

I-5 Corridor Reinforcement Project

Final Environmental Impact Statement

Volume 3C: Comments and Responses (Communications 14601–14701)
DOE/EIS – 0436

Bonneville Power Administration

Cooperating Agencies:

**U.S. Army Corps of Engineers, Oregon Energy Facility Siting Council,
Washington Energy Facility Site Evaluation Council, Cowlitz and Clark Counties, Washington**

February 2016

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Comments and Responses

Volume 3C

Communication Log Numbers 14601 - 14701

Each comment form, email, letter or other type of correspondence (collectively referred to as communications) was given an identifying log number when it was received (e.g., 14100). Breaks in the number sequence are a result of communications logged during the comment period that were not comments on the Draft EIS. In some cases, duplicate communications (such as petitions and form letters) were later combined and assigned the same log number. Each communication is divided by subject or issue into individual comments. For example, 14444-2 is comment number 2 of communication 14444. BPA received 662 communications on the Draft EIS and 2,859 comments were identified in these communications.

All comments received on the Draft EIS and BPA's responses to these comments are provided in their entirety in Volume 3 (Volume 3A through 3H). Each page of comments is followed by a page of BPA responses to the comments. Due to the number of comments received, Volume 3 has been divided into eight parts for the purposes of printing and managing electronic file sizes (Volume 3A through 3H). The range of log numbers and page numbers found in each volume is included in Table 1 - Volume Contents for reference.

How to Review Comments and Responses

Communications are ordered consecutively by log number in the report. Please refer to Table 2 in the Introduction of Volume 3 for a list of all communications submitted by each commenter and the page number where the communication can be found in Volume 3A through 3H. If BPA's response to a comment refers back to an earlier response, use Table 1 to find the referenced log number. An online comment response search tool is also available at <http://www.bpa.gov/Projects/Projects/I-5/Pages/Search-Comments.aspx>.

Table 1 - Volume Contents

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14093 – 14379	3A	1 - 402
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14601

From: noreply@bpa.gov
Sent: Wednesday, March 13, 2013 11:50 PM
Subject: BPA I5 Comment Submission Confirmation
Attachments: BPA Comment.docx

Thank you for submitting your comments on the Bonneville Power Administration's draft environmental impact statement (EIS) for the I-5 Corridor Reinforcement Project. All comments submitted between November 13, 2013 and noon on March 25, 2013 will be responded to in the final EIS, which is expected in 2014.

A copy of your information, as submitted using our online form, is included below for your records. If you provided your contact information and submitted a question we can answer at this time, you will receive a response. Your contact information will also be added to our project mailing list. All comments including names will be processed and then posted on BPA's website at www.bpa.gov/goto/i-5

Sincerely,
Bonneville Power Administration

Name: Linda S Watson
Organization: A Better Way for BPA
E-mail:
Phone:
Address:

Group type: Private citizen

Please ADD me to the mailing list.

Comment:

14601-1

Dear BPA, I have been reading a lot about this and since no one (individual residences, businesses and even the government) wants this on their land or to have above ground new lines. Why cannot the BPA do underground lines following the exact same path as the existing above ground lines and or follow existing lines? I know they say it is too expensive and they worry about if we were attacked they want alternative placement of lines but they are spending a lot of money fighting everyone and taking so long in the planning phase. They would save a lot, not having to buy land, buy easements and complete environmental studies and meet environmental requirements. I am sure you have heard and conveyed this but I just needed to vent... Please see the attached letter. Best Regards, Linda Watson

14601-1 Please see the response to Comment 14283-1.

14601

March 13, 2013

RE: Bonneville Power Administration, I-5 Corridor Reinforcement Project
Double-circuit towers on wetlands and Oregon alternatives

14601-2 To Whom It May Concern:

I am writing you today because I believe Bonneville Power Administration (BPA) did not provide a full range of alternatives, including complete and substantive analyses both quantitatively and qualitatively as required by law in any Environmental Impact Statement.

Double-circuit towers not studied

Under a Freedom of Information Act (FOIA) request to BPA asking for studies on double-circuit towers on wetlands along its West alternative (BPA-owned existing right-of-way), we received a response stating there were "no documents responsive to our request."

In 2009 BPA told my community that putting towers side-by-side along their West alternative would be a reliability problem. They told us using their West alternative would be putting all their eggs in one basket if an airplane hit the lines or if there were a terrorist attack.

On August 18, 2011, there was a response to several questions from Maryam Asgharian, a BPA contact person for this project. One question that was asked was "Has there ever been a tower collapse or line failure along their existing easement (West alternative). Her response was "**We** have not seen a tower collapse along this line. We have seen insulators fail or be vandalized. If this occurs, it would likely be along one span (between two towers), rather than the whole line. Once we are aware of an issue like this we can repair it within hours."

14601-3 There is clearly not much of a reliability problem based on the 70-year history of this transmission corridor.

Using BPA's West alternative would save 74 million dollars by BPA's estimate. This would also minimize the impact to the environment. Double circuiting through wetlands would result in zero long-term net loss of wetlands. BPA's new double-circuit design reduces the perceived health risks, as found on BPA's web site¹ and in their Draft Environmental Impact Statement² (DEIS) for the I-5 Corridor Reinforcement Project.

¹ BPA Engineers Build A Better Tower, Saving Millions: <http://www.bpa.gov/news/newsroom/Pages/BPAengineers-build-a-better-tower-saving-millions.aspx>

² <http://www.bpa.gov/Projects/Projects/I-5/Pages/Draft-EIS.aspx>

BPA's new double-circuit tower design

☐ Uses fewer towers: "4 per mile in some places"

☐ Costs less: "saves BPA an average of \$18,000 to \$270,000 per tower"

☐ Uses less right-of-way and creates less Electromagnetic Field levels: as noted on page 3-section 3.2.1 Tower Types in the DEIS.

Double circuiting for the entire right-of-way would place towers on the center of the right-of-way instead of near the edges, which would increase the distance from homes, businesses, and schools, would use half as many towers and would not require removal of as much vegetation along the edge of the existing corridor.

Pearl Alternatives (Oregon) not given a thorough Environmental Assessment as required under the National Environmental Policy Act.

14601-4 For approximately ten years, the I-5 Corridor Reinforcement Project was a study of Oregon (Pearl) and Southwest Washington (Troutdale) alternatives. In 2009, just days before an announcement went to the public, BPA made the decision to not carry the Pearl alternatives through a full Environmental Assessment and made the decision to only study the Troutdale alternatives. In late 2009, a FOIA request was submitted for the Agency Decision Framework (Version 6)³ discussing the prematurely dropped Pearl alternatives. From that documentation I learned that BPA planned to not let the Pearl alternatives "go public" for many reasons, most of

14601-2 Please see the response to Comment 14596-1.

14601-3 Please see the response to Comment 14460-1.

14601-4 Please see the response to Comment 14596-3.

14601

which made little sense.

Two examples are the following:

1. BPA states the Pearl alternatives would impact 3,100 landowners, whereas the Troutdale alternatives impacts 7,700 landowners. Since the Pearl alternatives would impact less than half the number of landowners, why did BPA drop it?

2. BPA states concerns regarding a new river crossing at the Columbia River in Longview,

"requiring very tall towers up to 450 feet tall." This should not be a concern because the existing transmission towers crossing the Columbia River in Longview are over 450 feet tall.

Both the Troutdale and Pearl alternatives had similar scenarios, as stated in the Agency Decision Framework (Version 6).

"All Pearl routing alternatives would need to go through some residential areas," "would go through managed timber lands," "would go near or through established wildlife areas and near or on private airstrips,"

14601-4

http://abetterway4bpa.org/index.php?option=com_docman&task=cat_view&gid=92&Itemid=77

However, in the decision to only study the Troutdale alternative BPA stated that **"The Pearl alternatives do not offer a route on existing right of way, whereas the Troutdale plan does."**

In that case why didn't BPA choose an existing right-of-way, the West alternative, for its preferred alternative? I think this is the most reasonable choice. If BPA persists in its decision to waste millions of dollars and hundreds of acres and invade, take, and devalue the properties of private landowners by building a new transmission corridor, then it should also be considering the Pearl alternatives to find the route least damaging to private property owners and the environment.

BPA wrote **"a new line in either corridor** (Pearl or Troutdale) would fully meet our electrical needs," and **"proposing and thoroughly analyzing up to 88 segments** (Pearl alternative and Troutdale alternative) will send a clear message that we considered all possible routes and have **selected the very best alternative."** I believe this is exactly what BPA should have done.

The current Draft Environmental Impact Statement is flawed without a full range of alternatives included. To provide a full range of reasonable alternatives, BPA should perform a complete environmental review and analysis of the Pearl alternatives and double-circuit towers on wetlands along the West alternative.

14601-5

The Army Corps of Engineers must issue a permit for this project. BPA has only requested to permit one alternative, the Central Alternative, Option 1. Since BPA chose the Troutdale alternatives over the Pearl alternatives because Troutdale has an existing right-of-way, I demand that BPA requests a permit from the Army Corps of Engineers for its existing right-of-way, the West Alternative, using double circuit towers through wetlands.

14601-6

I am asking that you work with me to ensure all alternatives, including double circuit towers and Pearl alternatives are given a complete and thorough analysis, both quantitatively and qualitatively by bringing these issues to light and commenting to Bonneville Power

Administration and the Army Corps of Engineers during the public comment period for the Draft Environmental Impact Statement. Both of these comment periods end at noon, March 25.

14601-7

Sincerely,

Linda S Watson

cc: David Bricklin, Bricklin and Newman LLP

14601-5 Please see the response to Comment 14596-4.

14601-6 Please see the response to Comment 14460-1.

14601-7 Please see the responses to Comments 14596-1 through 14596-5.

BPA I-5 Corridor Reinforcement Project Voicemail**Received: 03/14/2013 12:38 PM**

14602-1 I'm calling concerning, I sent an online comment form to you and it indicated that I would receive an e-mail confirmation and copy of the letter that I sent you, but I never got it and it's been about a month since I sent it. So I do have a question about that and wondering if you would call me back with a reply as to why I never received a copy of my letter that I sent you or any comments. So my phone number is . My name is Carolyn. Thank you.

14604

BPA I-5 Corridor Reinforcement Project Voicemail**Received: 03/15/2013 8:47 AM**

14604-1 My name is Rose Wetmore and I'm at area code-telephone number area code . I'd like to be – I haven't paid that much attention to what's going on with this, completely. I've gotten things in the mail and I'd like to have somebody to kind of update me what's going on with this completely. I'm in the corridor, I think, for it, but I'm not sure – I really don't know completely what's going on. I was just wondering how far along it is. If somebody could contact me, I would appreciate it. Thank you.

- 14602-1 BPA contacted the commenter and asked that she resubmit her comments since her original comments were not found in the comment database.
- 14604-1 BPA contacted the commenter and provided an update on the project and schedule.

March 13, 2013

**RE: Bonneville Power Administration, I-5 Corridor Reinforcement Project
Double-circuit towers on wetlands and Oregon alternatives**

To Whom It May Concern:

14605-1 I am writing you today because I believe Bonneville Power Administration (BPA) did not provide a full range of alternatives, including complete and substantive analyses both quantitatively and qualitatively as required by law in any Environmental Impact Statement.

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In 2009 BPA told my community that putting towers side-by-side along their West alternative would be a reliability problem. They told us using their West alternative would be putting all their eggs in one basket if an airplane hit the lines or if there were a terrorist attack.

14605-2 On August 18, 2011, there was a response to several questions from Maryam Asgharian, a BPA contact person for this project. One question that was asked was “Has there ever been a tower collapse or line failure along their existing easement (West alternative). Her response was “*We have not seen a tower collapse along this line. We have seen insulators fail or be vandalized. If this occurs, it would likely be along one span (between two towers), rather than the whole line. Once we are aware of an issue like this we can repair it within hours.*”

There is clearly not much of a reliability problem based on the 70-year history of this transmission corridor.

Using BPA’s West alternative would save 74 million dollars by BPA’s estimate. This would also minimize the impact to the environment. Double circuiting through wetlands would result in zero long-term net loss of wetlands. BPA’s new double-circuit design reduces the perceived health risks, as found on BPA’s web site¹ and in their Draft Environmental Impact Statement² (DEIS) for the I-5 Corridor Reinforcement Project.

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14605-1 Please see the response to Comment 14596-1.

14605-2 Please see the response to Comment 14460-1.

14605

- 14605-2 BPA's new double-circuit tower design
- Uses fewer towers: "4 per mile in some places"
 - Costs less: "saves BPA an average of \$18,000 to \$270,000 per tower"
 - Uses less right-of-way and creates less Electromagnetic Field levels: as noted on page 3-2, section 3.2.1 Tower Types in the DEIS.

Double circuiting for the entire right-of-way would place towers on the center of the right-of-way instead of near the edges, which would increase the distance from homes, businesses, and schools, would use half as many towers and would not require removal of as much vegetation along the edge of the existing corridor.

Pearl Alternatives (Oregon) not given a thorough Environmental Assessment as required under the National Environmental Policy Act.

For approximately ten years, the I-5 Corridor Reinforcement Project was a study of Oregon (Pearl) and Southwest Washington (Troutdale) alternatives. In 2009, just days before an announcement went to the public, BPA made the decision to not carry the Pearl alternatives through a full Environmental Assessment and made the decision to only study the Troutdale alternatives. In late 2009, a FOIA request was submitted for the Agency Decision Framework (Version 6)³ discussing the prematurely dropped Pearl alternatives. From that documentation I learned that BPA planned to not let the Pearl alternatives "go public" for many reasons, most of which made little sense.

- 14605-3 Two examples are the following:
1. BPA states the Pearl alternatives would impact 3,100 landowners, whereas the Troutdale alternatives impacts 7,700 landowners. Since the Pearl alternatives would impact less than half the number of landowners, why did BPA drop it?
 2. BPA states concerns regarding a new river crossing at the Columbia River in Longview, "requiring very tall towers up to 450 feet tall." This should not be a concern because the existing transmission towers crossing the Columbia River in Longview are **over** 450 feet tall.

Both the Troutdale and Pearl alternatives had similar scenarios, as stated in the Agency Decision Framework (Version 6).

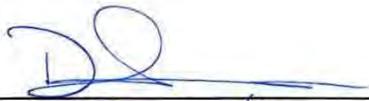
"All Pearl routing alternatives would need to go through some residential areas," "would go through managed timber lands," "would go near or through established wildlife areas and near or on private airstrips,"

³ http://abetterway4bpa.org/index.php?option=com_docman&task=cat_view&gid=92&Itemid=77

14605-3 Please see the response to Comment 14596-3.

- 14605-3 However, in the decision to only study the Troutdale alternative BPA stated that *"The Pearl alternatives do not offer a route on existing right of way, whereas the Troutdale plan does."*
- In that case why didn't BPA choose an existing right-of-way, the West alternative, for its preferred alternative? I think this is the most reasonable choice. If BPA persists in its decision to waste millions of dollars and hundreds of acres and invade, take, and devalue the properties of private landowners by building a new transmission corridor, then it should also be considering the Pearl alternatives to find the route least damaging to private property owners and the environment.
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- 14605-4 The current Draft Environmental Impact Statement is flawed without a full range of alternatives included. To provide a full range of reasonable alternatives, BPA should perform a complete environmental review and analysis of the Pearl alternatives and double-circuit towers on wetlands along the West alternative.
- 14605-5 The Army Corps of Engineers must issue a permit for this project. BPA has only requested to permit one alternative, the Central Alternative, Option 1. Since BPA chose the Troutdale alternatives over the Pearl alternatives because Troutdale has an existing right-of-way, I demand that BPA requests a permit from the Army Corps of Engineers for its existing right-of-way, the West Alternative, using double circuit towers through wetlands.
- 14605-6 I am asking that you work with me to ensure all alternatives, including double circuit towers and Pearl alternatives are given a complete and thorough analysis, both quantitatively and qualitatively by bringing these issues to light and commenting to Bonneville Power Administration and the Army Corps of Engineers during the public comment period for the Draft Environmental Impact Statement. Both of these comment periods end at noon, March 25.

Sincerely,



Derek Nies

cc: David Bricklin, Bricklin and Newman LLP

14605-4 Please see the response to Comment 14596-4.

14605-5 Please see the response to Comment 14660-1.

14605-6 Please see the responses to Comments 14596-1 through 14596-5.

14606

BPA I-5 Corridor Reinforcement Project Voicemail**Received: 03/17/2013 5:03 PM**

14606-1

Hi, I recently obtained some additional information regarding the proposed I-5 corridor preferred line being located on the west side of Silver Star Mountain at the headwaters of Salmon Creek. It came to my attention in a conference on public radio on the 13th. It was an international conference of pediatricians citing the teratogenic or mutagenic effects for the World Health Organization being slightly nuanced and insufficient to represent the pediatric and unborn fetuses and whatnot.

It went on to talk about how environmental toxins get concentrated into the water, then they grow up into the trees, the trees are burned for fuel, the ash is used in the garden, which we all do here to mitigate the acidic soil. And with each subsequent generation, the concentrations of toxins are becoming higher and higher. So I'm thinking the potential liabilities of using chemicals along this corridor in anyway being that this is a watershed filled with artesian springs. Many neighbors get their water directly from surface water, in Dole Valley wells as shallow as 12 feet. One of my neighbors up the road drinks right from a spring. And if the power should go out, I and many other neighbors can just go to the stream behind us and dip from the stream, as well as the animals of course and the plants that the animals eat, and that are also used by many because they are eco-friendly in salads and whatnot. We don't want our watershed contaminated, so if for some reason they absolutely have to go over ground, could there please be something in there about in perpetuity, never using chemicals if it should be involved in the High Valley which is rimmed by Bells Mountain, Spotted Deer Mountain, Elk horn, Little Elk horn, and Finn Hill. It's a basin formed in the glacial recession filled with Artesian springs everywhere that people drink from.

The best suggestion would be to go east from the High Valley to avoid all this potential liability and clean-up, not to mention, in this international conference of Pediatricians, they said sometimes the teratogenic effects and mutagenic effects aren't seen for a few generations as they concentrate in the soil, and in the wood, and in the food, and in the people and animals that they eat, which many people hunt here.

14606-2

And, you know, there are those that are litigious, so the potential costs of the job, the liability costs, could far exceed the project costs if this is done through an area that is a natural watershed. In the event of an extended power outage - which it might be a good idea as an environmental assessment agency to attend one of the disaster preparedness meetings that occurs every three months by the emergency responders. In fact, the pastor from the Venersborg church is one of those emergency responders. He could tell you when the meetings are, his name is Rob Sisson. He could tell you when the next meeting is and what the scenarios

1 of 3

14606-1 Please see the response to Comment 14160-1.

14606-2 Please see the response to Comment 14160-1.

14606

- 14606-2 are for the shift off-shore, the plate tectonic thing that's overdue, that's projected to send a tidal wave up the Columbia River and break the Bonneville Dam, and damage subsequent dams, which would certainly interrupt our power and cause us all to be further drinking surface water.
- 14606-2 Which, like I said, my neighbors up the road even at higher elevation, they don't even have a well. They drink from an artesian that comes right out of the ground. And a lady in Dole Valley, her well is only 12 feet deep. Well depths are accessible through the sanitation department, where you get the map of your septic field. They can also send you out maps of how deep everybody's wells are, exactly at what depth they hit water. So you might have a 110 foot well, but it begins to take on water at 39 feet. So when you get rain for days, it comes muddy out of your faucet. We do have surface water even as high as 800, 1200, 1300 feet. Many of us are drinking from surface water.
- 14606-3 So that's the comment of the day. I thought you ought to be aware of that. The electromagnetic frequency issue, the jury's still out. Many countries don't allow kids to use cell phones because there's evidence in both directions and why not err on the side of safety where our children are concerned, since it's noted to have more effect on developing cells.
- 14606-4 And then there's the lynx tracking project of course, which now I think is monitored by the Fish and Wildlife, because the BLM had to scale down. I think that's out of the Lacey office. I recently talked to a lady as far south as Camas who has seen the lynx and I [voicemail cut off].

Received: 03/17/2013 5:21 PM

- 14606-5 Hi, I ran out of space on my other comment, but I had a little bit more information to give you. And that is I left off with the EMF, you know, potential consequences to developing cells, which are, you know – I think it's England where kids aren't allowed to use cell phones legally because the jury's still out. And within the last couple years even in this country studies have been cited in publications, they just seem to go back and forth and can't agree. So I think the best thing is to err on the side of safely on behalf of our children. But I had two other thoughts.
- 14606-6 One is - Here in the High Valley, most of us are on some kind of hilltop, we got a nice wrap-around view that add 20,000 dollars to your property value. If you no longer have a nice wrap-around view that automatically takes off 20,000 dollars because you no longer have a beautiful view. But unsightly towers, not to mention possibly unhealthy towers.

2 of 3

14606-3 Please see the response to Comment 14328-6.

14606-4 Comment noted.

14606-5 Please see the response to Comment 14328-6.

14606-6 Please see the response to Comment 14140-2.

14606

14606-7 And the other thing is, there was a study done here using a blue dye test to see where our water was coming from. And it was used apparently - one of the old timers at church told me about this. He said you can find it at Douglas County water and sewer authority "blue water" or something like that. It was a technique used to chase the contaminants source in some other Douglas County, Georgia, I don't know where. But anyway, it wouldn't be hard to figure out where the contaminants were coming from if in fact later on down the line our water was shown to be contaminated. And the teratogenic effects onto subsequent generations are often not seen you know, for a while. But at the breeding rate of some of these sectors of society here - WHEW it's quick, you know. You've got 36 year-old grandmothers. You'd be seeing it, ya know, after not too long. And that would be a horrible thing to impose on people in this particular watershed where people drink right from the surface water. And I think I mentioned Dole Valley wells as shallow as 12 feet deep.

14606-8 This is Lisa Lenzini, Thank you very much for being so helpful and receptive and helping the BPA determine their environmental issues. I think over in the DNR land, east of Spotted Deer Mountain would be preferable. Course, I don't know what's over there or who it would impact. But this watershed has water so close to the surface, many residents drink right from the surface, including my neighbor up the road, and she's going to call you too. That this would not be a good place to have to use anything chemical, much less ruin everybody's beautiful view and take away from their property values, notably 20,000 dollars for a view, that's the outer end of the market.

14606-9 Okay, thank you so much for your consideration and we really appreciate the work you're doing on behalf of our county on this project.

14606-10 And Katy Fulton was just a terrifically amicable resource who responded to an earlier comment last year that occurred to me about the lynx and the threatened species and the federal threatened species and the lynx tracking project and all that, which now we know it's from Woodland all the way down to Camas. And I'm telling everybody, report it, report it, report it because they're very excited that it's repopulating down this far. But little lynx under electric power lines like that, who knows? Two friends of mine in high school developed cancer living near high voltage power lines and one had her leg amputated and the other got leukemia and it terminated her professional skating career and she barely survived the chemo. So it's tough on developing cells and the brain keeps developing through about age 25.

14606-11

Okay, so that's all for today. Thank you for your consideration. Bye.

3 of 3

- 14606-7 Please see the response to Comment 14160-1.
- 14606-8 Please see the response to Comment 14160-1.
- 14606-9 Comment noted.
- 14606-10 In Washington, lynx are found in high-elevation forests of northeastern Washington in Okanogan, Chelan, Ferry, Stevens, and Pend Oreille counties. A breeding population also occurred historically in the southern Cascades near Mount Adams. Habitat analyses suggest that lynx require at least four months of continuous winter snow cover. Such conditions are not present along the Preferred Alternative corridor and Lynx are not documented to occur within the study area.
- 14606-11 Please see the response to Comment 14328-6.

14607

JAMES S MCGUIRE

03/16/2013

14607-1 I'm very pleased that you have moved away from the West Alternative. These lines would ruin my neighborhood. It never made any sense to impact that many homes and schools. I strongly urge the BPA to move forward with creative options to not impact people and destroy their property values.

14608

MICHAEL COOK

03/16/2013

14608-1 The east route minimizes property owner impact. The west route maximizes property owner impact. The tower need to go east.

14609

STEVE M BRISTOW

03/16/2013

14609-1 We are very concerned about health risks associated with living in close proximity to high voltage power lines as would anyone looking to buy our home. Please do not use the West Alternative for current or future power line enhancements, as this would have adverse impact on too many people.

Thanks for your consideration.

The Bristow Family.

14610

EMILY K WOOD

03/16/2013

14610-1 West does NOT work, we can not have our children put at risk and ruin everything we own. use the forst land or dont build at all. this is unfair.

14607-1 Comment noted.

14608-1 Comment noted.

14609-1 Comment noted.

14610-1 Comment noted.

BPA I-5 Corridor Reinforcement Project Voicemail**Received: 03/18/2013 9:59 AM**

14611-1 | Hi, my name is Judy Calcote. My phone number is area code . And I'm trying to figure out where the reinforcement project is in relation to property we own in Clark County. I'm having a hard time determining exactly where it is since we don't live on the property. The address is . If you could give me a call and let me know how I can figure out where the paths of these power lines are going to be in relationship to this property, I would appreciate it. Once again, my phone number is . Thank you, bye.

14612

SAMANTHA E MARTINEZ

03/16/2013

14612-1 | As a 13 year old who would be exposed to the west alternative please dont make me have to live under the lines. I have read that in other states laws prohibit this type of power line to be close to children. I know if you build we wont be able to afford to move and that I could get sick, why would you risk doing that to me?

14613

KAYE A NELSON

03/16/2013

14613-1 | Please keep the lines away from the populated areas of the current right-of-way. Do not endanger the lives of the nearby residents, especially the children in the area. Separate line locations further east offer more security and provide multiple benefits for the grid overall.

14611-1 BPA contacted the commenter and helped her locate her property in relation to the project.

14612-1 Please see the response to Comment 14328-6.

14613-1 Comment noted.

14614

HOWARD W TAYLOR, LORI A TAYLOR

03/16/2013

March 13, 2013

RE: Bonneville Power Administration, I-5 Corridor Reinforcement Project

Double-circuit towers on wetlands and Oregon alternatives

To Whom It May Concern:

14614-1

I am writing you today because I believe Bonneville Power Administration (BPA) did not provide a full range of alternatives, including complete and substantive analyses both quantitatively and qualitatively as required by law in any Environmental Impact Statement.

Double-circuit towers not studied

Under a Freedom of Information Act (FOIA) request to BPA asking for studies on double-circuit towers on wetlands along its West alternative (BPA-owned existing right-of-way), we received a response stating there were "no documents responsive to our request."

In 2009 BPA told my community that putting towers side-by-side along their West alternative would be a reliability problem. They told us using their West alternative would be putting all their eggs in one basket if an airplane hit the lines or if there were a terrorist attack.

14614-2

On August 18, 2011, there was a response to several questions from Maryam Asgharian, a BPA contact person for this project. One question that was asked was "Has there ever been a tower collapse or line failure along their existing easement (West alternative). Her response was "We have not seen a tower collapse along this line. We have seen insulators fail or be vandalized. If this occurs, it would likely be along one span (between two towers), rather than the whole line. Once we are aware of an issue like this we can repair it within hours."

There is clearly not much of a reliability problem based on the 70-year history of this transmission corridor.

Using BPA's West alternative would save 74 million dollars by BPA's estimate. This would also minimize the impact to the environment. Double circuiting through wetlands would result in zero long-term net loss of wetlands. BPA's new double-circuit design reduces the perceived health risks, as found on BPA's web site and in their Draft Environmental Impact Statement (DEIS) for the I-5 Corridor Reinforcement Project.

BPA's new double-circuit tower design

- Uses fewer towers: "4 per mile in some places"
- Costs less: "saves BPA an average of \$18,000 to \$270,000 per tower"

14614-1 Please see the response to Comment 14596-1.

14614-2 Please see the response to Comment 14460-1.

- Uses less right-of-way and creates less Electromagnetic Field levels: as noted on page 3-2, section 3.2.1 Tower Types in the DEIS.
- 14614-2 Double circuiting for the entire right-of-way would place towers on the center of the right-of-way instead of near the edges, which would increase the distance from homes, businesses, and schools, would use half as many towers and would not require removal of as much vegetation along the edge of the existing corridor.
- Pearl Alternatives (Oregon) not given a thorough Environmental Assessment as required under the National Environmental Policy Act.
- For approximately ten years, the I-5 Corridor Reinforcement Project was a study of Oregon (Pearl) and Southwest Washington (Troutdale) alternatives. In 2009, just days before an announcement went to the public, BPA made the decision to not carry the Pearl alternatives through a full Environmental Assessment and made the decision to only study the Troutdale alternatives. In late 2009, a FOIA request was submitted for the Agency Decision Framework (Version 6) discussing the prematurely dropped Pearl alternatives. From that documentation I learned that BPA planned to not let the Pearl alternatives “go public” for many reasons, most of which made little sense.
- Two examples are the following:
1. BPA states the Pearl alternatives would impact 3,100 landowners, whereas the Troutdale alternatives impacts 7,700 landowners. Since the Pearl alternatives would impact less than half the number of landowners, why did BPA drop it?
 - 14614-3 2. BPA states concerns regarding a new river crossing at the Columbia River in Longview, “requiring very tall towers up to 450 feet tall.” This should not be a concern because the existing transmission towers crossing the Columbia River in Longview are over 450 feet tall.
- Both the Troutdale and Pearl alternatives had similar scenarios, as stated in the Agency Decision Framework (Version 6).
- “All Pearl routing alternatives would need to go through some residential areas,” “would go through managed timber lands,” “would go near or through established wildlife areas and near or on private airstrips,”
- However, in the decision to only study the Troutdale alternative BPA stated that “The Pearl alternatives do not offer a route on existing right of way, whereas the Troutdale plan does.”
- In that case why didn’t BPA choose an existing right-of-way, the West alternative, for its preferred alternative? I think this is the most reasonable choice. If BPA persists in its decision to waste millions of dollars and hundreds of acres and invade, take, and devalue the properties of private landowners by building a new transmission corridor, then it should also be considering the Pearl alternatives to find the route least damaging to private property owners and the environment.

14614-3 Please see the response to Comment 14596-3.

14614-3 BPA wrote “a new line in either corridor (Pearl or Troutdale) would fully meet our electrical needs,” and “proposing and thoroughly analyzing up to 88 segments (Pearl alternative and Troutdale alternative) will send a clear message that we considered all possible routes and have selected the very best alternative.” I believe this is exactly what BPA should have done.

14614-4 The current Draft Environmental Impact Statement is flawed without a full range of alternatives included. To provide a full range of reasonable alternatives, BPA should perform a complete environmental review and analysis of the Pearl alternatives and double-circuit towers on wetlands along the West alternative.

14614-5 The Army Corps of Engineers must issue a permit for this project. BPA has only requested to permit one alternative, the Central Alternative, Option 1. Since BPA chose the Troutdale alternatives over the Pearl alternatives because Troutdale has an existing right-of-way, I demand that BPA requests a permit from the Army Corps of Engineers for its existing right-of-way, the West Alternative, using double circuit towers through wetlands.

14614-6 I am asking that you work with me to ensure all alternatives, including double circuit towers and Pearl alternatives are given a complete and thorough analysis, both quantitatively and qualitatively by bringing these issues to light and commenting to Bonneville Power Administration and the Army Corps of Engineers during the public comment period for the Draft Environmental Impact Statement. Both of these comment periods end at noon, March 25.

Sincerely,

Howard and Lori Taylor

[address]

cc: David Bricklin, Bricklin and Newman LLP

14614-4 Please see the response to Comment 14596-4.

14614-5 Please see the response to Comment 14460-1.

14614-6 Please see the responses to Comments 14596-1 through 14596-5.

14615

MICHELE HUFFMAN

03/16/2013

I support the BPA preferred alternative based on the following issues which I consider to be of paramount importance: it represents the least impact to citizens and high population areas, as mentioned in the EIS, separating the new corridor from the existing corridor increases reliability and reduces the chances that both power lines would be damaged concurrently in the event of adverse weather or other sources of damage.

14615-1

While no one wants a large power line close to their homes, it is impossible to eliminate all impacts. I would prefer to see BPA delay construction of this line as long as possible, pursuing alternatives to this larger overhead power line that would have fewer impacts. If this line must be built, I am glad to see that BPA has chosen an alternative that represents true compromise between multiple competing interests and has chosen an alternative, that, while not the least expensive, will have the least impact to people living close to the power line.

I live close to the existing power line (option 9) and my family would be significantly impacted by an additional power line in this corridor. As mentioned in the EIS, option 9 would have the largest impact to communities living near the corridor. The preferred alternative represents an option that will impact significantly fewer people. In addition, placing the power line on lands that have low populations and are already dedicated to resource extraction (private and state forests) represents more efficient use of natural resources -- the power line will not significantly reduce the amount of land available for timber, and other resource uses are compatible with this development. This is a better alternative than siting the power line in sensitive native landscapes.

14615-1 Comment noted.

14616

MARGARET STAPENHORST TRUSTEE

03/16/2013

As a resident along the existing ROW, I was somewhat relieved to learn that the Central Alternative was the preferred route. It does seem like a reasonable compromise .

14616-1 My concerns: The Gray Line could have been chosen affecting the least amount of people/property owners.

The other routes have not been removed from consideration which leaves us all wary of any last minute switcheroos by BPA.

14616-2 Since this new line will be the first in the area in 60+ years, I am pleased that a new ROW will be created providing opportunities for future growth and development of the grid.

Had the existing ROW been chosen, I believe we would have been revisiting this issue in the foreseeable future.

- 14616-1 Though it is neither the least expensive alternative nor the easiest to construct, the Preferred Alternative provides a way forward that would limit project impacts and disruptions across a broad array of communities and neighbors, manages costs to ratepayers, and achieves the goal of preserving transmission system reliability for everyone in the I-5 area in the future.

The selection of alternatives for consideration in the EIS, including the Preferred Alternative, included the need to balance many factors, such as managing costs for regional ratepayers, BPA's role as responsible environmental stewards, and meeting the goal of operating a reliable transmission system. BPA considered many factors when identifying its Preferred Alternative. Please see BPA's issue brief at: <http://www.bpa.gov/Projects/Projects/I-5/Documents/BPA-I-5-Issue-Brief-Preferred-Alternative-Nov2012.pdf>.

- 14616-2 Comment noted.

14617

DONALD BENZ

03/16/2013

14617-1 Using the West approach will impact the most homes, both present and future. I understand one consultant advised the lines need to be over 1500 feet from homes. That can not be accomplished by anything but the far East alternative. Avoid private property and put the lines through the forest.

14618

JEFF D PETERSEN

03/17/2013

14618-1 This issue has been hashed and rehashed but the bottom line is that due to all the aesthetics factors, property devaluation and health risks the placement of the new line should be placed where the least amount of impact to people lives.

14617-1 Comment noted.

14618-1 Comment noted.

14619

RANDY W HUIBREGTSE

03/17/2013

14619-1

As a private citizen in the Clark County area, I would prefer to see this new transmission line routed east and north of Clark & Cowlitz Counties. It's my understanding these lines will not directly benefit Clark County residents, yet their existence will certainly directly affect Clark County property values and future income from timber lands. If you must construct these new towers, please do so using as much public land as possible...NOT private land, and certainly not through high density population areas.

14619-1 Please see the response to Comment 14395-2 concerning why a potential northeastern route was considered but eliminated from detailed study in the EIS.

Please see the response to Comment 14494-2 regarding who would benefit from this proposed project.

Please see the response to Comment 14120-2 regarding property values.

Chapter 11, SocioEconomics discusses timber revenue impacts.

14620

AMY K ZENGER-NEIMAN

03/17/2013

- 14620-1 I am not in favor of any proposal that creates a new right-of-way through private property over using the existing right-of-way BPA already owns. Landownership is a constitutional right. The right-of-way BPA already owns is adequate for this project and most people that purchased their land with the knowledge that the right-of-way existed.
- 14620-2 This process has not protected those of us that live on large pieces of property in more rural and more environmentally sensitive areas. The impact this project would have on our properties is
- 14620-3 immeasurable! We have sensitive wildlife (ex. eagles, salamanders and native wildflowers).
- 14620-4 Additionally, the aesthetic value of our properties will be forever negatively impacted. Not only are these 500kV powerlines a visual unpleasing to say the least, but the sound they create (especially on wet
- 14620-5 days) is loud and obnoxious. The access that these powerlines would provide to trespassers is
- 14620-6 unacceptable. It doesn't take much to see that dumping, camping and dirt bike riding occur below these powerlines. This puts our more remote, rural routes at greater risk from trespass, vandalism, and theft.
- 14620-7 It is clear that those of us living in more rural areas have been considered easy targets for bullying. Simply because we tend to be more affluent and less vocal does not mean that our landowner rights any
- 14620-8 less valid. Do not scar our landscape and forever change these more wild areas. There is a better choice. Use your existing right-of-ways or don't build this transmission line at all!
- 14620-9 The Army Corps of Engineers must issue a permit for this project. BPA has only requested to permit one alternative, the Central Alternative, Option 1. Since BPA chose the Troutdale alternatives over the Pearl
- 14620-10 alternatives because Troutdale has an existing right-of-way, I demand that BPA requests a permit from the Army Corps of Engineers for its existing right-of-way, the West Alternative, using double- or triple-circuit towers through wetlands or for the entire length of the West Alternative.

- 14620-1 Comment noted.
- 14620-2 Comment noted.
- 14620-3 Mitigation measures for protection and restoration of wildlife habitat are listed in Table 3.2, Mitigation Measures Included as Part of the Project, and Section 18.2.8, Recommended Mitigation Measures.
- 14620-4 Please see the response to Comment 14331-4.
- 14620-5 Please see the response to Comment 14331-2.
- 14620-6 Please see the response to Comment 14457-2. Vandalism is discussed in Section 10.2.2.2, Operation and Maintenance.
- 14620-7 Comment noted.
- 14620-8 Comment noted.
- 14620-9 BPA has submitted a permit application to the Corps of Engineers for the Central Alternative using Central Option 1 because that is BPA's Preferred Alternative.
- 14620-10 Please see the response to Comment 14460-1.

14621

CARLOS PONT

03/18/2013

Dear Mr. Wright, I urge you to disclose, consider and act accordingly to the following:

- 14621-1 1) Demonstrate without any reasonable doubt the need for the new power lines. Plain words, not even one technicality
- 2) Provide a clear forecast of the increase of Federal, State and private revenues that would come from the increase of power transmission volume.
- 14621-2 3) Provide clear and detailed maps as requested by many citizens. Maps should be accessible online and allow entering and address which would return the map of the location and the possibility to zoom out to show the closest proposed new power line and the exact distance from the address entered.
- 14621-3 4) Use public and timber land to build the new line.
- 5) Move as East as possible affecting none or the minimum amount of homeowners.
- 14621-4 6) If homeowners are affected, provide reasonable and generous financial compensation that would allow them to decide if they want to stay in their property or relocate without affecting their current financial situation and lifestyle. Work which each individual affected owner on a one-on-one basis.
- 14621-5 7) THE WEST ROUTE SHOULD BE DIMISSED IMMEDIATELY.
- Thank you for your consideration.

- 14621-1 BPA's proposed I-5 Project would build a 500-kV transmission line that would increase the electrical capacity and transfer capability of BPA's transmission system in the local area.

This project is not intended to increase revenues; the project is intended to improve reliability in southwest Washington and northwest Oregon. Chapter 1 of the EIS describes the need for the project. Below is a short description of the need for the project.

The Portland, Oregon-Vancouver, Washington metropolitan area is the major electric load center in northwest Oregon and southwest Washington. High concentrations of residential, commercial, and industrial loads are served by hydroelectric dams on the Columbia River, thermal plants along the I-5 corridor, and wind turbines operating east of the Cascades in Washington and Oregon. Electricity flows from these generating resources to the metro area over BPA's and other utilities' transmission lines.

Demand is growing in the Portland, Vancouver (including Camas), and Longview areas combined. The entire area draws on the transmission lines along the I-5 corridor in much the same way. While population and therefore electricity demand in northwest Oregon is higher than in southwest Washington, improved transmission is just as important to provide reliable power in the greater Vancouver area as it is the Portland area. This is because the power grid operates as an integrated system. Since there is very limited local generation, the area receives most of its power through the I-5 corridor transmission system and is especially reliant on the 500-kV system at times of peak summer demand.

The project is needed to increase the electrical capacity and transfer capability of the transmission system to respond to increasing system congestion and system reliability concerns. The congestion on the transmission system is caused by increased demand in southwest Washington and northwest Oregon and transfers through the I-5 corridor. The increased demand is due to increases in population and corresponding electrical usage in the area. Increased transfers are due to the available resource location relative to the greatest demand areas.

BPA has an obligation to construct new transmission facilities in order to maintain a reliable transmission system. BPA currently meets its obligations in the I-5 corridor. However, future load growth and potential changes to reliability criteria would cause the existing transmission system to be inadequate.

- 14621-2 An interactive map is on the project website at www.bpa.gov/goto/i5 and has the features the commenter requests.

