program SSSHADE and SSTEMP (*Bartholow, J. 1989. Stream Segment Temperature Model (SSTEMP) Version 3.5. Temperature Model Technical Note # 2. Fort Collins, U.S. Fish and Wildlife Service*). These models show negligible temperature effects resulting from altering 10 percent shade cover on a 1,000-foot long stream reach. The data presented in the Fisheries Technical Report (revised Appendix A) support the report's conclusions. These findings are fully consistent with the most detailed analysis of the shade-temperature relationship yet performed for Washington Streams: *Sullivan, K. J.; Tooley, J.; Doughty, K.; Caldwell, J. E. and Knudsen, P. A. 1990. Evaluation of prediction models and characterization of stream temperature regimes in Washington. TFW-WQ3-90-006. Timber Fish & Wildlife, Department of Natural Resources, Olympia, Washington.*

394-063 | Comment noted.

394-064 | This information has been included.

394-065 | The project vicinity has been enlarged and is described along with the approach to addressing wildlife impacts in Section 3.8 of the SDEIS. In general, there are two levels at which wildlife habitat is discussed. The broad project vicinity is used to address issues related to wide-ranging species, migratory species, and species with large home ranges. The project area, defined as the area within 0.25 miles of the proposed project, is addressed in more detail because the potential impacts of the project would likely be focused within that area.

The list of species with federal or state protection status has been updated in Table 2 of the Wildlife Technical Report (Appendix

- 394-076 | Watershed. Also, to protect the municipal water supply, SPU has “no-tolerance” objectives for spills or leaks of hazardous materials in the CRW. The DEIS should indicate how all spills would be prevented in the CRW.
- 4.6 Fisheries**
- 394-077 | The DEIS needs to describe environmental impacts of long-term, repeated maintenance activities.
- 4.6.1 Impact Levels**
- “Construction, operation, and maintenance of transmission facilities could impact fish and their habitat as a result of:”
- 394-078 | The DEIS should describe the effect of long-term and cumulative effects of maintenance activities (e.g., repeated vegetation clearing) on soil disturbance and stream temperature regimes.
- 4.6.2 Proposed Action**
- 394-079 | The DEIS should describe potentials for dispersal of non-native and noxious weed species.
- 4.6.2.1 Removal of Riparian Vegetation**
- “...Transmission towers are typically sited on higher ground, and they generally span drainages and associated riparian areas. This siting requirement would minimize potential impacts from riparian clearing because topography facilitates placement of structures that span drainages and increases the likelihood that conductors would be above many riparian areas and require only limited removal of danger trees. Construction of the transmission line, particularly clearing riparian vegetation, has the potential for high impacts on fish. However, BPA would prepare a clearing plan as part of the design of the project to minimize this impact. This plan would evaluate areas to be cleared and the permissible height of existing vegetation that could remain. BPA would site facilities to minimize clearing of riparian areas.”
- 394-080 | SPU believes these claims can not be made without knowing the specific tower locations and associated infrastructure. Also, this statement suggests very little clearing of riparian vegetation would occur, which is not consistent with the Fisheries Technical Report. According to that Technical Report, even the Cedar River may need riparian clearing. The DEIS needs to identify which stream crossings would span drainages and which would require vegetation removal. The DEIS, its technical appendices, and associated permitting documents need to present a complete, accurate, and consistent description of the proposed action.
- 4.6.2.1 Removal of Riparian Vegetation**
- “Construction of the transmission line,.....”
- 394-081 | SPU will require an approved vegetation removal plan for areas in the CRW. 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.

Table 4-3

B). The decision to preclude species that were not expected to occur in the project area was based on the habitat requirements for the individual species. Species with large home ranges were excluded based on the lack of habitat within the boundaries described under project vicinity. Wording in Table 3 of Appendix B was changed to “not expected to occur in project vicinity” for these species. The remainder of the species in Table 3 are either habitat specialists or low mobility species and habitat for them does not occur in the project area or vicinity.

Potential impacts to species with large home ranges are discussed in general terms in Section 4.7.2 of the SDEIS and changes in the amount of habitat available for species in the project area are displayed in Table 4-10 of the SDEIS.

- 394-066 | Comment noted. The project vicinity was enlarged in the SDEIS to include the upper watershed. Table 2 of the Wildlife Technical Report (Appendix B) lists marbled murrelet as “may occur in the project vicinity.” The risk of bird collision with transmission lines is discussed in Section 4.7.2.4 of the SDEIS.
- 394-067 | While signs of nesting activity were not observed during field reconnaissance surveys for this project, and the area does not meet the usual description of pileated woodpecker nesting habitat (as in Rodrick and Milner 1991), Section 4.1.2 of the Wildlife Technical Report (Appendix B) was revised to reflect the comment.
- 394-068 | According to existing data sources (i.e., the Cedar River Watershed HCP [City of Seattle 2000] and the WDFW Priority Habitats and Species Database [WDFW 2000]) no peregrine falcon eyries occur in the Cedar River Watershed or in the project vicinity, as defined in the Wildlife Resources Report, Section 3.3.
- 394-069 | This information was not provided in the Vegetation Technical Report (Appendix C) or the Wetlands Technical Report (revised 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. Riparian vegetation at the Cedar

394-082 Information from the HCP in this table is incorrect. Thus DEIS comments related to this table are also incorrect. The table appears to be based on the Draft HCP, not the final, but, even so, is simply wrong. For example, buffers are not an element of the Final HCP (2000). This table and any other references to the HCP should be revised, updated, and clarified throughout the DEIS and its technical appendices to reflect content of the final version of the HCP (2000).

"...features would be installed where needed in accordance with the Washington State Forest Practices Rules" (WSFPR)

394-083 SPU standards will be required if they exceed WSFPR. 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.

4.6.2.2 Culvert Installation

394-084 SPU believes some culverts on BPA's access roads for the existing transmission line may be fish and flow passage barriers. The DEIS should disclose this situation, indicate which of those culverts are fish and flow passage barriers, and describe the methods BPA will use to correct these problem culverts as part of their construction of the proposed action. 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. SPU standards will be required if these exceed WSFPR.

"....(as with a hung culvert)."

This statement should include "hung/perched" to describe a physical barrier.

"BPA would comply with guidelines for fish passage...."

394-085 SPU standards will be required if these exceed WSFPR. The DEIS and technical appendix should commit to ensuring all pertinent plans (such as all road and culvert-related plans) would meet and be conducted by SPU standards and approval for those portions of the project constructed in the CRW.

"...and using effective sediment and erosion control methods."

394-086 The DEIS needs to specifically describe these methods.

4.6.2.6 Accidental Spills of Hazardous Materials

"BPA would prepare a Spill Prevention and Contingency Plan..."

394-087 Because of the potential effects on water quality and drinking water supply, any spill of hazardous materials in the CRW is not acceptable to SPU. The DEIS should include a discussion of how BPA proposes to avoid possibility of any spill. [SPU would require BPA to develop a project-specific Water Quality Control Program (WQCP) that will need to be approved by SPU and DOH.]

4.6.2.7 Species Listed and Proposed for Listing under the Endangered Species Act

"The Proposed Action could potentially impact chinook salmon, bull trout, and coho salmon. ...The level of these potential impacts would be high for the following reasons. First, the loss of LWD recruitment would be permanent and would affect streams that, by and large, already contain insufficient LWD."

River crossing will be minimally impacted by the construction of the new line. The line design includes taller, double-circuit towers on each side of the Cedar River. The tower design and location would reduce greatly the vegetation clearing required.

394-070 and -071 The discussion of wetland buffers within the Wetlands Technical Report (revised Appendix D) provides a brief overview of some of the functions provided by intact buffers. The purpose of this discussion is to outline general functional benefits from intact wetland buffers and not to detail the entire suite of buffer functions including benefits to water quality, water supply, stream temperature, bank stability, and the associated benefits for fish, amphibians, and other species. However, we do not feel it is necessary to collect or present additional information because it would not substantively contribute to the impact analysis, or the identification of potential impacts as required under the National Environmental Policy Act.

394-072 The DEIS did refer to the mapped, ancient deep-seated landslide which is on the southeastern flank of Brew Hill along the preferred Alternate 1 route (see Section 4.4.2). The DEIS also referred the reader to the technical appendix (Appendix F of the DEIS) for additional details regarding this landslide. The mapped, deep-seated landslide hazard along the Alternate 3 route in the Steele Creek basin is not referred to in the DEIS, but is discussed in the technical appendix. Evidence of recent or historical mass movement in these mapped, deep-seated landslide areas was not observed.

Several inner gorges are encountered along the alternative alignments where the alignments cross rivers or creeks. These areas are discussed as potential shallow landslide and soil erosion areas in the technical appendix. Roads and towers would not be placed on the steep slopes within these inner gorges. Instead, towers would be placed on the flatter slopes on either side of the gorges and the transmission lines would span these drainages. As a result, the potential for project-related landslides in these areas is remote.

Soil erosion is discussed in Section 4.4.1.1 of the SDEIS and in the technical appendix. Soil erosion BMPs are discussed in Section 4.4.2.1 of the SDEIS and in the technical appendix.

Second, in view of the low project area elevation, potential thermal effects could harm fish by causing thermal stress during low flows. Third, there would be little opportunity to mitigate these impacts, although impacts would be less for some streams than for others because in some settings relatively little vegetation clearing would be required."

394-088 | The DEIS concludes that the impacts are **high** but can not be mitigated. This is significant considering BPA's important responsibilities and commitments under the Endangered Species Act and Northwest Power Act to protect, mitigate, and enhance regional salmon runs. This conclusion also suggests the proposed action is unable to be compliant with the ESA and its regional implementation. The DEIS should disclose this situation and its associated consequences.

"... all streams in the project area are too warm to support bull trout spawning habitat."

394-089 | The DEIS should provide data or appropriate reference to support this contention.

4.6.2.12 Cumulative Impacts

"Cumulative impacts on fish and other aquatic resources are those impacts that act not only on the local area where the impact occurs, but at every point downstream that is influenced by the impact."

394-090 | This is an incorrect definition of cumulative impacts. The DEIS is describing indirect effects, not cumulative impacts. Cumulative effects are those effects from any number of sources within an area or watershed that are additive. One significant omission in this analysis, as mentioned in the review of the Fisheries Technical Report, is the lack of consideration of cumulative effects connected to the existing transmission ROW and the proposed ROW.

"Fine Sediment Load —...The sensitivity of a watershed to the cumulative effects of additional sediment load depends on the distribution of resources sensitive to fine sediment inputs, such as spawning beds, as well as the quantity and location of fine sediment sources, soils, slopes, vegetation cover, and flow regime. If the Proposed Action were implemented, fine sediment production would continue to be low."

394-091 | In general, most of Chapters 3 and 4 pertaining to fisheries, wildlife, vegetation, and wetlands are condensed versions of the text in the corresponding technical reports. This DEIS statement is an example of how condensing material for the DEIS from the Fisheries Technical Report resulted in an inadequate discussion of the issue. The first sentence fragment in this citation above describes the potential generic effects; the second concludes, with no supporting analysis presented, that the effects are low. In addition, as discussed in SPU's review of the Fisheries Technical Report, the analysis of sediment impacts is deficient.

LWD Recruitment

"... (which do not spawn in such warm streams)."

394-092 | The DEIS should provide data or an appropriate citation to support this contention.

Table 4-4

394-093 | This table contains incorrect information. For example, based on data provided in Burton (1999), the earliest confirmed sighting of Chinook salmon in the Cedar River is August 18. Based on data in Burton (1997), the latest recorded steelhead spawning is June 11, and the latest date of completion of steelhead

394-073 | See response to Comment 394-050.

394-074 | Comment noted.

394-075 | Since herbicides will not be used within the CRW, it is not possible for herbicides to contaminate the Cedar River. The statement in the EIS has been changed to reflect that.

394-076 | A site-specific Spill Prevention and Control (SPC) Plan will be prepared that covers the project scope of work (including equipment, materials, and activities).

This SPC Plan shall address the procedures, methods and equipment to prevent discharge of oil (i.e., petroleum products) into or upon the navigable waters of the United States. This SPC plan also shall meet the requirements of the State of Washington, which specify the spill response, cleanup, and disposal requirements of oil. In addition, BPA requires that this SPC Plan be prepared to include all hazardous substances (including oil and other petroleum products) associated with the scope of work.

394-077 | Section 4.2 of the Fisheries Technical Report (Appendix A) describes operations and maintenance impacts of Alternative 1 (the Proposed Action).

394-078 | Cumulative impacts of vegetation clearing are described in Section 4.1.3 of the Fisheries Technical Report (Appendix A).

394-079 | Please see response to Comment 382-017.

394-080 | Comment noted. BPA has sited the proposed transmission towers and access/spur roads to avoid streams, wetlands and riparian areas. While none of these facilities would be located in these sensitive areas, some clearing would be required in wetlands and riparian areas particularly where those areas are found within the proposed right-of-way. Table 4-5 displays information on the amount of riparian vegetation that may be cleared. BPA would attempt to minimize the amount of clearing in riparian areas.

394-094 spawning is August 11. The DEIS and its environmental analyses should be based on correct information on the affected natural resources. This table should be revised to include correct information. Also, this or another table should address lamprey species in the same manner. (Burton, Karl. 1997. Cedar River steelhead monitoring program annual report. Seattle Public Utilities.) (Burton, Karl. 1999. Temporal and spatial distributions of Cedar River Chinook salmon spawning activity. Seattle Public Utilities.)

Section 4.7 Wildlife
4.7.1 Impact Levels

394-095 The DEIS and its technical appendix should address impacts from changes in behavior of species (e.g., travel barriers, dispersal barriers).

4.7.2.3. Bird Collision

394-096 Though the incidence of electrocution on transmission lines is low, it should be discussed and thoroughly evaluated. The DEIS should commit to a monitoring and adaptive management program to evaluate bird mortality by both collision and electrocution. 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.

Table 4.5
Aquatic Communities

394-097 Totals do not match the values listed. Values given for wetlands are inconsistent with the values presented in Table 5 of Appendix B. The DEIS, its technical appendices, and associated permit documents need to present a complete, accurate, coherent, and consistent description of the proposed action.

4.7.2.5 Forest Community Dependent Species

“... both band-tailed pigeon and blue grouse....”

394-098 Ruffed grouse nesting and foraging habitat would be more impacted in most of the project area at such low elevations than that of blue grouse. Elevation range use needs to be checked and clarified for these species and a correct analysis presented in the DEIS.

4.7.2.13 Mitigation

394-099 Though most of the impacts to wildlife were described as moderate, mitigation proposed was generally simply minimization of the impact. This is insufficient mitigation for moderate levels of impact. Compensatory mitigation should also be included.

Bird Collision

“Provide bird marking in known flight corridors.”

394-100 The DEIS presents insufficient information for reviewers to effectively evaluate this method. The DEIS should disclose known flight corridors, and needs to add compensatory mitigation actions for mortality.

394-081 BPA is working with SPU to assure that all activities on the Watershed meet SPU standards to the extent practicable.

394-082 At the time the Fisheries Technical Report (Appendix A) was prepared in late 2000, the Final Cedar River Watershed HCP (City of Seattle 2000) was not yet available to the public, in spite of the fact that the HCP had been approved by the Seattle City Council in April 2000. The Final HCP has since become available. The findings reported in the Fisheries Technical Report were revised to be consistent with the Final HCP. Text in the SDEIS was changed to reflect these revisions.

394-083 See response to Comment 394-081.

394-084 An undetermined number of new cross drain culverts will be installed and we will be replacing other culverts of this type. BPA acknowledges that there are problems associated with some of its existing culverts on its access roads on the Raver-Echo Lake right-of-way within the Cedar River Watershed. BPA is committed to addressing these problems with SPU, the landowner, and the Washington State Department of Fish and Wildlife.

394-085 See response to Comment 394-081.

394-086 See response to Comment 394-081.

394-087 Comment noted. Please see response to Comment 394-076.

394-088 BPA has included more information concerning potential impacts to endangered species in the SDEIS. The commenter states that the DEIS concludes that the impacts are high but cannot be mitigated. BPA respectfully disagrees with the commenter's interpretation. The DEIS makes it clear that two of the three waterways which may potentially provide habitat to listed fish in the future (once the proposed downstream fish ladder is completed thereby opening up the Cedar and Raging rivers to migration), would have low impacts. A third waterway, the Cedar River, may have high impacts if large conifers were cut and removed, but this would not be needed. There are currently no listed fish in the project's action area, and during construction no trees will be cut near the Cedar River.

394-101 | Several raptor species utilize ROW corridors. The DEIS should commit to the use of all available types of structural modification(s) for lines and towers that prevent and/or minimize negative impacts to any avian species over the full extent of the ROW (inside and outside of the CRW).

Forest Community Dependent Species

394-102 | The DEIS should commit to including snag-creation mitigation along the edges of the cleared ROW to create nesting and foraging habitat for snag-dependent forest species.

Riparian Community Dependent Species

"Span riparian corridors to the extent possible..."

394-103 | The DEIS should identify streams on which this is possible, so reviewers can evaluate potential impacts.

4.7.2.14 Cumulative Impacts

394-104 | The DEIS classifies cumulative impacts as "low," with little or no data to support this conclusion. The DEIS should present data and a complete analysis of cumulative impacts.

"The HCP also outlines plans to close certain roads within the CRW..."

394-105 | It is inappropriate for BPA to be allowed "mitigation credit" for road decommissioning contained in the HCP and accomplished by the City of Seattle. See additional comments elsewhere in this comment letter.

4.8 Vegetation

"BPA is collecting data and analyzing the feasibility of using a different clearing criteria within the CRW that would take fewer trees..."

394-106 | This evaluation should be completed and included within the DEIS so reviewers can evaluate the actual impacts of tree removal and habitat conversion within CRW, rather than simply in the final EIS. . Further, the criteria used for evaluation should be made explicit so that review of how tree removal would occur could be technically evaluated.

Tables 4-6 and 4-7

394-107 | The relationship between the acreage shown in these tables is not clear. For example, mid-seral was defined as in the range of 15 to 35 years, but the total mid-seral acreage for the proposed action in Table 4-7 (26 ac), is not equivalent to the 10-35 year age category in table 4-6 (0 ac). The DEIS, its technical appendices, and associated permit documents need to present a complete, accurate, coherent, and consistent description of the proposed action and its impacts.

4.8.2.3 Operation and Maintenance Impacts

"This is a low impact because it could be mitigated."

394-108 | The DEIS should describe how this impact will be mitigated.

Concerning the comments on the ESA, BPA fully intends to fully comply with its obligations under the Endangered Species Act. After submitting a biological assessment to the U.S. Fish and Wildlife Service, FWS concurred with BPA's "not likely to adversely affect" determination on the bull trout, marbled murrelet, bald eagle, grizzly bear, gray wolf, and Canada lynx and did not identify any other federally-listed endangered species that would be adversely affected by the project. Consultation on the spotted owl will be completed prior to construction.

With respect to the NMFS, we received letters from them stating that they expect the effects of the Proposed Action to be discountable or insignificant. Their letters announce the conclusion of our informal consultation with them in accordance with 50 CFR 402.14(b)(1) (see Appendix U of the SDEIS and FEIS).

394-089 | No bull trout spawning areas have been identified in western Washington at elevations of less than 2,000 feet (King County Department of Natural Resources, 2000). See Section 4.1.3.1 of the revised Fisheries Technical Report (Appendix A).

394-090 | The analysis of cumulative impacts has been changed in the SDEIS. The beginning of Chapter 4 includes the definition of cumulative impacts and lists the foreseeable future actions that were considered in estimating cumulative impacts to individual resources.

394-091 | The Fisheries Technical Report (Appendix A) was included as an appendix to the DEIS because the EIS is written, according to CEQ regulations, in plain language the public and decision-makers can understand. The full findings of the analysis are in the technical report so that reviewers interested in the details of the analysis can read them. The DEIS contained sufficient information to assess the potential impacts of the Proposed Action in accordance with NEPA requirements.

394-092 | See response to Comment 394-089.

394-093 and -094 | Table 5 of the Fisheries Technical Report (Appendix A) has been revised to include this information. Information on the lamprey is outside the scope of this project.

4.8.2.4 Mitigation

"BPA would consult with the DNR, SPU, and other"

394-109 | This list should include the U.S. Forest Service.

"Management practices regarding noxious weed control... have been defined in the BPA Transmission System Vegetation Management Program."

Given that the DEIS acknowledges the current ROW has extensive invasion and occupation by noxious weeds, the current policies and procedures appear to be inadequate. See additional comments on noxious weed management elsewhere in this comment letter.

394-110 | *"Areas would be maintained using a combination of manual methods and herbicides.... No herbicides would be used in the CRW."*

The DEIS should present much more detail on how BPA intends to eradicate noxious weeds in CRW. See additional comments on noxious weed management elsewhere in this comment letter. Data on the success or failure of the proposed methods in other areas should be included so reviewers can adequately evaluate the proposal and its likelihood of success.

"The Muckleshoot Tribe would like the opportunity to salvage or relocate plants before construction."

394-111 | Is this a commitment to allowing the Muckleshoot Tribe to do this? What, if any, limitations would be placed on this? Would entire trees be given to the tribe? What input would the landowner have? The DEIS should explicitly describe these activities.

"These are also measures that the Muckleshoot Tribe would like in included as mitigation:"

394-112 | Is this a commitment to include these proposals as mitigation? The DEIS should explicitly describe these measures and be clear regarding BPA's commitment to use them as mitigation.

Section 4.9 Wetlands

4.9.2 Proposed Action

"BPA would avoid crossing wetlands where possible, and where impacts are unavoidable, BPA would use best management practices to minimize destruction or denigration of the wetland to the maximum extent practicable."

394-113 | This is a misleading statement. The alternatives were not chosen to avoid wetlands, and any wetlands in the path of these ROWs could not reasonably be avoided. The DEIS should acknowledge that this was the case, and should properly evaluate realistic potentials for avoiding wetlands and riparian zones. The DEIS statement that BMPs would be used to minimize wetland impacts is not adequate for effective evaluation of the proposed action.

394-095 Section 4.1 of the Wildlife Technical Report (Appendix B) was revised to include a more detailed analysis about the issues of travel or dispersal barriers and how it affects the behavior of animals. More information was added to the SDEIS.