To BPA Representatives of 500KV Project

- 14622-1 **There continues to be comments regarding the “lower cost” of the Western route alternative to building the new 500KV lines.**
This is short sighted and these comments only look at the initial upfront costs.
- Placing the new lines adjacent to the old lines poses serious potential risk for total power failure to the whole of the Northwest, California and Canada.**
- Any unforeseen, but realistic natural or human-created disaster (hurricane, airplane crash, terrorist attack) on these parallel towers would not only cost exponentially more but create human turmoil seen in other similar situations.**
- 14622-2 **The most recent scenario was the Sandy storm in Manhattan which shut down the NYU Langone Medical Center. The backup generator was in the same building as the main power generator and both were disabled resulting in the evacuation of hundreds of patients and over a billion dollars of unforeseen expense.**
Separating the 500KV lines from the current towers may initially cost more than the current supposed savings but it makes logical sense when considering the multiple costs and devastation that is a realistic catastrophic potential.
- 14622-3 **Please find some quotes from articles which talk to this subject.**
- Sincerely yours,**
- Fred Santolucito**

14621-3 Comment noted.

14621-4 Please see the response to Comment 14566-9.

14621-5 Comment noted.

14622-1 Comment noted.

14622-2 Comment noted.

14622-3 Thank you for providing this information.

14622_attachment

CBS/AP/ November 2, 2012, 12:13 PM

What caused generators to fail at NYC hospitals?

There are few places in the U.S. where hospitals have put as much thought and money into disaster planning as New York. And yet two of the city's busiest medical centers failed a fundamental test of readiness during super storm Sandy this week: **They lost power.**

**Sandy-Damaged NYU Langone Medical Center Partially Reopens
Updated December 27, 2012 12:44pm**

The 700-bed hospital has been largely shuttered since [Hurricane Sandy](#) hit on Oct. 29, when some 15 million gallons of water flooded the hospital's basement and sub-basement and forced the immediate evacuation of hundreds of patients.

"Destruction was everywhere," said Sen. [Charles Schumer](#), who toured NYU Langone in the days after the storm. **"You saw multimillion-dollar machines that had saved thousands of lives totally battered and gone."**

But Schumer said Thursday's reopening would send 20,000 workers back to their jobs and would restore care for many patients who rely on the hospital, which is facing a recovery that is **expected to cost roughly \$1 billion**. **"This is just the beginning," said Schumer, who is pushing an aid bill through the Senate that includes roughly \$1.2 billion** earmarked for the hospital. "We have a long way to go to making this hospital whole."

A Flooded Mess That Was a Medical Gem By [ANEMONA HARTOCOLLIS](#) Published: November 9, 2012

Dr. Robert I. Grossman, dean and chief executive of NYU Langone, looking pale and weary — as if he were, indeed, struggling to hold back the FUD — **estimated that the storm could cost the hospital \$700 million to \$1 billion.** His estimate included cleanup, rebuilding, lost revenue, interrupted research projects and the cost of paying employees not to work.

As the hurricane raged, the East River filled the basement of the medical center, at 32nd Street and First Avenue, knocked out emergency power and

2 of 3

14622_attachment

necessitated the evacuation of more than 300 patients over 13 hours in raging wind, rain and darkness. It disrupted medical school classes and shut down high-level research projects operating with federal grants.

Dr. Grossman said, he could only theorize as to why the generators had shut down. All but one generator is on a high floor, but the fuel tanks are in the basement. The flood, he said, was registered by the liquid sensors on the tanks, which then did what they were supposed to do in the event, for instance, of an oil leak. They shut down the fuel to the generators.

3 of 3

14623

RICK SAFRANSKI

03/15/2013

Comments on BPA Central Alternative

Property Owner: Rick and Mary Gail Safranski Segment: [parcel information] Total Acres: 278 March 15, 2013

Comments on Project in General

14623-1 Full Objection to BPA towers, wires, and roads on current Central Alternative
Draft EIS does not or only partially considers the following:

Economic Impact of Central Alternative

Home values in decline, due to towers, wires and roads

14623-2 Views being compromised or ruined, with no compensation

Removal of productive lands FOREVER from towers, wires and roads

Massive Tax will affect all county homeowners

14623-3 Inefficient routes: Routes for wires and roads are not laid out efficient thought out the route. Does not fully consider existing roads(especially timbered lands), or reduced impact to landowner. Looks like someone just drew it on a map, rather than deep project thought. What other parts of this project has been done poorly? After how many years?

14623-4 EMF Risks are a real concern. Wires must be located away from populated areas or never built. Does EMF offer health benefits? Or just risks? Will BPA and its management indemnify rate payers from any future legal action resulting fro this 500kv line? Why even take these risks, where alternatives exist.

14623-5 Counties impacted receive no power from new towers, lines and roads. Pay the price, but do not gain benefit. That is not reasonable or fair and a huge burden.

14623-6 Individual property owners should not be impacted, when there are alternatives that protect their property rights. Those rights, along with people safety must a be priority and have not been given appropriate weighting in the DEIS.

14623-7 If lines are to be built, they must be moved off the CA to non-population areas to the North and East.

14623-8 There is no excuse not to do so, if there is really a need for additional lines.

Page 2 Safranski Comments, BPA project

14623-9 Comments related directly to my Property:

14623-1 Comment noted.

Specific comments are addressed below.

14623-2 Please see the responses to Comments 14291-3, 14328-5 and 14674-1. Please also see Chapter 7, Visual Resources, which addresses impacts on views.

14623-3 Chapter 2, Facility Siting, Route Segments, and Action Alternatives, describes how BPA developed the routes and alternatives, and what factors were considered. Please see the responses to Comments 14097-1 and 14119-2.

14623-4 Please see the response to Comment 14328-6.

14623-5 Please see the responses to Comments 14316-2 and 14494-2.

14623-6 Comment noted. BPA believes that potential impacts to landowner property and personal safety from the proposed project have been sufficiently addressed in the Final EIS. Please see Chapters 5 and 11 concerning property impacts and Chapter 10 concerning public health and safety impacts.

14623-7 Comment noted. Please see the response to Comment 14289-3.

14623-8 Comment noted.

14623-9 Please see the response to Comment 14566-9.

- 14623-9 278 ac of high quality tree growing land. I already lose many acres due to RMZ, from the DNR rules. Cutting in towers, wires and roads as proposed, through my 2 parcels eliminate another 25 acres of productive lands. These lands will grow trees perpetually and provide taxes when cut to local governments. How will I, and my descendants, be compensated perpetually? Will I/they get annual payments forever? Why not? Have those costs been considered in the DEIS?
- 14623-10 My two parcels, according to Clark County, are buildable. Running towers, wires and roads, destroys the best views on both parcels. As I look out over Chalatchie Prairie, towards Mt. St. Helens, I will see towers, wires and roads. My large creek, in which the wires cross, will tower over a fish bearing stream and dammed beaver ponds. This part of the land will be damaged. I cannot even get a DNR permit to log there, yet BPA will mow the trees down. Who will want to stand there and enjoy the beauty with the ugly sight of 15 story towers and wires, as well as hearing a roaring buzz? I should not have to bear that cost to MY land.
- 14623-11
- 14623-12
- 14623-13 I will defend my property fully, and will not permit any trespassing from BPA. No compensation will be acceptable or accepted. Move off my land-period.
- 14623-14 Next door property- do not move there, as that is not acceptable to me as well.
- 14623-15 IN CONCLUSION: Move North and East: Use lower quality lands, some already State owned. Impact on industrial land owners, as a percentage of their land are way smaller than small private land owners. Do not beat up the small landowners or homeowners. Buy/USE their land, they will be happy, they buy and sell all the time. This is the only reasonable solution, and BPA has been told this many times, yet rejects it.
- Why keep forcing their will on Clark and Cowlitz Counties? People will support moving the lines to non-populated areas and the project can get completed without further delay. Why will BPA not do this and let the landowners move on to something else in their lives.

Sincerely,

Rick Safranski

- 14623-10 The visual assessment in Chapter 7, Visual Resources, acknowledges that the proposed project would create low-to-high impacts to visual resources for a number of residences.
- Please see the response to Comment 14171-10 for further explanation of the methodology used in the visual assessment.
- Economic impacts are addressed in Chapter 11, Socioeconomics, with property values addressed in Section 11.2.2.5, Property Values.
- 14623-11 Please see the responses to Comments 14523-3 and 14533-4.
- 14623-12 Please see the response to Comment 14328-5. See also Chapter 8, Electric and Magnetic Fields and Chapter 9, Noise. Property owners whose land the project crosses would have an opportunity to negotiate compensation with BPA, and these impacts would be discussed on a case-by-case basis with individual landowners during easement negotiations.
- 14623-13 Comment noted. BPA would not access properties without securing legal access rights.
- 14623-14 Please see the response to Comment 14097-1.
- 14623-15 Section 4.7.2.4, Northeastern Alternative, North of Silver Lake, Washington, explains why potential routes farther east were considered but eliminated from detailed study. BPA believes the reasons provided in the EIS for eliminating these alternatives are sufficient.

14624

LISA K HELTEMES, ROGER W HELTEMES

03/16/2013

Mr. Korsness,

14624-1 We strongly urge you to consider upgrading current towers to double-circuit towers as per BPA's recent engineering quest that proves these new transmission towers do more with less...quoted directly from the BPA article itself, "The savings will grow quickly as BPA upgrades other transmission lines because each new tower costs less, goes up faster and new lines may need fewer towers per mile. These savings will flow to utilities and other BPA transmission customers, and from there to homeowners and businesses throughout the Northwest." Does the public know this? It would be amazing if the number of existing towers could actually be reduced by upgrading to this double-circuit tower technology!! The public needs to know this. Practice what you preach. Don't wastefully destroy any more land unless every last option is considered, explored, and exhausted. Be frugal, and yield to nature, including its inhabitants (animals, plants AND yes, human beings too). Our children look at towers as if they are giant steel monsters. We live at 1000ft elevation. Lightning storms pass by nearly every year, and most certainly would strike one of these towers that you're considering placement near ours and our neighbor's homes. We are a small community up here, but we are people too and are greatly affected

14624-2 by the decision to run the pathway of power lines near and thru our land.

14624-3

14624-4 This is where we live. How can you fully understand an environmental impact primarily from an aerial view of the land and where a house sits on that land?

Aerial photos and Topo maps don't tell the whole story.

14624-5 Towers running nearby and thru this area would disrupt our lives more than you realize. We work hard for what we have, and chose to build our home here because of its peaceful tranquility, away from industrialization. This area is our "get-away", our "sanctuary". We enjoy our nature walks and being outdoors. All of our nature trekking pathways will be crossed by power lines and within a few feet of towers if the current preferred alternative is put into action. The nature walks we have grown accustomed to over the past 14 years would no longer be possible without crossing within a few feet of these "monster" towers and under power lines emitting EMF's at even greater strengths than what our home will be subjected to 24 hours/day by these same power lines that will be less than 1000ft away.

14624-6

14624-7 It's a nightmare to think about, resulting in stress and countless sleepless nights for us and probably many other potentially affected property owners and their families.

14624-8 To upgrade existing towers to double-circuit towers seems like the most logical cost-saving, environmentally friendly and humane thing to do. No additional land acquisition required, no more environmental impacts to consider, and substantial cost savings for EVERYONE.

- 14624-1 Please see the response to Comment 14460-1.
- 14624-2 Section 3.4, Overhead Ground Wire and Counterpoise, describes lightning protection for the line. Any lightning charge would be directed to the overhead ground wire and dissipated into the earth through a series of wires called counterpoise.
- 14624-3 Comment noted.
- 14624-4 Comment noted. BPA has also completed field work as part of the analysis.
- 14624-5 Please see the response to Comment 14328-5.
- 14624-6 Comment noted.
- 14642-7 Please see the response to Comment 14328-6.
- The EMF information specific to this area is provided in Table 7 and Figure 2 of Appendix F.
- 14624-8 Please see the response to Comment 14460-1.

Thank you,

Roger & Lisa Heltemes

[attached letter]

March 16, 2013

RE: Bonneville Power Administration, I-5 Corridor Reinforcement Project Double-circuit towers
on wetlands and Oregon alternatives To Whom It May Concern:

14624-9

I am writing you today because I believe Bonneville Power Administration (BPA) did not provide a full range of alternatives, including complete and substantive analyses both quantitatively and qualitatively as required by law in any Environmental Impact Statement.

Double-circuit towers not studied

Under a Freedom of Information Act (FOIA) request to BPA asking for studies on double-circuit towers on wetlands along its West alternative (BPA-owned existing right-of-way), we received a response stating there were "no documents responsive to our request."

In 2009 BPA told my community that putting towers side-by-side along their West alternative would be a reliability problem. They told us using their West alternative would be putting all their eggs in one basket if an airplane hit the lines or if there were a terrorist attack.

14624-10

On August 18, 2011, there was a response to several questions from Maryam Asgharian, a BPA contact person for this project. One question that was asked was "Has there ever been a tower collapse or line failure along their existing easement (West alternative). Her response was "We have not seen a tower collapse along this line. We have seen insulators fail or be vandalized. If this occurs, it would likely be along one span (between two towers), rather than the whole line. Once we are aware of an issue like this we can repair it within hours."

There is clearly not much of a reliability problem based on the 70-year history of this transmission corridor.

Using BPA's West alternative would save 74 million dollars by BPA's estimate. This would also minimize the impact to the environment. Double circuiting through wetlands would result in zero long-term net loss of wetlands. BPA's new double-circuit design reduces the perceived health risks, as found on BPA's web site and in their Draft Environmental Impact Statement (DEIS) for the I-5 Corridor Reinforcement Project.

BPA's new double-circuit tower design

- Uses fewer towers: "4 per mile in some places"

14624-9 Please see the response to Comment 14596-1.

14624-10 Please see the response to Comment 14460-1.

- 14624-10
- Costs less: "saves BPA an average of \$18,000 to \$270,000 per tower"
 - Uses less right-of-way and creates less Electromagnetic Field levels: as noted on page 3-2, section 3.2.1 Tower Types in the DEIS.
- Double circuiting for the entire right-of-way would place towers on the center of the right-of-way instead of near the edges, which would increase the distance from homes, businesses, and schools, would use half as many towers and would not require removal of as much vegetation along the edge of the existing corridor.
- Pearl Alternatives (Oregon) not given a thorough Environmental Assessment as required under the National Environmental Policy Act.
- For approximately ten years, the I-5 Corridor Reinforcement Project was a study of Oregon (Pearl) and Southwest Washington (Troutdale) alternatives. In 2009, just days before an announcement went to the public, BPA made the decision to not carry the Pearl alternatives through a full Environmental Assessment and made the decision to only study the Troutdale alternatives. In late 2009, a FOIA request was submitted for the Agency Decision Framework (Version 6) discussing the prematurely dropped Pearl alternatives. From that documentation I learned that BPA planned to not let the Pearl alternatives "go public" for many reasons, most of which made little sense.
- Two examples are the following:
1. BPA states the Pearl alternatives would impact 3,100 landowners, whereas the Troutdale alternatives impacts 7,700 landowners. Since the Pearl alternatives would impact less than half the number of landowners, why did BPA drop it?
 2. BPA states concerns regarding a new river crossing at the Columbia River in Longview, "requiring very tall towers up to 450 feet tall." This should not be a concern because the existing transmission towers crossing the Columbia River in Longview are over 450 feet tall.
- Both the Troutdale and Pearl alternatives had similar scenarios, as stated in the Agency Decision Framework (Version 6).
- "All Pearl routing alternatives would need to go through some residential areas," "would go through managed timber lands," "would go near or through established wildlife areas and near or on private airstrips,"
- However, in the decision to only study the Troutdale alternative BPA stated that "The Pearl alternatives do not offer a route on existing right of way, whereas the Troutdale plan does."
- In that case why didn't BPA choose an existing right-of-way, the West alternative, for its preferred alternative? I think this is the most reasonable choice. If BPA persists in its decision to waste millions of dollars and hundreds of acres and invade, take, and devalue the properties of private landowners by
- 14624-11

14624-11 Please see the response to Comment 14596-3.

- building a new transmission corridor, then it should also be considering the Pearl alternatives to find the route least damaging to private property owners and the environment.
- 14624-11 BPA wrote “a new line in either corridor (Pearl or Troutdale) would fully meet our electrical needs,” and “proposing and thoroughly analyzing up to 88 segments (Pearl alternative and Troutdale alternative) will send a clear message that we considered all possible routes and have selected the very best alternative.” I believe this is exactly what BPA should have done.
- 14624-12 The current Draft Environmental Impact Statement is flawed without a full range of alternatives included. To provide a full range of reasonable alternatives, BPA should perform a complete environmental review and analysis of the Pearl alternatives and double-circuit towers on wetlands along the West alternative.
- 14624-13 The Army Corps of Engineers must issue a permit for this project. BPA has only requested to permit one alternative, the Central Alternative, Option 1. Since BPA chose the Troutdale alternatives over the Pearl alternatives because Troutdale has an existing right-of-way, I demand that BPA requests a permit from the Army Corps of Engineers for its existing right-of-way, the West Alternative, using double circuit towers through wetlands.
- 14624-14 I am asking that you work with me to ensure all alternatives, including double circuit towers and Pearl alternatives are given a complete and thorough analysis, both quantitatively and qualitatively by bringing these issues to light and commenting to Bonneville Power Administration and the Army Corps of Engineers during the public comment period for the Draft Environmental Impact Statement. Both of these comment periods end at noon, March 25.

Sincerely,

Roger & Lisa Heltemes [address]

cc: David Bricklin, Bricklin and Newman LLP

14624-12 BPA believes it has provided a reasonable range of alternatives in the EIS to permit a reasoned choice and has adequately explained its reasons for eliminating certain alternatives from further consideration in the EIS, consistent with NEPA requirements.

Please also see the response to Comment 14460-1.

14624-13 Please see the response to Comment 14596-5.

14624-14 Please see the response to Comment 14624-12.

14625

LISBETH A SEIL

03/18/2013

14625-1 My husband, neighbors, and I were very relieved to learn that the BPA is favoring the Central route instead of the Western route! The Western route would severely impact property values and human health in more densely populated areas of Vancouver, and would set off a tempest of protests and lawsuits against the BPA. We applaud the BPA for favoring the more sensible Central option, and hope it moves forward with that plan!

14626

LYNN STIGLICH

03/18/2013

14626-1 Stop Towers Now and No Way BPA are two citizens groups opposing BPA's plans to erect new 500kV transmission lines through Clark and Cowlitz counties. I have assisted these groups in the past. Their message from the onset has been no new lines in populated areas. You might think these groups are a small minority with no real backing and few supporters, but you would be mistaken. A partial list of supporters in favor of locating new lines away from populated areas includes the Commissioners of Clark and Cowlitz counties, the City of Battleground, Senator Patty Murray, State Senators Don Benton, Joseph Zarelli and Craig Pridemore, State Reps Ed Orcutt and Jim Moeller, the Town of Yacolt, and Battle Ground and Hockinson school districts. Additionally many thousands of families opposed to the lines are busy working and raising their children. They have attended meetings, written letters and held signs.

14626-2 Given the concerns about health, real estate values and safety I'm not sure who would support the building of new lines close to schools, neighborhoods and privately owned land. Many folks have spoken up – let's hope you are hearing them.

I continue to be concerned about this project and respectfully request that you locate these towers far to the east away from populated areas, or not at all.

Lynn Stiglich

14625-1 Comment noted.

14626-1 BPA has received comments and spoken with members of Stop Towers Now and No Way BPA on multiple occasions. The comments and concerns these groups and other project stakeholders raise, are important for BPA to consider. BPA has considered project alternatives that would be located farther east, and recognizes there would still be advantages and disadvantages with potential impacts to homeowners. Other suggestions we have considered for this project also have advantages and disadvantages. BPA has considered these suggestions and their advantages and disadvantages, along with a variety of other factors, in identifying BPA's Preferred Alternative in the EIS. Please also see Section 4.9 of the EIS.

14626-2 Comment noted. Please also see the response to Comment 14626-1.

14627

From: noreply@bpa.gov
Sent: Saturday, March 16, 2013 4:44 PM
Subject: BPA I5 Comment Submission Confirmation
Attachments: Visual Impact Chapter 7 of the Draft EIS Table 7-3 .pdf

Thank you for submitting your comments on the Bonneville Power Administration's draft environmental impact statement (EIS) for the I-5 Corridor Reinforcement Project. All comments submitted between November 13, 2013 and noon on March 25, 2013 will be responded to in the final EIS, which is expected in 2014.

A copy of your information, as submitted using our online form, is included below for your records. If you provided your contact information and submitted a question we can answer at this time, you will receive a response. Your contact information will also be added to our project mailing list. All comments including names will be processed and then posted on BPA's website at www.bpa.gov/goto/i-5

Sincerely,
Bonneville Power Administration

Name: Cheryl K Brantley
Organization: A Better Way for BPA/Dole Valley Landowners' Coalition
E-mail:
Phone:
Address:

Group type: Special interest group

Please ADD me to the mailing list.

14627-1 **Comment:** To say there will be less visual impact on a new transmission corridor is false. Look at the attachment and then look us in the eyes and tell us we're wrong. The Draft EIS is flawed to the nth degree. We insist BPA comes forth with the truth in the Final EIS and corrects the inadequacies contained in the Draft EIS.

- 14627-1 The EIS acknowledges that the proposed project would affect visual resources in communities, natural areas, and near a large number of residences, with potential low-to-high impacts on these resources. Please see the response to Comment 14171-10 for further explanation of the methodology used in the visual assessment.

Through project design and mitigation measures, BPA has worked to minimize potential impacts to visual resources for all action alternatives. Mitigation measures are provided in Chapter 3, Project Components and Construction, Operation, and Maintenance Activities; Chapter 7, Visual Resources; and Appendix E.

14627-1

14627

Chapter 7 of the Draft EIS Table 7-3, the contrived notion that there will be more visual impact along the West alternative is ridiculous. To say there will be little impact to the environment or the viewscape by a new transmission corridor in the foothills of SW Washington is completely false. Just compare these pictures of a trail that will be destroyed with a trail that is already destroyed.

Bells Mountain Trail near Yacolt, WA, summer 2012, where new towers and lines are planned to traverse the landscape.



2 of 5

14627



3 of 5

14627-1 | The Appalachian Trail, July 2009, hiking trip where transmission towers and lines litter the trails.

14627



4 of 5

14627



5 of 5

From: noreply@bpa.gov
Sent: Saturday, March 16, 2013 6:10 PM
Subject: BPA I5 Comment Submission Confirmation
Attachments: East Fork of the Lewis River Eagles roost.pdf

Thank you for submitting your comments on the Bonneville Power Administration's draft environmental impact statement (EIS) for the I-5 Corridor Reinforcement Project. All comments submitted between November 13, 2013 and noon on March 25, 2013 will be responded to in the final EIS, which is expected in 2014.

A copy of your information, as submitted using our online form, is included below for your records. If you provided your contact information and submitted a question we can answer at this time, you will receive a response. Your contact information will also be added to our project mailing list. All comments including names will be processed and then posted on BPA's website at www.bpa.gov/goto/i-5

Sincerely,
 Bonneville Power Administration

Name: Cheryl K Brantley
Organization: A Better Way for BPA/Dole Valley Landowners' Coalition
E-mail:
Phone:
Address:

Group type: Special interest group

Please ADD me to the mailing list.

Comment:

East Fork of the Lewis River Eagles. Prove to us that they won't be scared away when BPA builds this project across their flight path. Prove to us that they won't collide with the new lines and towers.

14628-1

East Fork of the Lewis River, near to where BPA plans to build this project across the river.

14628

Eagles travel routinely above the river searching for food. They fly consistently back and forth during the day. Prove to us that they won't be frightened and scared away when the project is getting built across their flight path. They live here year round. Prove to us they won't collide into new transmission lines.



- 14628-1 Bald eagle surveys were completed by MB&G for BPA in 2011 and 2012. All action alternatives have areas of suitable bald eagle habitat. The Lewis River Winter Eagle Habitat priority area is identified and discussed in Chapter 18, Wildlife. Six documented occurrences of bald eagle nests and three WDFW bald eagle priority areas—the Gobar Creek Winter Eagle Site, the Lewis River Winter Eagle Habitat, and the Merwin South Shore Communal Night Roost—are within 1 mile of the Preferred Alternative.

If BPA decides to build the project, BPA would install appropriate bird flight diverters on overhead ground wires or fiber optic line in areas at high risk for bird collisions, such as at the crossing of the East Fork Lewis. The new line would be a 500-kV transmission line, which is easier for birds to see. In general, collision risk is low for bald eagles due to their excellent eyesight and flight maneuverability. These measures are discussed in Section 18.2 of Chapter 18, Wildlife.

14628



3 of 3

This page intentionally left blank.

From: noreply@bpa.gov
Sent: Saturday, March 16, 2013 7:00 PM
Subject: BPA I5 Comment Submission Confirmation
Attachments: One of our members wrote.pdf

Thank you for submitting your comments on the Bonneville Power Administration's draft environmental impact statement (EIS) for the I-5 Corridor Reinforcement Project. All comments submitted between November 13, 2013 and noon on March 25, 2013 will be responded to in the final EIS, which is expected in 2014.

A copy of your information, as submitted using our online form, is included below for your records. If you provided your contact information and submitted a question we can answer at this time, you will receive a response. Your contact information will also be added to our project mailing list. All comments including names will be processed and then posted on BPA's website at www.bpa.gov/goto/i-5

Sincerely,
Bonneville Power Administration

Name: Cheryl K Brantley
Organization: A Better Way for BPA/Dole Valley Landowners' Coalition
E-mail:
Phone:
Address:

Group type: Special interest group

Please ADD me to the mailing list.

Comment:

14629-1

One of our members wrote me and said: "Our family has owned property next to the Dole Valley bridge for 60 years. We've seen the Steelhead population dwindle over the years from hundreds to nearly none. When property owners along this part of the river go to the county GIS site to check on permits a habitat notice pops up first to alert us to the critical environment issues here. We all know that removing trees near rivers adds to temperature and silt that destroys the fish population. Federal money was spent to set up the fish restoration project that has been in place for years now. Is there any sense in spending federal money to destroy that same project?"

- 14629-1 BPA has included an analysis of restoration projects potentially affected by the action alternatives to Chapter 19, Fish. According to SalmonPort, the online project tracking system maintained by the Lower Columbia Fish Recovery Board, no restoration projects have been recorded for the reach crossed at V-5. Riparian restoration projects and stream nutrient enhancement (carcass placement) has occurred downstream of this crossing, but these projects would not be directly impacted by the stream clearing. This project is not expected to benefit fish production in the reach crossed at V-5.

14630

DAVID L BALLARD

03/17/2013

March 17, 2013

Mr. Mark Korsness, Project Manager I-5 Corridor Reinforcement Project Bonneville Power Administration

[address]

Dear Mr. Korsness,

14630-1 My name is David Ballard and I live on Vinemaple Road along the "P-Line" section of BPA's "Central Alternative," your preferred route for the "I-5 Corridor Reinforcement Project." In October 2010 I wrote a letter to you expressing my outrage with this selection and today I am reiterating those sentiments.

14630-2 My first reaction then was one of shock and incredulity and that hasn't changed today. How could the state and federal governments conspire to such a plan when directly to the east of my property line, and that of my neighbors, lay miles and miles of vacant state owned (DNR) land? How could these government agencies even consider imposing such a burden on private property owners and their children? The entire plan is unconscionable, to say the least.

14630-3 I am worried about the electromagnetic field (EMF) this project will create and the impact it will have on humans, wildlife and the general environment. I am worried I might be put at risk with such a powerful electric current so close to our property. What guarantees can BPA offer us to ensure there will be no problems if this project is built? Many of us are also concerned about the long term exposure to EMF. Some studies blame EMF for an increased risk of childhood cancer. What concrete steps will BPA take to make sure these risks are minimized? If EMF is safe, why wasn't the existing route, BPA's right of way, selected as the preferred route for this project?

14630-4 Vinemaple Road was really nothing more than a dirt/gravel road that neighbors pooled their funds together to pave the road. If BPA decides to access our road and properties we want to make sure BPA improves Vinemaple Road so it is left in a better condition than it was found. Heavy equipment and trucks will surely cause damage. It is only fair that BPA spend some money on infrastructure if BPA is going to use our private roads and driveways.

However, why would BPA even consider using our privately paid road for access to the P-Line when just a couple years ago DNR land was logged entirely independently of Vinemaple Road? A logging road was built to haul logs off DNR land, so why can't BPA use that road instead of our private road? The logging road is still there and could easily be reopened for BPA's purpose.

14630-5 Our neighborhood is beside state Department of Natural Resources land. The state created fish and wildlife buffers in place as part of the Oceanspray Timber Sale, which was completed in 2010. BPA now proposes to destroy that buffer and build these transmission lines practically right on top of some of the

14630-1 Comment noted.

14630-2 Please see the response to Comment 14097-1.

14630-3 Please see the response to Comment 14328-6.

The EMF information specific to this area is provided in Table 7 and Figure 2 of Appendix F.

Concerning how BPA identified its Preferred Alternative, please see the response to Comment 14472-3.

14630-4 Please see the response to Comment 14119-2.

14630-5 Please see the response to Comment 14097-1.

Table 3.2, Mitigation Measures Included as Part of the Project contains mitigation measures included in the project design. Section 18.2.8, Recommended Mitigation Measures identifies mitigation measures specific to wildlife. Through both project design, corridor siting, and mitigation measures, BPA has worked to minimize impacts on sensitive species and ecological areas.

- homes in our neighborhood. I would like to see BPA find a route that is not in such a sensitive ecological area, further to the east on DNR land for example
- 14630-5 BPA needs to do a complete wildlife inventory of this area. Trout swim in this fork of North Lacamas Creek; we also have Bald Eagles and many other migratory birds, bats, deer, salamanders, cougar, bears and a wide variety of other unique wildlife and plants. We want to make sure BPA spares no expense in protecting these sensitive areas if this configuration is chosen. Studies should be conducted which evaluate the danger the transmission lines and lattice towers will have on raptors and bats.
- 14630-6 Security is also an important issue for us. What steps will BPA be taking to ensure the general public has minimal access to the new transmission corridor? And what programs has BPA created to “hold harmless” property owners whose property or access becomes the focus of a lawsuit by a party injured by BPA infrastructure? Landowners should not be held responsible for anything that happens that might injure somebody if it’s related to this project.
- 14630-7 With a unified voice, our neighborhood opposes the proposed location of this portion of this project. I have attached a review of the Draft Environmental Impact Statement (DEIS); we make comments specifically on BPA’s findings, and we offer alternatives that will cause far less damage to the environment of the Vinemaple Road neighborhood.
- 14630-8 My letter two years ago stated that this is another example of government imposing its will at the expense of the citizenry. The proposal to build the towers on the edge of DNR land along our private property lines is an obvious attempt for DNR to preserve their own land, unencumbered with unsightly impediments such as transmission towers, so that their real estate value will substantially appreciate. DNR tells us that they want to preserve their land for recreation use, to be used by all-terrain vehicles. If this is true, does the state think that recreational land is more important than the welfare and health of an entire community? This argument seems so transparently false that we suspect that their real desire is to retain the value of their land, to the detriment of ours, so that they can sell it some time in the future for development at great profit.
- 14630-9 Please take all of our comments seriously. We are confident that if you read them and research our conclusions, you will realize the present configuration of the “P-Line” is catastrophic from an environmental standpoint. You will also see that we are presenting an alternative that does far less environmental damage and has far less impact on human beings. Please move the proposed towers further east, away from our homes.

Thank you for your consideration.

Sincerely,

David Ballard
[address]
[phone number]
[e-mail]

- 14630-6 Please see the responses to Comments 14242-1, 14457-2, and 14532-3.
- 14630-7 The referenced attachment with specific Draft EIS comments has been processed separately. Please see the responses to Comments 14714-1 through 14714-15.
- 14630-8 Please see the responses to Comments 14097-1, 14345-3, and 14630-2.
- 14630-9 Comment noted.

14631

FREDRIC J SANTOLUCITO

03/18/2013

14631-1

There continues to be comments regarding the “lower cost” of the Western route alternative to building the new 500KV lines.

This is short sighted and these comments only look at the initial upfront costs.

Placing the new lines adjacent to the old lines poses serious potential risk for total power failure to the whole of the Northwest, California and Canada.

Any unforeseen, but realistic natural or human-created disaster (hurricane, airplane crash, terrorist attack) on these parallel towers would not only cost exponentially more but create human turmoil seen in other similar situations.

14631-2

The most recent scenario was the Sandy storm in Manhattan which shut down the NYU Langone Medical Center. The backup generator was in the same building as the main power generator and both were disabled resulting in the evacuation of hundreds of patients and over a billion dollars of unforeseen expense.

Separating the 500KV lines from the current towers may initially cost more than the current supposed savings but it makes logical sense when considering the multiple costs and devastation that is a realistic catastrophic potential.

Sandy Article:

Dr. Robert I. Grossman, dean and chief executive of NYU Langone, looking pale and weary — as if he were, indeed, struggling to hold back the FUD — estimated that the storm could cost the hospital \$700 million to \$1 billion. His estimate included cleanup, rebuilding, lost revenue, interrupted research projects and the cost of paying employees not to work.

14631-3

As the hurricane raged, the East River filled the basement of the medical center, at 32nd Street and First Avenue, knocked out emergency power and necessitated the evacuation of more than 300 patients over 13 hours in raging wind, rain and darkness. It disrupted medical school classes and shut down high-level research projects operating with federal grants.

Dr. Grossman said, he could only theorize as to why the generators had shut down. All but one generator is on a high floor, but the fuel tanks are in the basement. The flood, he said, was registered by the liquid sensors on the tanks, which then did what they were supposed to do in the event, for instance, of an oil leak. They shut down the fuel to the generators.

14631-1 Comment noted.

14631-2 Please see the response to Comment 14130-2.

14631-3 Thank you for this information.

14632

Draft Environmental Impact Statement Comments-March 14, 2013:

- 14632-1 Our family owns 2-parcels of property in the direct path of BPA's proposed preferred alternative route, the Central Alternative Option 1, and owns a third parcel of a proposed new access road. After reviewing BPA's Draft Environmental Impact Statement, our family has the following comments.
- 14632-2 Your preferred alternative, Central Alternative Option 1, has the **highest impacts** and are **permanent** in nature to landowners adjacent to the **new** right-of-way which completely **restricts** the use of our properties for both current and future use. Your preferred alternative would require **2,113 acres** of **new** easements (about 90 %). This route would also require about **160 miles** of **new** and improved access roads. This alternative is **neither the least expensive nor the easiest to construct**. The Central or Eastern alternatives cause **high and permanent impacts** to personal property owners and the small community of Castle Rock and others. The **highest and best use** for this prime property is residential use which supports our schools and community. A transmission line through this area would be a **severe and permanent** economic blow for the community's future and personal property owner's plans. A few years ago, preliminary plans had been drawn by a developer to put in a 200-plus subdivision north of Castle Rock between Gassman Road and West Side Highway, which is in, or near the rural growth boundary area. This would be the highest and best use for this land that would give our community a greatly needed economic boost. The proposed transmission line would go through this area, and would completely destroy this potential for the community's opportunity for economic growth.
- 14632-3
- 14632-4 The purpose of a BPA's new transmission line is to provide reliable service to current users and expand commercial transmission service from utilities and power generators. Per BPA's draft EIS, this can be accomplished by choosing one of the Western Alternatives. As stated in the draft EIS, most of the western alternative **would use 98% of BPA's existing right-of-way** (compared to needing 2,113 acres/90% new right-of-way for the preferred route). **Only about 63 miles** of new and improved access roads would be required (compared to 160 miles of new and improved access roads for the preferred alternative). The Western Alternatives **would only cause low to moderate impacts** on adjacent landowners (compared to **high and permanent impacts** to adjoining property owners along the preferred alternative). In BPA's own words

1

1 of 3

- 14632-1 Thank you for your comments. Specific comments are addressed below.
- 14632-2 Please see the responses to Comments 14130-1 and 14166-1.
- 14632-3 Please see the response to Comments 14171-5 and 14328-5.
BPA recognizes that the property north of Castle Rock is in the city's urban growth/water district area. Cowlitz County confirmed there is no recorded subdivision to date. The property is presently for sale by the owner.
- 14632-4 Comment noted. Please also see the response to Comment 14632-2.

14632

- 14632-4 included in the draft EIS, "**Because the West Alternative would occupy 98% existing right-of-way and a larger portion of existing access roads, it would have the least overall impact on landowners of the action alternatives.**" The West Alternative would not create any additional tax burdens on cities, counties, and schools since the taxation of existing adjoining properties would not change. The existing right-of-way is already being used for its highest and best use. It will never be used for anything other than for transmission lines. There would be virtually very minimal impacts to people and the environment by placing a new transmission line going down BPA's existing right-of-way. Most impacts by going down the existing right-of-way **already exists**. The electrical effects are **already present** along the existing transmission lines, and by adding a new route, going through 2,113 acres of new land, would not eliminate these existing effects. The original, existing BPA transmission lines were constructed decades ago during the time where most of the adjacent land was vacant. People who purchased property adjacent to the original/existing lines made a conscious choice to build homes along the route with BPA as their choice of a neighbor. These **low to moderate impacts** would affect people who **chose** to build or purchase homes next to active transmission lines.
- 14632-5 In BPA's August 2010 Newsletter, titled "Why all the route options go from Castle Rock to Troutdale", it states "**No existing right-of-way available:** BPA searched and found that there is no existing right-of-way that could accommodate a new 500kv line in Oregon. BPA planners talked with other utilities about creative solutions such as swapping rights-of-ways in an attempt to assemble a corridor in Oregon, but unfortunately no such opportunities exist. BPA has an existing vacant right of way to consider that covers most of the way from Castle Rock to Troutdale." Since early on in the process of determining a route, it appears that using the existing right-of-way, or swapping rights-of-ways was of high importance to BPA. Now, later in the process, this should continue to be of high importance. Again, the Western Alternatives **would use 98% of BPA's existing right-of-way** and BPA's preferred Casey Road substation site can still be used, but the transmission line could go down your existing right-of-way and follow one of the Western Alternatives.
- 14632-6 As stated in BPA's draft EIS, the permanent impacts would include removing land from current use, it would restrict its future use, and the land would be cleared of vegetation and trees (**all high and permanent impacts**). Why take 2,113 acres of new land and clear and grub it, take it out of its highest and best use category, and needlessly impact all the property owners, adjacent property owners, and communities?
- 14632-7 In speaking with Mark Korsness and some of BPA's real estate division at the local public meeting, a property owner is "compensated" for the right-of-way that would be necessary to construct the transmission line. "Compensation" is at current market value. Since it is a right-of-way, the property owner still owns the land, is required to pay yearly taxes forever (probably at a lower rate), and has extreme restrictions on the use. (Basically, the only use allowed, per a BPA representative at one public meeting, was cattle grazing). This **would not be categorized as the highest and best use** of the property presently or in the future. According to the BPA's real estate reps, they will not/cannot take into consideration any future plans a property owner has for the property in determining "just compensation". In 2006, our family had the opportunity to purchase two pieces of prime property from our neighbor which is adjacent to the home we built and have lived in for nearly 25 years. This land is perfect for residential use, is in a peaceful, secluded, rural setting, and is close to town.
- 14632-8 Our plans are to allow our son and daughter to build homes if they desire, or to sell the land for our future retirement income. Any of BPA's proposed Central or Eastern routes go right through the middle of these pieces of property. It would be nearly impossible to find two adjoining pieces of property, in similar size and nature, within the same proximity of town. If BPA only "compensates" for the right-of-way at current market value, totally restricts the use to cattle grazing, eliminates the possibility of property owners selling the property at a profit due to highest and best use, since it cannot be used for anything, and does not consider the property owner's rights and future plans, then this is forcibly taking our properties. In addition to this, BPA is considering constructing an access road across a third piece of our property. This would eliminate the only building site on this entire 5-acre parcel. But again, BPA only "compensates" for current market value of the 150 foot right-of-way.
- 14632-9

- 14632-5 It was very important to BPA to consider existing rights-of-way that could be used to meet the need for a new line. While all routes meet the electrical requirements and transmission planning standards we follow, the West and Crossover alternatives would site more of the new line adjacent to our existing transmission system, which inherently decreases reliability because it increases the likelihood of losing more than one line at a time.
- 14632-6 Please see the response to Comment 14632-2.
- 14632-7 Please see the response to Comment 14566-9.
- 14632-8 Please see the response to Comment 14097-1.
- 14632-9 Please see the response to Comment 14566-9.