394-096 Section 4.1 of the Wildlife Technical Report (Appendix B) was revised to include a more detailed analysis about the issues of collision and electrocution. Additional information has been added to the SDEIS. Electrocutions associated with high voltage transmission lines are extremely rare. BPA is currently helping to develop improved technology for monitoring bird collisions in cooperation with the Edison Electric Institute. BPA is providing funding and expertise in a study to test a bird strike indicator, a device clipped onto overhead ground wires to monitor and store impacts with the wire. Some of these devices are being tested in areas of known bird strikes that have been previously studied in the Audubon Wildlife Refuge in North Dakota. If they prove to be a useful tool, these devices will be placed for monitoring in the areas identified as having the highest need.

394-097 Tables were double-checked, totals verified, and changes were made as needed.

394-098 Although ruffed grouse are likely to be present in the project area given the habitat types available, they do not meet any of the criteria for inclusion in the analysis, as described in Section 3.3.2 of the Wildlife Technical Report (Appendix B), and so were not included in the analysis. Blue grouse do meet the criteria, as a species of local concern, and because the habitat modeled for this species by Smith et al. (1997) for the Washington State Gap Analysis included mixed and coniferous forest habitats at all elevations, this species was included as potentially occurring in the project area.

394-099 Comment noted. Please see response to Comment 340-002.

394-100 BPA knows of no mortality issues involving avian species with its existing Raver-Echo Lake power line in the project area; however, the existing line has no overhead ground wire, and the proposed line would contain an overhead ground wire over the length of the project. To mitigate for the potential for collision

Table 4-10

394-114 | Acres in this table do not agree with those in the corresponding Table 2 in the Wetlands Technical Report. The DEIS, its technical appendices, and associated permitting documents need to present a complete, accurate, coherent, and consistent description of the proposed action.

"Construction would include clearing shrubs, trees, and herbaceous vegetation from wetlands and wetland buffers."

394-115 | The DEIS should describe the justification and/or reason for clearing all shrubs and herbaceous vegetation from wetlands and wetland buffers, as is indicated by this statement.

"Wetland Vegetation Impacts —Overall impact on wetland vegetation would be moderate."

394-116 | As pointed out in the SPU comments on the Wetlands Technical Report, conversion of forested wetlands to scrub-shrub or emergent wetlands constitutes a **high** impact, according to definitions used for analysis (impairment of ecological integrity). The DEIS and its analysis should be corrected to reflect this.

Wildlife Impacts

394-117 | The DEIS should address impacts to amphibians.

4.9.2.4 Mitigation

"Standard mitigation measures to minimize wetland impacts include the following:"

394-118 | That is a true statement, but the DEIS should commit to implementing even these minimal mitigation measures. These measures alone cannot mitigate for the unavoidable impacts to wetlands that will occur.

4.12 Cultural Resources

394-119 | Some areas in the project area and within the CRW have a high likelihood of containing cultural resources or Traditional Cultural Properties, and thus potential for significant impacts. The DEIS omits specific results of archaeological and CMT surveys that have been conducted for this project. Survey results should have been considered in the DEIS. The technical report for this discipline should have been included in the DEIS. The DEIS should have included proposed mitigation actions for any identified sites (if any). Also, the DEIS should recognize that SPU has archaeological standards for the CRW that need to be (and were) followed.

The DEIS's assertion that impacts will be "low" for the proposed action are unsupported by the existence of substantial uncertainty regarding impacts on archaeological resources or Traditional Cultural Properties, for which no assessment has been completed. Given the location of the project, these impacts could be significant. The DEIS should explain this uncertainty, qualify the description of impacts, and provide the needed information for public review.

4.13 Noise, Public Health, and Safety

394-120 | The DEIS does not address the impact of anticipated increases in noise on wildlife populations. Also, the DEIS needs to discuss how the new transmission line will interfere with CRW staff radio usage and reception.

with the overhead ground wire, BPA would install bird flight diverters over the Cedar and Raging rivers as a part of the project. This apparatus should allow any birds using these wildlife corridors to see the overhead ground wire and avoid the potential for bird strike. BPA believes avoiding the potential for mortality is preferable to offering compensatory mitigation for its occurrence.

394-101 | With the exception of installing bird flight diverters on the overhead ground wire over the riparian areas of the Cedar and Raging rivers, no alterations would be made to the proposed structures or line configurations to prevent and/or minimize negative impacts to any avian species in the area since none would be necessary. Since the proposed conductors would be spaced a minimum of 21 feet apart, it would be unlikely that any bird could come in contact with two conductors at the same time, thus avoiding any potential for electrocution. And raptor collisions with power lines are relatively rare. For more information, please see Section 4.1.1 of the revised Final Wildlife Technical Report, entitled "Impacts common to All Transmission Line Alternatives" in Appendix B.

394-102 | The details about these mitigation measures will be included in the Mitigation Action Plan for this project. We will include leaving existing snags and the creation of new snags to both preserve existing habitat and the creation of new wildlife habitat, where possible.

394-103 | The location of towers and access roads have been developed to help reduce the amount of riparian vegetation impacted.

394-104 | The cumulative effects analysis was updated in the SDEIS. Section 4.7.2.11 discusses cumulative effects associated with the Proposed Action. Table 4-9 in the SDEIS displays potential cumulative impacts for each of the alternatives. Although BPA would require additional access roads, SPU is planning on obliterating some of its current access roads. BPA has acquired a 352-acre parcel of land north of the CRMW to prevent future development (except for the Proposed Action and future transmission lines) as mitigation for the forestland that would be impacted by the Proposed Action. See also response to

394-121 In its scoping letter, SPU identified the need for BPA to address effects of the project on the drinking water supply. The DEIS completely fails to discuss the risks to the drinking water supply during project construction for any of the alternatives. These risks include the risk of spills that could contaminate the water and the risk of turbidity events that could have serious regulatory and public health consequences for SPU. See also SPU's comment under Environmental Consultation, Review, and Permit Requirements, immediately below.

CHAPTER 5—CONSULTATION, REVIEW AND PERMIT REQUIREMENTS

394-122 The DEIS should include a new section on the Washington Department of Health (DOH) Rules for Group A Public Water System (246-290 WAC). This section would summarize the federal Safe Drinking Water Act and subsequent regulations that require a high level of protection for a source of unfiltered drinking water such as the Cedar River. Because SPU's Cedar River source is unfiltered, SPU is required to control the watershed in accordance with a DOH-approved control program. Obviously, the currently approved control program does not address BPA's proposed project. For previous construction by SPU and SCL in the watershed, SPU required development of a project-specific Water Quality Control Program (WQCP) that could be approved by DOH as a supplement to the permanent control program. Typically, the program was prepared by a specialty sub-consultant in the consultant design team. SPU would require BPA to produce a WQCP for this project that would be acceptable to SPU and DOH.

5.2.1 Federal list

394-123 The DEIS incorrectly states that marbled murrelet is not expected to occur in the project area. Murrelets have been detected in the upper watershed, where they are possibly breeding, and can be expected to fly along the Cedar River to these areas. Thus, this species is at risk of colliding with power lines in the CRW. The DEIS should acknowledge this and provide a suitable analysis of impacts.

5.4 Heritage Conservation

394-124 The DEIS states that no culturally modified trees were found in the project area, but SPU believes that the Muckleshoot Tribe may have observed some of these in the project area. [Contact Tom Minichillo.]

5.5 Federal, State, Areawide, and Local Plan and Program Consistency

394-125 As previously mentioned, the DEIS fails to mention how BPA intends to meet the intent of local sensitive areas regulation such as King County Sensitive Areas Ordinance. BPA is required to meet the standards in this ordinance, which would not occur under measures describe in the DEIS. The DEIS should acknowledge this requirement and indicate how it will so meet the intent of such local and state regulations.

5.5.9 City of Seattle Cedar River Watershed Habitat Conservation Plan

394-126 The DEIS should acknowledge this proposed action is not a "covered activity" under the HCP (the primary land management document/direction in the project area) and then commit to not diminishing the conservation commitments in the HCP. The DEIS should explicitly describe how it intends to avoid diminishing HCP conservation commitments (for example, by committing to providing appropriate and effective compensatory mitigation).

5.17 Underground Injection Permits under the Safe Drinking Water Act

Comment 340-002. For these reasons, the cumulative impact of the Proposed Action is low to moderate.

394-105 Comment noted. BPA agrees.

394-106 See response to 366-002. We will be using a stable tree criteria.

394-107 Table 4-6 from the DEIS has been deleted. See Table 4-10 in the SDEIS.

394-108 Mitigation for soil disturbance and the possibility of introduction of noxious weeds would include any or all of the following:

- Reseeding disturbed areas with a seed mix acceptable by BPA and SPU;
- Washing of construction and maintenance vehicles to prevent spread of seed from one source to another;
- Treatment of known noxious weeds through manual or mechanical measures.

394-109 Comment noted. The statement has been revised in the SDEIS.

394-110 See response to Comment 382-017.

394-111 BPA has been meeting with the Muckleshoot Culture Committee on the proposed project since early 2000. One of the Tribe's chief concerns is what impact the proposed project would have on cultural resources important to the Tribe. BPA is working with the committee to site the proposed project with the least impact on cultural resources.

If BPA were to decide to construct the proposed project, BPA would obtain land rights from the property owners to do so, including Seattle Public Utilities. BPA obtains easement rights to construct, operate and maintain its transmission facilities; however, the land within the right-of-way remains in fee ownership of the property owner. Although BPA has offered to move its facilities, given certain constraints, to avoid cultural resources, the Tribe needs to work with the landowner regarding harvesting any resources important to the Tribe.

394-112 BPA would commit to these mitigation measures. With respect to the noxious weed issue, BPA is willing to work with the

"none of the alternatives would...adversely affect any surface water supplies"

394-127 |

This statement ignores the role of CRW in providing drinking water for 1.3 million people. The DEIS should correct this section to reflect this reality.

landowner in controlling noxious weeds on BPA's existing right-of-way attributable to BPA's actions or inactions, as well as to prevent the proliferation of noxious weeds on the proposed right-of-way within the CRW that would also be attributable to BPA actions or inactions. Preventing the spread of noxious weeds is an ongoing maintenance objective of BPA, but it must be undertaken in concert with landowner help, particularly where the noxious weed problem exists adjacent to BPA's rights-of-way as well.

- 394-113 BPA has sited all of its facilities, tower sites, access roads and substation expansion to avoid filling any jurisdictional wetlands. Although approximately 14 acres of forested wetlands would be converted from forested wetlands to scrub/shrub wetlands, this clearing would be undertaken by hand clearing only. No mechanized land-clearing equipment would be allowed in these wetlands. BPA believes in avoidance first, minimization next and then providing compensatory mitigation where necessary.
- 394-114 Additional information was developed for the draft EIS after the Wetlands Technical Report was prepared. The most recent information was included in the SDEIS.
- 394-115 The sentence was changed.
- 394-116 Please see response to Comment 394-029.
- 394-117 Impacts to amphibian habitat are described in Section 4.1.2 of the Wildlife Technical Report (Appendix B), with habitat loss expected to be the major potential impact for these species.
- 394-118 Please see response to Comment 340-002.
- 394-119 Please see response to Comment 394-016.
- 394-120 With respect to construction noise, the Muckleshoot Culture Committee has expressed a concern about construction noise impacts on fawning and calving by the deer and elk populations within the CRW. By the time BPA would initiate construction activities (in August), the deer and elk-birthing season would have ended. Our understanding is that fawning and calving are usually completed by June 15th. BPA will do its

best to honor this request while still trying to have the line energized when it would be needed. The construction noise would be considered short-term and intermittent, and would occur only in specific locations until the project would be completed.

Regarding operation noise, Section 4.13.1 of the DEIS entitled “Predicted Audible Noise Levels” stated that the incremental noise contributed by the proposed line adjacent to the existing Raver-Echo Lake 500-kV line would only be about 1 dBA at the edge of the proposed right-of-way and would not be discernible. Wildlife such as deer and elk commonly use BPA rights-of-way to browse, and do not appear to be affected by the corona-generated audible noise.

With respect to the concern as to the potential effect of the new transmission line on CRW staff radio usage and reception, the DEIS, Section 4.13.5 entitled “Radio Interference” stated that the project’s overall radio interference is expected to be minimal.

- 394-121 Please see responses to Comments 394-051, 052, 053, and 054.
- 394-122 Information has been added to Chapter 5.
- 394-123 See response to Comments 394-096 and 394-066. The preferred power line route does not affect suitable nesting habitat for the marbled murrelet and will parallel the existing corridor, which substantially lessens any increase in risk associated with the new line. No noise disturbance associated with this project would be conducted within 0.25 miles of suitable or occupied habitat. Therefore, the project is not expected to increase the potential for incidental take.
- 394-124 A survey for culturally modified trees was conducted on and off the Cedar River Watershed. No culturally modified trees were found.
- 394-125 BPA intends to abide by the King County Sensitive Areas Ordinance including providing compensatory mitigation for altering forested wetlands within the proposed right-of-way. However, BPA disagrees with the commenter’s statement that

BPA is required to meet the standards in this ordinance. See also responses to Comments 395-018, -019, and -020.

- 394-126 The DEIS states (on Page 5-16) that the HCP covers only actions by the City of Seattle and activities undertaken by other agencies (such as BPA) within the CRW are not addressed by the HCP, and therefore, require separate review by USFWS and NMFS. The DEIS also stated "The BPA is consulting with both the FWS and NMFS to ensure compliance with the HCP." See also Appendix U in the SDEIS and FEIS, and Appendix AA of the FEIS for the agencies' opinions that the proposed project would not adversely affect the HCP.

Furthermore, BPA has purchased land to be used a compensatory mitigation to replace that which would be lost should BPA acquire land rights to site its transmission line through the CRW. Additional mitigation is under negotiations.

- 394-127 Construction and operation of the proposed BPA transmission line would not require the underground injection of water or wastes. BPA would comply with applicable regulations of federal, state and local agencies to protect drinking water supplies, in particular, Seattle Public Utilities, Washington State DOH, and the Cedar River Watershed, which provides drinking water to 1.3 million people.

**Kangley-Echo Lake Transmission Line Project DEIS
Appendix A – Final Fisheries Technical Report**

**Summary of Major Comments to Appendix A – Final Fisheries Technical Report
Seattle Public Utilities
September 4, 2001**

GENERAL COMMENTS

1. The analysis in the DEIS and technical appendix is inadequate due to:
 - lack of assessment of Type 4 and 5 streams;
 - factual errors
 - lack of thorough erosion assessment
 - scant site-specific information on streams and no quantification of impacts by stream crossing
 - lack of disclosure as to the extent of clearing in riparian areas, which effectively precludes an evaluation of project effects
2. The DEIS and technical appendix should commit to compensatory mitigation in acknowledgment of the project's moderate to high impacts to fish habitat.
3. The DEIS and technical appendix should thoroughly address cumulative effects of creating additional ROW adjacent to the existing ROW.
4. The DEIS and technical appendix should discuss steelhead trout in greater detail throughout.

SPECIFIC COMMENTS

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

1.0 Executive Summary

"This report describes the existing conditions and potential impacts on vegetation"

394-128

This is the fisheries technical report.

"This report serves as the primary basis for the vegetation"

This is the fisheries technical report.

1.1.1.2 Clearing

"Non-merchantable timber may or may not be burned"

394-129

This statement conflicts with the project's Biological Assessment (BA), which claims there will be no burning. The DEIS, its technical appendices, and associated permitting documents need to present a complete and consistent description of the proposed action.

This activity, if allowed within Cedar River Watershed (CRW), would be with the approval of SPU relative to scheduling and methods. The DEIS and technical appendix should commit to ensuring all methods proposed in this section would meet and be conducted by SPU standards and approval for those portions of the project constructed in the CRW.

"... (BMPs) for timberland would also be used."

394-128 This change has been made in Section 1.0 of the Fisheries Technical Report (revised Appendix A).

394-129 Because the Biological Assessment was prepared after the Fisheries Technical Report (Appendix A), it included mitigation actions such as avoidance of burning. The Fisheries Technical Report has been changed to reflect this new information. Because of the proximity of the adjacent 500-KV line that would remain energized during project construction, no burning would be allowed on the proposed right-of-way.

Additionally, burning would not occur at this project because the project is close to the Seattle-Tacoma CO maintenance area and the King County urban growth boundary. The state of Washington forbids burning in non-attainment and maintenance areas, and within the urban growth boundary. Additionally, the state forbids burning in any other area of the state when a reasonable alternative to burning is found to exist (WAC 173-425-040). According to the state, reasonable alternatives include chipping, woodwaste recycling, and landfilling. Rather than burn, BPA would pursue these alternatives. BPA typically does not burn slash and tries to avoid such practices not only for air quality reasons, but because soot from fires can cause flashovers from one transmission line to another, resulting in outages. This information was included in Section 4.14, Air Quality, of the DEIS.

394-130 BPA is committed to using Best Management Practices. See response to Comment 394-081.

394-131 See responses to Comments 366-002 and 382-009.

394-132 Section 5.15 of the SDEIS describes how BPA intends to meet Clean Water Act requirements. The Stormwater Pollution Prevention Plan (SWPPP) will describe in detail actions that will be taken to limit erosion impacts. Section 4.6.2.10 describes specific mitigation that will be undertaken to lessen impacts to fisheries. BMPs would include silt fences and hay bales and other such means that the contractor would use to keep sediments from reaching surface waters. The contractor is responsible for identifying which specific BMPs would be used to meet resource protection goals.

- 394-130 | The DEIS and technical appendix should commit to ensuring all methods proposed in this section would meet and be conducted by SPU standards and approval for those portions of the project constructed in the CRW.

"Trees would be cleared within the ROW as well as outside of the ROW to prevent trees from falling on the lines."
- 394-131 | SPU is unable to comment effectively without more specific tree removal plans. Also, there is no mention of the temporary 50 ft construction easement BPA previously mentioned in this technical appendix (but which is not mentioned in the DEIS). The DEIS and technical appendices need to speak consistently on the nature of project features.

"Additional BMPs for timberland would also be used."
- 394-132 | What BMPs will be used? The DEIS and the technical appendices need to present a complete and accurate analysis of fisheries and potential impacts, which is related, in part to the disclosure of the BMPs to be used.

*"Total amount of clearing [for towers] 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 to be in poor condition and requiring upgrading by BPA"*
- 394-133 | SPU can not comment effectively without more specific information about grading plans. As evidenced by information presented in the project's BA, BPA has identified locations for towers and new roads and so should be able (in the DEIS and its technical appendices) to estimate the total amount of clearing for the proposed action. The DEIS and the technical appendices need to present a complete and accurate environmental analysis, which includes the disclosure of such known project characteristics. Also, The DEIS and technical appendices should commit to ensuring all methods proposed in this section would meet and be conducted by SPU standards and approval for those portions of the project constructed in the CRW.

1.1.1.3 Access Road Construction and Improvement
- 394-134 | The DEIS and technical appendix should commit to ensuring all methods proposed in this section would meet and be conducted by SPU standards and approval for those portions of the project constructed in the CRW.

"Access roads would be 16 ft wide, with additional road widths of up to 20 ft for curves."
- 394-135 | SPU believes these road widths are excessive. The DEIS should explain and justify these road prism dimensions. SPU can not comment effectively without more specific information about road plans. As evidenced by information presented in the project's BA, BPA has identified locations for new roads and so should be able (in the DEIS and its technical appendices) to firmly estimate the total amount of clearing/road-building for the proposed action.
- 394-136 | The DEIS and the technical appendix fail to present a complete and accurate environmental analysis because they fail to disclose such known project characteristics as location and kinds of roads. Road locations depicted in the BA are often distant from the proposed action. The DEIS and technical appendix should explain and justify the location of these roads. The DEIS and the technical appendix should acknowledge that all road plans affecting the CRW would be subject to SPU review and approvals.

*"...roads would be constructed and used outside the ROW."
"Where temporary roads are used...."*
- 394-137 | SPU can not comment effectively without more specific information on road plans. As evidenced by information presented in the project's BA, BPA has identified locations for towers and new permanent and temporary roads and so should be able to firmly estimate the total amount of clearing for the proposed action.

- 394-133 | Information not available when the DEIS was published has been added to the SDEIS.
- 394-134 | Comment noted. See response to Comment 394-081.
- 394-135 and -136 | BPA has committed to helicopter construction to reduce the standard of road needed for construction. Access road design in the CRW is described in Section 2.1.1.5 of the SDEIS.
- 394-137 | See responses to Comments 394-135 and 136.
- 394-138 | See responses to Comments 394-135 and 136.
- 394-139 | When establishing hazardous materials, equipment, and fueling staging areas, consideration will be given to minimizing the removal of existing trees and minimizing compaction of native soils except as needed. Staging areas will not be located adjacent to sensitive areas, buffers, and waterways. After consultation with SPU, major hazardous materials and fueling staging areas will be located outside of the CRW. Mobile fueling pads will be used sparingly within the CRW and only as absolutely necessary to proceed with work in a safe and efficient manner.

Hazardous Material Staging Area. Drums of diesel and gasoline, and small containers of diesel, gasoline, oils, hydraulic fluid, and decontamination/cleaning solutions will be stored on weather-resistant (i.e., hooded) spill containment pallets or specifically constructed spill containment sheds. Spill containment pallets or shed containment will be able to contain 110 percent of the largest container. Hazardous materials and chemicals shall be clearly labeled and segregated based on compatibility. Hazardous materials and fuel storage areas shall be designed in a manner that these areas can be secured and/or locked at the end of each workday. Only authorized personnel will be permitted to enter these areas. All products shall be clearly labeled and lids securely fastened. All storage tanks shall be kept off of the ground.

Fueling Staging Area. The fueling staging area shall consist of a spill pad and fuel tanks (diesel and gasoline). Temporary barriers will be used to prevent heavy equipment from damaging/

394-138 | The DEIS and the technical appendix need to present a complete and accurate environmental analysis, which includes the disclosure of such known project characteristics as location and types of roads.

1.1.1.4 Storage, Assembly, and Refueling Areas

394-139 | 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 the 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

“BMPs would be used during clearing and construction to reduce impacts.”

394-140 | The DEIS and technical appendix should describe what these BMPs include. The DEIS and technical appendix should commit to ensuring all methods proposed in this section would meet and be conducted by SPU standards and approval for those portions of the project constructed in the CRW.

“An average area of 30,000 sq. ft. would be disturbed at each tower site. Additional areas that could be disturbed could include the site where the conductor is strung and pulled. These disturbances could be as large as 370 ft radius from the tower center.”

394-141 | The DEIS and technical appendix should disclose estimates of where grading will occur and how much area will be graded. The DEIS, its technical appendices, and associated permitting documents need to present a complete and consistent description of the proposed action.