14632

- After reviewing BPA's draft EIS, it is even more clear that you should use your existing right-of-way to eliminate high and permanent impacts to more communities, families, individuals, and the environment.
- 14632-10 We are adamantly opposed to any of the Central or Eastern alternatives or options since BPA's objective could be accomplished by going down your existing right-of-way (Western Alternative) **"Because the West Alternative would occupy 98% existing right-of-way and a larger portion of existing access roads, it would have the least overall impact on landowners of the action alternatives."** The Central Alternative Option 1 is **neither the least expensive nor the easiest to construct**. For us personally, the impacts to our family by constructing the preferred Central Alternative transmission line are unimaginable by affecting our current quality of life, possible plans of family members constructing homes on these properties, and economic stability during our retirement years. The preferred Central Alternative will also have **high and permanent impacts** to our neighbors, our small community, our schools, and others along the 2,113 acres of new right-of-way.
- 14632-11
- 14632-12 We request that you completely eliminate any Central or Eastern Route Alternatives and their options and construct the new transmission line along BPA's existing right-of-way of the West Alternative.
- 14632-13 Please acknowledge that you have received our comments regarding the Draft EIS.

Sincerely,

Gary & Marcie Gonser

Mavis H. Gonser

14632-10 Comment noted.

14632-11 Please see the response to Comment 14328-5.

14632-12 Comment noted.

14632-13 BPA contacted the commenters and acknowledged that their comments had been received.

BPA I-5 Corridor Reinforcement Project Voicemail**Received: 03/18/2013 4:06 PM**

14634-1 Hello. This is Ben Webster calling. I'm in Camas, Washington. I'm over by the Camas High School. My address is . I wanted to see if I could talk to someone about where the power lines are going and if it'll impact my property. I have been able to look on the website and look at the maps. I think I understand it all. I think I understand that the best alternative choice that you guys are picking does not actually go through my property, but it's pretty close by. I just want to make sure I understand I'm reading the maps the right way. If there's somebody that could give me a call back. Again, Ben Webster My cell phone number would be . That's . If someone could give me a ring back and we could talk through the maps, that would be very helpful. Thanks.

14634-1 BPA contacted the commenter and located his property on Segment 50.

14635

MARK LEVANEN

03/20/2013

- 14635-1 Oh yes, this is Mark Levanen. Comment line regarding the reinforcement project, the corridor. I have a property up on Sunset Falls Road and what I see of the map, it looks like the lines are going to swing over my property and right over a building site that I had built for my son. Hopefully it's not going to go that way because it comes right through where people live. I'm sure you have a better route to go. So
- 14635-2 please call me back. It's Mark Levanen at phone number is [phone number]. Thank you.

14636

DEBBIE LEVANEN

03/19/2013

- 14636-1 In the decision to only study the Troutdale alternative BPA stated that "The Pearl alternatives do not offer a route on existing right of way, whereas the Troutdale plan does."
- In that case why didn't BPA choose an existing right-of-way, the West alternative, for its preferred alternative? I think this is the most reasonable choice. If BPA persists in its decision to waste millions of dollars and hundreds of acres and invade, take, and devalue the properties of private landowners by building a new transmission corridor, then it should also be considering the Pearl alternatives to find the route least damaging to private property owners and the environment.
- BPA wrote "a new line in either corridor (Pearl or Troutdale) would fully meet our electrical needs," and "proposing and thoroughly analyzing up to 88 segments (Pearl alternative and Troutdale alternative) will send a clear message that we considered all possible routes and have selected the very best alternative." I believe this is exactly what BPA should have done.
- 14636-2 The current Draft Environmental Impact Statement is flawed without a full range of alternatives included. To provide a full range of reasonable alternatives, BPA should perform a complete environmental review and analysis of the Pearl alternatives and double-circuit towers on wetlands along the West alternative.
- 14636-3 The Army Corps of Engineers must issue a permit for this project. BPA has only requested to permit one alternative, the Central Alternative, Option 1. Since BPA chose the Troutdale alternatives over the Pearl alternatives because Troutdale has an existing right-of-way, I demand that BPA requests a permit from the Army Corps of Engineers for its existing right-of-way, the West Alternative, using double circuit towers through wetlands.
- 14636-4 With so much attention and time given to wetlands, aquatic plants and animals, I wonder if our furry and feathered friends (spotted owls) are being forgotten and not given the consideration that is due.

- 14635-1 Please see the response to Comment 14097-1.
- 14635-2 BPA contacted the commenter and answered his questions.
- 14636-1 Please see the response to Comment 14443-1.
- 14636-2 Please see the response to Comment 14596-4.
- 14636-3 Please see the response to Comment 14596-5.
- 14636-4 Please see the response to Comment 14556-5.

14637

SALLY J HYDE

03/19/2013

BPA I-5 Reinforcement Project Comment

February 17, 2013

This is a very long comment and addresses many issues about one small section of proposed line segment F where it crosses the Cowlitz River north of Castle Rock. I will summarize my main points first and a more in-depth analysis will follow. The BPA says that it wants to limit impacts but I do not think they could have picked a Cowlitz River crossing with more impacts.

These include:

>Destruction of historic tribal/pioneer property.

>Detrimental impact on a very popular recreation site known as "The Preacher's Hole".

>Huge loss of value to river front property;

>Degradation of a high quality wetland created by a large beaver dam. Possibly a unique wetland on the lower Cowlitz.

>Harm to special-status species including Red-Legged Frogs, Western Toads, Blue Heron, and Cavity Nesting Ducks.

14637-1

>Power line danger to Bald Eagles, migratory birds and raptors which roost nearby and gather in numbers on the gravel bar to hunt. This part of the Cowlitz is a major migratory corridor.

>Negative impact to water quality and threat to juvenile endangered fish such as Coho and Steelhead which live in the gravel shallows.

>High bank dredge spoils on the east bank of the Cowlitz below the Toutle river are extremely fragile. Removal of 150 feet of trees will only increase the erosion. I do not think they can be stabilized without massive river bank alteration.

Alarmingly, I could not find any discussion in the DEIS of the extreme fragility of these high bank dredge spoils. Lahars were mentioned only briefly as being present on the Cowlitz River. There should be a huge concern about cutting any trees down on an unstable east-side river bank. We are greatly concerned that cutting at least 150 feet of river bank trees will result in unpredictable changes to the gravel bar, which is now stable, and possible loss of property due to bank erosion. It happens all the time in this area. There are severe bank stabilization issues for 2 miles downstream from the Toutle River

14637-1 Thank you for your comments. Specific comments are addressed below.

- 14637-1 confluence, not to mention new lahars are always possible as Mt. St. Helens is an active and unpredictable volcano upstream from us.
- A More In-Depth Explanation and Analysis:
- Introduction
- Our family property is directly impacted by BPA segment F Central Option Alt. 1. This is where the proposed line crosses the Cowlitz River north of Castle Rock.
- 14637-2 The line would run the length of my sister's 14 acre riverfront parcel on the west bank. The rest of the family owns three 14 acre riverfront parcels adjacent. I, Sally Hyde, for the purposes of this paper, will speak for all of the family. I have several comments and questions about the Draft EIS. I will touch on aspects of seven chapters and how they relate to our family property.
- 14637-3 First I will describe our family's association with the property. My great-grandfather came to Castle Rock in 1911. He purchased 120 acres from Cowlitz tribal elder Henry Cheholtz. Henry had lived on the property and had a small farm and orchard. He was also an early environmental activist and made a famous speech at a Castle Rock 4th of July celebration in the 1890's decrying the abuse and waste of natural resources.
- 14637-4 My family has always been very proud of the history of this property and there are still old fruit trees from Henry's orchard in the woods. We have had 4 generations of my family own this property. Despite living with fairly low incomes we have never sold any of the riverfront property. We consider it a family heirloom to be passed to the next generation. Although it is divided into 4 lots we consider it as one piece and family members have access to all of it.
- Chapter 6 Recreation
- The proposed line segment F crosses the Cowlitz River over a very popular recreation site. The gravel bar on the west bank is used year-round for bank fishing, boat launches and in the summer as a picnic and stopping area for guide boats and river floaters. This area should be classified as a dispersed recreation area as noted in Ch. 6.1.8.
- 14637-5 Ch. 6.1 states that the study area for recreation resources was 2,000 feet wide . This would encompass nearly the whole of the gravel bar recreation area. Therefore, the whole gravel bar area should be considered.
- It should be noted that this has been a popular site for many years. Reference the book "South of Seattle" by Jim Lamarrs. When the army corps dredged here they had to put a boat launch in to make up for the one that they destroyed. The area is known as the Preacher's Hole as our father, Murray Hyde, is a Methodist Preacher (ret.).
- 14637-6 Ch. 6.2.5.3 Impacts:

14637-2 Comment noted.

14637-3 Comment noted.

14637-4 Comment noted.

14637-5 Please see the response to Comment 14493-2.

14637-6 Please see the response to Comment 14493-2.

- 14637-6 The DEIS states there would be no impacts to recreation in this segment. I would disagree greatly. The impacts would be high because it would “alter recreation opportunities” and possibly change the fishing and access to the area due to the disruption of vegetation that has finally stabilized the gravel bar.
- Also, there would be a moderate impact as the power lines would detract from the natural setting and “permanently impact user experience”.
- Ch. 11 Socioeconomic Impacts
- 14637-7 The negative impacts to our family property would be high. We like many others value the rural experience and all of our parcels would be affected by giant transmission lines down the length of the property. For my sister, Julie Shaw, who owns the most impacted parcel, her land would be basically unusable in this rural Residential area.
- Our family’s neighboring parcels would also be impacted as the riverfront property is very valuable. This would be greatly reduced as much of the value comes from the rural setting and proximity to a lovely river area. Many acres would have to be kept clearcut, including the river bank. This would greatly affect the rural setting and beauty of this area. Since this is long -held family property we do not want to sell or move. We would just be forced to accept the destruction of our land and its rural charm.
- Ch. 13 Cultural Resources
- 13.1 Affected Environment
- The DEIS states that “most of the project area has not been surveyed for cultural resources”. We believe our property is an important cultural resource that has not been noted.
- 14637-8 I would like to restate the important local history of this property both to the Cowlitz Indian Tribe and the early Castle Rock pioneers.
- Henry Cheholtz was a very important tribal leader and is still respected by the Cowlitz Tribe. The Cowlitz people know that this was once tribal land and still stop by the property on yearly river floats. They always ask my father for permission and often give him a small gift of some kind.
- Murray Hyde, the family patriarch, is also part of the local history. He was born in Castle Rock in 1920. His grandparents were one of the early Castle Rock families. He is well known and loved in the community. He inherited the property from his mother Clydena Hyde. This land is a legacy for our family and native people before us.
- Ch. 13.2.5 Impacts
- 14637-9 The impacts to this locally historic site would be high. The Castle Rock area is known for its tribal/pioneer beginnings and the “country” feel of the area. Large transmission lines plowing through the area would definitely take much away from this small town/country atmosphere and may actually destroy important sites. We want it to remain in a more traditional state: Rural.
- 14637-10 Ch. 15. Water

14637-7 Please see the response to Comment 14328-5.

14637-8 Please see the response to Comment 14565-7.

14367-9 Please see the response to Comment 14565-8.

14637-10 Please see the responses to Comments 14533-3 and 14714-6.

- 14637-10 Section 15.2.2. Impacts
The DEIS does not specifically comment on impacts to water quality in this area of segment F. I believe the impacts would be high as the lines would cross a side channel wetland and therefore result in "locally high impairment". The loss of riparian vegetation would warm the channel affecting the survival of juvenile salmonids and invite nonnative species into an important endangered species rearing area. This would continue due to the operation and maintenance that requires clearing of tall vegetation. (15.2.2.2). Also, the disturbance of fragile high bank dredge spoils could greatly affect water quality during construction.
- 14637-11 Ch. 16 Wetlands
The DEIS, by its own admission, did not conduct site visits to evaluate wetlands. As stated "all wetlands in the study area are considered priority habitats by WDFW". The property at the Cowlitz crossing is identified as palustrine emergent and scrub-shrub wetland in the riparian areas. This does not note that there is an active beaver pond along the west bank and the great importance this has to wetland value.
This may be a unique area on the Cowlitz below the Toutle River. The devastating lahars from Mt. St. Helens, and consequent dredging, drastically changed the lower river. The area has slowly been returning to a high value riparian zone. In some areas the constant movement of the high bank dredge spoils does not allow this. However, in front of our property there is now a large gravel bar and a flood channel. This channel is a permanent pond enhanced by high beaver activity throughout its length.
- 14637-12 Ch. 16.2.1 Impacts
This area would be highly impacted by clearing vegetation and removing trees, causing the conversion of a high quality wetland to lower quality. It could drastically alter river flow by creating a tree-free channel for faster moving water. This would destroy the beaver dams.
The permanent clearing of vegetation on a stable, tree growing gravel bar and fragile high bank dredge spoils is not addressed at all in the DEIS. We think this would be of great concern. The impact on a unique lower river wetland would certainly be high and probably irreversible.
- 14637-13 Ch. 18 Wildlife
Since this is a riparian zone there are numerous wildlife species present. They include: otter, mink, beaver, muskrat, black tail deer, green-backed heron, kingfisher, greater yellowlegs, spotted sandpiper, killdeer, and many warblers and other neotropical songbirds. Most of these species use the gravel bar and pond as den sites and nesting areas.
- 14637-14 In reviewing the presence of special-status species (Table 18.2) I have found several omissions. There are several species present on the property that require more comment. This is a list of the special-status species we have documented as being present on the gravel bar in front of our property and in the side channel wetland:

14637-11 Please see the response to Comments 14565-10 and 14565-11.

14637-12 Please see the response to Comments 14565-11 and 14565-11.

14637-13 Please see the response to Comment 14565-12.

14637-14 Please see the response to Comment 14565-13.

- 14637-14
- > Bald Eagle-important roosting in tall cottonwoods and feeding areas in shallow water
 - > Blue Heron-feeding areas in side channel and along river
 - > Wood Ducks-feeding in pond
 - > Bufflehead Ducks-feeding on pond
 - > Harlequin Duck-feeding on pond
 - > Western Toad-frequent sightings in upper end of beaver pond
 - > Red-legged frog-frequent sightings of adults and juveniles in covered areas of beaver pond (since 2008)
- 14637-15
- Ch. 18.2 Impacts
- Since most of these species are not even listed as occurring in segment F more study needs to be done on the effect the clearing of bank vegetation may have on these sensitive populations. Of special concern to us is the possible destruction of a beaver pond and the loss of the great habitat beaver create. The impact to this area would be high because "Permanent removal or alteration of WDFW priority habitat of high value to wildlife such that most or all relevant attributes of the original habitat are lost"(18.2.1) As stated earlier this is a unique lower river wetland area and should have special consideration.
- 14637-16
- Ch.18.2.2.2 Also of concern is the possible death of the many raptors and migratory birds that use this section of the river to travel and feed. The DIES says "The proximity of lines to high bird use or migration is the biggest factor in avian collisions" And "Waterfowl, shorebirds, other water birds appear to be more susceptible to collision where lines span open water.....or where lines are between waterfowl feeding and roosting areas." This gravel bar has a high population of migratory birds. Geese, ducks and shore birds use the gravel bars to feed and nest. Many raptors fly the river corridor in this area because the gravel bars and shallow water are great hunting areas. These include bald eagles, osprey, red-tailed hawks, harrier hawks, cooper's hawks and even peregrine falcons. The trees along the bank are well known roosting sites for bald eagles and osprey.
- 14637-17
- As a note: I could not find appendix N which contains a discussion of the twenty-one other special status species in the study area.(18.1.4.2) The one I found contains NEPA forms.
- 14637-18
- Ch. 19 Fish
- This area of the Cowlitz is of high value to many anadromous fish. The side channels and gravel shallows allow for excellent breeding and rearing areas. The area provides habitat for the young of many special status species (Table19.1) including Lower Columbia Coho, Chinook, Steelhead and even Lamprey. There are large piles of woody debris and safety areas from high water.
- 14637-19
- 19.2.1 Impacts

14637-15 Please see the response to Comment 14565-14.

14637-16 Please see the response to Comment 14565-15.

14637-17 Please see the response to Comment 14565-16.

14637-18 Please see the response to Comment 14565-17.

14637-19 Please see the response to Comment 14565-18.

- 14637-19 | The impacts to this area would be high. There would be permanent changes to riparian habitat including loss of woody debris and increase in water temperature. There would be high impairment to hydrology and sediment functions. The cutting of stabilizing vegetation would “inhibit long-term inundation patterns and natural rates of channel adjustment.”
- 14637-20 | Conclusion
In conclusion, I would like to say that this is a terrible place for the BPA to cross the Cowlitz River. It negatively affects a well-known and popular recreation area.
It greatly reduces rural residential and riverfront property values.
It greatly impacts important local historical/cultural land.
It has high negative impact on the water, wetlands, and riparian zone of an important wildlife area and has grave impacts to special-status species.
- 14637-21 | Alarmingly, I could not find any discussion in the DEIS of the extreme fragility of these high bank dredge spoils. Lahars were mentioned only briefly as being present on the Cowlitz River. There should be a huge concern about cutting any trees down on an unstable east-side river bank. We are greatly concerned that cutting at least 150 feet of river bank trees will result in unpredictable changes to the gravel bar, which is now stable, and possible loss of property due to bank erosion. It happens all the time in this area. There are severe bank stabilization issues for 2 miles downstream from the Toutle River confluence, not to mention new lahars are always possible as Mt. St. Helens is an active and unpredictable volcano upstream from us.
- 14637-22 | We definitely want to know how the BPA and by default the Army Corps of Engineers plans to mitigate or avoid these many issues. I would like to know how BPA can justify crossing the Cowlitz in this sensitive area. I am sure other options do not have this level of negative impacts. Of course, there is always the option to choose a less risky and destructive river crossing.
- 14637-23

Sincerely, The Hyde Family:

Sally Hyde, Mike Blake, Murray Hyde, Thad Hyde, Nesha Hyde, Julie Shaw, Ogie Shaw, Tyler Shaw, Lynley Shaw, and Nathan Hyde

14637-20 Please see the response to Comment 14565-19.

14637-21 Please see the response to Comment 14493-7.

14637-22 Please see the response to Comment 14523-3.

14637-23 Please see the response to Comment 14565-19.

Hello BPA Officials,

14638

Attached please find my comments regarding the proposed I-5 Corridor reinforcement project, to be included in the public record.

Thank you, Lynn Stiglich

1 of 2

14638

Dear BPA Officials,

14638-1 The I-5 Corridor Reinforcement project has been going on for a number of years now – since 2009 and will continue to impact many homeowners, businesses and communities for several years to come as the project gets built. My first comment is that this has not been easy for many people as they live with uncertainty, depressed property values and a need to pay attention to this project, the media information, public meetings etc. Some of the early work done by BPA was incomplete and not thorough or technically competent, which has resulted in delays and extensions of deadlines. The public has had no choice but to live with this.

14638-2 Secondly, it would behoove BPA to engage in the practice of prudent avoidance in situating these towers. While it has not been proven that exposure to EMF from high voltage transmission lines causes cancers, childhood leukemia, and other diseases, there also have not been definitive studies to prove that they do not. There are very many second order effects, in combination with other factors, difficult to measure, that may not result in a cancer or illness for many years, BUT exposure to EMF, especially in children may have contributed to the progression of an illness or disease. We have no way of knowing. That is why prudent avoidance is a wise course of action. DO NOT situate these lines near schools, residences, soccer and recreational fields, or places where people live, work or play.

14638-3 Thirdly, I took the time to attend a public meeting and had a good discussion with Steven Manlow of the US Army Corps of Engineers. He explained the significant impact to wetlands, especially along the western corridor, including segment 9. These facts of environmental impact to wetland areas and the plants and animals that inhabit them, coupled with the significant impact to human population along the western routes must continue to be valued in final consideration as to where to put this transmission line, if at all. DO NOT reverse the decision and place the line in more populated areas.

14638-4 Fourth, it is very unclear to me and most of the public why the Oregon routes were dismissed before we even knew about them, or why BPA has refused to seriously consider the Gray Line or a similar route further to the east. The reasons given for these decisions are inadequate, poorly explained and do not ring true. Consequently a lack of transparency is evident and I, and the public lose trust in what is being told to us. BPA's handling of this matter to date does not inspire trust that it will properly handle the project going forward.

14638-5 I remain opposed to placement of these 500 kV lines near populated areas. I remain concerned about the impacts to health due to proximity of EMF fields. I remain skeptical that residential property values and businesses will be unaffected if these lines are erected in their close proximity. Please reconsider this project in light of the negative impacts.

14638-6 Apply good science, sound engineering judgment, design with healthy tolerances, prudent avoidance and consideration of quality-of-life impacts to people. It is possible to do a better job and mitigate many concerns. Children, people of all ages, our communities, ecosystems and the planet need the best possible solution for our future.

- 14638-1 BPA understands the commenter's desire to have updated information and learn about our project decisions as quickly as possible. We want to ensure that we provide a complete and comprehensive environmental review for consideration and comment. That takes time. The additional time allows BPA to consider the comments it has received about the project and complete environmental analyses of issues identified by landowners and stakeholders. This will help BPA make a well-informed decision about whether, and where, to build a new line and substations.
- 14638-2 Please see the response to Comment 14328-6.
- 14638-3 Comment noted.
- 14638-4 Please see the response to Comment 14443-1 regarding the elimination of potential routes in Oregon from detailed study in the EIS. Section 4.7.2.4, Northeastern Alternative, North of Silver Lake, Washington, explains why potential routes farther east were considered but eliminated from detailed study. BPA believes that the reasons provided in the EIS for eliminating these alternatives sufficiently explain their elimination.
- 14638-5 We regret that the commenter does not trust BPA to provide information. BPA will continue to provide information as we complete our evaluation and make a decision.
- 14638-6 Comment noted.

14639

From: noreply@bpa.gov
Sent: Tuesday, March 19, 2013 11:18 AM
Subject: BPA I5 Comment Submission Confirmation
Attachments: February 2013 weather0001.pdf

Thank you for submitting your comments on the Bonneville Power Administration's draft environmental impact statement (EIS) for the I-5 Corridor Reinforcement Project. All comments submitted between November 13, 2013 and noon on March 25, 2013 will be responded to in the final EIS, which is expected in 2014.

A copy of your information, as submitted using our online form, is included below for your records. If you provided your contact information and submitted a question we can answer at this time, you will receive a response. Your contact information will also be added to our project mailing list. All comments including names will be processed and then posted on BPA's website at www.bpa.gov/goto/i-5

Sincerely,
 Bonneville Power Administration

Name: Cheryl K Brantley
Organization: A Better Way for BPA
E-mail:
Phone:
Address:

Group type: Special interest group

Please ADD me to the mailing list.

Comment:

- 14639-1 Under Chapter S.3.5, Page S-26 "Noise" of the DEIS the information is flawed by taking only rainfall totals from the Portland Airport and not considering the varying differences of precipitation in the foothills of SW Washington State. People who live in the SW Washington foothills will experience much more noise from new 500 kV transmission lines because these people don't have an existing transmission right-of-way near their homes now. The change in their environment due to excessive noise from wet transmission lines will be significant. It is derelict to state in the Draft EIS that the foothills in SW WA have fair weather 80% of the time.
- 14639-2 Place your new towers and lines in Vancouver, Washington. You already own rights to most of the land on your own existing easement along the West Alternative. The West Alternative is in the low lands and is much drier. The West Alternative will generate much less noise as proven by the attached file on rainfall amounts during the month of February 2013, and the average amount of rainfall for the month of February.

14639-1 Please see the response to Comment 14587-1.

14639-2 Please see the response to Comment 14331-2.

14640

March 15, 2013

**RE: Bonneville Power Administration, I-5 Corridor Reinforcement Project
Double-circuit towers on wetlands and Oregon alternatives**

To Whom It May Concern:

14640-1 I am writing you today because I believe Bonneville Power Administration (BPA) did not provide a full range of alternatives, including complete and substantive analyses both quantitatively and qualitatively as required by law in any Environmental Impact Statement.

Double-circuit towers not studied

Under a Freedom of Information Act (FOIA) request to BPA asking for studies on double-circuit towers on wetlands along its West alternative (BPA-owned existing right-of-way), we received a response stating there were “no documents responsive to our request.”

In 2009 BPA told my community that putting towers side-by-side along their West alternative would be a reliability problem. They told us using their West alternative would be putting all their eggs in one basket if an airplane hit the lines or if there were a terrorist attack.

14640-2 On August 18, 2011, there was a response to several questions from Maryam Asgharian, a BPA contact person for this project. One question that was asked was “Has there ever been a tower collapse or line failure along their existing easement (West alternative). Her response was “*We have not seen a tower collapse along this line. We have seen insulators fail or be vandalized. If this occurs, it would likely be along one span (between two towers), rather than the whole line. Once we are aware of an issue like this we can repair it within hours.*”

There is clearly not much of a reliability problem based on the 70-year history of this transmission corridor.

Using BPA’s West alternative would save 74 million dollars by BPA’s estimate. This would also minimize the impact to the environment. Double circuiting through wetlands would result in zero long-term net loss of wetlands. BPA’s new double-circuit design reduces the perceived health risks, as found on BPA’s web site¹ and in their Draft Environmental Impact Statement² (DEIS) for the I-5 Corridor Reinforcement Project.

¹ BPA Engineers Build A Better Tower, Saving Millions: <http://www.bpa.gov/news/newsroom/Pages/BPA-engineers-build-a-better-tower-saving-millions.aspx>

² <http://www.bpa.gov/Projects/Projects/I-5/Pages/Draft-EIS.aspx>

14640-1 Please see the response to Comment 14596-1.

14640-2 Please see the response to Comment 14596-2.

- 14640-2 BPA's new double-circuit tower design
- Uses fewer towers: *"4 per mile in some places"*
 - Costs less: *"saves BPA an average of \$18,000 to \$270,000 per tower"*
 - Uses less right-of-way and creates less Electromagnetic Field levels: as noted on page 3-2, section 3.2.1 Tower Types in the DEIS.
- Double circuiting for the entire right-of-way would place towers on the center of the right-of-way instead of near the edges, which would increase the distance from homes, businesses, and schools, would use half as many towers and would not require removal of as much vegetation along the edge of the existing corridor.

Pearl Alternatives (Oregon) not given a thorough Environmental Assessment as required under the National Environmental Policy Act.

For approximately ten years, the I-5 Corridor Reinforcement Project was a study of Oregon (Pearl) and Southwest Washington (Troutdale) alternatives. In 2009, just days before an announcement went to the public, BPA made the decision to not carry the Pearl alternatives through a full Environmental Assessment and made the decision to only study the Troutdale alternatives. In late 2009, a FOIA request was submitted for the Agency Decision Framework (Version 6)³ discussing the prematurely dropped Pearl alternatives. From that documentation I learned that BPA planned to not let the Pearl alternatives "go public" for many reasons, most of which made little sense.

Two examples are the following:

- 14640-3
1. BPA states the Pearl alternatives would impact 3,100 landowners, whereas the Troutdale alternatives impacts 7,700 landowners. Since the Pearl alternatives would impact less than half the number of landowners, why did BPA drop it?
 2. BPA states concerns regarding a new river crossing at the Columbia River in Longview, *"requiring very tall towers up to 450 feet tall."* This should not be a concern because the existing transmission towers crossing the Columbia River in Longview are **over** 450 feet tall.

Both the Troutdale and Pearl alternatives had similar scenarios, as stated in the Agency Decision Framework (Version 6).

"All Pearl routing alternatives would need to go through some residential areas," "would go through managed timber lands," "would go near or through established wildlife areas and near or on private airstrips,"

³ http://abetterway4bpa.org/index.php?option=com_docman&task=cat_view&gid=92&itemid=77

14640-3 Please see the response to Comment 14596-3.

- 14640-3 However, in the decision to only study the Troutdale alternative BPA stated that *"The Pearl alternatives do not offer a route on existing right of way, whereas the Troutdale plan does."*
In that case why didn't BPA choose an existing right-of-way, the West alternative, for its preferred alternative? I think this is the most reasonable choice. If BPA persists in its decision to waste millions of dollars and hundreds of acres and invade, take, and devalue the properties of private landowners by building a new transmission corridor, then it should also be considering the Pearl alternatives to find the route least damaging to private property owners and the environment.
BPA wrote *"a new line in either corridor (Pearl or Troutdale) would fully meet our electrical needs,"* and *"proposing and thoroughly analyzing up to 88 segments (Pearl alternative and Troutdale alternative) will send a clear message that we considered all possible routes and have selected the very best alternative."* I believe this is exactly what BPA should have done.
- 14640-4 The current Draft Environmental Impact Statement is flawed without a full range of alternatives included. To provide a full range of reasonable alternatives, BPA should perform a complete environmental review and analysis of the Pearl alternatives and double-circuit towers on wetlands along the West alternative.
- 14640-5 The Army Corps of Engineers must issue a permit for this project. BPA has only requested to permit one alternative, the Central Alternative, Option 1. Since BPA chose the Troutdale alternatives over the Pearl alternatives because Troutdale has an existing right-of-way, I demand that BPA requests a permit from the Army Corps of Engineers for its existing right-of-way, the West Alternative, using double circuit towers through wetlands.
- 14640-6 I am asking that you work with me to ensure all alternatives, including double circuit towers and Pearl alternatives are given a complete and thorough analysis, both quantitatively and qualitatively by bringing these issues to light and commenting to Bonneville Power Administration and the Army Corps of Engineers during the public comment period for the Draft Environmental Impact Statement. Both of these comment periods end at noon, March 25.
- 14640-7 I would like to add that the preferred bpa line is at least a mile from our property but I am still
14640-8 concerned about it lowering the quality of life for us in the east county. I am concerned about the
14640-9 herbicides impacting the ground water. I am concerned about the rivers and lakes it will be
14640-10 crossing and the wildlife in the electrical magnetic field. The existing West line just makes the most sense for a place for new towers.

Sincerely,

Lisa Anderson

- 14640-4 Please see the response to Comment 14596-4.
- 14640-5 Please see the response to Comment 14596-5.
- 14640-6 Comment noted.
- 14640-7 Please see the response to Comment 14328-5.
- 14640-8 Please see the response to Comment 14160-1.
- 14640-9 Please see the response to Comment 14332-1.
- 14640-10 Comment noted.

Table 4-9 Comparison of Alternatives to Project Purposes

Alternatives	Use Ratepayer Funds Responsibly And Efficiently	Minimize Impacts To The Natural And Human Environment	Maintain BPA Transmission System Reliability And Performance	Meet BPA's Statutory And Contractual Obligations
West Alternative	About \$385 million. Would be the least expensive because existing right-of-way is available for most of the length of the line. Some existing lines would need to be removed and replaced, which adds costs.	The project has been designed to minimize impacts to the environment where feasible, and mitigation measures are identified to avoid or reduce these impacts. Please see Table 4-10 for a comparison of the environmental impacts of the alternatives.	1. The project would increase the ability to serve the Portland/Vancouver metro area during summer and increase system flexibility should there be an interruption in the operation of one of the area's other transmission lines. It would also allow BPA to grant requests for transmission service while maintaining reliability of the electrical grid to BPA and industry standards. 2. Adds inherent risk to system reliability by placing the new line in the same corridor as other BPA lines transmitting power north-south.	Though BPA has no expressed contractual or statutory obligation to build the proposed project, the project would help BPA further its statutory mandates and tariff provisions that direct BPA to construct additions to the transmission system to integrate and transmit electric power and maintain system stability and reliability, as appropriate.
Central Alternative	About \$459 million	Same as West Alternative	1. Same as West Alternative 2. N/A	Same as West Alternative
East Alternative	About \$489 million. Would be the most expensive because it would be the longest route, and would require new right-of-way for most of its length.	Same as West Alternative	1. Same as West Alternative 2. N/A	Same as West Alternative
Crossover Alternative	About \$442 million	Same as West Alternative	1. Same as West Alternative 2. Same as West Alternative	Same as West Alternative
No Action Alternative	No immediate costs would be incurred if the project is not built.	This alternative has the least environmental impacts. Please see Table 4-10.	Benefits of the project (increased system flexibility and capacity to Portland/Vancouver metro area in the summer) would not be gained. It would limit BPA's ability to provide service to new transmission requests because the capacity of existing lines in the area cannot accommodate the requests without compromising reliability of the system.	By not constructing the project, BPA would not be acting in furtherance of its applicable statutory mandates or tariff provisions.

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14641

PHILIP T COLBERT

03/21/2013

14641-1

I've just reviewed your West route alternative and have been informed of a study you funded but have not yet made public. My family is one of the many that live/work/attend school within a very short distance from this route. If the study recommends a safe distance from your towers to avoid the long-term effects of EMF exposure, it seems odd, perhaps suspicious, that you have not released it. How can I be of assistance in helping you to get that information to those who could be affected so as to put the rumors to rest?

- 14641-1 The commenter references a study that he believes BPA funded, but has not published. BPA contacted the commenter and asked for more information about this study, particularly which study he was referring to, but BPA never heard back from the commenter. BPA is committed to sharing public information with our project stakeholders and property owners.



CASTLE ROCK SCHOOL DISTRICT #401

14642

Susan Barker, Superintendent

www.castlerock.wednet.edu

March 12, 2013

Mark Korsness, Project Manager
I-5 Corridor Reinforcement Project

Dear Mr. Korsness:

14642-1

We appreciate the opportunity to provide comment on the draft environmental impact statement for the I-5 Corridor Reinforcement Project. The scope of your project is immense and we understand the level of detail you are obligated to develop in your planning. As with any project of this regional magnitude, there are impacts to families and communities. We believe your transmission line will have multiple negative impacts to the future of Castle Rock School District and the greater Castle Rock area. While we can all anticipate impact which must occur to support our future growth, we respectfully request you consider the unique concerns of the Castle Rock School District.

Specifically, the Castle Rock School District has a vested interest with regard to any future loss of population as it directly relates to decreased student enrollment. Our fiscal health relies heavily on enrolled students and should the transmission line run directly through the identified urban reserve area west of the Cowlitz River, there will be no opportunity to increase or stabilize student numbers from this area in perpetuity exacerbating our declining enrollment trends.

14642-2

The preferred alternative suggested by BPA impacts Castle Rock and particularly Castle Rock School District more than any other with the line traveling on both our east and northern borders. Further, installation of your transmission line through the Castle Rock urban reserve area located at Gassman Road will lower the assessed value of properties here and by extension; if you examine annual taxable asset shifts there will be negative impacts to the Castle Rock School District, the City of Castle Rock and Cowlitz County.

Additionally, our fiscal health requires the passage of maintenance and operation levies. The installation of the transmission line has the high potential to shift the burden for locally approved maintenance and operation levies to fewer residents. This shift will increase each homeowner's tax liability making our community less desirable to future citizens. Further, examination of US Census data suggests areas of higher poverty occur at a greater frequency along existing high voltage transmission lines. For Castle Rock School District this equates to tax loss in perpetuity for an area already struggling to recover economically and maintain a quality of life attractive to current and future residents.

14642-3

We respectfully request you reopen the project scoping and give careful consideration to the northeastern route cited in your January 18, 2012 map and an Oregon sited alternative before your final determination is made. These routes bypass populated Castle Rock and appear to lessen the impact to this school district and community who will shoulder the greatest burden

The Castle Rock School District complies with all federal and state rules and regulations and does not discriminate on the basis of race, creed, color, religion, national origin, families with children, marital status, gender, age, sexual orientation, disability, honorably discharged veteran or military status, or the presence of any sensory, mental, or physical disability, or the use of a trained dog guide or service animal by a person with a disability and will provide equal access to the Boy Scouts of America and other designated youth groups. Inquiries regarding compliance and/or grievance procedures may be directed to the district's Title IX/RCW 28A 640 officer Susan Barker and/or Section 504/ADA coordinator Tyson Vogeler at (360) 501-2940.

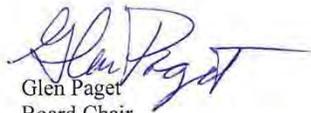
- 14642-1 Comment noted.
- 14642-2 Section 24.4 Economic Productivity, describes the project's potential long-term impacts on economic development and productivity in the region. Section 11.1.9, Environmental Justice, and Appendix H include analyses of low-income populations, using U.S. Census Bureau definitions of poverty and the most recent census data available. Also please see the response to Comment 14291-3.
- 14642-3 Please see the response to Comment 14638-4 concerning the reasons why a potential northeastern route and potential routes in Oregon were considered but eliminated from detailed study in the EIS. BPA continues to believe that these reasons provide sufficient basis for eliminating these alternatives from detailed study in the EIS.

14642-3 while realizing no benefit from the project as the power is to be directed to Oregon and California.

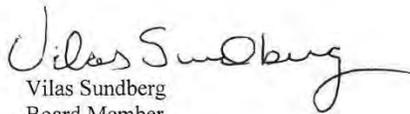
14642-4 To summarize our concerns, BPA's preferred route impacts Castle Rock School District more than any other school district with the high voltage transmission line surrounding us on the east and north, lines which will generate power not available for our use. This effect will reach far into the future and we are deeply concerned for our school children and future generations of children. In order to better mitigate the unfair and disproportionate impacts to this small community, we ask you as stewards of good public policy to reopen the scoping of this project for the following purposes: to fully evaluate the Northeastern route; to fully evaluate the Oregon alternative south of Alston; to fully evaluate a Bonneville dam crossing and urge you to select a route that minimizes the public cost while maximizing the public benefit. We ask this on behalf of the patrons and students in the Castle Rock School District today and for the future.

14642-5 of the patrons and students in the Castle Rock School District today and for the future.

Yours truly,


Glen Paget
Board Chair


Gayle Baker
Board Member


Vilas Sundberg
Board Member


Harold Erdlebrock
Board Member


Bill Davis
Board Member


Susan Barker
Superintendent

c. Governor Jay Inslee
Senator Maria Cantwell
Senator Patty Murray
Representative Jamie Herrera Buetler
Representative Brian Blake
Representative Dean Takko
Senator Brian Hatfield

Senator John Braun
Representative Ed Orcutt
Representative Richard DeBolt
Cowlitz County Commissioners
Castle Rock Mayor Paul Helenberg

Castle Rock School District complies with federal, state, and local laws and does not discriminate on the basis of race, creed, color, religion, national origin, ancestry, marital status, gender, age, sexual orientation, disability, or military or veteran status, or the presence of any sensory, mental, or physical disability, or the use of a trained dog guide or service animal by a person with a disability, or will provide equal access to the Boy Scouts of America or other recognized youth groups. Inquiries regarding compliance with our nondiscrimination policies should be directed to the District's Title IX/RCW 26A-540 officer Susan Barker and/or Director Kelly Z. Combs at (360) 881-3341.

- 14642-4 Please see the responses to Comments 14291-3, 14329-7, and 14674-1.
- 14642-5 Please see the responses to Comments 14443-1 and 14638-4 concerning a potential northeastern route and potential routes in Oregon. The reasons why a potential crossing near Bonneville Dam was considered but eliminated from detailed study are explained in Section 4.7.2.8, Transmission Line Route East to Bonneville Dam. BPA continues to believe that these reasons provide sufficient basis for eliminating this alternative from detailed study in the EIS.

14644

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

BPA's Proposed I-5 Corridor Reinforcement Project Draft environmental impact statement comment form

Public review of and comment on this draft EIS will continue through March 1, 2013. Comments should be as specific as possible, with references to particular pages, sections and chapters. Additional or clarifying information that should be considered is helpful. Factual corrections are appreciated. BPA staff will review all comments received and respond to them in the final EIS.

Name (will be included with your comment in the final EIS)

Address

Please add me to the mailing list

Please remove me from the mailing list

Comments:

Please Read the Attached

for



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14644

BPA's Proposed I-5 Corridor Reinforcement Project

March 12, 2013

14644-1 My wife & I live just north of Nourse Rd. at . We now have
route 50 power lines cutting our property almost in half. At this time we do not
have a tower on our property but if the new original route was to go through, the
map shows there would be a tower on the west side of our property. The map
shows BPA using our driveway for access as well as part of our field as a staging
14644-2 area for equipment & etc. If this were to take place, we would have trucks &
equipment coming past our house less than 40' from our front porch. Our field
would never be the same again, it is now planted in grass & we keep it mowed,
it's our park.

14644-3 We bought our property 20 years ago, placed our home 200 ft. south of the
existing power lines which located our home near the southern border of our
property. At that time BPA suggested that 200 ft. should be a safe distance from
the power lines for the voltage flowing through them at that time.

14644-4 I am 70 years old and retired. I don't know what we would do if the new
power lines came through our place. We have planned to sell off the back half of
our property as soon as we would be incorporated into the Camas city limits.

14644-5 I have been to a half dozen BPA Project Meetings, have said nothing, but am
now expressing my concerns.

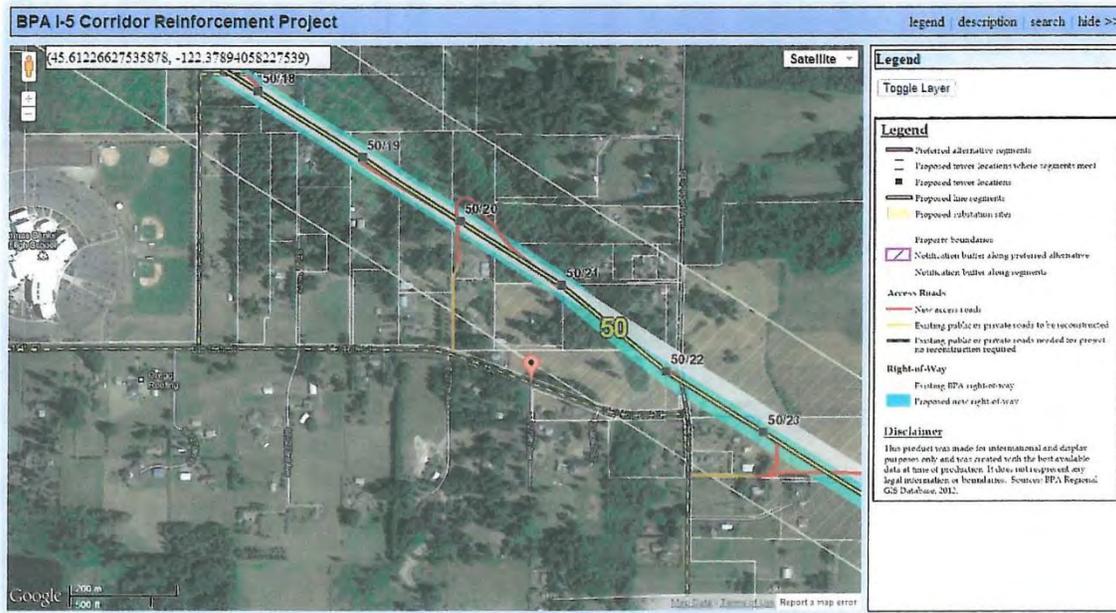
14644-6 I do understand there is a proposed rout east of us. We hope and pray that is
the rout you choose.

14644-7 I am inclosing several map printout copys of our location & how the new lines
would impact us.

LeRoy & Aletha Walker

2 of 4

- 14644-1 Central Alternative using Central Option 1 is BPA's Preferred Alternative. Segment 50 is not included in the preferred alternative.
- 14644-2 Please see the response to Comment 14644-1.
- 14644-3 Comment noted.
- 14644-4 Please see the response to Comment 14644-1.
- 14644-5 Comment noted.
- 14644-6 Please see the response to Comment 14644-1.
- 14644-7 Thank you for this information.



14645

CITIZENS AGAINST THE TOWERS, EVELYN SCHNOEBELEN

03/20/2013

14645-1 As a member of Citizens Against the Towers I am gratified that you have chosen the Central Option I as your preferred alternative route. It will alleviate the impact of the new lines for over 3,032 homes and numerous schools. All of those homes are a "little bit of heaven" for each of their owners. For almost all of the owners their homes are what they have and are working to maintain and support. Had you used the West Alternative hundreds of trees that now shield the towers and lines from the homes and public view would need to be cut down destroying the ambiance along that route. Also having two lines running along the same route would seem irresponsible in light of natural and manmade disasters. So your choice of the Central Route is more desirable. However this still impacts about 357 homes which should be avoided. I realize you will not consider the route that is all the way East, the Gray Route, but you should at least look at the route. There are many ways to plan the route to avoid most if not all of the homes. The cost factor when spread over all the rate payers and a period of time does not amount to enough to effect a decision.

14645-2

14645-3

Thank you

14646

KIM L SMITH

03/20/2013

14646-1 The preferred route will require multiple new stream crossings and new ROWs across private land. I have commented on this previously. In an approximate 1 mile stretch of the preferred alternative along Segment 35, there will be a minimum of 3 stream crossings that will affect the core of what Clark County identifies as the Little Washougal River Watershed. The Little Washougal empties into the Washougal River at the intersection of Blair Road and Washougal River Road carrying a high volume of water year round. Reduced filtration of runoff, increased sedimentation, and higher water temperatures caused by clearing up to and along those streams will affect this entire system. BPA speaks of mitigation, but provides no details. A landowner along a stream must adhere to a 75 foot buffer zone along a stream according to county rules. BPA has an alternative route that would utilize existing ROWs. That should be the preferred route.

14646-2

- 14645-1 Comment noted.
- 14645-2 Section 4.7.2.4, Northeastern Alternative, North of Silver Lake, Washington, explains why potential routes farther east were considered but eliminated from detailed study. BPA believes that the reasons provided in the EIS for eliminating these alternatives sufficiently explain their elimination.
- 14645-3 Please see the response to Comment 14623-6.
- 14646-1 As described in the response to Comment 14523-3, BPA would provide compensatory mitigation for unavoidable impacts to waters of the U.S. Additionally, as described in Section 27.26.2, Washington Local Plans and Programs, BPA would comply substantively, where possible, with local and county requirements.
- 14646-2 Comment noted.

14647

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

BPA's Proposed I-5 Corridor Reinforcement Project

Draft environmental impact statement comment form

Public review of and comment on this draft EIS will continue through March 1, 2013. Comments should be as specific as possible, with references to particular pages, sections and chapters. Additional or clarifying information that should be considered is helpful. Factual corrections are appreciated. BPA staff will review all comments received and respond to them in the final EIS.

Name (will be included with your comment in the final EIS) Mrs James A. Howarth

Address _____

Please add me to the mailing list

Please remove me from the mailing list

Comments:

14647-1

I'm definitely against the plan you have of going so close to Castle Rock, WA. You people think this might not harm me and my neighbors, but there are so many around here that have horses, and depend on them for their livings (Trail riding, packing in the Mt St Helens areas, etc.)

I have about 3 acres that I used for my family's horse for years. Now I let other horse people use the pasture for their horses for no charge.

Since it's been proven transmission lines do affect horses negatively, why do you have to come through anywhere near our struggling town?

14647-2

Pay attention to what we taxpayers are saying! Without the TAXPAYERS you might have more difficult times in the future.

Comment period extended until noon on March 25, 2013



1 of 1

14647-1 Please see response to Comment 14328-5. Please also see Chapter 6, Recreation and Chapter 8, Electric and Magnetic Fields.

14647-2 Comment noted.

14648

SANDRA S BENNETT

03/20/2013

14648-1 I strongly oppose placing the proposed towers alongside the existing towers in the I-5 corridor and encourage BPA to remove from consideration all Alternatives that the U.S. Army Corps of Engineers will NOT permit.

14648-2 I am a retired real estate appraiser and the president of the East Fork Frontier Neighborhood Association. BPA's existing I-5 corridor power lines run through the middle of our neighborhood. I have attended numerous of the meetings BPA has held with regard to using the I-5 Corridor for its proposed new 150' mega towers. It is my opinion that BPA has been extremely duplicitous in its dealings with the people of Clark County, changing its story about why this new line is needed, by whom it is needed, routes that it is considering, how it will impact property values, and myriad other considerations. The

14648-3 proposed towers would have a direct negative impact on the value of residential properties located within sight of them and many researchers have indicated that there will be serious negative health impacts from the EMF of such powerful transmission lines for those living within several hundred feet.

14648-4
14648-5 Additionally, the vast majority of this power will be sold to California and will provide very little benefit to the citizens of Washington State. The only reasonable route, the one that would have the last
14648-6 negative impact on the citizens of Clark County, is the route farthest east through mainly uninhabited areas.

Sandra S. Bennett

14649

KENNETH LONG

03/20/2013

14649-1 Dear BPA, What is so difficult about this decision. Keep it away from the most populated areas of Clark County!! The short sided cost savings pales in comparison to the scope of citizens that will sacrifice their health, safety, and welfare if the decision is made to build on the West corridor!!

14649-2 We have invested and built this corridor into one of the most desired resident areas of Clark County and you plan to tarnish it just so you can sell power to Oregon and California!!!! How do you sleep at night? There is no comprehensible human cost that can be assessed to the damage this line would create going through the West Corridor.

14649-3 Base your decision on humane decency rather than on a accounts spreadsheet!!

- 14648-1 Please see the response to Comment 14571-1.
- 14648-2 Chapter 1 describes the need for the project. Please also see the responses to Comments 14329-7, which summarizes the need for the project, and 14494-2.
- 14648-3 Please see the response to Comment 14140-2.
- 14648-4 Please see the response to Comment 14328-6.
- 14648-5 Please see the responses to Comments 14329-7 and 14494-2.
- 14648-6 Comment noted.
- 14649-1 Comment noted.
- 14649-2 Comment noted. BPA did not identify the West Alternative as its Preferred Alternative.
- 14649-3 Comment noted.

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I, Juanita Means of _____, oppose the "Preferred alternative: Central Alternative Opion1, For the following reasons:

- 14650-1 1. My health risks;
 - A. I have cardiomyopathy and 3rd degree heart block. NIEHS's 1999 Working Group showed an increased mortality rate among those cardiac patients exposed to magnetic fields.(Savitz,et al, 1998c)
 - B. I have a newly implanted ICD (Implantable Cardioverter Defibrillator). Boston Scientific, the manufacturer, says the transmission lines shouldn't affect it, but they have no data to support that statement. My device technician says some of her patients do notice temporary changes when passing under transmission lines. Therefore I believe the lines could affect the effectiveness and life of my ICD.
 - a. Even your October 2007 Living and Working Safely around High-Voltage Power Lines says "power lines and electrical devices can interfere with the operation of some implanted cardiac pacemakers."
 - C. I'm a two time Breast cancer survivor and at greater risk for cancers. Experts agree there is a relationship of EMFs and some cancers even though casual. Therefore transmission lines should be restricted to non-populated areas.
 - 14650-2 D. I have acute asthma. Allergens stirred up by construction and maintenance could cause an asthma attack.

- 14650-3 2. This plan would decrease the value of my property and many others adjacent to the right away.
 - a. Consider the following studies:
 - "How Much Do Power Lines Lower Real Estate Value?" By Michael Wolfe, Demand Media
 - A quote from John Mulkey, Housing Guru, "However---and to me this is the most important issue---whether or not there is a casual relationship between power line radiation and disease the existence of such lines near a home is often perceived to be a problem by Realtors and purchasers. Because of the questions surrounding power lines, the health issues and the problems of resale, I wouldn't purchase a home adjacent to such a line. For me, it's not worth either of the risks."

Jem 10/6/2

- 14650-1 Please see the response to Comment 14328-6.
- 14650-2 Potential impacts to air quality are described in Chapter 21, Air Quality. Construction activities would be short-lived and localized. Mitigation measures, including watering roads, would reduce dust. Impacts would be low. BPA and its construction contractor would provide a schedule to landowners and others in the area before construction would begin.
- 14650-3 Please see the response to Comment 14140-2.

- 14650-3
- MIST Review Project “Transmission Lines and Property Value impact” by Julia Haggerty, 2012 says small acreage and agricultural properties are more adversely affected.
 - There are many more like studies.
- b. I bought the property because, among other things, it’s pastoral views. This transmission line would destroy that view and the view of my neighbors. Thus reducing our property values.
- 14650-4
- Using the existing BPA right away or NOWAYBPA’s alterative would affect far fewer private property owners.
- 14650-5
3. If you should decide to continue with the Central Alternative, Option 1, **please** look at accessing Tower F13 & F14 from Gassman Rd. through the proposed right away on vacant property instead of using my private driveway shared by two other residences.
- 14650-6
- I hope you will carefully reconsider your choice of the Central Alternative Option1 as the preferred route and choose either NOWAYBPA’s Route or using the existing BPA right away; rebuilding the existing towers and lines.

Respectively submitted by Juanita Means,

Jem 2 of 2

14650-4 Comment noted.

14650-5 Please see the response to Comment 14119-2.

14650-6 Comment noted.

14651

PATRICIA A TROWBRIDGE

03/21/2013

March 21, 2013

I-5 Corridor Reinforcement Project [address]

- 14651-1 My husband and I own 5 acres of land adjacent to the proposed "P" line. The current plan is to clear all of the land that runs down the eastern boundary of my land. I have a number of concerns:
- 14651-2 1. This would result in the destruction of the branch of Lacamas Creek that crosses back and forth
14651-3 between my land and DNR land down my entire eastern boundary. The loss of this beautiful year round
14651-3 creek would mean the loss of irreplaceable habitat for a large variety of wildlife.
- 14651-4 2. BPA will undoubtedly need to spray this area with herbicide on a regular basis to keep the proposed
14651-4 lines and towers cleared. There is no way that they would be able to keep the chemicals used off my
14651-4 land or out of the creek. I have spent 20 years developing a garden without use of herbicides and
14651-4 pesticides in this area.
- 14651-5 3. This same area was cleared by DNR as part of the Oceanspray timber sale in 2010. Because the
14651-5 logging removed the windbreak on the eastern side of my property, a number of large Douglas fir trees
14651-5 were blown down in the following winter. My garage was demolished by falling trees. I subsequently
14651-5 met with representatives of DNR and was advised that they would replant this area. The whole area has
14651-6 since been replanted. If the windbreak is not allowed to grow back in this area, we will continue to be at
14651-6 increased risk of storm damage.
- 14651-7 4. Vinemaple road is a private road, paid for and maintained by the residents. It is not a two lane road
14651-7 and was not built to carry construction vehicles or more than light traffic. Who will be responsible for
14651-8 wear and damage to this road and who will address safety concerns?
- 14651-9 If BPA continues to plan the destruction of this area, I would request that, at the very least, Mr Korsness
14651-9 come out and view the area that will be destroyed and talk to us about the specific steps that BPA will
14651-9 take to mitigate the damage.

- 14651-1 Thank you for your comments. Specific comments are addressed below.
- 14651-2 Please see the response to Comment 14097-1. BPA has worked closely with WDNR to relocate the corridor in this area more to the east on WDNR property. This redesign avoids clearing along this stream and avoids your property.
- 14651-3 BPA has relocated the transmission line to avoid clearing along this stream and the commenters' property.
- 14651-4 Section 17.2.2.2, Vegetation Maintenance, describes herbicide use within BPA's right-of-way. The appropriate application of any herbicide should not result in drift that would affect adjacent vegetation; no herbicides would be used outside of the right-of-way.
- 14651-5 The effects of windthrow are discussed in Chapter 17, Vegetation and in Section 17.2.2, Impacts Common to Action Alternatives.
- 14651-6 Please see the response to Comment 14561-2.
- 14651-7 Please see the response to Comment 14097-1. Vinemaple Road will not be used to access the project.
- 14651-8 Please see the response to Comment 14651-7.
- 14651-9 Please see the response to Comment 14651-2.

From: noreply@bpa.gov
Sent: Thursday, March 21, 2013 9:37 PM
Subject: BPA I5 Comment Submission Confirmation
Attachments: BPA Server Error.docx

Thank you for submitting your comments on the Bonneville Power Administration's draft environmental impact statement (EIS) for the I-5 Corridor Reinforcement Project. All comments submitted between November 13, 2013 and noon on March 25, 2013 will be responded to in the final EIS, which is expected in 2014.

A copy of your information, as submitted using our online form, is included below for your records. If you provided your contact information and submitted a question we can answer at this time, you will receive a response. Your contact information will also be added to our project mailing list. All comments including names will be processed and then posted on BPA's website at www.bpa.gov/goto/i-5

Sincerely,
Bonneville Power Administration

Name: Terry L Constance
Organization: No Lines in Populated Areas
E-mail:
Phone:
Address:

Group type: Special interest group

Please ADD me to the mailing list.

Comment:

14652-1 Your server is not allowing 2mb attachments. See screenshot of error. Estimate that 35% of comments are not posted due to server error displayed.

14652-1 BPA corrected the problem.

BPA's communications management system receives alerts when errors such as these occur. This was the first such error recorded for this project.

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5.1.2 Need for Action

14653-1 The DEIS is vague and does not specify how much power transfer to loads in California the I-5 line will carry. Marketing and profiting from power sales outside the PNW does not justify this project.

8.1.1 EMF

14653-2 The comparison of magnetic fields created by common appliances to a UHV transmission line is misleading. A can opener is operated for 15 seconds at a time while the I-5 line will be energized nearly continuously. There is little discussion or study of the very long term cumulative effects of EMF generated by UHV lines.

Chapter 11 - Socioeconomic

14653-3 BPA can and will use eminent domain to condemn property it needs for the I-5 Project if owners refuse to sell. Whether sold to or condemned, BPA says it will offer "fair market value" for land. Is this an averaged "fair market value" over the last 10 years, or assessed value at the bottom of the real estate market as we've seen since 2008?

Clearing and Access Roads

BPA has a documented and dubious past record of promising certain mitigation measures in project planning, then renegeing during construction and O&M.

Examples:

- 14653-4
- Promising to use non-chemical vegetation management on the R/W, but years later BPA Maintenance starts using highly toxic and persistent herbicides.
 - On new access roads the DEIS mentions secure closure gates to prevent unauthorized use of line access roads. The typical gates used are easily by-passed, compromised and go unmaintained.
 - Sensitive watercourse crossings may be attended to during construction, but O&M see the watercourses crossed and compromised by future maintenance activities at will.

Where in the DEIS is there any discussion or assurances that all environmental protections promised will be followed through with during the 75-100 year life span of the I-5 line?

- 14653-1 Chapter 1 describes the need for the project. Please also see the responses to Comments 14316-2 and 14494-2.
- 14653-2 Please see the response to Comment 14332-1.
- 14653-3 Please see the response to Comment 14566-9.
- 14653-4 Comment noted. BPA strives in all situations to carry through on its mitigation commitments and fully intends to do so in the case of the I-5 Project. If BPA decides to build the proposed project, the Record of Decision that BPA would prepare to document the decision would identify those mitigation measures from the EIS to which BPA has committed. This includes those mitigation measures identified for implementation during the life of the project.

Stringing Sites

- 14653-5 To achieve the required 2:1 slope between stringing equipment and an angle dead-end tower, it is often necessary to locate the equipment off the legal R/W. The DEIS does
- 14653-6 not address this. Will property owners of these sites be notified and compensated?

General Comment

- 14653-7 The DEIS describes the public involvement process to date on the I-5 Project. There should be a definitive listing of all changes BPA has made as a direct result of public input. The choice of the Central Option as the preferred route seems in contradiction to
- 14653-8 the majority of the public input objections to this project, the route and impacts.

14653-5 Section 3.6, Pulling and Tensioning Sites, discloses that these sites would be needed outside the right-of-way. BPA has tentatively identified pulling and tensioning sites along the transmission line corridor and impacts caused by these areas have been included in the updated impacts analyses for each resource.

14653-6 Please see the response to Comment 14566-9.

Landowners would be given the opportunity to accompany the appraiser when s/he inspects their property.

14653-7 The Final EIS includes changes made to the EIS based on comments received on the Draft EIS.

14653-8 Comment noted.

14654

DEBRA PRENTICE-THORNLEY, ROY THORNLEY

03/21/2013

March 21, 2013

Bonneville Power Administration I-5 Corridor Reinforcement Project [address]

14654-1 The following comments are specific to the West Alternative proposed new right-of-way for Segment 50; specifically, towers 50/2, 50/3 and 50/4. Clark County maps, as well as yours, incorrectly show the stream that feeds into Lacamas Lake as bisecting our property. The stream actually passes to the west of our property, through Clark County owned park land, before flowing into the lake. Your proposed towers 50/2, 50/3 and 50/4 would be located within a few feet of, if not right in, this stream and the surrounding wetlands. Also, your proposed access road to 50/3 would cross this stream several times, directly through those wetlands. We don't believe your engineers were ever on the ground in this area, and thus these wetlands were not included in the total acreage of wetlands on the West Alternative in the Draft EIS.

14654-2

14654-3

14654-4 The Clark County GIS website "Environmental" tab shows our property: (1) classified as a wetlands area; (2) subject to the Critical Aquifer Recharge Areas (CARA) Ordinance that prevents compromising groundwater and aquifers that supply residential wells; (3) in a Riparian Habitat Conservation Area; and (4) listed as "High (80-100 percent)" for archaeological probability. As our property is adjacent to the 278 acres of Clark County park property where towers 50/2, 50/3 and 50/4 would be located, one can assume the same environmental factors apply to that property.

14654-5

14654-6

14654-7 The following comments are directed to the project in general. Rather than continue to hold the citizens of Southwest Washington hostage, why don't you just do the right thing? Build this line on the Northeastern route that you dismissed without cause in January of 2012. Even the U.S. Army Corps of Engineers stated that your reasons for dismissing it were inadequate. I can't imagine the time and heartache you might have saved everyone if you had just followed the NEPA process from the beginning and listened to the citizens, rather than continuing to pursue fast-tracking the project and ignoring the citizens it will impact for decades.

Debby Prentice & Roy Thornley [address]

- 14654-1 Comment noted.
- 14654-2 BPA has identified the Central Alternative using Central Option 1 as the Preferred Alternative. Segment 50 is not part of the Preferred Alternative. At this time, no wetlands would be crossed in Segment 50.
- 14654-3 Chapter 16, Wetlands, describes how wetlands were surveyed using aerial imagery interpretation, and available databases. Wetland delineations were done for the Preferred Alternative between the Draft and Final EIS. Because the West Alternative is not the Preferred Alternative, no further wetland determination work on Segment 50 was conducted.
- 14654-4 Section 15.1.5, Groundwater, identifies Critical Aquifer Recharge Areas (CARAs) in Clark County, Washington and in Oregon within the project footprint. Digital data for the spatial locations of CARAs in Cowlitz County, Washington were not available, but the ordinance is still recognized by BPA. Section 27.26.2.1, Critical Area Ordinances, describes how BPA has incorporated standards and guidance from the Critical Area Ordinances in analyzing and proposing mitigation for impacts on potentially critical areas, including vegetation control management (see the response to Comment 14160-1) and control of hazardous materials (see the response to Comment 14677-19).
- 14654-5 Comment noted.
- 14654-6 That could be the case depending on what environmental features are actually present on the Clark County property.
- 14654-7 Please see the response to Comment 14443-1 regarding the elimination of potential routes in Oregon from detailed study in the EIS. Section 4.7.2.4, Northeastern Alternative, North of Silver Lake, Washington, explains why potential routes farther east were considered but eliminated from detailed study. BPA believes that the reasons provided in the EIS sufficiently explain their elimination.



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3/18/13

- 14655-1 My wife and I own a tree farm of about 120 acres at Chelatchie Prairie. Segment 28 of the proposed central route bisects the property with towers 6 and 7 and their access roads causing a major loss of land, timber, and future home sites. Many other landowners are in the same situation. This power line routing will impact the aesthetics of the most scenic areas of Clark
- 14655-2 County, and will attract vandals and trespassers to further degrade our land and life. There is no way we will be compensated for the damage that will be done to our property and lifestyle.
- 14655-3 There have been other routes proposed which appear to be better from the impact standpoint:
- 14655-4 A western routing along the existing 250 KV route seems best from several standpoints.
- 14655-5 1) The land has already been acquired and the only new takings would be a possible width increase.
- 14655-6 2) While there are many more homes along this route, they were built near the power line and the occupants accepted the likelihood of expansion of the corridor when they moved in. The occupants are used to living near power lines and there should be little impact on their lifestyle.
- 14655-7 3) Little or no productive timber or farm land would be damaged.
- 14655-8 4) Vandalism in the more populated areas should be less of a problem.
- 14655-9 5) Phasing of the power supplies could help cancel some of the huge electrostatic fields to be produced.
- 14655-10 6) With clever logistics control, both lines could be hung on the same towers, making field cancellation even more effective.
- 14655-11 7) Out in the County, aircraft and helicopter traffic is significant. An accident between an aircraft and a 500KV power line would be terrible, inevitable and preventable.
- 14655-12 8) There is little chance of a forest fire severe enough to damage the lines or towers as there is on the proposed route.

- 14655-1 Please see the responses to Comments 14097-1 and 14119-2.
- 14655-2 Please see the response to Comment 14364-2. Chapter 7 describes the potential effects of the project on visual resources.
- 14655-3 Comment noted.
- 14655-4 Comment noted.
- 14655-5 Please see the response to Comment 14623-6.
- 14655-6 Comment noted.
- 14655-7 Comment noted.
- 14655-8 Please see the responses to Comments 14097-1 and 14119-2.
- 14655-9 Please see the response to Comment 14364-2. Chapter 7 describes the potential effects of the project on visual resources.
- 14655-10 Comment noted.
- 14655-11 Comment noted.

14655-12 | A far North and East route would avoid damage to most small landowners and use timber company and DNR/ Forest Service lands. While the impact to Weyerhaeuser Co. would be significant, it can much more easily absorb this impact than the small landowners who will lose the value of a large part of our land. This is a quasi-federal project, and public land should be used as much as possible.

14655-13 | Finally, we implore you to try to minimize damage to our property. We have spent nearly 40 years making payments only to have much of the value destroyed by a bolt from the blue. PLEASE do not worry so much about who has the least political or legal resources, and try to protect your ratepayers.

1/15/13

14655-14 | My wife and I own a tree farm of approximately 120 acres at Chelatchie Prairie in Clark County. It consists of much of the NE1/4 of section 12, T5N, R3E in several parcels including 3,14,01,62,4,10, all of which will be crossed by 2500 feet or so of segment 28 of the new power line. The terrain is steep in places and is stocked with 50 to 80 year old trees including some D.F. poles. The corridor bisects the farm N-S through the best timber, the best soil, and the best future homesites. It includes two towers (nos. 6 and 7) and several hundred feet of access road. It also passes very close to the new Lindberg house just South of us.
THIS PROJECT WILL DEVASTATE OUR LAND AND OUR LIVES.
There appears to be no consideration of the farmers and tree farmers who will be so severely impacted by this project.

14655-15 | The new line would pass over a 500-600 foot high ridge on our property. The planned route requires two towers because the ridge top is wider and flatter in this area. If the route were moved to the East, the ridge top becomes narrow and only one tower should be required and one access road instead of two. An alignment near our East property line would cause much less damage to our property value and avoid impact to the Lindberg house. There appear to be several options to pass the old IP sawmill and rejoin the original route while decreasing B.P.A. costs.
We ask that BPA re-examine the line placement with consideration of the landowners affected.

John and Sherry Fleming

14655-12 Please see the response to Comment 14623-6.

14655-13 Comment noted.

14655-14 Comment noted.

14655-15 It is BPA's standard practice to implement phase optimization wherever possible, potentially reducing both magnetic and electric fields. See our brochure at <http://www.bpa.gov/Projects/Projects/I-5/2012documents/How%20BPA%20Addresses%20EMF%20brochure-WEB.pdf>.

Also, please see the response to Comment 14328-6.

14656

LAURA FERNANDEZ

03/21/2013

14656-1

We got to complacent when you removed the I-5 Corridor from the preferred route list but we did not go away. The I-5 Corridor route impacts many, many, many more people and wetland animals. The impact will be financially unrecoverable, and unknown health impact to our children and adult citizens. Please go east to less populated areas.

14656-1 Comment noted.

14657

ERIN GROVER

03/21/2013

- 14657-1 Bonneville Power Administration please examine the importance of this vital Dispursal Corridor and the small streams involved in this project. The effect this will have long term on the Troutdale aquifer. This
- 14657-2 project will drastically change the lives of human inhabitants that currently make their living via small tree farms and home businesses that range from artistic pursuits to high tech home businesses. The
- 14657-3 effect this will create on these human inhabitants as well as all flora and fauna environmentally is huge and long term. This project drastically changes the ecosystem of this region destroying massive amounts
- 14657-4 of flora and fauna with no intent to take responsibility and repair for this environmental destruction. We already have Hanford leaking into the Columbia we should consider the importance of this "snag rich" area as BPA says (please examine the impact this project will have on underground plants and animals of this region) of Clark and Cowlitz County. Also this rare White Water River the East Fork of the Lewis
- 14657-5 River. Our native fish runs are already in sad shape. Herbicide flowing into numerous Rivers and creeks destroying supportive plant life and macrobiotic communities will create further decline of such vital
- 14657-6 resources. It was previously discussed that these lines would need to be lit in certain areas. How will this affect Bird and Bat populations. It is very hard to read comments by other Clark (mostly) County residence applauding these actions and failing to realize how severely their fellow Clark and Cowlitz citizens, flora, fauna and ecosystem that ultimately supports everything below will be changed and damaged forever. I grew up in Clark County and have watched it change. We are about to change the last intact Native area of this type in Clark County. I have gratefully shared stories with wonderful
- 14657-7 human beings like Margaret Colf Hepola, Ken Edwards, Debbie and Lee Levenan, Mariah Reese, Axel Swanson. People who are honest, compassionate, and in tune with many of the true situations that occur along these proposed lines. I have also heard some sad stories regarding people who have lived under such lines. I hope somehow wisdom will prevail and we will somehow see the importance of protecting all that currently exists here and cannot be replaced.

- 14657-1 Please see the responses to Comments 14533-3 and 14654-4.
- 14657-2 Please see the response to comment 14674-1.
- 14657-3 Chapters 16, 17, 18, and 19 describe the potential project impacts to flora and fauna, and identifies recommended mitigation measures. Mitigation, as required through Section 404, Section 7, and Section 106 would also be implemented.
- 14657-4 Underground animals and plant root systems would be disrupted, displaced or killed by tower footings and new roads and substations. Recommended mitigation measures are identified in Chapters 16, Wetlands, 17, Vegetation, and 18 Wildlife.
- 14657-5 The EIS summarizes distribution of special-status fish species in Section 19.1, Special-Status Species. The transmission line would cross the East Fork Lewis River at one of three locations (30-3, V-5, or O-8). Table 19-1 and Map 19-1C indicate that these crossings are used by Lower Columbia steelhead and river lamprey. NOAA Fisheries designated these reaches as critical habitat for Lower Columbia steelhead. Table D-1 in Appendix K indicates production of adult salmon and steelhead is in the 50th percentile among all anadromous fish-bearing streams crossed by transmission line corridors.
- The EIS summarizes impacts to fish resources in Section 19.2, Environmental Consequences. BPA discloses use of herbicides approved in its Transmission System Vegetation Management Program. Overspray of herbicides used for noxious weed control within rights-of-way and substation yards could affect aquatic habitat. BPA bases herbicide selection on toxicity level, proximity to aquatic habitat, and delivery potential. Appropriate buffers would be used to prevent herbicides from being deposited in surface waters. Effects to aquatic plant life from herbicide application would be limited.
- 14657-6 Section 3.7 describes obstruction lighting. The conductors would not be lit. There would be warning lights on the towers at the Columbia River crossing. Since this is an existing utility crossing with existing lit towers, the additional lighting is not expected to affect bird and bat populations.
- 14657-7 Comment noted.

14658

CITIZENS AGAINST THE TOWERS, YARO SCHNOEBELEN

03/21/2013

- 14658-1 As a member of the Citizens Against the Towers I am glad that your preferred route was not the I-5 route which would be close to 3,032 homes and several schools and day cares. The route you have chosen, the Central Option, still impacts 357 homes and this could be avoided by going further East. I
- 14658-2 note that you have not eliminated the I-5 corridor route and hope that your strategy is not to at the last minute choose the I-5 corridor on the assumption it would be passively received. I can assure you that I and thousands of others will aggressively resist this strategy.

14659

LAURA FERNANDEZ

03/21/2013

- 14659-1 The I-5 proposed line impacts way to many people and children and many wetlands. Take the line east to the less populated areas.

14658-1 Please see the response to Comment 14655-12.

14658-2 Comment noted.

14659-1 Please see the response to Comment 14655-12.

14660

LARRY C RAGLIONIE

03/21/2013

- 14660-1 The current suggested route is not acceptable to me. I live on the east fork of the Lewis River at or near Dole Valley Rd and Sunset Falls Rd in Yacolt. The current route will disrupt a very fragile eco system in this area. The river has a selected steelhead run that requires the river be shaded to protect the young smoldt. The county will not even allow the cutting of a small tree in the area because of shading issues, and you want to cut large swaths across the river in multiple locations, allowing the sun to warm the water and destroy the fish habitat.
- 14660-2 This area is also home to eagles that live along the river and use the river and banks for nesting and feeding. I even have photographic evidence of a very rare Golden Eagle perched in the fir trees along the bank directly across from my house. The photo was taken in 2010. The Golden Eagle has a 6 to 7 foot wingspan and is one of the largest of the eagle family. They are rare in the area and destroying precious habitat will be detrimental to their existence.
- 14660-3 These are just a few of the many wonders found along the river and the Yacolt forest. I am also concerned about the lack of fiscal responsibility BPA is taking in this project. To purchase thousands of acres of right of ways and to displace numerous lands from private home owners makes no sense, when the BPA already own right of ways on the west route. These land owners already are aware of the easements adjoining their lands and are aware that BPA has the right to use this land to their needs. The west route makes much more sense as well as a more easterly route through the DNR lands. This route would not disrupt private lands and would also provide a very valuable "fire break" when a fire could strike. (this is like an earthquake, it is not if, but when). This fire break would provide a complement to the environment and forest lands to protect them and would not receive the criticism your present routes do. Sit down with the DNR lands and WORK IT OUT, Geeeee, it is best for all. I know DNR does not want to cooperate, but you are both government entities and should be able to work together.
- 14660-4 Remember in the end, you all work for US, the people. I seems in these times that YOU all forget this fact. The people put you to work and don't expect you to harm their lands and pristine natural areas. PLEASE DO THE RIGHT THING.

Sincerely,

Larry Raglione

[address]

Land Owner

- 14660-1 The EIS summarizes distribution of special-status fish species in Section 19.1, Special-Status Species. Table 19-1 and Map 19-1C indicate that the East Fork Lewis River at this crossing downstream of the commenter's property (V-5) is used by Lower Columbia steelhead and river lamprey. NMFS has designated this reach as critical habitat for Lower Columbia steelhead. Table D-1 in Appendix K indicates that adult salmon and steelhead production at this crossing ranks in the 50th percentile among all anadromous fish-bearing streams crossed by transmission line corridors.

The EIS summarizes impacts to fish resources in Section 19.2, Environmental Consequences. Table B-1 in Appendix K indicates that riparian vegetation at this crossing is well stocked with large conifers and large woody debris recruitment potential is high. But, because the stream is wide (~50 feet), the ability of riparian vegetation to fully block solar radiation to the stream is limited. Therefore, impacts to stream temperature would not be as great as if the stream were narrower. Instead, impacts from clearing of streamside vegetation would be moderate as noted in Table B-1.

For any action alternative, the transmission line would cross the East Fork Lewis River at one of three locations (30-3, V-5, or O-8). The transmission lines would cross the river more or less perpendicular to the streambank so that the length of stream cleared would be about 170 to 190 feet (see Table B-1). Extrapolating stream temperature modeling results published by the WDOE (Cristea and Janisch 2007), this would translate to an increase of about 0.14 deg C at the downstream end of the clearing. Stream temperatures would then return to normal a short distance downstream of the clearing.

- 14660-2 Eagles use the river and banks for nesting and feeding and BPA is also concerned about impacts on bald and golden eagles. BPA has identified the placement of bird flight diverters as a recommended mitigation measure for this project in Section 18.2.8, Recommended Mitigation Measures. BPA continues to coordinate with state and federal agencies on specific locations for placement of bird flight diverters.
- 14660-3 Please see the responses to Comments 14655-5 and 14645-2.
- 14660-4 Comment noted.

February 15, 2013

Mark Korsness, Project Manager
I-5 Corridor Reinforcement Project

RE: I-5 Corridor Reinforcement Project

14661-1 The Castle Rock Chamber of Commerce is writing in response to the BPA's I-5 Corridor Reinforcement Project Draft EIS. Thank you for allowing the Chamber the opportunity to comment on this matter.

The Chamber's vision statement is "A consolidation of business owners and the community, combining efforts to improve and promote business and quality of life in the Castle Rock area," said Castle Rock business and residential areas are directly south of the BPA's proposed I-5 crossing.

Considering the above vision, the Chamber writes in strong opposition to the "Central Alternative, Option 1" and encourages BPA to consider using a shared utility corridor concept citing the following:

- 14661-2
1. While risk mitigation is improved by creating route alternatives, this risk is non-tangible and hypothetical compared to local business and residential impact.
 2. A shared corridor concept is standard business practice by BPA, as partly evidenced by the Longview-Napavine line segment, Bonneville-Vancouver line segment, etc. shown in Figure 2-1 in the draft EIS.
 3. One of several standard BPA permit requirements is that no flammable materials be on BPA property; however, the proposed route and its crossing of existing Natural Gas Pipelines and potential crossing/longitudinal distance to the new Williams pipeline is in direct conflict with BPA policy in a County where two major gas line explosions have occurred within the last 20 years.
 4. A study documented in IRWA magazine, November/December 2010, reflects a loss in property values averaging 1-10% depending on proximity to high voltage transmission lines. This loss in value can be partially mitigated by using existing utility corridors, while the "Central Alternative, using option 1" appears to have the most degrading impact.

The Chamber strongly recommends that BPA consider installing this line along the existing Lexington – Delameter route in a longitudinal / shared utility corridor manner as delineated in the EIS as the "West Alternative."

Again, thank you for allowing the Chamber to comment on this matter. If you have any questions, please feel free to contact the Chamber President, Bill Davis at

Sincerely,

Castle Rock Chamber of Commerce Board of Directors

14661-1 Comment noted.

14661-2 Two lines sharing a corridor increases the likelihood of losing both lines at the same time. It is one of the many things BPA considers when selecting routes.

BPA avoids paralleling or being close to natural gas pipelines whenever possible. BPA can safely cross pipelines.

Please see the response to Comment 14140-2 regarding property values.

14662

WILLIAM A NELSON

03/21/2013

- 14662-1 | There is no reasonable way to avoid exposing thousands of people to EMFs if the existing line is chosen.
The central route represents the logical, least damaging route for the new transmission line. Your current choice is the right choice.

14662-1 Comment noted.

BPA's Proposed I-5 Corridor Reinforcement Project Draft environmental impact statement comment form

Public review of and comment on this draft EIS will continue through March 1, 2013. Comments should be as specific as possible, with references to particular pages, sections and chapters. Additional or clarifying information that should be considered is helpful. Factual corrections are appreciated. BPA staff will review all comments received and respond to them in the final EIS.

Name (will be included with your comment in the final EIS) JACK & EILEEN GEORGE

Address _____

Please add me to the mailing list

Please remove me from the mailing list

Comments:

14663-1

Please consider making the access road along the same route between Tower F14 to F13, and not along the private driveway next to our house.

Comment period extended until noon on March 25, 2013



14663-1 Please see the response to Comment 14119-2.

14664

CHERYL KAY BRANTLEY

03/21/2013

Bonneville Power Administration

Army Corps of Engineers

It has been said that the areas surrounding the Yacolt, Amboy, Chelatchie Prairie, Green Mountain, Hockinson, and Venersborg are all overdue for another fire equivalent to the September, 1902 Yacolt Burn (footnote 1). Landowners who live in these areas fear they will be "boxed in" by fire as in the Fern Drive, Amboy, community who has only one road in and out of their home sites.

By placing these towers and lines in an area with a history of Washington's largest wildfire, BPA will be putting people residing in these areas at high risk of a branch blowing and sparking a blaze just as happened in Firestorm 91 (footnote 2), as noted below.

"... the fire was started by the tip of a tree with a forked trunk - a potential fire hazard in high winds - that fell across the lines." "He also says he saw a forked tree that had split, with one of its 40-foot limbs lying across the sagging power lines. He watched the tree tip arc with electricity and then fall into the brush. "I saw a little flicker of flame, no more than a candle, and I said, My God, we've got a fire." Then wind sent flames up the wooded hillside."

14664-1

Placing transmission lines in the rural forested areas of Yacolt, Amboy, Chelatchie Prairie, Green Mountain, Hockinson, and Venersborg is irresponsible and detrimental to the safety of the citizens residing in these areas because there is a history of the largest wildfire Washington State has ever encountered. Placing new transmission lines anywhere other than the existing transmission corridor (West Alternative) would be an act of negligence to the safety of people, their homes and land, and the environment.

(Footnote 1: <http://www.wildwestweather.com/2013/02/20/wildfire-history-the-yacolt-burn-forest-fire/>)

(Footnote 2: <http://www.spokesman.com/stories/1996/oct/16/engineer-ignites-legal-firestorm-alleges-wwp/>)

- 14664-1 Section 3.11, Vegetation Clearing, and Section 3.15, Maintenance, describe the clearing BPA and its contractors would do before and after construction to prevent trees from touching or falling into the transmission lines. After construction, trees are not allowed to regrow in the right-of-way.

14665



Caring for
your natural resources
... now and forever

March 18, 2013

Nancy Wittpenn, Environmental Protection Specialist
Bonneville Power Administration
905 11th Avenue NE
Portland, OR 97208

Subject: DNR Comments on the I-5 Corridor Reinforcement Project DEIS

Dear Ms. Wittpenn:

Thank you for the opportunity to review and comment on Bonneville Power Administration's (BPA) I-5 Corridor Reinforcement Project (I-5 Project) Draft Environmental Impact Statement (DEIS).