“...construction crews would remove selected trees in a 50 to 60 ft wide area on each side of the ROW. (i.e. to compensate for or anticipate resulting blowdown after initial ROW clearing”

394-142 | The DEIS and technical appendix should describe volume or number estimates for tree removal in this 50 to 60 ft zone. The DEIS and its technical appendix need to present a complete description of the proposed action.

“...four footings been placed in holes that have been excavated, augured, or blasted.”

394-143 | Use of blasting is a concern in the CRW. The DEIS and technical appendix should describe the likely blasting plan and evaluate the impacts of blasting on stream and fish resources. The DEIS and its technical appendix need to present a complete description of the proposed action.

“Noise and dust would be generated....”

394-144 | The DEIS and its technical appendix need to evaluate the impact of noise and dust generation on the affected fish populations. The DEIS needs to present a complete description of the proposed action.

rupturing these tanks. The fueling pad shall be designed with impervious secondary containment capable of capturing any spills that may occur during fueling operations.

The bulk fuel storage area shall be designed with a temporary cover that also provides wind protection, and will have an impervious berm around the perimeter of the storage area. The bermed area should have a storage capacity of at least 110 percent of the largest container. The storage area shall be lined with a double layer of plastic sheeting or similar material.

Mobile equipment fueling pads. Construction equipment fueling on the ROW would use pickups with saddle-mounted tanks in their beds over portable chemically compatible secondary containment systems. Sorbent materials shall be used to protect the fueling nozzle as it is transferred to and from the fueling cradle and the vehicle being fueled. Pickup beds will be sealed to prevent any leakage. Fueling will only occur in designated fueling areas. Fuel tanks are not allowed to be topped off. All equipment fueling operations shall use pumps and funnels and absorbent pads. All fueling vehicles would leave the CRW daily. All fueling operations personnel shall be trained in SPCC procedures.

Hand-carried Equipment. Fueling of hand-carried equipment shall only take place in a mobile secondary containment system consisting of a covered truck with a sealed bed and lined with an appropriate chemically impervious material. All gas cans would be stored and hand-carried equipment fueled in this area. The transfer of fuel into portable hand-carried equipment would be performed using a funnel and/or hand pump. The fueling system and transport cans would be inspected daily. All fuel storage containers would be stored in a manner that reduces the possibility of spills. Gas cans would not be allowed outside of the secondary containment area. All hand-carried equipment fueling vehicles would be removed from the CRW at the end of each day.

Spill Prevention. Spill response kits will be located in the fueling area for easy access. The spill response kits at a minimum will include chemical resistant “zip-seal” storage bags, plastic sheeting, plastic drum liners, sorbent sheets, sorbent

1.1.1.9 Site Restoration and Clean-up

"..... pull site locations would be reshaped and ..."

394-145 | The DEIS and technical appendix should describe what "reshaping" will include. Reshaping should include considerations for proper drainage.

".... Access roads would be repaired."

394-146 | The DEIS and technical appendix should describe what "repair" means.

"... reseeded with grass or an appropriate seed mixture ..."

394-147 | The DEIS and technical appendix should commit to ensuring all methods proposed in this section would meet and be conducted by SPU standards and approval for those portions of the project constructed in the CRW. Seed mixes should be composed of native seed species (i.e., grasses and shrubs) and meet SPU approval.

1.1.2.6 No Action Alternative

394-148 | The DEIS and technical appendix should provide data and/or references documenting how this conclusion was reached.

1.2 Key Issues for Fisheries

394-149 | The DEIS and technical appendix should address adverse impacts on habitat for coho salmon.

"Under the HCP, all forest clearing is prohibited except for purposes of habitat restoration."

394-150 | This statement is incorrect. The DEIS and technical appendix should restate and clarify this concept relative to the final version of the HCP (2000).

1.3 Major Conclusions

"All action alternatives would have similar impacts to fish and their habitat. All action alternatives would require removal of riparian forest vegetation in an area where such activity has previously been determined to cause adverse effects to fish species listed as threatened under the ESA. Although some measures could be taken to minimize vegetation clearing in riparian areas, the residual impacts would persist throughout the life of the project."

394-151 | This comment and the statement on page 23 (paragraph 5) of the technical appendix indicate impacts to ESA-listed fish species would be high. Despite these adverse impacts to listed fish, the DEIS and its technical appendix contain no substantive commitment to compensatory mitigation. Is BPA's conclusion, then, that there are no mitigation actions available that would reduce adverse effects of riparian vegetation clearing on ESA-listed fish to negligible levels? The DEIS and technical appendix should fully disclose this conclusion.

The DEIS and technical appendix should define what measures "could be taken" and what "methods are available."

2.1 Data Sources and Study Methods

"The CRW HCP (City of Seattle 1998)"

booms/socks, granular oil sorbent, shovels, and overpack/salvage drums. Any spills shall be cleaned up immediately and the contaminated material properly disposed of. Accumulated storm water in secondary containment vessels shall be collected and disposed of properly. Additionally sediments and sediment-laden water containing oil on the construction site shall be captured and managed properly.

Additional spill prevention procedures will include daily and weekly inspections to ensure that spill controls are in place and remain effective. Any leaks from a fuel tank, equipment seal, or hydraulic line will be contained within a spill pad placed beneath potential leak sources. An undetected leak from parked equipment will be contained within the equipment staging area and cleaned up upon discovery. In addition to inspections, employees shall be trained on spill source and receptor recognition, spill prevention planning, spill prevention techniques, spill response measures, and spill reporting protocol. All employees are responsible for spill prevention and will respond to a leak as appropriate based on their level of training, or if a spill has occurred, they will assume a defensive posture and immediately notify the designated person responsible for assessing spills, implementing the SPC plan, and contacting regulatory agencies. Should the on-site personnel not have the training, equipment, or materials to clean up spills, a spill response contractor will be used.

Fire Safety. Fire extinguishers shall be located adjacent to spill kits in the material, equipment, and fueling staging areas. Smoking will not be allowed in construction and fuel staging areas and during re-fueling procedures. Smoking will only be allowed in designated areas. The Contractor must comply with forest fire laws, rules and regulations of the State of Washington (e.g., RCW 76.04 and WAC 332-24 and WAC 332-24-405 Spark Emitting Equipment Regulations). Construction operations are subject to daily state fire precaution levels (FPL). The Contractor will need to check the level each day. The operators also need radio or telephone communications to report a fire. Vehicles will be equipped with fire extinguishers and spark arrestors. The local fire department is responsible for emergency containment procedures when called to the site. The fire department takes measures necessary to prevent fire

- 394-152 | In section 1.2 above, City of Seattle 2000 is referenced, but it is not included in this list. This section and any other references to the HCP should be revised, updated, and clarified throughout the DEIS and its technical appendices to reflect content of the final version of the HCP (2000).
- "The impact assessment for this analysis relied upon remote methods to identify potential fish-bearing streams...."*
- 394-153 | The known distribution of fish in the project area should be used in the analysis wherever it confirms a greater distribution than the remotely sensed data indicates. Some stream reaches that contain fish are not indicated as such in the analysis. Consultation with SPU Cedar Falls biologists may be beneficial. The DEIS and the technical appendix need to present a complete and accurate analysis of fisheries and potential impacts.
- "The GIS database was not found to include any non-fish-bearing streams, so these streams were not inventoried. It is assumed that the project area contains at least twice as many non-fish-bearing streams as fish-bearing streams."*
- 394-154 | It is well-known that non-fish bearing streams (Types 4 and 5) have a water quality impact on downstream reaches that are fish-bearing. The CRW HCP has a standard of 150 ft buffer for clearing on Type 4 and 100 ft for Type 5. Lack of inventory of Type 4 and 5 streams and lack of impact analysis on these streams are significant deficiencies in the DEIS and this technical appendix. The DEIS and technical appendix should inventory Type 4 and 5 streams and consider the potential impacts of the proposed action on these stream and fish resources. The DEIS and the technical appendix need to present a complete and accurate analysis of fisheries and potential impacts.
- "Color aerial photographs were reviewed to collect information about the size and species composition of riparian vegetation, and the existing riparian shade, along all potentially affected streams. This review used methods established for watershed analysis in Washington (WFPB 1998). Field studies were undertaken to visit representative examples of fish-bearing streams, observe channel geomorphology and fish habitat, and ground-truth the aerial photograph assessment."*
- 394-155 | Color aerial photographs were 1:24,000 scale. It is questionable whether this scale is adequate for Washington Watershed Analysis methodology. The DEIS and technical appendix should describe what Washington watershed methodologies were used (that is, which modules were used).
- "For the impact assessment, it was assumed that the action alternatives would require clearing vegetation over a 150 ft wide corridor along the entire project area. This assumption is conservative because BPA would seek to minimize vegetation clearing in riparian areas by not placing towers in riparian areas."*
- 394-156 | The statement conflicts with other statements in the DEIS and its technical appendices. The ROW would be 150 ft with or without towers; the DEIS indicates that clearing could occur in an area as wide as 400 ft. The DEIS and technical appendices need to speak consistently on the nature of project features (number location, width, etc.) of the proposed action.
- "...it was assumed that the action alternative would require clearing vegetation over a 150 ft wide corridor...."*
- 394-157 | This assumption is incorrect based on conflicting information provided in sections 1.1.1.2 and 1.1.1.5. The DEIS and technical appendices need to speak consistently on the nature of features of the proposed action.
- 3.2.1 Cedar River Watershed Habitat Conservation Plan**
- 394-158 | Any reference to "ecological reserve" in this or any other section of the DEIS or its technical appendices is incorrect. The "ecological reserve" as a "conservation strategy" is not included in the final signed version of

- and explosion, and to protect people and property in the event of a fire or explosion.
- 394-140 | See response to Comment 394-132.
- 394-141 | BPA is proposing using a special footing design, micropiles, so that impacts would be reduced. No grading would be necessary except for the spur roads to each tower site and limited grading at tower sites on very steep slopes for micropile drilling equipment. The location of stringing sites are determined by BPA's construction contractors and are unknown at this time. It is likely that there would be one stringing site where there is an angle structure in the CRW. Other sites would likely be outside the CRW.
- 394-142 | See response to Comment 382-011.
- 394-143 | Blasting will not take place next to fish bearing streams.
- 394-144 | Noise, particularly noise derived from activities not performed underwater, has not been shown to have any impact on salmonid fishes. The potential impacts of fine sediment (such as dust) on fish habitat are described in Section 4.6.2.3 of the SDEIS.
- 394-145 | Locations would be restored to their original preconstruction condition to the extent practicable.
- 394-146 | Restored to previous condition without changing the character of the road, if necessary.
- 394-147 | Disturbed areas are to be reseeded with native seed mix as soon as construction is completed in that area. However, in many cases, locally adapted native plant materials are not available. Many native species available for restoration are actually from other areas, representing different genetics than existing vegetation. BPA would consult with the DNR, SPU, other agencies and Tribes about the appropriate seed mixtures to use.
- 394-148 | BPA system planners are constantly studying the transmission system. BPA is proposing the Proposed Action since the capacity of the present system is near the limits of its capability. If the limit would be exceeded during time of peak demand (during the