14665-1

Lands managed by the Washington State Department of Natural Resources (DNR) already are encumbered by approximately 600 miles of BPA transmission corridor and 500 miles of access roads. Granting an easement for the I-5 Project would be the fourth BPA easement granted on DNR-managed lands since 2009. Although the National Environmental Policy Act (NEPA) process is project-specific, DNR is concerned with the cumulative and ongoing addition of new lines and expansion of existing lines on DNR-managed lands.

14665-2

DNR-managed lands are likely to be severely impacted by the I-5 Project. Like many private landowners, DNR has major concerns with the project and is recommending mitigation to offset unavoidable impacts. DNR is also requesting additional analysis. DNR's attached comments focus on the following themes related to DNR's proprietary and regulatory responsibilities:

- (1) trust land management and impacts to the use of DNR-managed lands (1a-1j),
- (2) geologic hazards,
- (3) local economies including timber and recreation,
- (4) cultural resources,
- (5) forest practices,
- (6) forestry riparian easements,
- (7) protection from wildfire,
- (8) special lands and special status species, and
- (9) accuracy of GIS data for Environmental Impact Statement (EIS) analysis.



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14665-1 Appendix A describes how BPA and WDNR are addressing the statewide effect of BPA's transmission facilities on WDNR-managed lands through statewide agreements between the two agencies. One of these agreements is an Appraisal Memorandum of Understanding (MOU) for WDNR-managed lands that was entered into in August 2010. This Appraisal MOU provides a mutually acceptable methodology for appraisals of WDNR managed lands crossed by BPA's transmission facilities such as the proposed project.

In addition, BPA and WDNR entered into a Statewide Rights-of-Way Memorandum of Agreement (MOA) in March 2012. This Statewide MOA is designed to comprehensively address BPA transmission line operations and maintenance compatibility with WDNR trust land management.

14665-2 Thank you for your comments. Specific comments are addressed below.

Nancy Wittpenn
March 18, 2013
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Under each theme you will find a series of issues. If applicable, each issue is broken down into a summary, references to the DEIS, recommended mitigation, recommended additional analysis, and recommended changes. A table is provided in Attachment 2 for quick reference to the themes and issues, and the recommended mitigation and analysis.

Several of the issues identified in the attachment involve “compensatory mitigation” for impacts to DNR’s current or future land use, as identified in the DEIS’s general approach to mitigating adverse impacts to the human and natural environment (Section 3.12 Mitigation Measures, page 3-17). Others seek commitments from BPA, in the EIS, to processes for analyzing and mitigating impacts as they are identified through ongoing refinements to the proposed transmission line location and related ground- and water-disturbing activities.

14665-2

DNR’s goals are to ensure that: (1) BPA prepares an EIS that can be adopted under the State Environmental Policy Act (SEPA) for use by all state and local agency actions, including the potential granting of an easement on DNR-managed lands and any other DNR actions; and (2) the NEPA process provides a public input opportunity as required under SEPA. Impact analysis and coordination of SEPA and NEPA requirements are tied to SEPA laws and procedures codified in Chapter 43.21C RCW State Environmental Policy Act; Chapter 197-11 WAC SEPA Rules; and NEPA Regulations 40 CFR. The EIS must analyze the significant impacts of the proposal to the SEPA defined natural and built environment (WAC 197-11-444). In some instances, what is required is detailed in substantive standards, policies, or plans. All of DNR’s issues must be mitigated or dealt with prior to the granting of an easement.

The project area includes state lands covered by DNR’s State Uplands habitat conservation plan (HCP) and related Incidental Take Permits, and non-federal lands covered by DNR’s Forest Practices Habitat Conservation Plan. In addition to evaluating impacts on covered species as specified in 1b (DNR managed lands) and Forest Practices (all non-federal lands), BPA should initiate consultation with the U.S. Fish and Wildlife Service and NOAA Fisheries to determine whether the project will adversely affect listed threatened and endangered species covered by the State Uplands HCP and the Forest Practices HCP.

Since BPA initiated scoping on the McNary-John Day project four years ago, DNR has been clear on several principles for granting easements: (1) disclosure of the environmental impacts and recommended mitigation measures in the NEPA and SEPA documents for impacts to the human environment under NEPA, and the “natural” and “built” elements of the environment under SEPA; (2) no net loss of trust land productivity; (3) mitigation for unavoidable impacts;

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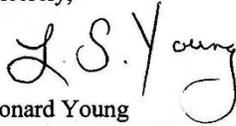
and (4) minimization of short- and long-term liability and regulatory risk. These principles are reflected in DNR's comments and recommendations.

14665-2

Over the last four years, DNR and BPA have increased their knowledge of each other's unique responsibilities and have made progress in improving communications and the management of 800 existing BPA easements that traverse 600 miles and impact 10,000 acres of DNR-managed lands. DNR hopes that the positive direction of our working relationship will continue while we work through impacts resulting from the I-5 Corridor Reinforcement Project.

DNR SEPA Specialist Dave Dietzman is available to assist you with additional information regarding SEPA/NEPA coordination and compliance, at your convenience.

Sincerely,



Leonard Young
Department Supervisor

Enclosures (6)

cc: Stephen Posner, Washington State Energy Facility Site Evaluation Council

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**Washington State Department of Natural Resources Comments on Bonneville
Power Administration's I-5 Draft Environmental Impact Statement -
November 2012**

Trust land management and impacts to the use of DNR managed lands

1a. Roads

Issue 1: Road standards

Summary: DNR submitted Scoping Comments that requested BPA meet Forest Practice Road Maintenance and Abandonment Plan (RMAP) standards for all new road construction. BPA recommended mitigation measures include meeting Washington's Forest and Fish Law or like standard for new construction (Chapter 15.2.8 page 15-23). However, the Forest and Fish Law is an inaccurate reference (See Recommended Editing Changes, item 1.). BPA's intent is unclear for meeting the requirements of Washington State's Forest Practices Act and Rules.

14665-3 **Reference:** Chapter 3 Project Components, and Construction, Operation and Maintenance Activities, pages 3-14 and 3-15; Chapter 15 Water, pages 15-1 through 15-24; Chapter 16 Wetlands, pages 16-1 through 16-19

Recommended mitigation: Based on the recommended analysis below, identify and recommend what additional mitigation should be required for this project to meet the scoping comment request.

Recommended analysis: BPA needs to compare the differences between the Washington Forest Practice RMAP standards and the 1987 BPA access road planning and design manual road standards. The comparison should evaluate if the 1987 standards meet or exceed forest practices standards that serve to mitigate for impacts associated with road construction and maintenance.

Issue 2: Avoid sediment delivery from access road surfaces

Summary: In Western Washington, to avoid delivery of sediment all access roads should have a durable clean lift of aggregate. The DEIS referred to graveling roads "where soil is unstable", which does not ensure that road use will not deliver sediment in a way that impacts water quality.

14665-4 **Reference:** Chapter 3 Project Components, and Construction, Operation and Maintenance Activities, pages 3-14 and 3-15; Chapter 15 Water, pages 15-1 through 15-24; Chapter 16 Wetlands, pages 16-1 through 16-19

Recommended mitigation: Based on DNR's experience, at a minimum, to mitigate for the potential for excessive road surface wear that could lead to sediment delivery, a minimum of 40 cubic yards per station (100') of rock will be applied to all new and reconstructed access roads associated with this project on DNR managed trust land. Additional rock will be applied as conditions and anticipated use dictate.

Issue 3: Structures and culverts on stream crossings

Summary: The DEIS states "*Where new roads cross year around, seasonal, or fish streams, open bottomed culverts or bridges would be needed*". Based on DNR's experience open bottom culverts or arches on small order (typically non-fish bearing) streams tend to have more frequent maintenance issues and need for repair than a traditional fully enclosed culvert. The Washington Department of Fish and Wildlife (WDFW) has published guidelines for structures allowing fish passage. *Design of Road Culverts for Fish Passage* (linked below) is a work in progress. It was first published in 1999, and it has been

14665-5

14665-3 BPA's access road group has revised their access road standards (Bonneville Power Administration Access Road Design Standard STD-DT-000056 Revision 2, April 9, 2015) and they now more closely reflect forest practices standards and are in use for access road design on the I-5 Project. As required by the Statewide MOA between BPA and WDNR, annual meetings have produced additional agreements between both agencies concerning access road construction and maintenance. An analysis of BPA's access road standards and how they compare to the Washington Forest Practice RMAP standards are included in Appendix A of the EIS. BPA's standards are consistent to the extent practicable with the RMAP standards. Recommended mitigation measures that protect natural resources have been included in Chapters 3, and 15 through 19. You are correct and BPA has removed the reference to the Forest and Fish Law.

14665-4 In 2012, BPA and WDNR signed the Statewide MOA for Managing Impacts to State Lands from BPA Transmission Line and Access Road Easements. This agreement describes road classification and management on state lands. Road design would meet the requirements detailed in the MOA. All future responsibility for maintenance and improvement costs for access roads and WDNR access rights are guided by this MOA. For BPA's current road design efforts, a minimum of 29 tons of rock per station would be applied to improve driveways, 50 tons of rock per station for improved roads, and 82 tons of rock per station for reconstructed and constructed roads. There may be some specific requirements in some areas which may differ from these amounts. BPA also plans to add subgrade stabilization for soft areas which is an additional 12 inches of quarry spalls with geotextile fabric. In some cases this would be added to the amounts above.

Additional rock would be applied as needed during construction for maintenance and in the future for maintenance based on agreements between BPA and landowners.

14665-5 In 2012, BPA and DNR signed the Statewide MOA for Managing Impacts to State Lands from BPA Transmission Line and Access Road Easements. This agreement describes road classification and management on state lands. Road design would meet the requirements detailed in the MOA. All future responsibility for maintenance and improvement costs for access roads and WDNR access rights are guided by this MOA, unless one or both parties to the agreement initiate new negotiations.

Any structure installed on any stream regardless of fish presence would be appropriately sized based on hydraulic calculations similar to those in the WDFW manual for 100-year flood plus debris events: Design of Road Culverts for Fish Passage <http://wdfw.wa.gov/publications/00049/>. For fish bearing streams specifically, BPA would use the stream simulation method for sizing the crossings with a hydraulic analysis of the 100-year flows performed as a check of the culvert or bridge size. Hydraulic analysis is not used for ditch relief culverts.

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- updated several times since then.
Reference: : Chapter 3 Project Components, and Construction, Operation and Maintenance Activities, pages 3-14, page 3-15 , and page 3-26.
Recommended mitigation: Any structure installed on any stream regardless of fish presence will be appropriately sized based on hydraulic calculations similar to those in the WDFW manual for 100-year flood plus debris events: Design of Road Culverts for Fish Passage <http://wdfw.wa.gov/publications/00049/>. BPA will use appropriately sized round culverts on non-fish bearing streams and open bottom culverts or bridges for crossings on fish bearing streams.
- 14665-5
- Issue 4: Drain dips and water bars**
Summary: It is unclear on what type of roads and at what road gradients “*drain dips or water bars*” will be installed. Water bars can be an effective Best Management Practice (BMP) or negatively, a drainage structure that increases log and equipment transportation costs due to slower speeds and damage to log trucks. Drain dips do not provide adequate mitigation “*where access roads cross drainages that carry seasonal runoff*,” nor ford crossings which essentially put equipment and the resulting impacts to fish and water quality directly into the stream. Neither are recognized drainage structures in Western Washington that serve to mitigate for impacts in these areas.
Reference: Chapter 3 Project Components, and Construction, Operation and Maintenance Activities, section 3-9 pages 3-14, and 3-15.
Recommended mitigation: Avoid installing drain dips, fords or water bars on access roads. Instead install cross drain culverts and associated ditches at a frequency to outlet water to the forest floor while not increasing erosion. BPA should utilize guidelines in WAC 222-24-040 Water crossing structures (3) and (4): <http://apps.leg.wa.gov/wac/default.aspx?cite=222-24-040>
If water bars are proposed for installation then BPA needs to compensate for the change in land use from accepted standards and the resulting economic impact due to log transportation costs and the potential damage to log and equipment trucks in comparison to installing culverts.
- 14665-6
- Issue 5: Roads within the transmission line corridor**
Summary: Existing BPA rights-of-way have a large number of roads built within and that run parallel to the right-of-way and transmission line corridor, which facilitates unauthorized use, the spread of noxious weeds, and sediment delivery to streams. Some of these temporary construction roads are kept open, maintained and used for maintenance activities but many of them are not properly maintained nor properly abandoned to prevent use. The building of roads between towers to facilitate construction activities was not mentioned in the DEIS.
Reference: Chapter 3 Project Components, and Construction, Operation and Maintenance Activities page 3-24.
Recommended mitigation: Temporary construction roads that are parallel to and within the right-of-way corridor will be avoided. If temporary roads are needed, then BPA will develop and implement BMPs such as: limit the number to only critical roads; allow roads to be used only during the dry season (generally June-October); require vehicle wheels to be clear of noxious weeds when entering the roads; scarify and re-vegetate the road immediately upon completion of use; and install an access barrier of earth or other natural onsite material to prevent unauthorized use.
Recommended changes: Incorporate a discussion of the building of temporary construction roads and the need to mitigate impacts from temporary construction roads.
- 14665-7
- 14665-8 **Issue 6: Miscellaneous Transportation Comments**

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- 14665-5 BPA would use appropriately sized round culverts on non-fish bearing streams. Fish bearing stream crossings may contain an embedded round or arch pipe in addition to open bottom culverts and bridges. For embedded culverts BPA typically sets the invert of the culvert a minimum of 1 foot or 2D90 below the lowest potential scour elevation (Vertical Adjustment Potential [VAP]). WDFW published guidelines (see link above) specifies embedded culverts as an option with the stream simulation method.

Since this is a federal project, BPA is required to meet Corp of Engineers culvert design requirements which are in addition to WDFW standards and in some cases may require larger embedded culverts on non-fish streams.

Culvert discussions are ongoing but in general they will be sized to meet design standards with additional effort to incorporate criteria which address constructability and future maintenance of the culverts.

- 14665-6 In 2012, BPA and WDNR signed the Statewide MOA for Managing Impacts to State Lands from BPA Transmission Line and Access Road Easements. This agreement describes road classification and management on state lands. Road design would meet the requirements detailed in the MOA. All future responsibility for maintenance and improvement costs for access roads and WDNR access rights are guided by this MOA.

The use of waterbars continues to be coordinated with landowners. Water bar type (rock or rubber) would depend on access road usage and grades. Dips are not intended to convey water from ditches or streams. They are used to armor areas where the road is in a sag (i.e., low area or trough); also, where there is a need to minimize maintenance by armoring because adjacent basins are causing the road to be soft or to offset roadway flows which may propagate through rutting. Road sections continue to be evaluated to determine if an uphill ditch would be needed and cross drains used at intervals based on road grade.

- 14665-7 Section 3.9, Access Roads, acknowledges that roads are built within the transmission line right-of-way as much as possible if terrain and land use allow. BPA builds both permanent and temporary access roads for construction. Only permanent roads are used for ongoing maintenance of project facilities. Temporary roads, whether in or outside of the right-of-way, are removed and the area re-established to pre-project conditions.

In 2012, BPA and DNR signed the Statewide MOA for Managing Impacts to State Lands from BPA Transmission Line and Access Road Easements. This agreement describes road classification and management on state lands. All future responsibility for maintenance and improvement costs for access roads and WDNR access rights will be guided by this MOA. The manual states that all road work done under the agreement would use the Western Washington Stormwater Management Manual.

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- 14665-8 Section A2.4 references Bonneville Power Administration Access Road Design Standard STD-DT-000056 Revision 2 dated 9/13/2013 (previously BPA's 1987 Access Road Planning and Design Manual) and the Statewide MOA that was signed in March 2012. BPA's comprehensive manual includes BPA's access road policy and standards regarding the design and construction of access roads, including those on and next to WDNR land. The Statewide MOA for Managing Impacts to State Lands from BPA Transmission Line and Access Road Easements describes road classification and management on state lands. Road design would meet the requirements detailed in the MOA. All future responsibility for maintenance and improvement costs for access roads and WDNR access rights are guided by this MOA.

Environmental, engineering, economic, and maintenance factors are considered in locating and designing access roads. Access road planning, as described in the BPA Manual, takes into account many factors including seasonal constraints for construction, steep slopes, present and potential land uses, soil conditions, soil erosion potential, water quality impacts, visual impacts, and impacts to cultural resources. The BPA Manual also describes erosion and sediment control measures that are implemented during access road construction.

These details would likely be included in easement documents negotiated between BPA and WDNR if BPA decides to build the project.

All bridges on heavy equipment transportation routes would be inspected to verify they have the working load capacity to handle construction equipment and insure the safety of workers and the public. BPA would ensure a safe working load capacity on any deficient structures prior to their use by BPA heavy equipment.

BPA plans to use WDNR roads to get onto WDNR property because WDNR has asked BPA not to create new entrance roads to their properties. With this plan, no new gates on WDNR property would be needed. If gates are needed for some reason, BPA would install an appropriately sized lock box with the required number of padlocks to accommodate access.

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14665-8

Summary: Numerous miles of existing roads on DNR lands will be improved. There are tables and maps that identify the roads and summarize the miles, but not a general discussion of the type of road improvements that are needed and hence there is not a thorough understanding of road improvement impacts associated with the project.

Bridges on private lands and forest land may not have the same load capacity as a County bridge, nor would they have the same frequency of inspection.

Existing and new gates installed with the project will help control unauthorized use, however there may be multiple landowners with legal access who may be affected.

Reference: Chapter 3 Project Components, and Construction, Operation and Maintenance Activities Table 3-2 pages 3-22, 3-23 and 3-24; Chapter 12 Transportation page 12-5.

Recommended mitigation:

(1) Specific minimum road improvement standards will be developed and incorporated as mitigation in the EIS, or in subsequent agreements with landowners such as; clearing limits, brushing limits, aggregate needs, and curve widening requirements.

(2) All bridges on heavy equipment transportation routes will be inspected and certified they have the working load capacity to handle construction equipment and insure the safety of workers and the public. BPA will install new structures if bridges have been compromised or do not meet certification for the anticipated heavy equipment.

(3) BPA will install gates and a lock box that can accommodate the required number of padlocks to meet the access need.

Recommended changes: Provide a general discussion of the type of road improvements that could be needed, an acknowledgement of the potential for road improvement impacts and the need to mitigate.

1b. Socioeconomic and Land Use impacts to DNR trust land management

14665-9

Issue 1: Quantify and analyze the socioeconomic impact on long term trust revenue due to the proposed changes in land use that will likely interfere with trust management objectives.

Summary: The DEIS provides estimates of the value of timber to be cleared from DNR managed lands in Table 11-5 and from private lands in Table 11-7, for each alternative and option. The DEIS also provides estimates, in net present value terms, of foregone revenue from DNR-managed lands in Table 11-6 and for private lands in Table 11-8, for each alternative and option. However, the assumptions behind these calculations are not explicitly defined. Estimating the revenues realized from the immediate harvest of timber is a function of assumptions about how many thousand board feet (MBF) of merchantable timber (by species and sort) can be harvested from the project area, and how much each MBF of timber is worth (the stumpage price). Estimating the lifetime, foregone revenues from land conversion is a function of these same assumptions, plus how many acres are affected, a rate of inflation, a real growth rate for the stumpage price, a discount rate, the age classes of existing timber, and an assumption about rotation age. Of all of these assumptions, only two are explicitly stated in the DEIS: a discount rate of 4 percent (page 11-19), and estimates of affected acres by alternative and option (Table 5-3). There is not enough information presented or disclosed to determine how the value of the timber cleared from the project area and the net present value of foregone future timber harvests in the project area were calculated. It is also not clear how the value of timber reproduction (trees of age class younger than merchantable timber rotation age) is accounted for and if it is included in either valuation, as would be appropriate.

Reference: Chapter 11, tables 11-2 (page 11-5), 11-5 (page 11-30), 11-6 (page 11-31), 11-7 (page 11-

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- 14665-9 Appendix A and Section 11.2.2.4, Government Revenue, describe both the short-term revenues from immediate timber harvest and the long-term revenues foregone from timber harvests due to the project on WDNR lands. Section 11.2.2.4 has been updated to include a more detailed description of the assumptions used for the analysis of timber impacts.

32), and 11-8 (page 11-33).
Recommended analysis: At a minimum, an analysis of impacts to the local economy caused by impacts to the timber industry should include estimates of: (1) The revenues to be realized in the short-term due to immediate harvesting of timber from the proposed right-of-way; (2) The revenues over the life of the project that will be foregone due to conversion of timberland to non-timber production on the proposed right-of-way.

Issue 2: Transmission Line location near property boundaries
Summary: The identified alternatives locate the corridor along several DNR managed property lines. Though this is best for DNR management, adjacent homeowners along said line have expressed concern. Moving the line away from the edge for example 300'-500' interior would alleviate some of the landowners concerns. Please note that DNR is not opposed to a route adjustment for any of the alternatives that moves the line interior to state trust land by 300-500' to avoid impacts on adjacent residential properties as long as the impacts to DNR's land use and management are properly mitigated. This will likely require including these additional buffers in the right-of-way and providing compensation for this additional land. If the land is purchased in fee, the title needs to be encumbered by a deed restriction, a conservation easement, or other mechanism to ensure the property remains undeveloped.
Reference: Chapter 3 section 3.12 Mitigation Measures; Table 3.2 Mitigation measures as part of the project; Chapter 5 Land; Appendix A- maps A-D; DEIS maps 5-1A, 5-1B, 5-1C, and 5-1D.
Recommended mitigation: BPA will mitigate these impacts by compensating DNR for the additional width of land between the edge of the corridor and DNR's property boundary where the transmission line is moved in and away from adjacent existing private homes. Compensation can either be by purchasing the strip in fee or by another mechanism. If the land is purchased in fee the title will be encumbered by a deed restriction, a conservation easement, or other mechanism to ensure the property remains undeveloped.

1c. Uplands HCP

Issue 1: Uplands Habitat Conservation Plan (HCP) Integrity
Summary: DNR is a unique land manager due to the quantity of acres and diversity of locations and uses, most of which are covered by the DNR Final HCP (1997), HCP Final EIS (1996) and related Incidental Take Permits (ITPs) issued by the Secretary of the Interior and Secretary of Commerce under Section 10 of the Endangered Species Act (ESA). Under the current proposal, vegetation removal will increase within habitat of federal- or state-listed species covered by the Uplands HCP, which poses a risk to DNR with respect to its ITPs. The I-5 project if not adequately mitigated will add to the cumulative impact of similar projects and expansions of BPA transmission lines across DNR managed lands.
 Removal of acres covered by the Uplands HCP will have a detrimental impact on the species and habitats the conservation strategies are designed to protect. If BPA's proposal increases "incidental take" of covered species, DNR will object to it or require BPA to obtain its own ITP for its activities. The only references to the Department's Uplands HCP are found in Chapter 28 Substantive Standards and in Appendix A. The analysis in the DEIS of impacts on listed species that are covered by DNR's Final HCP is insufficient under NEPA and will not allow DNR to adopt BPA's EIS under SEPA if not substantially improved. BPA should review DNR's Final HCP, Final EIS and related Incidental Take Permits for a complete listing of species that will require additional analysis. It is insufficient to assume that other analysis or proposed mitigations for this project will ensure the integrity of the DNR Uplands

- 14665-10 Please see the response to Comment 14097-1. BPA has discussed this issue with WDNR and will continue to work with WDNR through the appraisal and acquisition process to determine what strips of land should be acquired and on the best way to acquire these strips of land and the appropriate compensation for them if BPA decides to build this project.
- 14665-11 BPA has submitted a biological assessment (BA) to the Services under Section 7 of the Endangered Species Act. The BA includes an analysis of threatened and endangered species that are also included in the Uplands HCP. Based on effect determinations, a Biological Opinion is expected to be issued for some species and a Letter of Concurrence for other species. Conservation and mitigation measures for these species has and will continue to be discussed with WDNR, USFWS, NMFS, and others. This information will be included in the EIS as it becomes available.

Impacts to stream crossings are included in Chapters 15, 17, 19, and Appendix K.

HCP. Mitigation sequencing (Avoid, Minimize, and Compensate) similar to the process cited in Chapter 27.10 "Clean Water Act" could be followed.

Reference: Summary, section S.3.11.2 Impacts Common to Action Alternatives, page S-47; Chapter 15 Water, pages 15-5 through 15-7; Chapter 17 Vegetation page 17-5; Chapter 18 Wildlife section 18.1.2.8 page 18-9; Chapter 18 Wildlife page 18-64; Chapter 27 Consultation, Review and Permit Requirements page 27-1,2; and Chapter 28 State Substantive Standards page 28-1.

Recommended mitigation: Impacts to species listed under DNR's Uplands HCP or to habitat that is currently providing protection per DNR's Uplands HCP commitments will be analyzed by BPA through a formal consultation with the US Fish and Wildlife Service and National Oceanic & Atmospheric Administration/Fisheries (NOAA Fisheries). Mitigation measures will be recommended in BPA's I-5 EIS for the impacts identified through the consultation. DNR believes that impacts should be mitigated at the following **minimum** ratios for replacement acreage (e.g., if the direct impact is 1 acre of riparian buffer permanently removed, the compensation replacement acreage provided should be 1 acre) provided that the replacement land mitigates for the ecological functions equal to those lost from the removal or deterioration of habitat:

1:1 All permanent impacts

0.5:1 Temporary impacts, e.g., staging or construction areas

In addition to restoration efforts on behalf of BPA, impacts that result from temporary staging and construction areas should also be mitigated at a replacement ratio (0.5:1) that compensates for the short- and long-term impacts to the ecological functions equal to those lost that are currently provided through DNR's Upland HCP conservation measures.

14665-11

BPA and DNR together will determine the location of replacement land.

Recommended analysis: BPA needs to provide an analysis of the impacts to listed threatened and endangered species and to the integrity of DNR's Uplands HCP. Additionally, DNR believes that BPA is required to initiate consultation under Section 7 of the ESA with U.S. Fish & Wildlife Service and/or National Oceanic & Atmospheric Administration/Fisheries (NOAA Fisheries) to demonstrate and document that the construction of a new transmission line will not adversely affect listed species that are covered under DNR's Uplands HCP. As a part of that consultation, BPA should provide information sufficient for USFWS and NOAA Fisheries to ascertain whether the proposed transmission project will interfere with any of DNR's obligations under its Uplands HCP. The results of the consultation should be published in the FEIS and, if conservation measures are identified as a result of consultation, these measures should be included as mitigation in the FEIS. Additionally, USFWS section 10 representatives and appropriate DNR representatives familiar with the Uplands HCP should be involved in any discussion with USFWS and/or NOAA Fisheries regarding DNR managed lands and recommended mitigation measures.

Recommended changes: Well-functioning riparian ecosystems require retention of riparian buffers. These buffers supply critical function by: intercepting sediments flowing from upland human or natural caused disturbances; stabilizing stream banks, providing for shade to keep water temperatures cool; and contributing down wood for increased stream structure. Impacts to any stream crossing with mature shrubs or trees providing shade should be rated as **high** due to the removal of vegetation that may affect water quality and ecological function.

Issue 2: The duration of impacts

14665-12

Summary: BPA states the life of the project is 50 years and all maintenance actions in the future originate from this project; economic analysis is completed for at least 50-year periods; easements may be perpetual in duration and hence indicate BPA acknowledges the project and impacts will extend over the

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14665-12 Impacts to the human and natural environment could occur during operation and maintenance of the transmission line. However, though many of the mitigation measures described in Table 3-2, Mitigation Measures Included as Part of the Project, and referred to in Section 3.12, Mitigation Measures, refer primarily to construction activities, several of the measures (such as routing roads to avoid known cultural resource sites, designing roads to minimize unauthorized use, noxious weed management, and road maintenance to reduce impacts to fish and streams) also would be in place during project operation and would help mitigate longer-term impacts.

14665-12 life of the project. However, the DEIS states in Chapter 3, section 3.12 Mitigation Measures “*All mitigation measures included as part of the project would be implemented prior to, during, or immediately after construction.*”. DNR experience with managing for transmission lines demonstrates substantial environmental impact issues for decades beyond construction, especially with respect to unauthorized use, vegetation management including control of noxious weeds, management of danger trees and other potential obstructions and restrictions to the management of DNR managed lands along the transmission line, roads and impacts to water and fish, geologic hazards, and protection from wildfire. **Reference:** Chapter 3 Project Components and Construction, Operation, and Maintenance Activities section 3.12 Mitigation Measures, page 3-17; Chapter 26 Cumulative Impacts, pages 26-1 through 26-48. **Recommended mitigation:** Mitigation will be applied over the life of the project/easement as appropriate to address impacts that are reasonably likely occur over the life of the project. **Recommended changes:** BPA needs to acknowledge the potential for impacts to the human environment under NEPA and the elements of the natural and built environment under SEPA that are reasonably likely to occur into the future for at least a 50-year period by adjusting the language on page 3-17 that limits the duration for implementing the mitigation measures in Table 3-2 to immediately following the construction. Long term mitigation beyond “*immediately after construction*” should apply for any for any operations and maintenance activities that have potential for longer term impacts to the resources analyzed.

14665-13 **Issue 3:** Existing legacy and green tree retention
Summary: Transmission corridors do not contribute to the late successional habitats or species that the Uplands HCP and conservation strategies are designed to protect. Ecological functions are disrupted by further fragmenting or severing habitats or permanently removing mature legacy and green tree retention clumps designed to provide transitions between early plantations and late successional stands. The retention clumps and individuals exist post-harvest and are an important part of DNR harvest impact mitigation and are not readily replaceable if permanently removed. The removal of retention clumps and/or legacy trees will have a detrimental impact on the species and habitats the conservation strategies are designed to protect, as well as on the overall integrity of the Uplands HCP. **Reference:** Chapter 26 Cumulative Impacts. **Recommended mitigation:** Retention clumps and legacy trees permanently removed will be mitigated by compensating DNR for the ecological function and the monetary value of the trees removed. At a minimum, the total of 8 trees per acre (five live trees and 3 snags) should be compensated and should meet the minimum characteristics identified in the DNR’s Final HCP 1997 page IV. 157. **Recommended changes:** The EIS should incorporate the discussion regarding the mitigation of impacts provided by legacy trees and retention clumps in DNR’s Uplands HCP and FEIS and the conservation strategies.(DNR HCP DEIS 1996, pages 4-487-488 and DNR Final HCP 1997, page IV. 157) No additional analysis is required providing the impacts from the removal of legacy trees and retention clumps are acknowledged in the FEIS and mitigation provided as stated above.

1d. Vegetation management (including danger trees)

14665-14 **Issue 1:** Danger trees
Summary: DNR requested in the Scoping Comments that BPA develop and model an estimation of the amount and location of danger trees that would require removal; and to identify areas outside of the transmission line corridor width that would require low-growing vegetation to be maintained similar to

- 14665-13 BPA has worked with WDNR to identify and avoid, where possible, green tree retention clumps and legacy trees through the siting of project facilities. Appropriate mitigation has been determined for those resources that would be permanently removed from WDNR land by the proposed project. A discussion of impacts from the removal of these resources and a measure to provide mitigation for removal of these trees has been added to Chapter 17, Vegetation.
- 14665-14 BPA would develop and model an estimate of the amount and location of danger trees that would require removal when the preferred route is surveyed and marked in the field. Geospatial information of danger trees will be collected. Data will include quantities, locations, species, volumes and defects for affected property owners. BPA does not propose that areas outside the transmission line easement be maintained as low-growing vegetation. For new transmission line easements, BPA would acquire rights to cut vegetation outside the easement that presents a real or potential hazard to the transmission line's reliability. BPA would compensate landowners for the rights to cut danger trees based on the fair market value of the danger trees at the time they are identified. Criteria for these conditions would include but not be limited to vegetation exhibiting characteristics of failure such as trees on unstable slopes, isolated tree or tree fringes exposed to adverse winds, diseased trees or communities of diseased trees, damaged trees and defective trees. Otherwise, property owners would be unrestricted by BPA in the management of their land outside of the transmission line easement.

At the time of Final EIS distribution, danger tree locations and amounts were not known but a general discussion of impacts to these areas is included in Chapter 17 and specifically for WDNR land, Appendix A.

- 14665-14 within the transmission line corridor. This would include areas with trees upslope of the line, diseased areas, areas with undesirable species, and other existing conditions that will be considered a hazard or concern once the transmission line is built. This was not presented in the DEIS.
Reference: Summary, section S.3.12.2 pages S-11, S-14; table 2-1; Chapter 3 Project Components, and Construction, Operation and Maintenance Activities, section 3.11 pages 3-16; Chapter 5 Land, section 5.2.2.1 page 5-11; section 5.2.2.2 page 5-14; Chapter 11 Socioeconomics, section 11.2.2.5 pages 11-21, and 11-22.
Recommended mitigation: See recommended mitigation under 1e. below.
Recommended analysis: See recommended analysis under 1e. below.

- 14665-15 **Issue 2: Other vegetation management**
Summary: The DEIS does not acknowledge the vast majority of BPA's vegetation control is accomplished using herbicides. Based on DNR's experience with similar BPA installations, vegetation control is underfunded and cannot be expected to control vegetation on all lines every year. Control and eradication should be prioritized. The BPA Transmission System Vegetative Management Program Final EIS does not accurately consider these management realities and is therefore unreliable for anticipating or analyzing impacts from the site-specific applications of herbicides.
Reference: Summary, section S.3.6.2 "Impacts common to action alternatives" page S-28.
Recommended mitigation: To avoid colonization of the I-5 corridor by invasive species, BPA will include a mitigation measure to ensure funding of I-5 corridor vegetation control commensurate with the predictable weed problem.
Recommended analysis: Analyze the probable extent of the need for vegetation management and control and eradication of noxious invasive weeds using existing corridors in the area that are similar to and representative of the proposed corridor.

1e. Restrictions, constraints & prohibitions including impacts to current and future allowable uses both inside and outside the right-of-way

- 14665-16 **Issue 1: Extended right-of-ways/corridors**
Summary: DNR's experience has shown that BPA's proposal to clear to a safety backline in some areas creates an unmanageable timber stand and further degrades DNR's ability to manage the stand as part of the Uplands HCP. In order to mitigate these impacts to DNR's land use, BPA needs to be responsible for the management of areas that require and extend the corridor to create a safety backline including those that have naturally occurring stand health issues such as: root rot or animal damage; stands managed primarily for hardwoods; and areas such as wetlands and riparian areas.
Reference: Chapter 3 Project Components, and Construction, Operation and Maintenance Activities, section 3.6 pages 3-10, section 3.10 page 3-15, and 3-16, section 3.11 page 3-16; Chapter 5 Land, section 5.2.2.1 page 5-11; section 5.2.2.2 pages 5-14, 5-22. Chapter 11 Socioeconomics, section 11.2.2.5 page 11-21, 11-22.
Recommended mitigation: In order for mitigation to cover all impacts to DNR's land use for the full corridor width, mitigation needs to include those areas outside the typical 150' width that it will need to control to protect its transmission line including extended distances of clear safe backlines.
Recommended analysis: BPA should analyze the predicted environmental impacts to DNR's land use, forest management, and conservation strategies that will likely result from the need to control the

- 14665-15 Sections 3.15, Maintenance, and 17.2.2.2, Operation and Maintenance, discuss transmission line maintenance, including vegetation management. Using herbicides is one method for controlling vegetation, and in some locations, is the most cost-effective method. It is also one tool of several BPA uses for integrated vegetation management. BPA spends approximately \$13 million annually to control vegetation in its service area. Each year, spending for vegetation management must be balanced with other important BPA programs.

Section 17.1.4, Weeds, identifies weeds in the three counties that would be crossed by the project, some of which BPA's Natural Resource Specialists know are found on existing corridors. Section 17.2.8, Recommended Mitigation Measures, identifies pre- and post- construction weed surveys that would be done to identify weed populations for future treatment on this project.

Along easements, the underlying landowner is responsible for noxious weed control. If BPA decides to build this project, Natural Resource Specialists would work with landowners and county weed control districts and incorporate weed control measures into regularly scheduled maintenance.

- 14665-16 BPA would develop and model an estimation of the amount and location of danger trees that would require removal when the Preferred Alternative route is surveyed and marked in the field. These trees would then be marked for removal in the field. Geospatial information about danger trees would be collected. Data would include quantities, locations, species, volumes and defects for affected property owners. In some cases, a full safe backline would be cleared but this is not common. This determination would be coordinated with WDNR. The danger tree discussion in the Final EIS remains qualitative since the danger tree survey is not complete. Once the survey is complete, BPA will have a better estimate of the number of danger trees that would need to be removed. For new transmission line easements, BPA would acquire rights to cut vegetation outside the easement that presents a real or potential hazard to the transmission line's reliability. BPA would compensate landowners for the rights to cut danger trees (or to clear to a full safe backline) based on the fair market value of the danger trees at the time they are identified. Criteria for these conditions would include but not be limited to vegetation exhibiting characteristics of failure such as trees on unstable slopes, isolated tree or tree fringes exposed to adverse winds, diseased trees or communities of diseased trees, damaged trees and defective trees. Otherwise, property owners would be unrestricted by BPA to manage their land outside of the transmission line easement.

14665-16 | vegetation within 200' (or tree height) of the transmission line corridor edge.

Issue 2: Impacts to harvest operations not clearly identified in the DEIS

Summary: Section 8.2.2.1 (page 8-4) states “*person should never put themselves or any object higher than 14 feet above the ground*” under a transmission line. The economic impact to DNR for what timber haul roads would be impacted by this requirement was not identified. It is possible that the sag of transmission lines could make some existing timber haul roads unsafe for the operation of log trucks or transport of harvest equipment;

Section 11.2.2.7 (page 11-24) states “*The long-term decreases in revenue derived from timber production would occur in three ways: ...Increased costs of managing private timberland near the new right-of-way, resulting, for example, from project-related restrictions on timber-harvest techniques, such as cable logging, or greater risks to safety from logging near the right-of-way*”. The DEIS has not described in any detail the setback distance or vertical offset distance of guyline cables to the right-of-way corridor. Further there is no mention of a potential of reconstructing existing landings outside of the right of way due to harvest restriction nor the cost associated with such a need.

Reference: Chapter 8 Electric and Magnetic Fields section 8.2.2.1 page 8-4, Chapter 11 Socioeconomics section 11.2.2.7 page 11-24.

14665-17

Recommended mitigation: Landowners will be compensated for the long-term economic impacts of harvest restrictions from inside or outside of the right-of-way including those involving new timber haul roads, reconstruction of landings and avoiding guyline cables. Compensation should include: cost recovery for staff time; permitting; construction; materials; and abandonment costs.

Recommended analysis: BPA needs to analyze the impacts of harvest restrictions including what the long term economic impacts will be to forest landowners that will have harvest restrictions due to need to construct new timber haul roads, new landings and respecting guyline setbacks. This impact is different than a bifurcation calculation that would be completed in a typical appraisal.

Recommended changes:

(1) Include a discussion of the potential need to reconstruct existing landings outside of the right-of-way, to construct new roads to avoid log truck traffic under transmission lines, and to operate around the setback distance or vertical offset distance of guyline cables to the right-of-way corridor.

(2) BPA should describe in detail or provide a method to determine the setback distance or vertical offset distance of guyline cables to the right-of-way corridor.

Issue 3: Temporary use areas outside the right-of-way

Summary: BPA leaves the location of pulling and tensioning sites and staging areas up to its contractors to define after the easement is signed (Chapter 3, section 3.10 Staging Areas, page 3-15.)

Many times these are located on landowner sites outside the right-of-way. All use of state land, temporary and permanent, needs to be defined in order to fully evaluate the impacts of the proposal. This would include pulling and tensioning sites, staging areas, and other temporary use areas including helicopter landings.

14665-18

Reference: Chapter 3 Project Components and Construction, Operation, and Maintenance Activities, Table 3-2 and sections 3.6 pages 3-10 and 3-11, and section 3.10 pages 3-15 and 3-16

Recommended mitigation:

(1) Pulling and tensioning sites, staging areas, and other offsite temporary use and disturbance locations on DNR managed lands will be reviewed and mitigation identified.

(2) Similar to mitigation proposed for cultural resources on Table 3-2: “*Plan for survey and review as needed of additional disturbance areas not identified during the NEPA process (e.g., staging areas*

- 14665-17 The timber analysis in the EIS is not intended to serve as an appraisal of the value of timber on individual properties. It is instead intended to provide information sufficient to allow BPA to compare timber-related impacts across alternatives. Timber landowners whose land the project would cross would have an opportunity to negotiate compensation with BPA. During those negotiations, specific details such as those raised in this comment may be addressed.

Timber harvesting impacts were minimized by locating the transmission line perpendicular to steep terrain (areas requiring cable logging techniques) and positioning the transmission line on more level terrain. BPA worked extensively on line location with WDNR and other private timber landowners who provided their timber harvesting methods for specific areas, particularly in steep terrain where cable harvesting methods are needed. Cables used for cable logging equipment are not allowed inside the transmission line rights-of-way. Landings used for timber harvesting need to be far enough away from the transmission line rights-of-way to allow safe placement of cables and safe movement of harvested timber.

Based on discussions and information and materials received from Sierra Pacific, WDNR, Weyerhaeuser, and Columbia Timberlands, and in-house knowledge, the conductor elevation above ground level would be raised the appropriate distance to allow a safe clearance of 45 feet (tallest point at which any equipment passing under the conductors would ever be operated at) above any existing road and any potential new road proposed by BPA and currently identified as used for timber harvesting. This would allow timber harvesting equipment to travel under and through the transmission line corridor and conductors without breaking the equipment down to highway legal heights. It would also allow a dump truck to travel through the corridor while the truck bed is in the upright position while depositing rock onto the road. Increased conductor heights would be achieved through structure placement, increasing structure heights, and taking advantage of terrain. A 45-foot safe clearance zone under the conductors would minimize impacts to timber harvesting and road maintenance activities.

Where the transmission corridor would impact an existing logging road or landing site, a new road would be constructed that could access both a transmission tower and a relocated or future landing site.

- 14665-18 Preliminary pulling and tensioning sites have been identified and analyzed. The following text has been added as a mitigation measure in Section 5.2.8, Recommended Mitigation Measures: Review and coordinate with WDNR regarding pulling and tensioning sites, staging areas, and other offsite temporary use and disturbance of locations on WDNR-managed lands. Potential mitigation for impacts would also be reviewed and coordinated closely with WDNR.

14665-18 | *stringing and pulling sites, guard structure areas, etc.)*”, BPA will identify and mitigate for impacts to temporary use and disturbance areas on DNR managed lands outside the right-of-way consistent with mitigation measures in the DEIS as a part of this project and the recommended mitigation measures for the resources identified in the DEIS analysis.

1e.i. Wind power

Issue: Potential Wind Power Locations

14665-19 | **Summary:** There is some limited information about wind power potential in the document and about proposed mitigation for impacts to potential wind power sites. There are a number of high wind energy sites in the area that will be affected by the proposal. However BPA does not analyze impacts to lost wind power opportunities on DNR managed lands in general and the impact of the project to potential wind power in the Yacolt Burn State Forest. This is an unavoidable impact to DNR’s land use resulting from certain alternatives that cannot be mitigated apart from DNR seeking monetary compensation for these costs. There is a potential impact to the potential placement of 17 wind tower placements in the East Alternative along segment “O” in Sections 22, 26, 27 & 34, T03N, R04E and Section 2, T02N, R04E. There is a potential impact to the potential placement of 8 wind towers along the Central Alternative near segment “P” in Sections 1, 2, & 13, T03N, R03E. Lastly, there is a potential impact to the potential placement of 7 wind towers in the Central Alternative near segment “30” in Sections 22, 25 & 26, T04N, R03E.

Reference: Chapter 4 Proposed action and alternatives section 4.7.2.2 page 4-24; Chapter 11 Socioeconomics, section 11.2.8 page 11-45.

Recommended mitigation: For all the alternative segments noted in the summary above, commit to mitigation for the impacts to DNR’s land use in the form of compensation for increased wind power development costs and for reimbursement for losses of the State’s ability to generate revenue from these sites.

Recommended analysis: Include an analysis of the impacts to wind power development that are reasonably likely to occur from locating the transmission line in the areas identified above.

1f. DNR trust land management transfer parcels and transactions

Issue: Land Use impacts to DNR’s reasonably foreseeable land transactions.

14665-20 | **Summary:** The DEIS has not analyzed impacts to DNR’s ongoing land transactions necessary to maximize a productive land portfolio that includes the potential redistribution of lands based on current or future opportunities. In addition to a market appraisal, there is little discussion in the DEIS or measures indicating how compensation will be established in cases where the landowner suffers a loss of value due to severance, restricted use or negative impacts of the remaining property. These lost values of ownership and use are not always captured by a “market” appraisal.

The current land use is not always the highest and best use. Due to the nature of DNR’s business model, some trust lands, though vacant and growing trees, will convert to other uses such as residential home sites based on zoning, location, and/or other development attributes. A transmission line is incompatible with some other uses. The socioeconomics section in Appendix A omits any discussion regarding loss of revenue from the sale or transfer of trust lands encumbered by or near the BPA right-of-way. In some cases the State’s trust land’s future marketability will be negatively impacted by the BPA presence.

- 14665-19 BPA worked closely with WDNR on siting the Preferred Alternative along segments P and 30 to minimize impacts to WDNR resources, including potential wind power locations. At the same time, wind power sites need transmission lines to transport the energy from the site to potential end-users. Transmission lines in the vicinity could be to WDNR's advantage in this regard. Section 11.2.8, Recommended Mitigation Measures, describes BPA's recommended mitigation measures, which include avoiding WDNR lands planned for wind farms or other income generating opportunities where appropriate.
- 14665-20 BPA worked closely with WDNR on siting project facilities on WDNR land to avoid present resources and future development plans to the extent possible. Table 27-1 in Chapter 27, Consultation, Review, and Permit Requirements, provides local zoning categories and their consistency with the project alternatives. Section 27.26.2, Washington Local Plans and Programs, provides individual discussions of local plans and ordinances and project consistency. Golder Associates also conducted a study for BPA in March 2011, entitled ""Summary of Zoning and Population Data in Support of the I-5 Corridor Reinforcement Project,"" which is included in Chapter 29, References. Chapter 11, Socioeconomics, discusses timber resources and BPA compensation for affected properties and State Trusts Lands. Section 24.4, Economic Productivity, recognizes losses that could occur to long-term economic productivity if project facilities preclude different types of development.

See also the response to Comment 14508-5 regarding appraisals.

- Reference:** Summary, section S.3.7 pages S-30 through S-35; Chapter 3 Project Components and Construction, Operation and Maintenance Activities, Table 3-2 pages 3-22 through 3-28; Chapter 5 Land, section 5.2 pages 5-9 through 5-38; Chapter 11 Socioeconomics, section 11-1 pages 11-1 through 11-46 ; Appendix A, section A.2.1 Land Use, Table A-4 Land Use on WDNR Land in the Project Area (Acres), section A.2.3 Socioeconomics.
- Recommended mitigation:**
- (1) BPA will mitigate the impacts to DNR's future ability to transition lands or compensate loss of reasonably foreseeable future economic opportunities both on and off the right-of-way including where the easement changed other uses of some properties as a result of the transmission lines (See 11.1.5), e.g., creates incompatible uses such as the conversion of rural residential properties to non-residential uses.
- (2) BPA will identify mitigation measures for negative socioeconomic impacts due to loss of current land use, for example community values as outlined in section 11.1.8. BPA will identify mitigation measures for negative impacts due to loss of community values as outlined in 11.1.8.
- Recommended analysis:**
- (1) Include information and analysis on zoning and allowable uses, not just current use that will be impacted by the project. Include discussion on impacts to rural residential properties for all categories (5.2.2.1 through 5.2.7.5)
- (2) Zoning should be included with an analysis on the impact of the project on residentially developable land.
- Recommended changes:**
- (1) Rural residential should be defined under typical zoning ordinances.
- (2) Define categories according to zoning and provide a discussion concerning allowable uses within each zoning category; and a table with acres per zoning category.

14665-20

1f.i. Potential Camas school site

- Issue:** Potential Camas school site on DNR managed trust land
- Summary:** A DNR managed trust parcel in Township 2N, Range 3E, Section 22 under segment 43 (directly east of Vancouver) has been identified as a potential school site for the Camas School District as part of the 2007 Washington State Legislature report "Potential School Site State Trust Land Study: Report to the Legislature". Segment 43 would bifurcate the parcel making it unusable for Camas School District.
- Reference:** Chapter 5 Land and Chapter 11 Socioeconomics.
- Recommended mitigation:** If segment 43 is included in a final design, BPA should follow mitigation sequencing (avoid, minimize, compensate) for potential impacts to the parcel. BPA should: Avoid the parcel; minimize by moving tower and corridor locations to the edges of the parcel; replace the parcel for like characteristics suitable for the Camas School District.

14665-21

1f.ii. Casey Road Substation Site

- Issue 1:** General comments for the Casey Road property and access roads
- Summary:** The Casey Road property and access roads are heavily utilized by informal recreation users and local community members. The addition of controlled access points (gates) will impact these uses.

14665-22

- 14665-21 Comment noted. Segment 43 is not part of the Preferred Alternative.
- 14665-22 BPA plans to pave about 1800 feet of the proposed access road to the Casey Road site due to the steep grade in this area. Discussions with WDNR about use and maintenance continue. BPA would work with WDNR on the need for and placement of gates. Recreation users and local community members would still be able to freely access the Casey Road site once construction is complete. During construction there would likely be temporary access restrictions.

- 14665-22 DNR considers the potential paving of the access road a further encumbrance to DNR management. DNR's experience has shown paved roads that are not built to a county road standard typically deteriorate quickly under log haul operations and also are more costly to maintain over time.
Reference: Chapter 5 Land section 5.2 Environmental Consequences, pages 5-9 through 5-16, pages 5-25 through 5-29, and pages 5-37 and 5-38.
- 14665-23 **Recommended mitigation:** (1) Mitigation of impacts to informal uses should include a planned investment in formal replacement recreational sites on DNR managed land to offset this loss.
- 14665-24 (2) All maintenance and improvement costs associated with a paved access road will be BPAs responsibility and at its sole cost. DNR will retain full and unlimited access to all DNR managed lands accessed by the road.
- Issue 2: Road Maintenance and Abandonment Plans (RMAP) – Casey Rd. substation site**
Summary: BPA should address RMAP issues associated with the access road to the proposed Casey road substation site as requested in the DNR scoping comments. In addition, the DEIS contained a reference within the Summary Chapter Page S-4 Casey Road substation “About 2.8 miles of existing road would be improved to access the site”. BPA I-5 project representatives have indicated a need to construct a new access road that will require new construction and right-of-way involving the removal of lands dedicated to timber production, combined with existing road improvements. In Chapter 4 Proposed Action and Alternatives under section 4.3.4.2 Casey Road (page 4-14) Figure 4-5, the proposed Casey Road Substation schematic is not accurate; it does not reflect current BPA proposals, which include new construction and existing road improvements. The proposed new access road will need to include current RMAP scheduling and standards into the designs as requested.
- 14665-25 **Reference:** Summary, section S.2.1.1 “Substations” Casey Road substation page S-4, Chapter 4 Proposed Actions and Alternatives, section 4.3.4.2 Casey Road page 4-14; Figure 4-5 Casey Road Substation, and section 4.3.5 “Access Roads” table 4-4.
Recommended mitigation: Mitigation measures to address RMAP and road design standards will be developed in consultation with DNR and will be incorporated into the EIS or into a subsequent agreement(s) with DNR. Any DNR RMAP scheduled projects will be completed by BPA at its sole cost on any access road to the Casey Road substation site.
Recommended analysis: The EIS needs to reflect changes in proposed access roads to Casey Road substation if inserting additional proposed roads.
Recommended change: The proposed substation access road needs updating to reflect current BPA proposals, which include new construction and existing road improvements to the north of represented schematic in the DEIS.

1g. Communication sites

- Issue 1: Electromagnetic Interference**
Summary: The DEIS under Chapter 8, Section 8.1.3 discusses the possibility of electromagnetic interference for AM Radio and Television resulting from the presence of the proposed transmission line. DNR does have broadcast television lessees located at two communication sites in the project area.
- 14665-26 Electromagnetic interference created by the presence of the transmission line may cause a reduction in signal quality. Mitigation measures listed under Public Health and Safety, EMF in Table 3-2, page 3-23 may be sufficient to restore signal quality. If mitigation measures are not successful, lessees may terminate their lease agreements.

- 14665-23 This comment references the Casey Road substation site. There would be no impact to recreation at the Casey Road substation site nor would the access road to WDNR lands be permanently affected. Informal target practice at the Casey Road substation site is not considered a formal recreation activity that would be affected by the project, since the activity would not be permitted following construction of the substation. Prior to and during construction, BPA would work with WDNR to inform the public as to when and for how long the road to the site would be affected, and any closures would be temporary and short term. BPA is designing a reconstruction of the road slightly farther to the north that would leave the existing road open to the public. At this time, BPA is not considering a planned investment in formal replacement of recreational sites on WDNR managed land to offset dispersed recreation at the Casey Road substation site.
- 14665-24 In 2012, BPA and WDNR signed the Statewide MOA for Managing Impacts to State Lands from BPA Transmission Line and Access Road Easements. This agreement describes road classification and management on state lands. All future responsibility for maintenance and improvement costs for a paved road and WDNR access rights would be guided by this MOA. BPA plans to pave about 1800 feet of the proposed access road to the Casey Road site due to the steep grade in this area. Discussions with WDNR about use and maintenance continue.
- 14665-25 Please see the response to Comment 14665-22. Section 4.3.4.2 and Figure 4-5 (now Figure 4-6) have been updated in the EIS. Any road abandonment at the Casey Road substation site would be guided by the 2012 Statewide MOA for Managing Impacts to State Lands from BPA Transmission Line and Access Road Easements. There are no plans at this time to abandon any roads at the Casey Road substation site.
- 14665-26 BPA does not believe that there would be any interference with any broadcast television communications. However, BPA has an active program to identify, investigate and mitigate any legitimate radio and television interference complaints. BPA believes any instances of television interference caused by the proposed line could be effectively mitigated. A mitigation measure that addresses this impact is in Table 3-2.

14665-26 **Reference:** Chapter 8 Electric and Magnetic Fields, section 8.1.3 page 8-3; Table 3-2 page 3-23.
Recommended mitigation: If identified mitigation measures are not successful in avoiding interference, BPA will relocate these communication sites to a location that does not interfere with them or DNR will be compensated for impacts to land use that result in loss of lease revenues for any portions of the new transmission line that cause electromagnetic interference with current or reasonably foreseeable planned sites.

Issue 2: Microwave Beam Paths

Summary: Microwave dish beam paths require line of sight between transmitting and receiving microwave dishes. Of particular concern to the DNR's communication site leasing program are the following communication sites that are less than one mile from at least one of the contemplated transmission line routes:

Bebe	-122° 58' 27.77", 46° 20' 48.34"
Bells Mt	-122° 23' 30.89", 45° 48' 49.15"
MCI Tower	-122° 22' 18.76", 45° 44' 21.22"
Larch Mt	-122° 17' 44.25", 45° 43' 1.07"

(Note: coordinates provided are NAD 83)

14665-27 If the proposed transmission line interferes with microwave dish beam paths of DNR lessees, it will likely cause the affected lessees to terminate their leases. These land use impacts may result in a reduction in lease revenues for the communications site leasing program.

Reference: : Chapter 4 Proposed Action and Alternatives, section 4.7.2.2 page 4-23; Chapter 8 Electric and Magnetic Fields, section 8.1.3 page 8-3; Table 3-2 page 3-23.

Recommended mitigation: Discuss potential mitigation measures to these land use issues which may be taken to correct this line of site interference of microwave beam paths. Provide compensation for any loss of revenue that result from interference with microwave dish beam paths.

Recommended analysis: Analyze and discuss the possibility of the proposed transmission line interfering with microwave dish beam paths.

1h. Recreation

Issue 1: Existing and planned recreation opportunities in the Yacolt Burn State Forest

Summary: The West Alternative and West Options do not transect portions of the Yacolt Burn State Forest. All other alternatives and options transect portions of the Yacolt Burn State Forest.

14665-28 The DEIS lists the Planned Recreation Resources and Activities, but has not included those recreational trails and facilities identified in the Western Yacolt Burn State Forest Recreation Plan. In August 2010, DNR published a recreation plan for the Western portion of the Yacolt Burn State Forest identifying proposed trails and facilities for this area. Central Option 1 will transect an area in which motorized and non-motorized trails are planned. Crossover Alternative; Crossover Option 1-3; East Alternative; and East Options 1-3 will all transect portions of the Yacolt Burn State Forest where there are a significant amount of trails existing and planned. The crossing of existing and planned trails within the listed alternatives should be addressed in the FEIS and would cause moderate to high impacts to the recreation resources in the proposed tower corridor as identified in criteria under section 6.2.1 Impact Levels (page 6-13).

- 14665-27 If a transmission line structure supporting the line is in the direct line of sight (direction and height above ground) of a highly-directional microwave communication link, there is a potential for signal degradation; however, if the structure were even 65 to 100 feet (20 to 30 meters) away from a direct line of site (to either side or above or below the structure) from the microwave link then the likely interference would be minimal. The structures proposed to support the line would not be large enough to have an appreciable effect on other (typically isotropic) radio communications. For example, the reception of mobile phone and GPS signals is not diminished by the presence of transmission line structures.
- 14665-28 Reference to WDNR management of the Bells Mountain Trail in the Western Yacolt Burn Forest has been corrected in Table 6.1 in Chapter 6, Recreation, and in Section A.2.2 in Appendix A, WDNR Lands Analysis. Impacts to the trail are discussed in Sections 6.2.5.1 and 6.2.5.2.

Using the impact levels in Section 6.2.1, low-to-high impacts are identified in these sections depending on different factors as defined in the impact levels. Activities allowed on Bells Mountain Trail and other WDNR trails could continue in the presence of project facilities as the trails would still be available for full use after construction of the project.

BPA has worked closely with WDNR to site the Preferred Alternative. The Preferred Alternative potentially impacts fewer existing and planned recreational sites than the East Alternative. Corrections and more discussion have been added to Chapter 6 and Appendix A.

An existing road crosses the Bells Mountain Trail. BPA does not know if that road is already providing motorized access to this non-motorized trail. BPA does not plan to build new access roads into WDNR land but would use existing WDNR roads.

As the commenter recognizes, the Preferred Alternative affects fewer trails than the other action alternatives that cross lands in the Yacolt Burn State Forest. Central Options 1 and 2 do not cross the Bells Mountain Trail. The Central Alternative and Central Option 3 do.

The ""Living and Working Safely Around High-voltage Power Lines"" pamphlet is a general guide for landowners; it does not address all situations that occur within BPA transmission line corridors. There are many occurrences of trails and parks within BPA rights-of-way throughout the BPA system. BPA facilities are designed for the safety of those who live, work, and recreate within and around these facilities.

All activities that presently occur on the trails within the Yacolt Burn State Forest could continue after the line was constructed.

The DNR Bells Mountain Trail, a DNR-managed recreation trail is missing from the inventory of current recreation resources. The DEIS lists the Bells Mountain Trail as being managed by Vancouver-Clark Parks. This trail runs through the Yacolt Burn State Forest and a portion of the trail is managed by DNR. Central Alternative, Central Options 1 & 2, and East Option 2 directly transect a portion of the Bells Mountain Trail that is on DNR-managed land and the tower corridor will directly impact recreation in this location. Mention of the Bells Mountain Trail and impacts to DNR-managed recreation on and around this area are also missing from the Appendix A. Permanent impacts to the Bells Mountain trail would likely be **moderate to high** at the crossing as well as the vicinity of the crossing by adding additional unauthorized access such as motorized use to a non-motorized designated trail system. This would “alter” recreation opportunities after project construction meeting this **high** impact level by affecting the non-motorized user experience on this trail system.

The DEIS inadequately discusses permanent impacts at locations altered by placement of transmission towers, access roads, and right-of-way restrictions. The DEIS states that most permanent impacts would result from experiential intrusions to the scenic character. Placement of towers, access roads, and right-of-way restrictions are often not compatible with many recreational activities, forcing them to cease and then begin again outside the right-of-way. Or the restrictions can permanently eliminate those lands for recreational use and development, potentially cutting-off and then isolating areas from recreational use including dispersed recreation.

Based upon BPA’s pamphlet “Living and Working Safely Around High-voltage Power Lines,” restricted activities include irrigation, wind tower replacement, some types of orchards, location of buildings and **parking lots, recreation facilities, trails and fencing**. DNR considers these restrictions, when applied outside of the right-of-way, as an impact that prevents DNR from providing recreational opportunities such as those identified in the Western Yacolt Burn State Forest recreation plan.

Reference: Chapter 6 Recreation, section 6.1.1 page 6-2, section 6.1.3 page 6-3, Table 6-1 page 6-5, 6-8 and 6-9; Table 6-2, page 6-11, section 6.1.4 page 6-12, section 6.1.8 and section 6.2.1 page 6-13, section 6.2.5.1 and section 6.2.5.2 page 6-20; Table 6-4 page 6-24; Section 6.2.6.2 page 6-24; Table 6-5 page 6-25; Table 6-6 page 6-29 and section 6.2.9 page 6-30.

Recommended mitigation:

(1) BPA in consultation with DNR and users will identify areas within and adjacent to the power line corridor where recreational access would be determined to be compatible or incompatible with power-line corridors and access roads. This information will be used as part of the existing or planned recreational trail systems. Access will be restricted or provided as these locations are identified.

(2) BPA will provide long term funding to DNR for enforcing authorized use (through barriers, signage, education, and enforcement) as well as preventing unauthorized use including by regularly and permanently closing and decommissioning unauthorized trails or access points.

Recommended analysis:

(1) The impacts to current and planned DNR-provided recreation opportunities as outlined in the Western Yacolt Burn State Forest Recreation Plan need to be analyzed in the EIS. The Western Yacolt Burn State Forest Recreation Plan should be read and an analysis completed on the impacts of where the power-line corridor will transect existing or proposed trails and roads or come within 500 feet of existing or planned trails, facilities and roads. The analysis should also include:

(2) The power-line corridor and access road crossing of the Bells Mountain Trail on DNR-managed lands and the impacts of those crossing;

(3) The locations where recreational facilities and trails may be compatible with power-line corridors and access roads-such as motorized trail use;

14665-28

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- 14665-28 (4) Identification of existing recreation uses of state lands and an analysis of the impacts of the proposal on the recreational uses of state lands;
 (5) The amount of land that will be permanently removed from inventory for recreational opportunities;
 (6) The extent of restrictions outside the easement area particularly in areas where the corridor will disallow, limit or increase recreational use.
Recommended changes: Impacts at locations altered by placement of transmission towers, access roads, and right-of-way restrictions are **moderate to high**.
- 14665-29 **Issue 2: Impacts to dispersed recreation opportunities**
Summary: Central Alternative, Central Options 1-3, Crossover Alternative and Crossover Options 1-3, East Alternative and East Options 1-3 all transect DNR managed lands that support dispersed recreation opportunities (Yacolt Burn State Forest and DNR-managed lands adjacent to segments 10, 12, 15, 23, 18, and K). There is no analysis of the impacts to current and future dispersed recreation if one of those alternatives is chosen. Impacts would be **moderate to high** in areas where the towers would be placed due to altering current or planned recreational use. Impacts would be **high** in areas where the towers would be placed.
Reference: Chapter 6 Recreation pages 6-1 through 6-30, Maps of Alternatives and Options.
Recommended mitigation: BPA in consultation with DNR will identify and implement strategies that mitigate negative impacts to dispersed recreation opportunities, including restoration of impacted areas, relocation to suitable areas, and restrictions to existing areas. BPA will provide long-term funding to ensure access and protect the resources critical to dispersed opportunities as well as provide enforcement.
Recommended analysis: There needs to be an analysis of the impacts to dispersed recreation on all DNR managed lands, including those identified above as a result of constructing any of the alternatives. This analysis should include changes in access for dispersed recreation opportunities, changes in habitat for fish and wildlife, and impacts to activities such as hunting, fishing, geocaching, and forest product gathering.
- 14665-30 **Issue 3: Impacts during construction**
Summary: The DEIS outlines temporary construction impacts that would be throughout the year, **low** in off-season and **moderate** during peak use times. Construction activities would disturb the quiet and scenic landscape, but existing facilities would still be accessible. The DEIS does not discuss impacts to the proposed trails and facilities as outlined in the Western Yacolt Burn State Forest Recreation Plan.
Reference: Chapter 6 Recreation, section 6.2.5.3 pages 6-20 and 6-21.
Recommended mitigation: BPA in consultation with DNR will identify and implement strategies for blocking access to the area during corridor construction. This should include blocking access to unauthorized trails that are within 500 feet of the corridor. BPA will provide funding to defray the enforcement costs of blocking access as well as to defray the costs of maintenance to the redirected areas that see increased use.
Recommended analysis: There needs to be an analysis of specific recreational uses that would be displaced in the Yacolt Burn State Forest from construction, including possible places the users would go and what the impacts to those places would be from the increased use. This includes existing uses as well as planned uses if the construction interferes with plan implementation.
- 14665-31 **Issue 4: Reduced public support of DNR-managed lands**
Summary: If DNR managed trust lands are heavily impacted by the towers and lines, there is a high potential for less visits to the forest from formal and informal users which may lead to a reduction in

- 14665-29 Dispersed recreation is identified in Section 6.1.8, Dispersed Recreation. Dispersed recreation is acknowledged in the impact levels in Section 6.2.1, Impact Levels, and in each of the impact sections for the alternatives.

Access to areas near the project could be temporarily limited during the construction phase of the project. Although the transmission line and roads would be visible to recreationists close to the facilities, the transmission line would not prohibit dispersed recreation where it is allowed, nor prohibit activities such as hiking, hunting, geocaching, fishing, and plant gathering. BPA would site towers to avoid directly displacing an established motorized or non-motorized trail.

Text has been added in Chapter 6 to clarify our original intent to acknowledge impacts to dispersed recreation.

- 14665-30 Text has been added to Sections 6.2.5.1 and 6.2.6.1 in Chapter 6, Recreation, and in Section A.2.2 Recreation, in Appendix A, to reflect the temporary disturbances to WDNR-managed trails that could occur during construction. Construction would create temporary, low impacts including potential exposure to noise and dust, access delays to sites, or visual disturbances. BPA would work with WDNR to ensure adequate notice is provided to users of WDNR trails and recreational facilities in advance of and during the construction period.

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14665-31 Section 11.2.2.4, Government Revenue, describes the potential impacts of the project on WDRN revenues from timber harvest. Section 11.2.2.8, Community Values, describes potential impacts of the project on the value of recreational use both in the short- and long-term. It recognizes there could be potential increases and decreases in recreation use and resulting effects to sales, employment, and earnings in related businesses.

Any quantitative analysis of the impact on the Discover Pass would be speculative, for the following reasons:

- Quantitative estimates of the change in recreation visits to WDNR land resulting from the project are not available.
- Existing data do not suggest recreational visits to WDNR land would decline because of the project.
- Existing data do suggest it is likely that recreationists who choose not to go to the project site would choose to go somewhere nearby, rather than not going at all. If they went to a WDNR site or recreated on WDNR land somewhere else they would still likely purchase either a day or annual Discover Pass.
- The Discover Pass is sold as day and annual versions. Data are not available for how many people who recreate on WDNR land in the project area do so under a day vs. annual pass. Those who currently purchase an annual pass would likely still purchase even if they chose not to recreate in the project area, because it covers the entire state.

The Draft EIS captures the potential socioeconomic effects arising from impacts to recreation in general, which is the appropriate level of analysis given the current availability of data. Section 11.2.2.8 has been updated to reference potential impacts on WDNR revenue related to the Discover Pass.

- 14665-31 purchases of the Discover Pass. This may negatively impact vital recreational support and revenue to DNR as well as WDFW and State Parks. Chapter 11 of the DEIS discusses the changes in the value of recreational opportunities resulting from the project.
Reference: Chapter 6 Recreation pages 6-1 through 6-30; Chapter 11 Socioeconomics, section 11.1.8.3 page 11-8.
Recommended analysis: The socioeconomic impacts to recreational use and to the potential decrease in revenue from reduced Discover Pass sales should be analyzed.

ii. Control of unauthorized access

Issue 1: Opportunities for unauthorized public access

Summary: Power line corridors and tower access roads create high potential for unauthorized public use, especially by off-road use. The DEIS describes general impacts that result from unauthorized public use, and states that “*the location and frequency of unauthorized access is hard to predict*” and that “*impacts could be low to high*”. There is high potential for the tower access roads and the power-line corridor to increase unauthorized use and associated adverse impacts damaging resources such as road surfacing or streams due to off-road access and ORV use, trash dumping, vandalism and theft as experienced on existing BPA transmission corridors. If unaddressed through effective mitigation by BPA, these future impacts to the natural and built environment will require mitigation by DNR and would be uncompensated costs to the DNR.

- 14665-32 DNR previously recommended that a sample survey be conducted on a given portion of existing power line representative of other DNR managed lands, and a quantitative prediction of unauthorized public use including the impacts be completed. There is no indication or mention that a sample survey was completed to predict the impacts from unauthorized public use. If BPA has not used that approach to predict the level of unauthorized use and associated impacts, BPA should propose and use another methodology to reasonably predict the level of unauthorized use and resulting adverse impacts on DNR managed lands that would result.

The DEIS states that “*mitigation measures would be completed before, during, or immediately after project construction*”. Unauthorized public use will occur over the life of the project. Mitigation is needed for the life of the easement both within and outside the right-of-way on DNR managed lands. Although the majority of the mitigation measures would be implemented around the time of construction, additional monitoring with corrective actions would be necessary for the life of the project (e.g. 50 years).

DNR acknowledges the potential mitigation measures listed in the DEIS and those additional measures that have been incorporated into Appendix A to address the issues of unauthorized access and damage. Appendix A identifies a measure that would address rights-of ways and an MOA/ Easement document to work with DNR to provide various provisions to discourage unauthorized access including periodic inspection and repair of damages. Repairing damages is a form of mitigation, but preventing unauthorized uses and associated damage would be the most effective mitigation and should be the goal. Gating access roads to the right-of-way may not be sufficient to keep unauthorized use out due to off-road vehicles going around gates.

Reference: Chapter 5 Land, section 5.2.2.2 page 5-12; ; Chapter 6 Recreation, section 6.2.8 page 6-30; Appendix A.2.4.2 and Appendix A- Table A-13.

Recommended mitigation:

- 14665-32 The amount and causes of unauthorized use vary widely across the BPA system and are impossible to quantify. Subsequently, as indicated in the EIS, unauthorized use would be impossible to predict with any accuracy, and a sample survey thus would not provide any useful data for an evaluation of this issue.

Preventing unauthorized uses along the right-of-way is also BPA's goal. BPA has worked with WDNR to site project facilities and minimize impacts to a range of resources. BPA followed WDNR's request to not create any new public access roads into the new transmission line right-of-way. BPA inspects its rights-of-way yearly to identify damage and unauthorized activities. BPA would continue to work with WDNR to meet the requirements of the Statewide MOA. BPA would also work with WDNR to identify effective locations of gates although gates are not always the most effective solution to preventing access.

If BPA and WDNR together decide that additional agreements are needed to address potential unauthorized use or existing problems created by unauthorized use (if the project is built) along the corridor, then additional agreements would be created to meet this need. New agreements would likely include some of the measures identified in this comment.

Regarding surveying and marking the edge of right-of-way, land surveys would continue to be done to determine edge of right-of-way but boundaries are not permanently marked. Landowners still maintain ownership within the right-of-way and BPA has never had a request to permanently mark a right-of-way boundary.

In Chapter 5, Land, BPA recognizes that a temporary unauthorized access or use could occur regardless of whether it is consistent with existing land use. It could be a one-time occurrence with no damage or the access could be by mistake. This is identified in the impact levels as a low impact and BPA believes this is a reasonable assessment.

BPA will provide long term funding and cooperative management with DNR that is outlined in the EIS; or the EIS includes an acknowledgement that subsequent agreements with DNR regarding preventing unauthorized access, providing enforcement, completing unauthorized trail closures, and restoring areas due to unauthorized public access will be created. Agreements with DNR will include resources and funding for preparing and implementing long term plans to help avoid or otherwise mitigate damages from unauthorized use. Plans and funding should include enforcement and posting/maintaining new signs, gates, and other barriers when new/other access points are created that were not considered during the construction phase. BPA will share in the responsibility of enforcement, installation of gates, culvert replacement, access roads, closing and decommissioning unauthorized trails that occur from corridors and access roads, etc., for environmental and resources protection measures into the future. The EIS should also identify mitigation measures that could be taken to curtail these unauthorized public uses. This may include:

- (1) Install fencing or blockades in key locations;
- (2) Survey existing power lines on DNR-managed lands in the vicinity and document unauthorized use and damage to state lands and public resources. Use this survey to predict damage on proposed lines; Include costs to repair or mitigate predicted damage or identify effective mitigation that could be added that would avoid unauthorized use and damage;
- (3) Design the corridor to prevent unauthorized public use;
- (4) Develop and implement a cooperative management plan with DNR to reduce unauthorized public access to the corridor;
- (5) Regularly inspect for off-road development and damage. Repair damage promptly, especially resource damage;
- (6) Maintain signs that discourage unauthorized use of the corridor;
- (7) Survey the easement corridor and clearly mark it so that BPA, contractors, adjacent landowners and the public can clearly recognize when they are within the corridor to prevent uncompensated corridor expansion, vegetation management conflicts, and to reduce unauthorized use;
- (8) Clarify and disclose the responsibilities, roles, and plans BPA proposes to help prevent and assist grantors in managing these real issues;
- (9) Provide a gate and lock box that can accommodate access for multiple landowners on joint use road systems.

14665-32

Recommended analysis:

- (1) Conduct a sample survey on a given portion of at least the preferred alternative power line corridor representative of State ownership on the proposed I-5 project. A quantitative prediction of unauthorized use and the impacts could be applied to the DNR-managed lands crossed by the proposed alternatives and options;
- (2) As a comparison, BPA should conduct an analysis of current power-line corridors that are representative of DNR managed lands for this project, and the unauthorized access by the public and the impacts that have resulted. (i.e., how many unauthorized trails have been created due to the power-line corridors and access roads, and the steps taken to prevent or mitigate unauthorized access?)

Recommended additional discussion: Briefly discuss the long-term impacts, especially unauthorized use and vandalism, over the life of the easement, which adjacent land owners are exposed to because of the right-of-way.

Recommended change: The impacts from unauthorized use are **moderate to high** under all of the alternatives under the current mitigation recommended in the DEIS for the options that cross DNR-managed lands.

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1j. Aquatic lands and resources

Issue 1: Identification of State Owned Aquatic Land (SOAL) and DNR provided lists for species and vegetation

Summary: Although there are numerous references to “navigable waters” there is no mention, identification, or analysis of DNR managed SOAL other than the acknowledgement in Chapter 28, “Consistency with State Substantive Standards”. DNR provided BPA with a table showing navigable river crossings (page 12, 2009 NEPA Scoping Comments) and a map of “navigable” waters. BPA should be made aware the map is no longer circulated. To determine if a water body is within a SOAL please contact DNR directly. Within the DEIS on page 28-15 there is a reference to two lists, to be provided by DNR. Both are attached. Please incorporate, as appropriate, in the Final EIS. These lists should be reviewed wherever the proposal will potentially impact SOAL.

Reference: Chapter 1 Purpose and Need, section 1.5.1 page 1-11; Summary section S.3.8.2 page 3-37; Chapter 10 Public Health and Safety page 10-11; Chapter 11 Socioeconomics; Chapter 12 Transportation; Chapter 27 Consultation, Review and Permit Requirements section 27.10 Clean Water Act page 27-5 and 27-6; section 27.12 Rivers and Harbors Act page 27-9; Chapter 28 State Substantive Standards section 28.2.10 SOAL page 28-14.

14665-33

Recommended change: Use the DNR provided lists: DNR Proposed List of Protected Vegetation, Navigable waters table, and DNR Aquatic Lands DRAFT Habitat Conservation Plan Species Considered for surveys to be completed on or adjacent to SOAL

Issue 2: Land Use Impacts to SOAL easements

Summary: DNR requested that BPA identify affected DNR licenses, leases, and easements that may be affected by the project, and to calculate lost revenue to the state that may result. That analysis was not included in the DEIS.

Reference: See citations above under issue 1. Identification of State-owned Aquatic Land (SOAL) for references to “navigable waters”.

Recommended mitigation: BPA will coordinate with DNR in determining the exact location of the easement boundaries, and the restrictions on SOAL, prior to the development or amendment of any easement and any final decision by DNR on the issuance of an easement.

Recommended analysis: Once the SOALs are identified, BPA will need to provide further information on crossings over state-owned aquatic lands in order for DNR Aquatic staff to determine environmental impacts to habitat, calculate the length of the crossings, calculate administrative cost recovery, and determine the associated impacts to existing DNR licenses, leases, and agreements.

Issue 3: Suspension tower in the Columbia River

Summary: The DEIS has not provided detail on the exact placement of the tower in the Columbia River or analyzed the impacts to aquatic resources on state-owned aquatic lands. Consistent with the issue noted in 2. Above, BPA has not identified the specific deeds and contracts (signed and dated) that BPA may have with DNR for this location and for the existing right-of-way.

14665-34

Reference: Chapter 3 Project Components and Construction, Operation, and Maintenance Activities, Section 3.2.4 page 3-6; Chapter 10 Health and Safety pages 10-11 and 10-15; Chapter 12 Transportation page 12-5 and 12-6; Chapter 15 Water page 15-7.

Recommended change: Identify the exact location of the tower in the Columbia River and work with DNR to identify potential mitigation measures for impacts to aquatic resources on state-owned aquatic lands.

- 14665-33 With WDNR help, SOAL have been identified and boundaries determined. Maps were prepared for WDNR review. The list of SOAL has been included in Chapter 28, Consistency with State Substantive Standards, and Appendix A, Washington Department of Natural Resources Lands Analysis. Existing licenses, leases, and easements continue to be reviewed and discussed with WDNR. This information would be used to obtain new easements or modify existing easements if BPA decides to build the project.

WDNR Proposed List of Protected Vegetation and WDNR Aquatic Lands DRAFT Habitat Conservation Plan Species Considered list have been added by reference to Chapter 28 and Appendix A. While BPA could not locate the navigable waters table, those navigable waters considered to be SOAL crossed by the action alternatives are included in Chapter 28 and Appendix A. The presence of plant species that could be present within SOAL identified for this project were confirmed during surveys. These are listed in Table A-12, WDNR Aquatic Plants Potentially Occurring within State-Owned Aquatic Lands along the Preferred Alternative.

- 14665-34 BPA has worked with WDNR on exact tower and road placement, including the tower in the Columbia River. The analysis of impacts to aquatic resources has been updated with additional site-specific information included in Sections 17.1.2, Special-Status Plant Habitats, 28.2.10, State-Owned Aquatic Lands, and A.2.7, Water and Fish. BPA has also discussed specific deeds and contracts that BPA has with WDNR for this and other SOAL locations. Additional mitigation measures for aquatic resources have been added to the Final EIS.

- 14665-35 **Recommended Analysis:** Once the exact location of the tower is identified, include an analysis of the impacts to aquatic resources.
- Issue 4: Protection of Submerged Native Aquatic Vegetation**
Summary: Adequate detail needs to be provided on potential impacts to freshwater vegetation located on SOAL, within, outside and adjacent to the BPA proposed right-of-way. The Chapter on Vegetation identifies aquatic bed land vegetation under the section on wetlands (p. 17-6) but the analysis for special status species references upland plants only.
Reference: Chapter 17 Vegetation page 17-6.
- 14665-36 **Recommended mitigation:** Coordinate with DNR to ensure consistency with the overall statements in the U.S. Corps Permit (U.S. Corps Permit NWS-2011-346-PN dated January 4, 2013) to protect and utilize important resources and consider fish and wildlife values.
Recommended analysis: BPA will analyze the impacts to aquatic freshwater vegetation and will ensure the DNR-provided list of protected vegetation is used during surveys of aquatic plant species, when completing wetland delineations.
- Issue 5: Species Work Windows- Consistency with State Standard**
Summary: For all water crossings, Washington Department of Fish and Wildlife (WDFW) species work windows should be used for the timing of any construction, operation or maintenance activities, to protect listed and sensitive species and forage fish species in sensitive life history phases. The DEIS does reference in-water work windows in Table 3-2, and should include the reference material in Chapter 19.
Reference: Chapter 19 – Fish page 19-13 through 19-28, Table 19-2 page 19-19 and 19-20; Chapter 3 Project Components, and Construction, Operation and Maintenance Activities Table 3-2 page 3-25 and 3-27.
Recommended mitigation: BPA will operate according to in-water work windows established by the Washington Department of Fish and Wildlife (WDFW) or the U.S. Corps Permit (see page 3-27) for this project. Information regarding WDFW in-water work windows can be obtained by contacting WDFW through their Hydraulic Project Approval website: <http://wdfw.wa.gov/licensing/hpa/>.
- 14665-37
- Issue 6: Mitigation projects**
Summary: Mitigation projects, particularly offsite mitigation projects located on state-owned aquatic land must involve DNR, and may require a use authorization.
Reference: Chapter 15 Water pages 15-23 and 15-24; Chapter 16 Wetlands page 16-18; and Chapter 19 Fish page 19-28.
Recommended mitigation: BPA will coordinate with DNR on the development of any proposed mitigation projects on SOAL.
- 14665-38
- Issue 7: Quality of maps / sufficiency of information**
Summary: DNR suggests the applicant uses standard survey identifiers in the FEIS to assist DNR in locating the exact placement of the tower – e.g., lat/long and/or TSR, and/or nearby county parcel number or survey marker. These identifying markers will be necessary prior to obtaining or modifying an easement for state-owned aquatic lands.
Reference: Map appendix; maps within document; Washington Department of Natural Resources Requirements for Records of Survey for Leases and Easements (2002)
Recommended change: Incorporate standardized survey identifiers which include the line of ordinary high water, low water, and township-section-range.
- 14665-39

- 14665-35 Please see the response to Comment 14665-34.
- 14665-36 The analysis for special-status species in the Draft EIS is based on those species with documented occurrences within 1 mile of the right-of-way for the project alternatives; no special-status aquatic bed wetland plant species were documented in the study area.
- BPA completed surveys for all (upland and aquatic) special-status plant species within the Preferred Alternative study area. The results of these surveys are included in Chapter 17, Vegetation, and Appendix A.
- Potential impacts on wetland habitats and species were identified and documented by the wetland delineations and impact assessments that were completed for the project. These results are summarized in Chapter 16, Wetlands.
- BPA's strategy for protecting environmental resources and consistency with state plans and programs is outlined in the EIS in Chapter 28, State Substantive Standards and in Appendix A, Washington Department of Natural Resources Lands Analysis.
- 14665-37 BPA agrees. For all in-water work, WDFW species work windows would be used for the timing of any construction, operation or maintenance activities, to protect listed species and forage fish species in sensitive life history phases. BPA has included this mitigation measure in Section 19.2.8, Recommended Mitigation Measures.
- 14665-38 BPA would coordinate with WDNR if mitigation is proposed on SOALs.
- 14665-39 All land acquisition, lease, and easement documents would include industry standard identifying information. The EIS location descriptions are meant for a much wider and varied audience and remain as they are.