- 394-159 | the HCP (2000). This section and any other references to the HCP should be revised, updated, and clarified throughout the DEIS and its technical appendices to reflect content of the final version of the HCP (2000).
- 3.2.1 CRW HCP**
- "...principal water supply for the City of Seattle..."
- 394-160 | The Cedar River Watershed is not the principal water supply just for the citizens of Seattle, but numerous other communities as well (27 additional purveyors and communities), totaling 1.3 million people. The DEIS and technical appendix should accurately describe the role of the Cedar River Watershed.
- 3.4.1 Alternative 1**
- 394-161 | The DEIS and the technical appendix need to present a complete and accurate analysis of fisheries and potential impacts. Several errors in this section suggest the environmental analysis for the CRW portion of the proposed action was not thorough. These errors include:
- Segment C –**
 "...the floodplain (of the Cedar River) is not confined... (where it crosses the proposed ROW)"
- 394-162 | The river is actually moderately confined within a glacial fluvial terrace.
- "Currently, this reach of the Cedar River supports rainbow and cutthroat trout."
- 394-163 | The Cedar River also contains non-salmonid species.
- "Currently, this reach of the Cedar River supports rainbow and cutthroat trout."
- 394-164 | Although this statement is true, it is misleading insofar as these two species occur in a ratio of approximately 99 to 1 (rainbow to cutthroat). The DEIS and technical appendix should state this clearly so as to not be misleading. The same clarification should be made in all other sections where similar statements occur.
- "Once passage around the Landsburg Diversion Dam has been established (in September 2002), it is likely that this reach would support all anadromous species now prevented from upstream migration by the Landsburg Diversion Dam, including chinook, coho salmon, and steelhead."
- 394-165 | Sockeye will be prevented from passage beyond Landsburg even with the new passage facility. The DEIS and technical appendix should correct this statement in all sections in which it occurs in error.
- Segment D –**
 "The affected streams have a pool-riffle morphology..."
- 394-166 | As described in the paragraph above, many streams in this segment flow down relatively steep slopes (20 to 40 percent). Stream gradients on these slopes are generally too high to support pool-riffle morphology and are more commonly step-pool or cascade channel types.
- "Rock Creek, downstream of this segment, is known to be used by cutthroat trout and, where it joins with the Walsh Lake diversion ditch, by coho salmon and Walsh Lake kokanee."
- 394-167 | Rock Creek does not join with the Walsh Lake diversion ditch. It flows directly to the Cedar River and is not connected to the ditch. The DEIS and the technical appendix need to present a complete and accurate analysis of fisheries and potential impacts.

- coldest days of the winter season) and a major BPA line were to go out in the area, this scenario could develop. See BPA's expanded discussion on need for the project in Chapter 1 of the SDEIS.
- 394-149 | An analysis of impacts to coho salmon habitat is presented in Section 4.0 of the Fisheries Technical Report (revised Appendix A) and is further detailed in the biological assessment for the proposed transmission line.
- 394-150 | See response to Comment 394-082.
- 394-151 | Please see response to Comment 340-002.
- 394-152 | Please see response to Comment 394-150.
- 394-153 | The inventory of fish-bearing streams used in the analysis was based on the inventory of such streams presented in the Draft Cedar River Watershed HCP (City of Seattle 1998). The Draft HCP was used because the Final HCP (City of Seattle 2000) was not available for public review at the time the Fisheries Technical Report (Appendix A) was being prepared. Figure 3 and revised Appendix A of the Fisheries Technical Report includes the inventory of fish-bearing streams presented in the Final Cedar River Watershed HCP.
- 394-154 | Data do not indicate that detailed analysis of Type 4 and 5 streams would substantively alter the findings of the analysis. The effects of the Proposed Action on such streams would be approximately the same as the effects on Type 3 fish-bearing streams, and those effects are detailed in Section 4.0 of the Fisheries Technical Report (revised Appendix A).
- 394-155 | The module used was Appendix D, Riparian Function (WFPB 1998), which is the only module that describes methods for assessing riparian vegetation. A skilled aerial photograph interpreter has little difficulty interpreting stand structure using the quality of aerial photographs available for this analysis. Moreover, results were field-verified and, for that portion of the project within the Cedar River Watershed, were corroborated by vegetation structure maps provided in the Draft Cedar River Watershed HCP (City of Seattle 1998).

**3.4.2 Alternative 2
Segment G**

"Currently, this reach of the Cedar River supports rainbow and cutthroat trout."

394-168 | Non-salmonid species are also present there. See comment re: ratio in comment above. The DEIS and the technical appendix need to present a complete and accurate analysis of fisheries and potential impacts.

"Once passage around the Landsburg Diversion Dam has been established in September 2002, it is likely that this reach would support all anadromous species now prevented from upstream migration by the dam, including chinook, coho and sockeye salmon, and steelhead."

394-169 | Not all anadromous species will be allowed passage. See comments above. The DEIS and the technical appendix need to present a complete and accurate analysis of fisheries and potential impacts.

3.4.3 Alternative 3

394-170 | Another error/omission: Taylor Creek also has resident cutthroat trout. See the more detailed comment in SPU's review of the DEIS. The DEIS and the technical appendix need to present a complete and accurate analysis of fisheries and potential impacts.

Segment J

"Within the project area, Taylor Creek is known to contain resident rainbow trout, but a natural falls near its mouth renders the stream inaccessible to anadromous fish."

394-171 | Non-salmonid species are also present. SPU data indicate that Taylor Creek has predominately cutthroat trout and perhaps relatively small numbers of rainbow trout. The DEIS and the technical appendix need to present a complete and accurate analysis of fisheries and potential impacts.

"Currently, this reach of the Cedar River supports rainbow and cutthroat trout."

394-172 | Non-salmonid species are also present. See previous comment on ratio. The DEIS and the technical appendix need to present a complete and accurate analysis of fisheries and potential impacts.

3.5 Access Roads

"All new access roads would that have the potential to affect fish-bearing streams would be situated within the alternative ROW's...."

394-173 | This statement appears to be inconsistent with information provided in Section 1.1.1.3. Also, it appears the effects of temporary roads and construction of the 50 ft temporary construction easement previously mentioned by BPA (but not mentioned in the DEIS) are not considered at all in this environmental analysis.

4.0 Environmental Consequences

"All of these are recognized as common impacts to fish populations and habitat as a result of timber harvest and associated activities in mountainous terrain in the Pacific Northwest (WFPB 1998, City of Seattle 1998). It is largely incidental that timber harvest would be followed by installation of a transmission line for the proposed project."

394-174 | This statement appears to suggest: "the proposed action is no different than a timber harvest, it just happens that BPA will be putting in a transmission line after the trees are cut." This statement obscures the point that

394-156 | Not all trees in the ROW would be removed. Transmission towers are typically sited on higher ground, and they generally span drainages and associated riparian areas. Siting towers in this manner would increase the likelihood that the conductors may be above riparian areas and may require less removal of vegetation. BPA would also leave/protect low-growing vegetation where possible.

394-157 | The proposed right-of-way would be 150-feet wide. The right-of-way would cross riparian areas and ravines where some of this vegetation would not need to be taken. BPA tries to remove tall-growing woody vegetation from its rights-of-way and establish low-growing vegetation to maximize cost-effectiveness and minimize the environmental damage by having to continually revisit the rights-of-way to remove tall-growing species.

394-158 and -159 | Comment noted. The technical appendices and the SDEIS have been revised to reflect this comment. BPA appreciates the clarification provided.

394-160 | Comment noted. Changes were made in the technical study reports and the SDEIS to reflect this comment.

394-161 | Comment noted.

394-162 | Comment noted.

394-163 | Section 3.4.1 of the Fisheries Technical Report (Appendix A) has been revised to clarify this point.

394-164 | Section 3.4.1 of the Fisheries Technical Report (Appendix A) has been revised to clarify this point.

394-165 | Section 3.4.1 of the Fisheries Technical Report (Appendix A) has been revised to clarify this point.

394-166 | The *affected* streams have a much lower gradient. Streams with 20-40 percent gradient are generally regarded as non-fish-bearing and moreover are much less vulnerable to the types of impact discussed in the Fisheries Technical Report (Appendix A) than are pool-riffle streams, especially fish-bearing ones.

- timber harvest would not happen if the transmission line was not constructed. It also fails to acknowledge the notion that impacts of the proposed vegetation clearing in the ROW would be long-term and on-going—much longer and more disruptive than a timber harvest. The DEIS and the technical appendix need to present an accurate description of the proposed action. 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.
- "...or toxicity or deterioration of water quality from accidental spills of hazardous materials."
- 394-175 | The DEIS and technical appendix should evaluate the potential of leaching of metals from the towers or lines, and the associated risks to water quality.
- 4.1 Construction Impacts**
4.1.1 Impacts Common to All Action Alternatives
4.1.1.1 Impacts
- Disturbance to Fish Habitat from Removal of Riparian Vegetation**
- "Riparian trees protect fish habitat by filtering runoff before it reaches the stream, shading the stream and reducing mid-summer temperatures, providing LWD to streams which increases habitat complexity, and providing organic matter to the stream which increases productivity in the aquatic food chain".
- 394-176 | Riparian trees and vegetation also provide soil stability, shoreline stabilization, and insects as food.
- "BPA would prepare a clearing plan ..."
- All methods proposed in this plan would have to meet and be conducted by SPU standards and with SPU approval for all areas within CRW.
- 394-177 | "... drainage features would be installed where needed in accordance with the Washington Forest Practices Rules (WSFPR).
- SPU standards would have to be followed if they exceed WSFPR and would be subject to SPU approval for areas in CRW.
- Culvert or Bridge Installation—**
- "Some fish in the streams along the proposed transmission line ROW, including sensitive species such as bull trout, steelhead, and salmon, migrate upstream to spawn."
- 394-178 | Although it is mentioned elsewhere in the report that bull trout are not likely to be found in the project area due to warm stream temperatures, it is implied that they are here. The CRW HCP presents strong evidence that bull trout are not resident in the lower Cedar River system, but this source is not cited in this technical appendix. The DEIS and technical appendix need to present a complete and consistent analysis of fisheries and potential impacts.
- "BPA would comply with guidelines for fish passage in the design"
- 394-179 | 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.

- 394-167 | The relationship between the two streams has been clarified in Section 3.4.1 of the revised Fisheries Technical Report (Appendix A).
- 394-168 | Comment noted.
- 394-169 | Section 3.4.2 of the Fisheries Technical Report (Appendix A) has been revised to clarify this point.
- 394-170 | Section 3.4.3 of the Fisheries Technical Report (Appendix A) has been revised to clarify this point.
- 394-171 | Section 3.4.3 of the Fisheries Technical Report (Appendix A) has been revised to clarify this point.
- 394-172 | Comment noted.
- 394-173 | There is no inconsistency. New access roads outside the ROW would be distant from fish-bearing streams and have no potential to cause impacts to them. Temporary roads may be needed by the construction contractor for clearing trees and for access to pulling and reeling sites. Temporary roads would be located within the existing or new ROW in upland areas. One temporary bridge crossing, running from upland bank to upland bank, may be needed for construction. The bridge would be removed after construction. Temporary roads would be abandoned and the disturbed area would be reseeded.
- 394-174 | Comment noted.
- 394-175 | No toxic materials have been identified leaching from Bonneville Power Administration (BPA) lines or towers. BPA has reviewed the processes by which the steel to be used for towers in the CRW would be prepared to determine if hazardous materials could leach from the steel. The protective coating on these towers will be hot-dipped galvanization. This is a Zinc coating that fuses with the steel as well as coats it. This is the same process used to galvanize steel pipes for potable water transmission.
- The galvanized steel is then dulled by dipping into acid. This gives the steel a darker appearance. The acid is rinsed off completely by dipping into a water bath.