Geologic hazards

2a. Geologic hazards on DNR managed lands

Issue 1: Mitigation of landslides

Summary: Recommended mitigation measures in the DEIS do not include mitigation if a landslide occurs related to the construction of the transmission line.

In Chapter 14 Geology and Soils, a list of recommended mitigation measures is provided on pages 14-16 (section 14.2.8) in the form of a bulleted list. The mitigation recommendations include conducting a site-specific geologic evaluation in areas of potential landslides and if they cannot be avoided, site-specific designs will be developed. This addresses the construction, but does not address what will take place if a landslide occurs in the future as a result of development done for the BPA project. BPA will be responsible and fully liable for any damage to property or personal injury resulting from a landslide related to construction of the BPA I-5 corridor project.

14665-40

Reference: Chapter 14 Geology and Soils, section 14.2.8 page 14-16.

Recommended mitigation: Any landslide and associated damage related to construction of the BPA I-5 corridor project, either during construction or at any point in the future, will be the responsibility of BPA and will be repaired, rehabilitated, and restored by BPA. Repairs, rehabilitation, and restoration can include, but are not limited to, engineered slope stabilization measures, repairs to any damaged infrastructure such as roads, rehabilitation of damaged riparian habitat or other ecological functions, and reconstruction of any damaged or destroyed structures. This responsibility also includes full liability for any damage to property or personal injury resulting from a landslide related to construction of the BPA I-5 corridor project.

Issue 2: Landslide hazard areas are identified primarily from remote screening tools

Summary: Due to the scope of the project, it is reasonable that remote screening tools would be used to get a general idea of potential landslide hazards for all of the alternative routes. However, once a preferred route is identified, the slope stability of the entire route should be evaluated on a site-specific level.

On page 14-16, the current recommended mitigation measure states: *“Conduct additional site-specific evaluations in areas of potential landslides to determine degree of recent activity, likelihood of activation or reactivation, potential setbacks, and site-specific stability as appropriate. Site towers in areas not underlain by landslides. If necessary, design site-specific mitigation measures.”*

14665-41

Reference: Chapter 14 Geology and Soils, section 14.2.8 page 14-16.

Recommended mitigation:

(1) Amend the language to read *“Conduct additional site-specific evaluations in areas of potential landslides identified in Appendix J and by site-specific evaluation of the entire selected route to determine degree of recent activity, likelihood of activation or reactivation, potential setbacks, and site-specific stability as appropriate. Site towers in areas not underlain by landslides. If necessary, design site-specific mitigation measures”*

(2) BPA will coordinate with DNR on design and site-specific slope stability mitigation measures.

- 14665-40 Comment noted. We have modified Section 14.2.8, Recommended Mitigation Measures, to include site-specific mitigation measures for potential landslides that may occur during or after construction, as well as development of a landslide monitoring plan.
- 14665-41 BPA has used existing information gathered during the Draft EIS phase to help locate the substations, towers and access roads. Along with other siting work and analysis, geotechnical work in the field has helped micro-site these project facilities and design foundations. Geotechnical work would continue to inform the project after the Final EIS and Record of Decision if a decision is made to build the project. BPA has worked with and will continue to work with WDNR on centerline, tower, and access road locations. Recommended mitigation has been added to Chapter 14, Geology and Soils.

- 14665-41 **Issue 3:** DNR review of final tower placement locations on DNR-managed lands
Summary: DNR will need to review tower locations on DNR-managed lands prior to finalizing locations.
Recommended mitigation: A DNR representative will have the opportunity to review/approve tower line locations on DNR managed lands prior to finalizing locations to limit geological impacts.
- 14665-42 **2b. Geologic hazards on all lands**
Issue: Seismic Risk
Summary: In Chapter 14 Geology and Soils section 14.1.1.2 the seismic risks do not include seismically induced landslides for areas of site locations (for example, see papers by Romeo and others, 2009 [A methodology for Assessing Earthquake-Induced Landslide Risk - 1st North American Landslide Conference](#), v.1, p.867-875). This screening tool can help determine areas that would be vulnerable for near earthquakes or regional earthquakes to help assess potential downhill hazards of sites.
For example, in section 14.1.1.2 landslide impacts have been identified; however, there is no written plan on response and/or clean-up, as mitigation for landslides. If a large landslide event occurs, such as the blocking of the Coweeman River, in which downstream hazards include parts of Kelso, a rapid response plan must be implemented to reduce or disband such risk or hazard.
Reference: Chapter 14 Geology and Soils, section 14.1.1.2 page 14-2.
Recommended mitigation: Develop and implement a rapid response plan which includes contacts in case of emergency.

The local economy including timber and recreation

- 14665-43 **Issue 1:** The local economy including timber
Summary: The DEIS mentions an average Pacific Northwest stumpage price of \$200/MBF for 2008-2009 (Section 11.1.7), but does not confirm that this price is used in the analysis. Furthermore, this \$200/MBF is anomalous due to the effects of the recession. Prior to 2008, stumpage prices from public lands had not approached the low of \$200/MBF in over 20 years, and the average price from 2000-2012 was between \$300-320/MBF. A stumpage price of \$200/MBF grossly underestimates the actual price that timber from these lands is likely to fetch, and is therefore inappropriate to use in calculating timber revenues (realized or foregone) and the resulting impacts to the local economy.
Reference: Chapter 11 Socioeconomics, section 11.1.7 page 11-7.
Recommended change: Use the most up to date stumpage values for any appraisal and calculation.
Recommended analysis: At a minimum, an analysis of impacts to the local economy caused by impacts to the timber industry should include estimates of: the impact of these revenue changes to the employment and income of lumber mills and other timber end users; and the impact of both the short-term timber harvest and the long-term land conversion on employment and income in the local timber industry (including logging companies and mills).
- 14665-44 **Issue 2:** Recreation and the local economy
Summary: Chapter 6, "Recreation", identifies the impacts to specific parks and trails from clearing of the right-of-way, construction of towers, and new and improved access roads. The impacts are described as changing the recreation experience in terms of "*visual and experiential impacts to the recreational user*". The described impacts are mostly negative.

14665-42 Chapter 14, Geology and Soils, acknowledges that site-specific geotechnical investigations would be done at potential landslide and liquefaction prone areas (and other areas where sub-surface information is needed) to evaluate the potential for these areas to experience landslides or liquefaction. The particular methodology and tools to conduct this evaluation will be selected by the engineering contractor but is being done in coordination with WDNR and BPA. Some of these investigations have been done and there are more to do. The results from these studies have been incorporated into the location and design of project facilities and subsequent results from additional studies will be used the same way. If needed, mitigation measures, such as those described in Chapter 14, to reduce the risk of landslides, erosion, and liquefaction to the towers, would be implemented.

BPA has a Transmission Emergency Response Program that has created policies, procedures, action plans, training, and exercises that respond to emergencies in the region that involve the transmission system.

BPA's Continuity of Operations plan, which includes relevant contacts with local emergency response personnel, addresses how BPA continues to conduct its business despite emergencies that could occur in the region, including landslides, fire, flooding, earthquakes, and other emergencies; and which may affect BPA facilities. This plan is part of the Transmission Emergency Response Program.

BPA assumes that WDNR also has its own plans for responding to seismically-induced events, such as landslides, or other natural disasters that occur in Washington.

14665-43 Sections 11.2.2.4, Government Revenue, and 11.2.2.7, Private Timber Production, and Appendix A, Washington Department of Natural Resources Lands Analysis, have been updated to include a more detailed description of the assumptions used for the analysis of timber impacts. The assumption regarding stumpage prices was updated to reflect current conditions.

14665-44 As the commenter mentions, Chapter 5, Land, and Chapter 6, Recreation, provide a comparison of impacts to recreational resources across alternatives. Appendix A displays this information just for lands managed by WDNR. Section 11.2.2.8, Community Values, recognizes and captures values that were important to those commenting during the project scoping period. The results in Chapter 11 are consistent with those in Chapter 6.

- 14665-44 Chapter 11, "Socioeconomics", contains a very short subsection "Recreation and Tourism" under Section 11.2.2.8 "Community Values". In contrast to the negative impacts to recreation areas and uses detailed in Chapter 6, it describes a balance between people who would experience a long-term permanent increase in the value of recreation activities on affected lands and people who would experience a decrease in recreation values. No attempt is made to qualify or quantify the relative changes in behavior in the two groups both inside and outside the project area. The subsection concludes by observing that *"To the extent that the project's effects on recreation resources lead recreationists to alter their spending patterns, it would affect sales, employment, and earnings in related business"*, but there is no analysis performed to attempt to quantify these local economic impacts. This analysis should be undertaken so the impact can be understood and mitigation can be developed.
- Reference:** Chapter 6, "Recreation", Chapter 11, "Socioeconomics"
- Recommended mitigation:** Once the analysis is completed mitigation of impacts should be considered and proposed.
- Recommended analysis:** In general and for each alternative, the DEIS quantifies the number of impacted acres by landowner and land use, and qualitatively discusses the impacts of construction, maintenance, and the transmission lines on trails, streams, parks, and recreation types (See Chapters 5 and 6 and Appendix A). However, the DEIS fails to synthesize these disparate impacts into an explanation of the trade-offs involved with each alternative compared to the no-action. Such a synthesis is critical to understanding what is at stake in selecting a given alternative and the proper mitigation it would require.

Cultural Resources

- 14665-45 **Issue 1: Cultural Resources-graves and burial sites**
- Summary:** BPA is subject to the National Historic Preservation Act of 1966 ("NHPA" or "Act"). Section 106 of the Act requires federal agencies to consider the effects of projects they carry out, approve, or fund. BPA is the lead agency for all of its easement activities that may involve cultural resources on State Lands. DNR is subject to chapter 27.44 RCW (Indian graves and records) which may have different requirements for the protection of native Indian burial sites or graves and human remains than federal law. Under the current list of mitigation measures in Table 3-2, pages 3-24, 25, there is no assurance of DNR's protection from potential violations of Chapter 27.44 RCW Indian Graves and Records.
- Reference:** Chapter 3 Table 3-2 pages 3-24, 25; Chapter 13 Cultural Resources.
- Recommended mitigation:** BPA shall notify DNR if and when a native Indian burial site, grave or human remains is found on DNR managed lands and cooperate with DNR to ensure DNR compliance with state law.
- 14665-46 **Issue 2: Impact Levels**
- Summary:** The DEIS proposes a high impact designation for properties eligible to the National Register of Historic Places (NRHP), moderate impact for those properties un-evaluated and low impact to those properties determined ineligible to the NRHP. NRHP eligibility, based on the characteristics, is inherent in the properties whether evaluated or not. This should be changed to High-Low-and Unevaluated.
- Reference:** Chapter 13 Cultural Resources, section 13.2.1 page 13-5.
- Recommended change:** Amend the discussion and assignment of impact levels to recognize that an

- 14665-45 BPA conducted a cultural resources survey to identify any resources that may be impacted by the proposed project. If at any time a native Indian burial site, grave or human remains is found on WDNR managed lands, BPA will notify WDNR and will cooperate with WDNR to ensure WDNR compliance with state law.
- 14665-46 BPA has taken this recommendation into account. However, BPA has decided that a "moderate" impact level does in fact address your concern. Moderate provides a space between high and low probability, and implies that until evaluated the action can have a high or it can have low potential to effect a given property.

- 14665-46 unevaluated potential NRHP property may be a **high** impact and not assume that a potentially eligible NRHP property is a **moderate** impact.

Forest Practices

- Issue 1: Forest Practices applications**
Summary: Even though BPA is not required to submit a forest practice application for the removal of standing timber as part of the transmission line corridor clearing, when BPA relinquishes the rights to the timber back to the landowner, the landowner may be required to submit a forest practices application for the removal of the cut timber, as is noted in DNR's scoping comments. The removal of the timber is thereby regulated by the Forest Practice Act and Rules.
Reference: Chapter 28 Consistency with State Substantive Standards, section 28.2.9 page 28-14.
Recommended mitigation: BPA will work with DNR forest practices staff to develop notification and informational materials for forest landowners who wish to harvest (remove) cleared timber generated from the clearing of the transmission line corridor. The informational materials should be designed to inform landowners of their responsibilities to reduce or eliminate impacts covered by DNR's forest practices rules.
- 14665-47
- Issue 2: Forest Practices Habitat Conservation Plan (FP HCP)**
Summary: The Forest Practices HCP represents an incidental take permit issued to the State of Washington by the United States Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA-Fisheries) to provide for long term protections for covered species under the ESA. The Forest Practices HCP and permit provide for the protection of these species during forest practices that take place on non-federal forest lands in the state. Under the current proposal, vegetation removal will increase within habitat of federal- or state-listed species-or lands covered by the Forest Practices HCP and hence may result in increased "take" of these species.
Reference: Chapter 28 Consistency with State Substantive Standards, section 28.2.9 page 28-14.
Recommended analysis: Provide analysis for and initiate consultation under Section 7 of the Act with U.S. Fish & Wildlife Service and/or National Oceanic & Atmospheric Administration/Fisheries (NOAA Fisheries) to demonstrate and document that the construction of a new transmission line, considering appropriate environmental impact mitigation, will not adversely affect the agreement and the commitments made in the Forest Practices HCP. Additionally, USFWS Section 10 representatives familiar with the Forest Practices HCP should be involved in any discussion regarding the Forest Practices HCP.
Recommended changes: A reference to DNR's Forest Practices HCP should be added in Chapter 28, section 28.2.9 page 28-14.
- 14665-48
- Issue 3: Forest Road Best Management Practices (BMPs) on lands regulated by Forest Practices**
Summary: DNR's scoping comments requested that BPA meet Forest Practice RMAP standards for all new road construction. These standards were incorporated with the Forest Practices HCP and enumerated in the Washington Administrative Code forest practices rules. In addition to ESA coverage, the Forest Practices HCP provides a vehicle through which the EPA-delegated state clean water agency (Department of Ecology) may certify and provide assurance that the standards in the Forest Practices HCP and WAC meet the requirements of the federal Clean Water Act. BPA recommended mitigation measures include
- 14665-49

14665-47 BPA would work with WDNR forest practices staff to develop notification and informational materials for forest landowners who wish to harvest (remove) cleared timber generated from the clearing of the transmission line corridor. The informational materials would be designed to inform landowners of their responsibilities to reduce or eliminate impacts covered by WDNR forest practices rules.

14665-48 Section 27.2, Endangered Species Act of 1973, describes BPA's consultation with USFWS and NOAA Fisheries under Section 7 of the ESA regarding species analyzed in Chapter 17, Vegetation; Chapter 18, Wildlife; and Chapter 19, Fish.

BPA realizes it cannot meet all requirements outlined in the Forest Practices HCP. This has been discussed with WDNR and the Services. BPA continues to work with USFWS and NOAA Fisheries Section 7 and Section 10 staff. Mitigation was identified in the Biological Assessment and final conservation measures would be included in Biological Opinions and/or Letters of Concurrence prepared by the Services. At this time, BPA continues to work with WDNR and the Services on appropriate mitigation strategies.

14665-49 Please see the responses to Comments 14665-3, 14665-4, and 14665-6.

Section A.2.4, Transportation, in Appendix A has been updated to reflect BPA's updated road standards. It also includes a comparison of the updated access road standards with other applicable standards including Forest Practice RMAP standards for culvert design. Section 3.9, Access Roads, describes access road construction and maintenance activities including installation of drainage structures and placement of rock. In addition to measures designed to reduce potential sediment movement from roads described in Section 15.2.8, Recommended Mitigation Measures, Table 3-2, Mitigation Measures Included as Part of the Project, provides additional measures.

- meeting Washington's Forest and Fish Law or like standard for new construction (Chapter 15.2.8 page 15-23). However, referencing the Forest and Fish Law itself is inaccurate (See Recommended Editing Changes, item 1.).
- Reference:** Chapter 15 Water, section 15.2.8 page 15-23; References page 29-2.
- 14665-49 **Recommended mitigation:**
- (1) On forest roads where Clean Water Act compliance is implemented by the forest practices rules, BPA should follow the BMPs codified in WAC 222-24.
- (2) All access roads should have a minimum of 40 cubic yards per station applied, and adequate drainage structures to minimize sediment delivery to any live water.
- Issue 4: Riparian Area Best Management Practices on lands regulated by Forest Practices**
- Summary:** Riparian habitat protections are codified in the Washington State Forest Practices Act and are inclusive in the Forest Practices HCP. As previously stated, these protections are linked to Clean Water Act assurances and Endangered Species Act compliance. Forest landowners are required to retain riparian habitat when harvesting timber under an approved Forest Practices Application.
- Reference:** Chapters Summary, 15 Water, 16 Wetlands, 17 Vegetation, 18 Wildlife, 19 Fish, 26 Cumulative Impacts and others.
- 14665-50 **Recommended mitigation:** Mitigation sequencing in riparian areas should follow: (1) Avoidance- where practical, BPA should mitigate impacts by raising towers to avoid cutting overstory timber. Understory vegetation should be retained. (2) Mitigation- if avoidance is not possible, timber should be topped and other trees felled only when needed. All felled timber within the riparian core zone (from edge of bank full width or channel migration zone extending perpendicular to fifty (50) horizontal feet should be left as down wood recruitment in the riparian area.

Forestry riparian easements

- Issue 1: Location change and impact analysis of the Forestry Riparian Easement**
- Summary:** The location of the one Forestry Riparian Easement that has been identified as being adversely impacted under West and Crossover alternatives is identified in an inaccurate location. A number of references to the location as described in the DEIS indicate the easement is "along Segment 9" found in and "near Tower 9/26". However the discussions of West Option 2 indicate this option would avoid impact to the Forestry Riparian Easement. In fact, all options of the West and Crossover Alternatives would impact the easement because the easement is located in Township 7 North, Range 1 West. In this location all of the options segments for the West and Crossover Alternatives are in the same location. The locations of the different segments in the three options of the West Alternative are all found in Township 2 North, Range 3 East and Township 2 North, Range 4 East which is many miles further to the south and several miles northwest of Camas. For clarification, see Map A of Appendix A in the DEIS.
- 14665-51 Prior to any activity affecting the easement, consent from DNR on the scope of compensation and/or mitigation to the impacted easement will need to be given. BPA will only be able to proceed with impacts to a Forestry Riparian Easement after DNR has been compensated using the guidelines of WAC 222-21-080 and/or mitigation work is formally outlined in a binding contract.
- References:** Summary, section S3.1.3 page S-12, section S.3.13.1 page S-57, and section S.3.13.2 page S-59; Chapter 4 Proposed Actions and Alternatives, section 4.2 page 4-3, Table 4-10 page 4-42; Chapter

14665-50 Please see the response to Comment 14665-48. Section 27.10, Clean Water Act, describes how BPA would take all appropriate and practicable steps to avoid and minimize adverse impacts to waters of the U.S. To offset impacts that are unavoidable, the Corps and other regulatory agencies would require BPA to provide compensatory mitigation. Mitigation measures described in Table 3-2, Mitigation Measures Included as Part of the Project, and Section 15.2.8, Recommended Mitigation Measures, would be done to further reduce impacts to waters of the U.S. While BPA would need to clear all tall-growing vegetation from the right-of-way, there may be some transmission line crossings where the conductor is high enough to avoid all tree removal across some streams.

Raising the height of towers may reduce the clearing of tall trees but would increase visual impacts in riparian areas.

Section 19.2.8, Recommended Mitigation Measures, states that BPA would place wood debris along streams cleared for transmission line crossings.

14665-51 Text in the Final EIS has been corrected. BPA understands the Forest Riparian Easement is located along Segment 9 of the West and Crossover alternatives, near Tower 9/27. Reference to the easement along West Option 2 has been deleted. BPA has identified Central Alternative using Central Option 1 as the Preferred Alternative. Segment 9 is not part of the Preferred Alternative.

- 14665-51 5 Land, section 5.1.3 page 5-5, section 5.2.4.2 page 5-24; Chapter 17 Vegetation, section 17.1.2.1 page 17-8, section 17.2.4.4 page 17-24.
- Recommended mitigation:** Consistent with the general mitigation approach for “compensatory” mitigation stated in section 3.12 Mitigation Measures, page 3-17, add a provision for compensation and/or mitigation for the loss of conservation capacity intended by the Forestry Riparian Easement. Some types of compensation or mitigation DNR might consider are: replacement land, stream enhancement, or other similar actions acceptable to DNR.
- Recommended changes:** Please refer to the editing changes under Forest Riparian Easements which will correct the location and impact discussions for the Forest Riparian Easement that is impacted by all options of the West and Crossover Alternatives.

Protection from fire

- 14665-52 **Issue 1: Fire prevention and protection**
- Summary:** As stated throughout the DEIS, it is BPA’s intent to follow guidelines, plans and safety requirements developed by the underlying landowner. The statewide operations and maintenance MOA agreed to between DNR and BPA for existing right-of-ways includes the following language under fire prevention:
- “Measures include ensuring all vehicles carry a fire extinguisher of at least a 5B/C rating and a serviceable shovel, following BPA safety operating procedures which include compliance with the substantive requirements of the current Washington Administrative Code (WAC) 332-24-301 (industrial restrictions) and WAC 332-24-405 (Spark emitting requirements)... ”.* This commitment should be included in the DEIS for both new construction and maintenance when occurring on forest lands where DNR has fire protection authority.
- References:** Chapter 10 Health and Safety Page 10-9, page 10-11.
- Recommended mitigation:**
- (1) BPA shall take all reasonable measures to prevent and minimize the start and spread of fire on to adjacent forested areas. Measures should include ensuring all vehicles carry a fire extinguisher of at least a 5 B/C rating and a serviceable shovel, following construction site safety operating procedures which should include compliance with the substantive requirements of the current Washington Administrative Code (WAC) 332-24-301 (Industrial restrictions) and WAC 332-24-405 (Spark emitting requirements).
- (2) In addition to the proposed mitigation the DEIS should incorporate language similar to *“follow best practices to address accumulations of slash, logs or trimmings from vegetation removal operations that pose a hazard for wildfire spread or ignition. Best practices include scattering, chipping or the arrangement of concentrations of logs or trimmings in a manner as to not create a continuous extreme hazard fuel bed”.*
- Recommended change:** Chapter 10 includes discussion under the fire section regarding BPA *“following all fire safety requirements that may be in place by large public or private commercial landowners...”* This should be a mitigation measure.

Special lands and special status species including DNR managed lands

- 14665-52 As noted in the comment, BPA included language in the EIS regarding fire suppression equipment in all vehicles and the intent to follow all fire safety requirements that may be in place by large public or private landowners, including WDNR.

BPA uses lop and scatter to spread material on the ground that will not exceed fire load. Slash is staged in piles along a road then removed. Logs generally are moved to a decking and processing location, then removed promptly. These activities are all done so as not to present a fire risk or negatively impact other sensitive environmental resources.

Mitigation measures regarding fire safety are included in Chapter 10, Health and Safety and Chapter 17, Vegetation.

8a. See the editing recommendations below for the Lacamas Prairie Natural Resource Conservation Area and Natural Area Preserve

8b. Other special status species

Issue 1: Determination of impact level for special status plant species is unclear

Summary: The document doesn't provide a clear statement regarding the determination of impact level for some of the special- status plant species. For example, from page 17-23: "Impacts to small-flowered trillium, dense sedge, and Nuttall's quillwort would be **moderate-to-high** depending on whether impacts would contribute to the need for federal listing." The definition for the **high** impact level includes situations where project activities would cause "...disturbance ... that contributes to the need for federal listing of the species" (page 17-16). These statements seem somewhat circular. The preparers of the document apparently did not actually make a determination as to whether the project would "contribute to the need for federal listing." In the end, it is unclear what impact the project will have on special-status plant species.

Reference: Chapter 17 Vegetation pages 17-1 through 17-34.

Recommended mitigation: BPA will consider and propose any mitigation that is needed to protect the species in addition to that recommended on page 17-33. Similar to mitigation proposed for cultural resources on Table 3-2: "*Plan for survey and review as needed of additional disturbance areas not identified during the NEPA process (e.g., staging areas stringing and pulling sites, guard structure areas, etc.)*", BPA will identify and mitigate for special-status species not identified during the NEPA process.

Recommended analysis: An analysis of the potential impacts should be done at the time of pre-construction surveys as is recommended on page 17-33 and should include the degree of impacts and how to mitigate.

Recommended changes:

(1) The text in various places should be appended to acknowledge that a complete analysis of impacts to special status plant species was not / has not been completed and that such an analysis cannot be completed at present because adequate on-the-ground surveys have not been undertaken. The revised text should include a commitment to conduct the pre-construction surveys (as indicated in the recommended mitigation measures [17-33]) and to identify appropriate mitigation measures based on a determination of the level of impact. The Natural Heritage Program has developed suggested guidelines for rare plant surveys (<http://www1.dnr.wa.gov/nhp/refdesk/pubs/rareplantsurveyguidelines.pdf>). The guidelines address surveyor qualifications, appropriate timing and intensity of survey effort, and documentation of survey findings. We recommend that these guidelines be followed for this project.

14665-53

Accuracy of GIS data for DEIS analysis

Issue 1: GIS data used for analysis

Summary: Generally, GIS is fairly accurate for resource features of a larger scale; roads, rivers, lakes, et cetera. At a micro scale unnamed or located streams, wetlands, and other ecological features may not be correctly identified or displayed in GIS databases. There may be substantive changes in the number and order of wetlands, streams, and other features that could indicate additional impacts and the need for additional mitigation.

14665-54

- 14665-53 For special-status species, the EIS provides a range of potential impact levels based on documented occurrences and estimated ground disturbance. BPA believes this approach to the analysis provides a sufficient level of information concerning potential project impacts to special-status species and is reasonable given the scale of the proposed project. In addition, plant surveys of federally-listed threatened and endangered plants were conducted in potential habitat along the Preferred Alternative. Federal species of concern were surveyed on WDNR land. All sensitive species were recorded if observed during the surveys. An updated assessment of impacts based on a combination of survey data and databases has been added to the EIS in Chapter 17, Vegetation.
- 14665-54 BPA has conducted field work to verify data gathered during the Draft EIS process and has updated the Final EIS appropriately.

- 14665-54 **Reference:** All chapters and sections.
Recommended mitigation: BPA needs to ground verify all GIS data that is being used for the environmental analysis in the EIS and provide additional mitigation measures where additional impacts are indicated.
Recommended analysis: Post ground truthing, BPA should review the GIS data in the FEIS and update the data and the environmental impact analysis where needed especially that which is related to the hydro layers.

Recommended editing changes to the DEIS

The following are editing or factual errors needing to be corrected in the final EIS:

- 14665-55 1. The reference to Washington’s Forest and Fish laws on page 15-23 is incorrect and should be replaced with the following: *Pursuant to, Washington’s Forest Practices Act and Rules bring all existing access roads up to new forest road standards through Road Maintenance and Abandonment Plans (RMAPs) by 2016.*
- 14665-56 2. Throughout the DEIS document there are correct references to “State owned trust lands, managed by the WDNR”. The document has several locations that refer to the “Washington Department of Natural Resources (WDNR) owned property....” or “WDNR owned...” and should be corrected to “DNR managed” Summary (page S-4-2nd paragraph) incorrectly states “Washington Department of Natural Resources property....” It is correctly addressed under Summary- Land section S.3.1.1 (page S-8) and Chapter 5 Land section 5.1.1 (page 5-1) where it states “Public agencies that own or manage lands include WDNR, the City of Camas, and Port of Portland”. The State of Washington owns the land that DNR manages; RCW 79.02.010 defines lands managed by DNR.
- 14665-57 3. Need to change references to the Lacamas Prairie Natural Area throughout the document to reflect our recent purchases, i.e. “lands managed by WDNR as the Lacamas Prairie NAP/NRCA” (e.g. pp. S-12; S-57; 18-7; 17-8; and others).
- 14665-58 4. Table 3-2 Mitigation Measures Land and Recreation (page 3-22) “Stay on established access road and designated access roads across agricultural fields during routine operation and maintenance activities”. Need to add “forest management roads” to the sentence.
- 14665-59 5. Page 5-8 (1st and 4th paragraph) - “Publicly owned forest lands are also managed for recreation (trails) and wildlife habitat, including the Yacolt Burn State Forest”. Need to correct this sentence to read “DNR managed trust lands are also managed for recreation....” in the final EIS.
- 14665-60 6. Section 6.2.6.4 East Option 2 page 6-26 incorrectly includes the Bell’s Mountain trail, which is not in the vicinity of this option alternative.
- 14665-61 7. Appendix A Table A-1 (page A-2 to A-5) Need to add segments 23- towers 1,2,3,4 (Central and Crossover Alternatives); S-towers 1,2,3 (East alternative), T-towers 1,2,3 (Central Option 1 Alternative) to being on State trust lands.
- 14665-62 8. Appendix A Section A-2.2 (page A-9 or A-10) Recreation trails impacted needs to mention Bell’s Mountain trail which will be crossed in two locations on the Central Option 1 alternative near segment V by a proposed new tower access road and the transmission corridor.
- 14665-63 9. Appendix A Table A-5 (page A-10) for the Central Alternative needs to add Bells Mountain trail (crossing near segment V).
- 14665-64 10. Appendix A (page A-10) need to include Central Alternative as affecting future trail expansion under the West Yacolt Burn Recreation Plan for segment P. These future trails include 4x4 and/or

- 14665-55 Thank you for the clarification. Suggested changes have been made.
- 14665-56 Thank you for the clarification. Suggested changes have been made.
- 14665-57 Thank you for the clarification. Suggested changes have been made.
- 14665-58 Thank you for the clarification. Suggested changes have been made.
- 14665-59 Thank you for the clarification. Suggested changes have been made.
- 14665-60 East Option 2 crosses the Bell Mountain Trail on Segment V. The icons on this page were not placed within the correct section which could have caused confusion. This has been corrected.
- 14665-61 Suggested changes have been made.
- 14665-62 Segment V is on the Central Alternative, not Central Option 1. Comment 14665-63 correctly refers to the Bells Mountain Trail crossing by Segment V.
- 14665-63 Suggested changes have been made.
- 14665-64 Suggested changes have been made.

- 14665-64 | ORV trails under phase 3 construction schedule shown in the recreation plan. Need to include this in the paragraph describing potential impacts and in Table A-5.
- 14665-65 | 11. Appendix A (page A-13): there are three bullets that reference private land, but no reference to State trust lands. Need to delete **private** and add reference to **DNR managed trust lands**.

DEIS Maps

- 14665-66 | 12. Map 6-1C Recreation for Inset Map 5- need to add proposed new construction tower access road crossing Bells Mountain trail to V segment tower.
- 14665-67 | 13. Map 6-1E Recreation Inset Maps for Map 6-1C and Map 6-1D- need to add inset map #5 from map 6-1C showing Bells Mountain trail crossing.
- 14665-68 | 14. Map 12-1A: Transportation Resources- Need to include proposed new road and existing access road proposals to the Casey Road substation.

Aquatic Resources

- 14665-69 | 15. Chapter 28 State Substantive Standards, page 28-15 references two lists to be provided by DNR. Both lists **DNR Proposed List of Protected Vegetation** and **DNR Aquatic Lands Habitat Conservation Plan Species Considered** are attached. Please incorporate as needed into the EIS.
- 14665-70 | 16. The following section of Chapter 28 State Substantive Standards, Section 28.2.10 page 28-15 containing DNR Aquatic HCP Conservation Measures has been edited as follows. (please replace the existing language, beginning with the first sentence after the Heading 28.2.10 and ending just before the paragraph “Consistency” with the following language):

28.2.10 State Owned Aquatic Lands

The following conservation measures are implemented on a case-by-case basis as site-specific conditions warrant. DNR is currently in negotiations with US Fish and Wildlife and the National Marine Fisheries Services regarding the development of an Aquatic Lands Habitat Conservation Plan, which will cover aquatic lands under waterbodies in this DEIS (such as the Columbia River).

The final requirements are subject to change once the Aquatic HCP is implemented and the Incidental Take Permit is developed for covered species and vegetation. DNR reserves the right to update the language and will contact BPA to do so, if necessary. The DEIS should indicate that BPA will comply with any conservation requirements required by any Aquatic Lands Habitat Conservation Plan adopted by DNR.

Protection of Submerged Native Aquatic Vegetation

A list of freshwater and marine vegetation species to be protected is attached. New activities must avoid existing freshwater native aquatic vegetation identified in the project area (Appendix D – NEPA Copy of Proposed List of Protected Vegetation DNR Aquatic Lands Habitat Conservation Plan, November 2012).

Species Work Windows

For the crossings listed in the Columbia, Coweeman, Kalama, Lewis, and Washougal Rivers, WDFW species work windows must be used for the timing of any construction, operation or maintenance activities, to protect listed and sensitive species and forage fish species in sensitive life history phases. Please use the attached list for identifying any species in the construction, operation or maintenance footprint (Listed and Sensitive Species provided by DNR Aquatic Lands Habitat Conservation Plan, November 2012).

- 14665-65 Thank you for the clarification. Suggested changes have been made.
- 14665-66 The map correctly shows that no new proposed access roads to towers cross the Bells Mountain Trail. There is an existing road that crosses Bells Mountain Trail that is identified for some improvements.
- 14665-67 Inset Map 5 on Map 6-1C is located on Map 6-1C. We created Map 6-1E to display only those insets that we felt could not fit on Maps 6-1C and D clearly.
- 14665-68 The existing 12 percent and the earlier proposed 8 percent access roads to the Casey Road substation site are shown in Appendix C1. Chapter maps are at a scale that would prevent showing this type of detail.
- 14665-69 Thank you for this information. The lists have been incorporated by reference in Section 28.2.10, State Owned Aquatic Lands.
- 14665-70 Thank you for the clarification. Suggested changes have been made in Section 28.2.10. Regarding compliance with the Aquatic Lands Habitat Conservation Plan adopted at some point in the future by WDNR, BPA would comply with the Plan to the extent practicable and would strive to meet the substantive requirements of the Plan. BPA's intent is stated in the consistency paragraph in Section 28.2.10, State Owned Aquatic Lands.

- 14665-70 *Maintenance and Decommissioning*
Lessees and grantees must remove unused, abandoned structures, and equipment from the lease or easement site. A timeframe for removal will be specified in the authorizing document.

Forestry Riparian Easements

- 14665-71 17. Throughout the DEIS the title of this easement is referred to as “Forest Riparian Conservation Easement.” The name of the easements that DNR manages and one of which is potentially affected by this proposal should be labeled “Forestry Riparian Easement.” This error is understandable as DNR’s Scoping Comments referred to these as forest riparian conservation easements. Although this easement is a type of conservation easement, by capitalizing all the words “Forest Riparian Conservation Easement” it incorrectly implies this is the title of the easement, when in fact the correct label is “Forestry Riparian Easement.”
- 14665-72 18. Section 17.1.2.1 WDNR Protected Areas (Page 17-8) – Change the name of the program referenced in the fifth paragraph of this section from “Riparian Open Space Program” to “Forestry Riparian Easement Program.”
- 14665-73 19. Section S.3.1.3 Impacts Unique to Action Alternatives (Page S-17) – Need to indicate an impact to the Forestry Riparian Easement in the Open Space category of Vegetation for the Crossover Alternative similar to what is indicated for the West Alternative in Section S.3.1.3 (Page S-12).
- 14665-74 20. Section S.3.13.3 Impacts Unique to Action Alternatives (Page S-59) – In the discussion of West Option 2, remove the reference that the Forestry Riparian Easement will be avoided with West Option 2. See Map A in Appendix A of the DEIS for the correct location of the Forest Riparian Easement.
- 14665-75 21. Section S.3.13.3 Impacts Unique to Action Alternatives (Page S-61) – Need to include a Vegetation impact to the Crossover Alternative similar to the description on West Alternative in this same Section on page S-59 where the right-of-way would cross the Forest Riparian Easement and require tree removal.
- 14665-76 22. Section 4.2 West Alternative (page 4-3) – In the third paragraph of this section, the easement is described as being near Tower 9/26 however DNR GIS information shows Tower 9/26 is located in the southeast corner of Section 5 of Township 7 North, Range 1 West but the Forestry Riparian Easement is in the Southwest corner of Section 4 of Township 7 North, Range 1 West. Tower 9/27 is the closest tower to the easement. See map attached to this document.
- 14665-77 23. Table 4-10 Summary of Environmental Impacts by Alternative (Page 4-42) – Two changes need to be made to the chart on this page. First the reference that West Option 2 will “avoid the WDNR Forest Riparian Conservation Easement” needs to be removed (see Map A in Appendix A of the DEIS). Second, add an impact to Vegetation Resource for the Crossover Alternative.
- 14665-78 24. Section 5.2.7.2 Land Use (Page 5-35)– Need to include a Vegetation Resource impact to the Crossover Alternative similar to the West Alternative as described in Section 5.2.4.2 where the right-of-way would cross the easement and require tree removal.
- 14665-79 25. Section 17.2.4.4 West Option 1, 2, and 3 (Page 17-24) – In the second paragraph remove the reference that the Forestry Riparian Easement will be avoided with both West Option 2 and 3.

Lacamas Prairie Natural Resource Conservation Area (NRCA) and Natural Area Preserve (NAP)

- 14665-80 26. p. S-57: “Noxious weeds are those that can damage cultivated or natural vegetation, livestock or other resources. They include Himalayan blackberry, thistles, and scotch broom.” The 2nd sentence should be modified to say: “They include *species such as* Himalayan blackberry, *non-native* thistles, and scotch broom.”

- 14665-71 Thank you for the clarification. Suggested changes have been made.
- 14665-72 Suggested changes have been made.
- 14665-73 Suggested changes have been made.
- 14665-74 Suggested changes have been made.
- 14665-75 Suggested changes have been made.
- 14665-76 Thank you for the clarification. Suggested changes have been made.
- 14665-77 Suggested changes have been made.
- 14665-78 Suggested changes have been made.
- 14665-79 Suggested changes have been made.
- 14665-80 Suggested changes have been made.

- 14665-81 27. p. S-59: "Right-of-way would cross more (+28 acres) of the Lacamas Prairie Natural Area (and proposed WNHP preserve)..." This should be modified to say: "Right-of-way would cross more (+28 acres) of the Lacamas Prairie Natural Area (including Natural Resources Conservation Area and Natural Area Preserve)..."
- 14665-82 28. p. 5-5 and 5-6. Change reference to Lacamas Prairie natural area from "recreational area" to "conservation lands."
- 14665-83 29. p. 16-4. "camas prairie wetland areas" should be changed to "wet prairie wetland areas". These should also be noted as Category I wetlands under DOE Wetland Rating System.
- 14665-84 30. p. S-66. West Option discussions should include impacts to Oregon white oak woodlands within the Lacamas Prairie Natural Area. These woodlands are a key feature of the Natural Area and are used by the slender-billed white-breasted nuthatch.
- 14665-85 31. p. 18-6. Slender-billed white-breasted nuthatch (state candidate) is found in the Oregon white oak woodlands in Lacamas Prairie NAP. This should be noted here and incorporated into effects of alternatives.
- 14665-86 32. p. 4-4. Under West Alternative, descriptions of segments 36B, 45, and 50 should include reference to crossing the proposed Lacamas Prairie NRCA.
- 14665-87 33. p. 4-5. Under West Option 1, descriptions of segments 36, 40, and 46 should include reference to crossing the proposed Lacamas Prairie NRCA (in addition to the reference to crossing the NAP).
- 14665-88 34. p. 4-5. Under West Option 2, descriptions of segments 36 and 36A should include reference to crossing the proposed Lacamas Prairie NRCA.
- 14665-89 35. p. 4-6. Under West Option 3, descriptions of segments 36 and 36A should include reference to crossing the proposed Lacamas Prairie NRCA.
- 14665-90 36. p. 4-18. Under Crossover Option 1, description of segments 50 should include reference to crossing the proposed Lacamas Prairie NRCA.
- 14665-91 37. p. 17-5. Description should include state-threatened Hall's aster as one of the special status species found in the wet prairie at Lacamas Prairie.
- 14665-92 38. p. 17-6. Description should include "state-threatened" before Halls' aster and "state-endangered" before rose checkermallow.