Fine Sediment Delivery to Streams—

"Clearing of the transmission line ROW, grading and placement of tower footings, and construction of new access roads and their associated stream crossing structures would expose soil to the erosive forces of wind, rain, and surface runoff during construction and until sites were revegetated. Such erosion would deliver fine sediment into streams....Construction of the transmission line would cause low impacts to fish and their habitat as a result of erosion and sedimentation... BMPs that would minimize potential impacts to fish from turbidity and sedimentation."

394-180

This analysis of potential erosion effects does not mention that the types of soils the ROW passes through on the south slope of Brew Hill are poorly consolidated glacial sediments that easily erode. SPU has observed active erosion in the existing ROW where Rock Creek is incised into a narrow ravine. Although a note in this report mentions the existing ROW offers a good basis for predicting effects of the proposed ROW, impacts of the existing ROW to streams (such as erosion) are rarely mentioned in the analysis. Rather than acknowledging that such erosion could be an ongoing problem, the analysis states that revegetation and BMPs will readily eliminate erosional effects. This is questionable considering BPA's present level of management of its existing ROW. The DEIS and the technical appendix need to present a complete and accurate analysis of fisheries and potential impacts.

"BPA has constructed transmission lines using a number of standard construction practices and BMPs that would minimize"

394-181

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.

Adverse Effects to Fish from Accidental Spills of Hazardous Materials –

"Spill Prevention and Contingency Plan..."

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.

Impacts to Species Listed and Proposed for Listing under the Endangered Species Act—

394-182

Impacts of reduced LWD input and increased stream temperatures are described as possible impacts to listed or proposed listed species. Sedimentation, as described just above, is also a potential impact.

"Other streams in the project area are too narrow and steep to support chinook salmon spawning habitat, and all streams in the project area are too warm to support bull trout spawning habitat."

394-183

This is likely untrue for Steele Creek and lower Taylor Creek. The DEIS and technical appendix need to present a complete and consistent analysis of fisheries and potential impacts.

"... all streams in the project area are too warm to support bull trout."

394-184

The DEIS and technical appendix should provide data or appropriate references to support this contention. The DEIS and technical appendix need to present a complete and consistent analysis of fisheries and potential impacts.

4.1.1.2 Mitigation

The last step in the coating process is to apply a white rust inhibitor (keeps white rust from forming while in transit). This is accomplished by dipping the steel into a solution of Sodium Dichromate, that when applied, fuses to the metal becoming Zinc Dichromate. This last step is optional and will be foregone for material entering the CRW.

The fasteners (bolts) are galvanized in the same process as indicated above. A lubricating wax is utilized as dictated by the ASTM A325 and ASTM A563 standards.

The aluminum conductors (lines) are essentially pure aluminum (99.4% Al) with galvanized steel cores. The aluminum (line) is essentially inert as it is coated with a layer of aluminum oxide NOTE: Aluminum oxide is one of the most stable ceramics known. There are no oxidation inhibitors applied to ACSR conductors. The galvanizing on the steel core is sacrificial, as is the standard scheme with any galvanizing.

Insulators are essentially an inert entity being of porcelain/galvanized steel or EPDM polymer/galvanized steel. Either insulator type carries no corrosion inhibitor nor do they leach any compounds in significant quantities (if at all).

394-176 Section 4.1.1.1 of the Fisheries Technical Report (Appendix A) has been revised to note this point.

394-177 When the DEIS was written, not all information was available. The term "clearing plan" is not a plan per se — it is a clearing advisory based on topography and location of the conductor (sag and swing) that gives "safe" heights, i.e., heights that could be allowed given a few years growth at various distances from centerline. This advisory, in conjunction with other tools, aids in the selection of danger trees and retention of vegetation within the ROW. BPA will be preparing a clearing plan specific to the CRW with assistance from SPU staff.

See response to Comment 394-081.

394-178 The Proposed Action does not only affect the Cedar River Watershed. Bull trout may be present in the Raging River Watershed. The Fisheries Technical Report (Appendix A) does not say that bull trout are likely to spawn in the project area.

- 394-185 The term "mitigation" as used here appears to refer to methods for minimizing impacts, not actions to replace lost function. One of the most serious deficiencies in the DEIS and all of its technical appendices is the lack of compensatory mitigation for the unavoidable impacts that would occur. Impacts to fish populations and habitat (including listed species) are acknowledged in the DEIS and its technical appendices, yet no compensatory mitigation is recommended to compensate for these impacts. The DEIS and technical appendices should commit to compensatory mitigation for unavoidable impacts.
- 394-186 BPA is obligated to acknowledge and meet the intent of local regulations, including sensitive areas provisions. For example, King County requires other public utilities such as Puget Sound Energy to compensatorally mitigate every tree removed from wetland and riparian habitats during operation and maintenance of their transmission system. The DEIS and technical appendix should commit to similar or other adequate and appropriate compensatory mitigation to meet the intent of local sensitive areas provisions.
- The DEIS and technical appendix should acknowledge that all pertinent plans, BMPs, and methods mentioned in this section would meet SPU standards and be subject to SPU approval for all areas within CRW.
- "To minimize potential impacts to fisheries habitat from clearing of vegetation:
BPA would site the transmission line to minimize clearing of riparian vegetation..."*
- 394-187 Locating the proposed transmission line ROW alternatives appear to be relatively fixed. Information presented in the BA on the location of project facilities for the proposed action also suggests these features are relatively fixed. Therefore, siting the line to minimize clearing of riparian vegetation is unlikely. The DEIS, its technical appendices, and associated permitting documents need to present a complete and consistent description of the proposed action.
- "Culverted crossings in areas where fish are present would be designed to achieve appropriate flow and depth for fish passage and would be large enough to prevent clogging with debris."*
- 394-188 How large would these be? It seems unlikely that absolute prevention of debris clogging would be achieved. What about maintenance of culverts? The DEIS and technical appendix should describe the process for determining the size and location of culverts, and should disclose who will be responsible for maintaining roads and culverts. The DEIS and technical appendix need to present a complete and consistent analysis of fisheries and potential impacts.
- To minimize the potential for increases in fine sediment delivery to streams:
"...In areas that could be susceptible to erosion, BPA would stabilize the site or road using a variety of methods, which may include riprapping or mulching."*
- 394-189 Mulching is not likely to stabilize the site or road, although it could provide some temporary reduction in sedimentation. Riprapping along waterbodies is generally not a desirable form of bank stabilization, except where absolutely necessary to protect built structures. In such cases, King County has required compensatory mitigation for the use of riprap. The DEIS and technical appendix should describe the compensatory mitigation to be implemented should riprap be used.
- "BPA would site towers and roads appropriately, use sediment and erosion control methods during construction, and minimize clearing of riparian vegetation."*
- 394-190 The DEIS and technical appendix should describe these project components. Information provided in the BA suggests that BPA has conducted sufficient design engineering for the proposed action as to be able to describe these components in detail. The DEIS' s "trust us" approach is not satisfactory for this proposed action.

- They are not, due to (relatively) warm waters throughout the Raging River Watershed. However, the U.S. Fish and Wildlife Service does not regard the absence of high-quality bull trout habitat as proof of their absence from the Watershed; for example, it is conceivable that an anadromous individual could ascend the Raging River to the project area, in spite of the absence of suitable spawning habitat in the Raging River headwaters. These and related considerations are discussed in greater detail in the Biological Assessment for the proposed project. The USFWS did conclude that the project would not affect bull trout (U.S. Fish and Wildlife Service, February 23, 2002).
- 394-179 See response to Comment 394-081.
- 394-180 Areas of soil erosion would be expected along steep banks of a high-energy stream that is incising, such as was described for a section of Rock Creek. All but one of the soil units mapped along the southern and eastern flanks of Brew Hill, which Alternative 1 would cross, are indicated by the US Soil Conservation Service (presently referred to as the Natural Resource Conservation Service) to have a slight erosion hazard. An area of moderate soil erosion hazard is mapped in the headwaters of Rock Creek (soil unit 274, Welcome Loam, Figure 5, Sheet 2 of 3, Geology, Soil, Climate, and Hydrology Technical Report). For more information, see Appendix F of the FEIS.
- 394-181 Please see response to Comment 394-179.
- 394-182 Sedimentation is recognized as an effect in many parts of the Fisheries Technical Report (revised Appendix A) and is discussed at length in Section 4.1.1, Impacts Common to all Alternatives.
- 394-183 Thank you for your comment. However, in the absence of supporting data, this information is not sufficiently credible to be incorporated into the technical analysis.
- 394-184 No bull trout spawning areas have been identified in western Washington at elevations of less than 2,000 feet. Section 4.1.1.1 of the revised Fisheries Technical Report (Appendix A) provides an appropriate citation.

"BPA uses several standard methods to minimize erosion and sedimentation associated with transmission line construction."

394-191 | The DEIS and technical appendix should describe these "standard methods."

"Except at stream crossings, roads would be constructed outside of the riparian corridors of streams,"

394-192 | Does this mean the HCP 300 ft buffer? The DEIS and technical appendix should define what is intended by "riparian corridors."

"BPA would comply with the standards and guidelines established in the Record of Decision (ROD) for vegetation management (BPA 2000)."

394-193 | The DEIS and technical appendix should include a summary. It is not reasonable for readers to obtain and read the ROD.

"To avoid potential impacts to fish from acoustic shock"

394-194 | Specifically, "working within WDFW windows" is missing.

4.1.1.3 Cumulative Impacts

394-195 | There is no mention of cumulative impacts relative to the existing transmission line ROW. Clearing of the existing ROW has resulted in loss of LWD recruitment, reduced shading to streams, and probably increased erosion. Yet the analysis in this report does not address the cumulative effects that the proposed transmission ROW would have to these already existing impacts. This comment applies to all the Cumulative Impacts assessments in the DEIS and its technical documents.

4.1.1.4 Unavoidable Effects, Irreversible, or Irrecoverable Commitment of Resources
"Even with BMPs to control erosion, road construction would likely cause some fine sediment to enter nearby streams. This effect could be minimized by consistent monitoring, especially during storm events, and by proper maintenance of road and stream crossings."

394-196 | No monitoring program is described anywhere in the DEIS or this technical appendix that would address sediment input to streams. Unless BPA is committed to implementing such a monitoring program, this reference should be eliminated and BPA's intent to do no such monitoring should be disclosed. However, the DEIS and technical appendix should describe commitments to avoiding, minimizing, and correcting erosion problems.

"This effect could be minimized by consistent monitoring, especially during storm events, and by proper maintenance of road and stream crossings."

394-197 | Is BPA committing to such monitoring and maintenance?

"..... because water temperatures are generally too high to support bull trout ..."

394-198 | The DEIS and technical appendix need to provide data or appropriate reference to support these conclusions.

4.1.3 Alternative Transmission Line Impacts
4.1.3.1 Alternative 1 Impacts—

394-185 | Please see response to Comment 340-002.

394-186 | Please see responses to Comments 340-002 and 394-081.

394-187 | See response to Comment 394-103.

394-188 | See response to Comment 394-084. Sizing and design of drainage culverts is also described in Section 4.6.2.2 of the SDEIS. Section 4.4.2.1 also contains design guidelines for culverts.

394-189 | The only riprap that would be used would be 6-inch light riprap as ditch lining associated with access road construction. The road where it would be used is located outside of any delineated wetlands and is not along a stream.

394-190 | The SDEIS includes more design information. BPA knows of no mortality issues involving avian species with its existing Raver-Echo Lake power line in the project. All proposed facilities (towers, access roads and substation expansion) have been sited in uplands, and BPA would prepare an erosion and sediment control plan as required by the National Pollutant Discharge Elimination System, to control stormwater runoff until the site has become 70 percent stabilized, as required by the permit. BPA would file the stormwater permit with EPA, and also file a notice of termination at the time the temporary stormwater erosion control devices would be removed. BPA would also try to minimize the removal of any riparian vegetation.

394-191 | Section 4.4.2.1 of the SDEIS describes a variety of mitigation measures that will be imposed to control erosion during and after construction.

394-192 | Section 9.0 of the Fisheries Technical Report (Appendix A) includes a glossary that defines technical terms such as "riparian."

394-193 | The Vegetation Management ROD is available upon request and can also be found on the internet at www.efw.bpa.gov/cgi-bin/PSA/NEPA/SUMMARIES/VegetationManagement_EISO285. It is not difficult to obtain.

"Construction of Alternative 1 would result in the clearing of 33 ac. within 300 ft. of potentially fish-bearing streams, and 12 ac. within 100 ft. of potentially fish-bearing streams. About 2,900 ft. of stream would be within the cleared ROW."

394-199 | This generalized accounting of clearing includes no site-specific information. There is no information presented about how much clearing is associated with what stream crossing. The DEIS and technical appendix need to present a complete and consistent analysis of fisheries and potential impacts.

**Cumulative Impacts—
Stream Temperature:**

"Proposed vegetation clearing would not comply with riparian shade protections called for by either the Washington Forest Practices Rules or the CRW HCP, and may result in local peak stream temperatures exceeding metabolic optima for salmonids. In streams only utilized by resident salmonids, this would constitute a moderate impact. In the three streams potentially utilized by threatened salmonid species (Cedar River, Raging River, and Rock Creek), this could constitute a high impact... The third stream, Rock Creek, would be crossed in a headwaters area and would be very unlikely to be utilized by chinook salmon (which avoid such narrow, high-gradient streams) or bull trout (which do not spawn in such warm streams). These considerations may result in a low impact to threatened species, but this conclusion cannot be confirmed until the extent of clearing needed in the affected areas is known."

394-200 | This section needs to disclose that Rock Creek will likely have coho salmon, a species proposed for listing. It should receive protection equivalent to listed species, and therefore rates as a **high** impact. Also, this environmental analysis is not clear with regard to the extent of clearing. The results of this analysis can not be evaluated. The DEIS and technical appendix need to assume a specific level, presumably a maximum level, of clearing for a review of the analysis to be possible. The DEIS and technical appendix need to present a complete and consistent analysis of fisheries and potential impacts.

LWD Recruitment:

"Currently, LWD recruitment is protected by provisions of the Washington Forest Practices Act and the Cedar River and WDNR HCPs that ensure retention of riparian forest buffers 100 to 300 ft. wide. Proposed vegetation clearing would not comply with those protections and may result in reduced LWD recruitment and resulting adverse impacts to in-stream fish habitat."

394-201 | No attempt is made to quantify how much stream would be affected by clearing of these buffer areas. SPU has estimated that approximately 1,800 ft of Rock Creek is within 300 ft of the cleared right of way. Streams that run parallel to the ROW will have more impact. The DEIS and technical appendix need to present a complete and consistent analysis of fisheries and potential impacts.

"Because no herbicides would be used in vegetation control within 400 ft. of streams and none would be used in the CRW, cumulative effects of toxic substances from the power line would be unlikely even when combined with other sources in the watersheds."

394-202 | Again, are there any toxics (metals) leaching off the lines or towers? The DEIS and technical appendix should evaluate the potential for such leaching, and the associated risks to water quality.

**4.1.3.2 Alternative 2
Impacts—**

The Alternative 2 ROW would be 9 mi. long and cross 11 fish-bearing (Type 1, 2, or 3) streams and an unknown number of non-fish-bearing (Type 4 or 5) streams.

394-194 | As noted in Section 4.1.1.2 of the Fisheries Technical Report (Appendix A), impacts due to acoustic shock would be avoided by doing any required blasting when vulnerable life history stages are not present.

394-195 | The existing transmission line was considered in the cumulative effects evaluation. The cumulative effects evaluation in Section 4.0 of the Fisheries Technical Report (Appendix A) was revised to make this clear.

394-196 | BPA intends to conduct a water turbidity monitoring program of the Cedar River, prior to, during, and following the completion of construction activities. Although the details of the monitoring program have not been worked out, the landowner's input (SPU) would be sought in how such a monitoring program would be conducted.

394-197 | BPA is committed to conducting water turbidity monitoring to assure that its activities would not affect the water quality of the Cedar River Municipal Watershed; although the terms of such a monitoring program has not yet been determined.

With respect to maintenance activities, BPA tries to maintain all of its facilities on an as needed basis and has developed a long-term maintenance agreement with SPU for access road maintenance in the CRMW.

394-198 | Section 4.1.1.4 of the revised Fisheries Technical Report (Appendix A) provides an appropriate citation.

394-199 | Areas potentially affected by clearing at stream crossings are all identified in Figure 3 of the Fisheries Technical Report (Appendix A). Areas potentially affected by clearing of riparian forest are listed in Table 4 of the report. BPA was unable to obtain access to the CRW to gather site-specific clearing information, so that data was unavailable.

394-200 | The revised Fisheries Technical Report (Appendix A) acknowledges that potential coho salmon use of Rock Creek. However, coho salmon is not a listed species under the ESA and NMFS has found that listing is "not warranted." Therefore, it is

- 394-203 | Descriptions of segments E, F, and G (the difference from Alternative 1) only identify the Cedar River – yet 2 additional stream crossings are numbered here compared to Alternative 1. The DEIS and technical appendix need to present a complete and consistent analysis of fisheries and potential impacts.
- “New roads would cross two fish-bearing streams, requiring that culverts or bridges be built.”
- 394-204 | Where would these features be located? Previous sections have not identified them. Reviewers are unable to assess environmental impacts without knowing where these new crossings would be.
- 4.1.3.3 Alternative 3
Cumulative Impacts—
Stream Temperature:**
“The one stream potentially utilized by threatened salmonid species, the Cedar River, runs in a relatively deep canyon where little vegetation clearing may be required—in this case, a low impact would be expected for threatened species. If extensive clearing were required, however, this would result in a high impact.”
- 394-205 | As mentioned above, the DEIS and technical appendix need to be specific about anticipated environmental impacts. Reviewers need to know if this extensive clearing will or will not occur to be able to assess the impacts of the proposed action.
- Table 5*
- 394-206 | This table contains incorrect information. For example, based on data provided in Burton (1999), the earliest confirmed sighting of Chinook salmon in the Cedar River is August 18. Based on data in Burton (1997), the latest recorded steelhead spawning is June 11, and the latest date of completion of steelhead spawning is August 11. The DEIS and its environmental analyses should be based on correct information on the affected natural resources. This table should be revised to include correct information. (Burton, Karl. 1997. Cedar River steelhead monitoring program annual report. Seattle Public Utilities.) (Burton, Karl. 1999. Temporal and spatial distributions of Cedar River Chinook salmon spawning activity. Seattle Public Utilities.)
- Also, this or another table should address lamprey species in the same manner.
- 4.1.3.6 Access Roads
Cumulative Impacts—**Because all roads in the project area are currently managed to avoid delivery of fine sediment to fish-bearing streams, cumulative impacts due to roads would be low under each of the action alternatives.
- 394-207 | This statement is unclear. Not all roads in the project area are currently designed or managed to avoid delivery of fine sediment to streams. Also, it is SPU’s opinion that BPA currently does not manage the roads it uses in the CRW such that delivery of fine sediment to fish-bearing streams is avoided. Roads in the CRW are the most significant sources of sediment to streams. Adding more than 1.5 mi of new roadway and impervious surface is a clear and significant cumulative impact. The DEIS and technical appendix need to state clearly what is meant by this statement and acknowledge the significant role of roads in contributing sediment to streams. SPU believes the cumulative impacts of adding such new roads are greater than “low.”
- 4.2 Operation and Maintenance Impacts
4.2.1 Impacts Common to All Action Alternatives
4.2.1.1 Impacts**
“... routine monitoring of the transmission line.”
- 394-208 | In addition, BPA should be “on call” for response if notified of a problem or need for maintenance at any time by SPU.
- Appendix A SPU Comments.doc | Page 13 of 14 | ; 09/05/01
- not evaluated as “equivalent to listed species.” Further details on potential effects to chinook and coho salmon, and bull trout, are available in the biological assessment for the Proposed Action. Because detailed designs have not been prepared, information on the planned extent of riparian clearing is not available.
- 394-201 | See response to Comment 394-199. BPA assumed that the maximum potential amount of clearing would be necessary, and impacts were evaluated on the basis of this assumption.
- 394-202 | See response to Comment 394-175.
- 394-203 | Potential impacts to streams resulting from the Proposed Action are detailed in Section 4.0 of the Fisheries Technical Report (Appendix A).
- 394-204 | As is shown in Figure 3 of the Fisheries Technical Report (Appendix A), the two new roads are located at crossings “9” and “10” in Segment “E.” Segment E is a part of Alternative 2, not the Proposed Action. BPA has designed its access road system to avoid constructing any new roads across fish-bearing streams.
- 394-205 | All streams would be spanned. BPA is proposing a double-circuit option at the Cedar River crossing to reduce clearing.
- 394-206 | Section 4.1.3.3 of the Fisheries Technical Report (Appendix A) has been revised to include this information. Details about potential impacts to lamprey species is presented in the Biological Assessment for the Proposed Action.
- 394-207 | BPA would design and maintain all roads to avoid or minimize fine sediment delivery to streams. It is true that some roads may occur in the project area that are neither used nor maintained by BPA. Such roads represent existing conditions and their future use or maintenance was not evaluated as part of the Proposed Action. As noted in the Fisheries Technical Report (Appendix A), the new roads would be constructed in accordance with a number of mitigation measures and would have a “low” impact. It is agreed that in the absence of such mitigation measures, the impact of the new roads might not be “low.”

"During routine maintenance, BPA would also inspect roads, identify potential erosion problems, and correct any erosion problems identified."

394-209 | An earlier section suggested that inspections would need to be done after storms.

5.3.1 CRW HCP

394-210 | The DEIS and technical appendix should clearly acknowledge that the proposed action does not comply with riparian and stream protection provisions specified in the City's HCP.

394-208 BPA personnel are readily available to address any problem or need for maintenance.

394-209 The Fisheries Technical Report (revised Appendix A) does not contain any references to road inspection after storms.

394-210 Section 4.1.1.1 of the Fisheries Technical Report (revised Appendix A) states that vegetation clearing that is not performed in accordance with established regulatory standards is assumed to have a moderate or high impact on fish resources. As noted in the text, three different regulatory standards may apply. One of these is the Cedar River Watershed HCP (City of Seattle 2000). On other lands within the project area, the WDNR HCP (1997) or Washington Forest Practices Rules (WFPB 2000) may apply.