Other special-status species

- 14665-93 39. Section 17.1.2.2: (Page 17-8) The second sentence should be edited to read: "Prioritization of ecosystems by the Natural Heritage Program is based primarily on ecosystem rarity and the degree of threat to the persistence of the ecosystem type." Ecosystems are not prioritized because of the presence of rare species, nor are they prioritized based on perceived scenic value. In the second paragraph of the same section (i.e., 17.1.2.2 on page 17-8) the 2nd and 3rd sentences should be deleted; they are both misleading.
- 14665-94 40. Section 17.1.3.1: (Page 17-11) – In the third paragraph, second sentence, it states that "*In Washington, special-status species in the project area include those identified as endangered, threatened, sensitive or candidates for listing (WDNR 2010e).*" DNR does not use the term 'candidate' in our process for generating lists of species of conservation concern. DNR does have two 'review' lists, but it isn't clear whether that is what is being referred to here.

- 14665-81 Suggested changes have been made.
- 14665-82 The suggested change has been made.
- 14665-83 Suggested changes have been made.
- 14665-84 Impacts on Oregon white oak woodlands are discussed in Chapter 17, Vegetation and specifically for the West Alternative in Section 17.2.4, West Option 1, 2, and 3 of that chapter.
- 14665-85 Chapter 18, Wildlife, has been updated to specify that the slender-billed white-breasted nuthatch is within 1 mile of the study area for all action alternatives. Slender-billed white-breasted nuthatch is reported present on Lady Island, which all action alternatives cross. The project's potential impacts on this species' preferred habitat are included in Section 18.2, Environmental Consequences.
- 14665-86 Suggested changes have been made.
- 14665-87 Suggested changes have been made.
- 14665-88 Suggested changes have been made. The suggested reference to Lacamas Prairie NRCA crossing Segment 36 is added under West Option 1 in Section 4.2.1.
- 14665-89 Suggested changes have been made in Sections 4.2.1 and 4.2.2 for the segments the commenter references. The description in West Option 3 refers to these sections.
- 14665-90 Suggested changes were made in Section 4.2. The discussion in Crossover Option 1 refers to this section.
- 14665-91 Hall's aster was added to the discussion of species in the Lacamas Prairie Natural Area in Section 17.1.1.5, Herbaceous of Chapter 17, Vegetation.
- 14665-92 State-threatened has been added to the Hall's aster references. Rose checkermallow (*Sidalcea virgate*) was not identified as present within the action alternatives study areas. Hairy-stemmed checkermallow (*Sidalcea hirtipes*) was documented as present. Hairy stemmed checkermallow is identified as state-endangered in Table 17-1, Special-Status Plant Species with the Potential to Occur in the Study Area.
- 14665-93 Thank you for the clarification. Suggested changes have been made.
- 14665-94 Thank you for the clarification. Suggested changes have been made.

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
1a. DNR lands- Roads	Avoid sediment delivery from access road surface	Chapter 3 Project Components, and Construction, Operation and Maintenance Activities, pages 3-14 and 3-15; Chapter 15 Water, pages 15-1 through 15-24; Chapter 16 Wetlands, pages 16-1 through 16-19	Based on DNR's experience, at a minimum, to mitigate for the potential for excessive road surface wear that could lead to sediment delivery, a minimum of 40 cubic yards per station (100') of rock will be applied to all new and reconstructed access roads associated with this project on DNR managed trust land. Additional rock will be applied as conditions and anticipated use dictate.	
	Structures and culverts on stream crossings	Chapter 3 Project Components, and Construction, Operation and Maintenance Activities, pages 3-14, page 3-15, and page 3-26.	Any structure installed on any stream regardless of fish presence will be appropriately sized based on hydraulic calculations similar to those in the WDFW manual for 100-year flood plus debris events; Design of Road Culverts for Fish Passage http://wdfw.wa.gov/publications/00049/ . BPA will use appropriately sized round culverts on non-fish bearing streams and open bottom culverts or bridges for crossings on fish bearing streams.	
	Drain dips and water bars	Chapter 3-9 page 3-14 "Access Roads", Chapter 3-9 page 3-15 "Road Improvements", Chapter 3-9 page 3-15 "New Roads"	Avoid installing drain dips or water bars on access roads. Instead install cross drain culverts and associated ditches at a frequency to outlet water to the forest floor while not increasing erosion. BPA should utilize guidelines in WAC 222-24-040 Water crossing structures (3) and (4): http://apps.leg.wa.gov/wac/default.aspx?cite=222-24-040 If water bars are proposed for installation then BPA needs to compensate for the change in land use from accepted standards and the resulting economic impact due to log transportation costs and the potential damage to log and equipment trucks in comparison to installing culverts.	
	Road Standards	Chapter 3 Project Components, and	Based on the recommended analysis below,	BPA needs to compare the differences between the

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
		Construction, Operation and Maintenance Activities, pages 3-14 and 3-15; Chapter 15 Water, pages 15-1 through 15-24; Chapter 16 Wetlands, pages 16-1 through 16-19	Identify and recommend what additional mitigation should be required for this project to meet the scoping comment request.	Washington Forest Practice RMAP standards and the 1987 BPA access road planning and design manual road standards. The comparison should evaluate if the 1987 standards meet or exceed forest practices standards that serve to mitigate for impacts associated with road construction and maintenance.
	Roads within the transmission line corridor	Chapter 3 Project Components, and Construction, Operation and Maintenance Activities page 3-24.	Temporary construction roads that are parallel to and within the right-of-way corridor will be avoided. If temporary roads are needed, then BPA will develop and implement BMPs such as: limit the number to only critical roads; allow roads to be used only during the dry season (generally June-October), require vehicle wheels to be clear of noxious weeds when entering the roads; scarify and re-vegetate the road immediately upon completion of use; and install an access barrier of earth or other natural onsite material to prevent unauthorized use.	
	Miscellaneous Transportation Comments	Chapter 3 Project Components, and Construction, Operation and Maintenance Activities Table 3-2 pages 3-22, 3-24 and 3-23; Chapter 12 Transportation page 12-3.	(1) Specific minimum road improvement standards will be developed and incorporated as mitigation in the EIS, or in subsequent agreements with landowners such as: clearing limits, brushing limits, aggregate needs, and curve widening requirements. (2) All bridges on heavy equipment transportation routes will be inspected and certified they have the working load capacity to handle construction equipment and insure the safety of workers and the public. BPA will install new structures if bridges have been compromised or do not meet certification for the anticipated heavy equipment. (3) BPA will install gates and a lock box that can	

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
			accommodate the required number of padlocks to meet the access need.	
1b. DNR lands- Socioeconomic and Land Use impacts	Quantify and analyze the socioeconomic impact on long term trust revenue due to the proposed changes in land use that will likely interfere with trust management objectives.	Chapter 11, tables 11-2 (page 11-5), 11-5 (page 11-30), 11-6 (page 11-31), 11-7 (page 11-32), and 11-8 (page 11-33).		At a minimum, an analysis of impacts to the local economy caused by impacts to the timber industry should include estimates of: (1) The revenues to be realized in the short-term due to immediate harvesting of timber from the proposed right-of-way; (2) The revenues over the life of the project that will be foregone due to conversion of timberland to non-timber production on the proposed right-of-way.
	Transmission Line location near property boundaries.	Chapter 3 section 3.12 Mitigation Measures; Table 3.2 Mitigation measures as part of the project; Chapter 5 Land; Appendix A- maps A-12; DEIS maps 5-1A, 5-1B, 5-1C, and 5-1D.	BPA will mitigate these impacts by compensating DNR for the additional width of land between the edge of the corridor and DNR's property boundary where the transmission line is moved in and away from adjacent existing private homes. Compensation can either be by purchasing the strip in fee or by another mechanism. If the land is purchased in fee the title will be encumbered by a deed restriction, a conservation easement, or other mechanism to ensure the property remains undeveloped.	

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
1c. DNR lands- Uplands IICP	Uplands Habitat Conservation Plan (IICP) Integrity	Chapter Summary 8.3.11.2 Impacts Common to Action Alternatives, page S-47; Chapter 15 Water, pages 15-5 through 15-7; Chapter 17 Vegetation page 17-5; Chapter 18 Wildlife section 18.1.2.8 page 18-9; Chapter 18 Wildlife page 18-64; Chapter 27 Consultation, Review and Permit Requirements page 27-1.2; and Chapter 28 State Substantive Standards page 28-1.	Impacts to species listed under DNR's Uplands IICP or to habitat that is currently providing protection per DNR's Uplands IICP commitments will be analyzed by BPA through a formal consultation with the US Fish and Wildlife Service (USFWS) and National Oceanic & Atmospheric Administration/Fisheries (NOAA) Fisheries. Mitigation measures will be recommended in BPA's I-5 EIS for the impacts identified through the consultation. DNR believes that impacts should be mitigated at the following minimum ratios for replacement acreage (e.g., if the direct impact is 1 acre of riparian buffer permanently removed, the compensation replacement acreage provided should be 1 acre) provided that the replacement land mitigates for the ecological functions equal to those lost from the removal or deterioration of habitat: 1:1 All permanent impacts. 0.5:1 Temporary impacts, e.g., staging or construction areas. In addition to restoration efforts on behalf of BPA, impacts that result from temporary staging and construction areas should also be mitigated at a replacement ratio (0.5:1) that compensates for the short- and long-term impacts to the ecological functions equal to those lost that are currently provided through DNR's Upland HCP conservation measures. BPA and DNR together will determine the location of replacement land.	BPA needs to provide an analysis of the impacts to listed threatened and endangered species and to the integrity of DNR's Uplands IICP. Additionally, DNR believes that BPA is required to initiate consultation under Section 7 of the ESA with USFWS and/or (NOAA Fisheries) to demonstrate and document that the construction of a new transmission line will not adversely affect listed species that are covered under DNR's Uplands HCP. As a part of that consultation, BPA should provide information sufficient for USFWS and NOAA Fisheries to ascertain whether the proposed transmission project will interfere with any of DNR's obligations under its Uplands HCP. The results of the consultation should be published in the FEIS and, if conservation measures are identified as a result of consultation, these measures should be included as mitigation in the FEIS. Additionally, USFWS section 10 representatives and appropriate DNR representatives familiar with the Uplands IICP should be involved in any discussion with USFWS and/or NOAA Fisheries regarding DNR managed lands and recommended mitigation measures.

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
	Existing legacy and green tree retention	Chapter 26 Cumulative Impacts.	Retention clumps and legacy trees permanently removed will be mitigated by compensating DNR for the ecological function and the monetary value of the trees removed. At a minimum, the total of 8 trees per acre (five live trees and 3 snags) should be compensated and should meet the minimum characteristics identified in the DNR's Final HCP 1997 page IV. 157.	
	The duration of impacts	Chapter 3 Project Components and Construction, Operation, and Maintenance Activities section 3.12 Mitigation Measures, page 3-17; Chapter 26 Cumulative Impacts, pages 26-1 through 26-48.	Mitigation will be applied over the life of the project/ easement as appropriate to address impacts that are likely occur over the life of the project.	
I.d. DNR lands- Vegetation Management	Danger Trees	Summary, section 8.3.12.2 pages 8-11, 8-14; table 2-1; Chapter 3 Project Components, and Construction, Operation and Maintenance Activities, section 3.11 pages 3-16; Chapter 5 Land, section 5.2.2.1 page 5-11; section 5.2.2.2 page 5-14; Chapter 11 Socioeconomics, section 11.2.2.5 pages 11-21, and 11-22.	See recommended mitigation under extended right-of-ways/corridors.	See recommended analysis under extended right-of-ways/corridors.
	Other Vegetation management	Chapter Summary, section 8.3.6.2 "Impacts common to action alternatives" page 8-28.	To avoid colonization of the I-5 corridor by invasive species, BPA will include a mitigation measure to ensure funding of I-5 corridor vegetation control commensurate with the predictable weed problem.	Analyze the probable extent of the need for vegetation management, and control and eradication of noxious invasive weeds using existing corridors in the area that are similar to and representative of the proposed corridor.
I.c. DNR lands- Restrictions, constraints & prohibitions	Extended right-of-ways/corridors	Chapter 3 Project Components, and Construction, Operation and Maintenance Activities, section 3.6 pages 3-10, section 3.10 page 3-15, and 3-16, section 3.11 page 3-16. Chapter 5 Land, section 5.2.2.1	In order for mitigation to cover all impacts to DNR's land use for the full corridor width, mitigation needs to include those areas outside the typical 150' width that it will need to control to protect its transmission line including extended	BPA should analyze the predicted environmental impacts to DNR's land use, forest management, and conservation strategies that will likely result from the need to control the vegetation within 200' (or tree height) of the transmission line corridor edge.

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
		page 5-11; section 5.2.2.2 pages 5-14, 5-22. Chapter 11 Socioeconomics, section 11.2.2.5 page 11-21, 11-22.	distances of clear safe backlines.	
	Impacts to harvest operations not clearly identified in the DEIS.	Chapter 8 Electric and Magnetic Fields section 8.2.2.1 page 8-4, Chapter 11 Socioeconomics section 11.2.2.7 page 11-24.	Landowners will be compensated for the long-term economic impacts of harvest restrictions from inside or outside of the right-of-way including those involving new timber haul roads, reconstruction of landings and avoiding guyline cables. Compensation should include: cost recovery for staff time; permitting; construction materials; and abandonment costs.	BPA needs to analyze the impacts of harvest restrictions including what the long term economic impacts will be to forest landowners that will have harvest restrictions due to need to construct new timber haul roads, new landings and respecting guyline setbacks. This impact is different than a bifurcation calculation that would be completed in a typical appraisal.
	Temporary use areas outside the right-of-way	Chapter 3 Project Components and Construction, Operation, and Maintenance Activities, Table 3-2 and sections 3.6 pages 3-10 and 3-11, and section 3.10 pages 3-15 and 3-16	(1) Pulling and tensioning sites, staging areas, and other offsite temporary use and disturbance locations on DNR managed lands will be reviewed and mitigation identified. (2) Similar to mitigation proposed for cultural resources on Table 3-2: "Plan for survey and review as needed of additional disturbance areas not identified during the NEPA process (e.g., staging areas stringing and pulling sites, guard structure areas, etc.)", BPA will identify and mitigate for impacts to temporary use and disturbance areas on DNR managed lands outside the right-of-way consistent with mitigation measures in the DEIS as a part of this project and the recommended mitigation measures for the resources identified in the DEIS analysis.	
I.c.i. DNR lands -Wind Power	Potential Wind Power Locations	Chapter 4 Proposed action and alternatives section 4.7.2.2 page 4-24; Chapter 11 Socioeconomics, section 11.2.8 page 11-45.	For all the alternative segments noted in the summary above, commit to mitigation for the impacts to DNR's land use in the form of compensation for increased wind power	Include an analysis of the impacts to wind power development that are reasonable likely to occur from locating the transmission line in the areas identified above.

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
			development costs and for reimbursement for losses of the State's ability to generate revenue from these sites.	
1f. DNR lands- Transfer parcels and transactions	Land Use impacts to DNR's reasonably foreseeable land transactions.	Summary, section 5.3.7 pages 5-30 through 5-35; Chapter 3 Project Components and Construction, Operation and Maintenance Activities, Table 3-2 pages 3-22 through 3-28; Chapter 5 Land, section 5.2 pages 5-9 through 5-38; Chapter 11 Socioeconomics, section 11-1 pages 11-1 through 11-46; Appendix A, section A.2.1 Land Use, Table A-4 Land Use on WDNR Land in the Project Area (Acres), section A.2.3 Socioeconomics.	(1) BPA will mitigate the impacts to DNR's future ability to transition lands or compensate loss of reasonably foreseeable future economic opportunities both on and off the right-of-way including where the easement changed other uses of some properties as a result of the transmission lines (See 11.1.5), e.g., creates incompatible uses such as the conversion of rural residential properties to non-residential uses. (2) BPA will identify mitigation measures for negative socioeconomic impacts due to loss of current land use, for example community values as outlined in section 11.1.8. BPA will identify mitigation measures for negative impacts due to loss of community values as outlined in 11.1.8.	(1) Include information and analysis on zoning and allowable uses, not just current use that will be impacted by the project. Include discussion on impacts to rural residential properties for all categories (5.2.2.1 through 5.2.7.3) (2) Zoning should be included with an analysis on the impact of the project on residentially developable land.
1fi. DNR lands-Camas school site	Potential Camas school site on DNR managed trust land.	Chapter 5 Land and Chapter 11 Socioeconomics.	If segment 43 is included in a final design, BPA should follow mitigation sequencing (avoid, minimize, compensate) for potential impacts to the parcel. BPA should: Avoid the parcel, minimize by moving tower and corridor locations to the edges of the parcel; replace the parcel for like characteristics suitable for the Camas School District.	
1fii. DNR lands-Casey Road substation site	General comments for the Casey Road property and access roads	Chapter 5 Land section 5.2 Environmental Consequences, pages 5-9 through 5-16, pages 5-25 through 5-29, and pages 5-37 and 5-38.	(1) Mitigation of impacts to informal uses should include a planned investment in formal replacement recreational sites on DNR managed land to offset this loss. (2) All maintenance and improvement costs associated with a paved access road will be BPA's	

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
			responsibility and at its sole cost. DNR will retain full and unlimited access to all DNR managed lands accessed by the road.	
	Road Maintenance and Abandonment Plans (RMAP) Casey Rd. substation site	Summary, section 5.2.1.1 "Substations" Casey Road substation page 5-4, Chapter 4 Proposed Actions and Alternatives, section 4.3.4.2 Casey Road page 4-14; Figure 4-5 Casey Road Substation, and section 4.3.5 "Access Roads" table 4-4.	Mitigation measures to address RMAP and road design standards will be developed in consultation with DNR and will be incorporated into the EIS or into a subsequent agreement(s) with DNR. Any DNR RMAP scheduled projects will be completed by BPA at its sole cost on any access road to the Casey Road substation site.	The EIS needs to reflect changes in proposed access roads to Casey Road substation if inserting additional proposed roads.
1g. DNR lands- Communication sites	Electromagnetic Interference	Chapter 8 Electric and Magnetic Fields, section 8.1.3 page 8-3; Table 3-2 page 3-23.	If identified mitigation measures are not successful in avoiding interference, BPA will relocate these communication sites to a location that does not interfere with them or DNR will be compensated for impacts to land use that result in loss of lease revenues for any portions of the new transmission line that cause electromagnetic interference with current or reasonably foreseeable planned sites.	
	Microwave Beam Paths	Chapter 4 Proposed Action and Alternatives, section 4.7.2.2 page 4-23; Chapter 8 Electric and Magnetic Fields, section 8.1.3 page 8-3; Table 3-2 page 3-23.	Discuss potential mitigation measures to these land use issues which may be taken to correct this line of site interference of microwave beam paths. Provide compensation for any loss of revenue that result from interference with microwave dish beam paths.	Analyze and discuss the possibility of the proposed transmission line interfering with microwave dish beam paths.
1h. DNR lands- Recreation	Existing and planned recreation opportunities in the Yacolt Burn State Forest	Chapter 6 Recreation, section 6.1.1 page 6-2, section 6.1.3 pages 6-3; Table 6-1 page 6-5, 6-8 and 6-9; Table 6-2, page 6-11, section 6.1.4 page 6-12, section 6.1.8 and section 6.2.1 page 6-13, section 6.2.5.1 and section 6.2.5.2 page 6-20; Table 6-4 page 6-24; Section 6.2.6.2 page 6-24; Table 6-5 page 6-25; Table 6-6 page 6-29 and section	(1) BPA in consultation with DNR and users will identify areas within and adjacent to the power line corridor where recreational access would be determined to be compatible or incompatible with power-line corridors and access roads. This information will be used as part of the existing or planned recreational trail systems. Access will be restricted or provided as these locations are	(1) The impacts to current and planned DNR-provided recreation opportunities as outlined in the Western Yacolt Burn State Forest Recreation Plan need to be analyzed in the EIS. The Western Yacolt Burn State Forest Recreation Plan should be read and an analysis completed on the impacts of where the power-line corridor will transect existing or proposed trails and roads or come within 500 feet of existing or planned

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		6.2.9 page 6-30.	identified (2) BPA will provide long term funding to DNR for enforcing authorized use (through barriers, signage, education, and enforcement) as well as preventing unauthorized use including by regularly and permanently closing and decommissioning unauthorized trails or access points.	trails, facilities and roads. The analysis should also include: (2) The power-line corridor and access road crossing of the Bells Mountain Trail on DNR-managed lands and the impacts of those crossings; (3) The locations where recreational facilities and trails may be compatible with power-line corridors and access roads such as motorized trail use; (4) Identification of existing recreation uses of state lands and an analysis of the impacts of the proposal on the recreational uses of state lands; (5) The amount of land that will be permanently removed from inventory for recreational opportunities; and (6) The extent of restrictions outside the easement area particularly in areas where the corridor will disallow, limit or increase recreational use.
	Impacts to dispersed recreation opportunities	Chapter 6 Recreation pages 6-1 through 6-30, Maps of Alternatives and Options.	BPA in consultation with DNR will identify and implement strategies that mitigate negative impacts to dispersed recreation opportunities, including restoration of impacted areas, relocation to suitable areas, and restrictions to existing areas. BPA will provide long-term funding to ensure access and protect the resources critical to dispersed opportunities as well as provide enforcement.	There needs to be an analysis of the impacts to dispersed recreation on all DNR managed lands, including those identified above as a result of constructing any of the alternatives. This analysis should include changes in access for dispersed recreation opportunities, changes in habitat for fish and wildlife, and impacts to activities such as hunting, fishing, geocaching, and forest product gathering.
	Impacts during construction	Chapter 6 Recreation, section 6.2.5.3 pages 6-20 and 6-21.	BPA in consultation with DNR will identify and implement strategies for blocking access to the area during corridor construction. This should include blocking access to unauthorized trails that are within 500 feet of the corridor. BPA will provide funding to defray the enforcement costs of	There needs to be an analysis of specific recreational uses that would be displaced in the Yacolt Hum State Forest from construction, including possible places the users would go and what the impacts to those places would be from the increased use. This includes existing uses as well as planned uses if the construction interferes

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			blocking access as well as to defray the costs of maintenance to the redirected areas that see increased use.	with plan implementation.
	Reduced public support of DNR-managed lands	Chapter 6 Recreation pages 6-1 through 6-30; Chapter 11 Socioeconomics, section 11.1.8.3 page 11-8.		The socioeconomic impacts to recreational use and to the potential decrease in revenues from reduced Discover Pass sales should be analyzed.
II. DNR lands- Control of unauthorized access	Opportunities for unauthorized public access	Chapter 5 Land, section 5.2.2.2 page 5-12; Chapter 6 Recreation, section 6.2.8 page 6-30; Appendix A.2.4.2 and Appendix A-Table A-13.	BPA will provide long term funding and cooperative management with DNR that is outlined in the EIS; or the EIS includes an acknowledgement that subsequent agreements with DNR regarding preventing unauthorized access, providing enforcement, completing unauthorized trail closures, and restoring areas due to unauthorized public access will be created. Agreements with DNR will include resources and funding for preparing and implementing long term plans to help avoid or otherwise mitigate damages from unauthorized use. Plans and funding should include enforcement and posting/maintaining new signs, gates, and other barriers when new other access points are used by trespassers that were not considered during the construction phase. BPA will share in the responsibility of enforcement, installation of gates, culvert replacement, access roads, closing and decommissioning unauthorized trails that occur from corridors and access roads, etc., for environmental and resources protection measures into the future. The EIS should also identify mitigation measures that could be taken to curtail these unauthorized public uses. This may include: (1) Install fencing or blockades in key locations.	(1) Conduct a sample survey on a given portion of at least the preferred alternative power line corridor representative of State ownership on the proposed I-5 project. A quantitative prediction of unauthorized use and the impacts could be applied to the DNR-managed lands crossed by the proposed alternatives and options; and (2) As a comparison, BPA should conduct an analysis of current power-line corridors that are representative of DNR managed lands for this project, and the unauthorized access by the public and the impacts that have resulted, (i.e., how many unauthorized trails have been created due to the power-line corridors and access roads, and the steps taken to prevent or mitigate unauthorized access?)

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
			<p>(2) Survey existing power lines on DNR-managed lands in the vicinity and document unauthorized use and damage to state lands and public resources. Use this survey to predict damage on proposed lines; include costs to repair or mitigate predicted damage or identify effective mitigation that could be added that would avoid unauthorized use and damage;</p> <p>(3) Design the corridor to prevent unauthorized public use;</p> <p>(4) Develop and implement a cooperative management plan with DNR to reduce unauthorized public access to the corridor;</p> <p>(5) Regularly inspect for off-road development and damage. Repair damage promptly, especially resource damage;</p> <p>(6) Maintain signs that discourage unauthorized use of the corridor;</p> <p>(7) Survey the easement corridor and clearly mark it so that BPA, contractors, adjacent landowners and the public can clearly recognize when they are within the corridor to prevent uncompensated corridor expansion, vegetation management conflicts, and to reduce unauthorized use;</p> <p>(8) Clarify and disclose the responsibilities, roles, and plans BPA proposes to help prevent and assist grantors in managing these real issues; and</p> <p>(9) Provide a gate and lock box that can accommodate access for multiple landowners on joint use road systems.</p>	
Ij, DNR	Identification of	Chapter 1 Purpose and Need, section 1.5.1	Recommended Change: Use the DNR provided	

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
lands- Aquatic lands and resources	State Owned Aquatic Land (SOAL) and DNR provided lists for species and vegetation.	page 1-11; Summary section 3.3.8.2 page 3-37; Chapter 10 Public Health and Safety page 10-11; Chapter 11 Socioeconomics; Chapter 12 Transportation; Chapter 27 Consultation, Review and Permit Requirements section 27.10 Clean Water Act page 27-5 and 27-6; section 27.12 Rivers and Harbors Act page 27-9; Chapter 28 State Substantive Standards section 28.2.10 SOAL page 28-14.	lists: DNR Proposed List of Protected Vegetation, Navigable waters table, and DNR Aquatic Lands DRAFT Habitat Conservation Plan Species Considered for surveys to be completed on or adjacent to SOAL.	
	Land Use Impacts to SOAL easements	See citations above under issue 1. Identification of State-owned Aquatic Land (SOAL) for references to "navigable waters".	BPA will coordinate with DNR in determining the exact location of the easement boundaries, and the restrictions on SOAL, prior to the development or amendment of any easement and any final decision by DNR on the issuance of an easement.	Once the SOALs are identified, BPA will need to provide further information on crossings over state-owned aquatic lands in order for DNR Aquatic staff to determine environmental impacts to habitat, calculate the length of the crossings, calculate administrative cost recovery, and determine the associated impacts to existing DNR licenses, leases, and agreements.
	Suspension tower in the Columbia River	Chapter 3 Project Components and Construction, Operation, and Maintenance Activities, Section 3.2.4 page 3-6, Chapter 10 Health and Safety pages 10-11 and 10-15, Chapter 12 Transportation page 12-5 and 12-6; Chapter 15 Water page 15-7.		Once the exact location of the tower is identified, include an analysis of the impacts to aquatic resources.
	Protection of Submerged Native Aquatic Vegetation.	Chapter 17 Vegetation page 17-6.	Coordinate with DNR to ensure consistency with the overall statements in the U.S. Corps Permit (U.S. Corps Permit NWS-2011-346-PN dated January 4, 2013) to protect and utilize important resources and consider fish and wildlife values.	BPA will analyze the impacts to aquatic freshwater vegetation and will ensure the DNR-provided list of protected vegetation is used during surveys of aquatic plant species, when completing wetland delineations.
	Species Work Windows- Consistency with State Standard	Chapter 19 Fish page 19-13 through 19-28, Table 19-2 page 19-19 and 19-20, Chapter 3 Project Components, and Construction, Operation and Maintenance	BPA will operate according to in-water work windows established by the Washington Department of Fish and Wildlife (WDFW) or the U.S. Corps Permit (see page 3-27) for this project.	

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
		Activities Table 3-2 page 3-25 and 3-27	Information regarding WDFW in-water work windows can be obtained by contacting WDFW through their Hydraulic Project Approval website: http://wdfw.wa.gov/licensing/hpa/	
	Mitigation projects	Chapter 15 Water pages 15-23 and 15-24; Chapter 16 Wetlands page 16-18; and Chapter 19 Fish page 19-28.	BPA will coordinate with DNR on the development of any proposed mitigation projects on SOAL.	
	Quality of maps/sufficiency of information	Map appendix, maps within document, Washington Department of Natural Resources Requirements for Records of Survey for Leases and Easements (2002)	Incorporate standardized survey identifiers which include the line of ordinary high water, low water, and township-section-range.	
2a. Geologic hazards on DNR managed lands	Mitigation of landslides	Chapter 14 Geology and Soils, section 14.2.8 page 14-16.	Any landslide and associated damage related to construction of the BPA I-5 corridor project, either during construction or at any point in the future, will be the responsibility of BPA and will be repaired, rehabilitated, and restored by BPA. Repairs, rehabilitation, and restoration can include, but are not limited to, engineered slope stabilization measures, repairs to any damaged infrastructure such as roads, rehabilitation of damaged riparian habitat or other ecological functions, and reconstruction of any damaged or destroyed structures. This responsibility also includes full liability for any damage to property or personal injury resulting from a landslide related to construction of the BPA I-5 corridor project.	
	Landslide hazard areas are identified primarily from remote screening	Chapter 14 Geology and Soils, section 14.2.8 page 14-16.	(1) Amend the language to read <i>"Conduct additional site-specific evaluations in areas of potential landslides identified in Appendix J and by site-specific evaluation of the entire selected route to determine degree of recent activity."</i>	

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
	towers		<i>likelihood of activation or reactivation, potential setbacks, and site-specific stability as appropriate. Site towers in areas not underlain by landslides. If necessary, design site-specific mitigation measures"</i> (2) BPA will coordinate with DNR on design and site-specific slope stability mitigation measures.	
	DNR review of final tower placement locations on DNR-managed lands		A DNR representative will have the opportunity to review/approve tower line locations on DNR managed lands prior to finalizing locations to limit geological impacts.	
2b. Geologic Hazards on all lands	Seismic Risk	Chapter 14 Geology and Soils, section 14.1.1.2 page 14-2.	Develop and implement a rapid response plan which includes contacts in case of emergency.	
The local economy including timber and recreation	The local economy including timber	Chapter 11 Socioeconomics, section 11.1.7 page 11-7		At a minimum, an analysis of impacts to the local economy caused by impacts to the timber industry should include estimates of: the impact of these revenue changes to the employment and income of timber mills and other timber end users; and the impact of both the short-term timber harvest and the long-term land conversion on employment and income in the local timber industry (including logging companies and mills).

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
	Recreation and the local economy	Chapter 6, "Recreation"; Chapter 11, "Socioeconomics"	Once the analysis is completed mitigation of impacts should be considered and proposed.	In general and for each alternative, the DEIS quantifies the number of impacted acres by landowner and land use, and qualitatively discusses the impacts of construction, maintenance, and the transmission lines on trails, streams, parks, and recreation types (See Chapters 5 and 6 and Appendix A). However, the DEIS fails to synthesize these disparate impacts into an explanation of the trade-offs involved with each alternative compared to the no-action. Such a synthesis is critical to understanding what is at stake in selecting a given alternative and the proper mitigation it would require.
Cultural Resources	Cultural Resources-graves and burial sites	Chapter 3 Table 3-2 pages 3-24, 25; Chapter 13 Cultural Resources.	BPA shall notify DNR if and when a native Indian burial site, grave or human remains is found on DNR managed lands and cooperate with DNR to ensure DNR compliance with state law.	
	Impact Levels	Chapter 13 Cultural Resources, section 13.2.1 page 13-5.		Recommended change: Amend the discussion and assignment of impact levels to recognize that an unevaluated potential NRHP property may be a high impact and not assume that a potentially eligible NRHP property is a moderate impact.
Forest Practices	Forest Practices applications	Chapter 28 Consistency with State Substantive Standards, section 28.2.9 page 28-14.	BPA will work with DNR forest practices staff to develop notification and informational materials for forest landowners who wish to harvest (remove) cleared timber generated from the clearing of the transmission line corridor. The informational materials should be designed to inform landowners of their responsibilities to reduce or eliminate impacts covered by DNR's forest practices rules.	
	Forest Practices-Habitat Conservation	Chapter 28 Consistency with State Substantive Standards, section 28.2.9 page 28-14.		Provide analysis for and initiate consultation under Section 7 of the Act with U.S. Fish & Wildlife Service and/or National Oceanic & Atmospheric

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
	Plan (FP HCP)			Administration/Fisheries (NOAA Fisheries) to demonstrate and document that the construction of a new transmission line, considering appropriate environmental impact mitigation, will not adversely affect the agreement and the commitments made in the Forest Practices HCP. Additionally, USFWS Section 10 representatives familiar with the Forest Practices HCP should be involved in any discussion regarding the Forest Practices HCP.
	Forest Road Best Management Practices (BMPs) on lands regulated by Forest Practices	Chapter 15 Water, section 15.2.8 page 15-23, References page 29-2.	(1) On forest roads where Clean Water Act compliance is implemented by the forest practices rules, BPA should follow the BMPs codified in WAC 222-24. (2) All access roads should have a minimum of 40 cubic yards per station applied, and adequate drainage structures to minimize sediment delivery to any live water.	
	Riparian Area Best Management Practices on lands regulated by Forest Practices	Chapters Summary, 15 Water, 16 Wetlands, 17 Vegetation, 18 Wildlife, 19 Fish, 26 Cumulative Impacts and others.	Mitigation sequencing in riparian areas should follow: (1) Avoidance - where practical, BPA should mitigate impacts by raising towers to avoid cutting overstory timber. Understory vegetation should be retained; (2) Mitigation- if avoidance is not possible, timber should be topped and other trees felled only when needed. All felled timber within the core zone (from edge of bank full width or channel migration zone extending perpendicular to fifty (50) horizontal feet should be left as down wood recruitment in the riparian area.	
Forestry Riparian Basement	Location change and impact analysis of the Forestry	Summary, section S.3.1.3 page S-12, section S.3.13.1 page S-57, and section S.3.13.2 page S-59; Chapter 4 Proposed Actions and Alternatives, section 4.2 page	Consistent with the general mitigation approach for "compensatory" mitigation stated in section 3.12 Mitigation Measures, page 3-17, add a provision for compensation and/or mitigation for	

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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
	Riparian Easement	4-3, Table 4-10 page 4-42; Chapter 5 Land, section 5.1.3 page 5-5, section 5.2.4.2 page 5-24; Chapter 17 Vegetation, section 17.1.2.1 page 17-8, section 17.2.4.4 page 17-24.	the loss of conservation capacity intended by the Forestry Riparian Easement. Some types of compensation or mitigation DNR might consider are: replacement land, stream enhancement, or other similar actions acceptable to DNR.	
Protection from Fire	Fire prevention and protection	Chapter 10 Health and Safety Page 10-9, page 10-11.	(1) BPA shall take all reasonable measures to prevent and minimize the start and spread of fire on to adjacent forested areas. Measures should include ensuring all vehicles carry a fire extinguisher of at least a 5 B/C rating and a serviceable shovel, following construction site safety operating procedures which should include compliance with the substantive requirements of the current Washington Administrative Code (WAC) 332-24-301 (Industrial restrictions) and WAC 332-24-405 (Spark emitting requirements). (2) In addition to the proposed mitigation the DEIS should incorporate language similar to <i>"follow best practices to address accumulations of slash, logs or trimmings from vegetation removal operations that pose a hazard for wildfire spread or ignition. Best practices include scattering, chipping or the arrangement of concentrations of logs or trimmings in a manner as to not create a continuous extreme hazard fuel bed."</i>	
Special Lands/Species	Determination of impact level for special status plant species is unclear	Within Chapter 17 Vegetation pages 17-1 through 17-34.	BPA will consider and propose any mitigation that is needed to protect the species in addition to that recommended on page 17-33. Similar to mitigation proposed for cultural resources on Table 3-2: <i>"Plan for survey and review as needed of additional disturbance areas not identified during the NEPA process (e.g., staging areas siting</i>	An analysis of the potential impacts should be done at the time of pre-construction surveys as is recommended on page 17-33 and should include the degree of impacts and how to mitigate.

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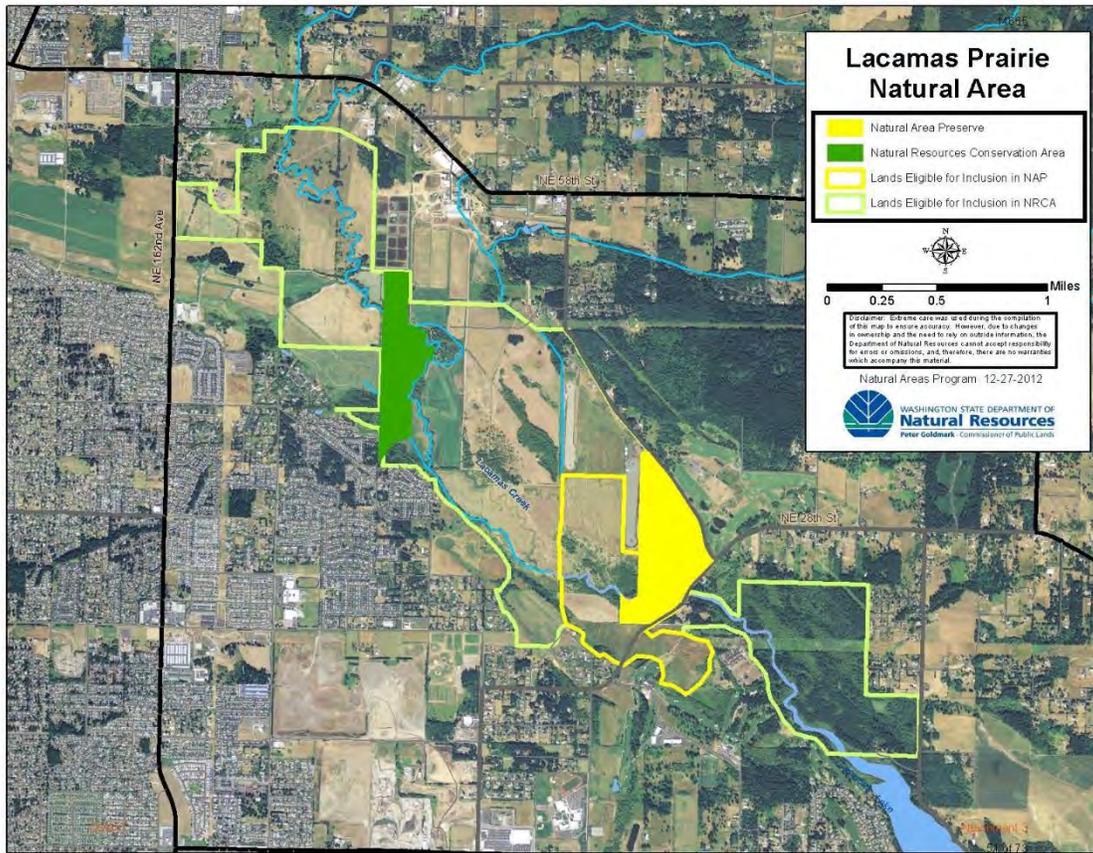
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Theme/ Subcategory	Issue	Reference	Recommended Mitigation	Recommended Analysis
			<i>and pulling sites, guard structure areas, etc.)"</i> , BPA will identify and mitigate for special-status species not identified during the NEPA process.	
Accuracy of GIS data for EIS analysis	GIS data used for analysis		BPA needs to ground verify all GIS data that is being used for the environmental analysis in the EIS and provide additional mitigation measures where additional impacts are indicated.	Post ground truthing, BPA should review the GIS data in the EIS and update the data and the environmental impact analysis where needed, especially that which is related to the hydro layers.

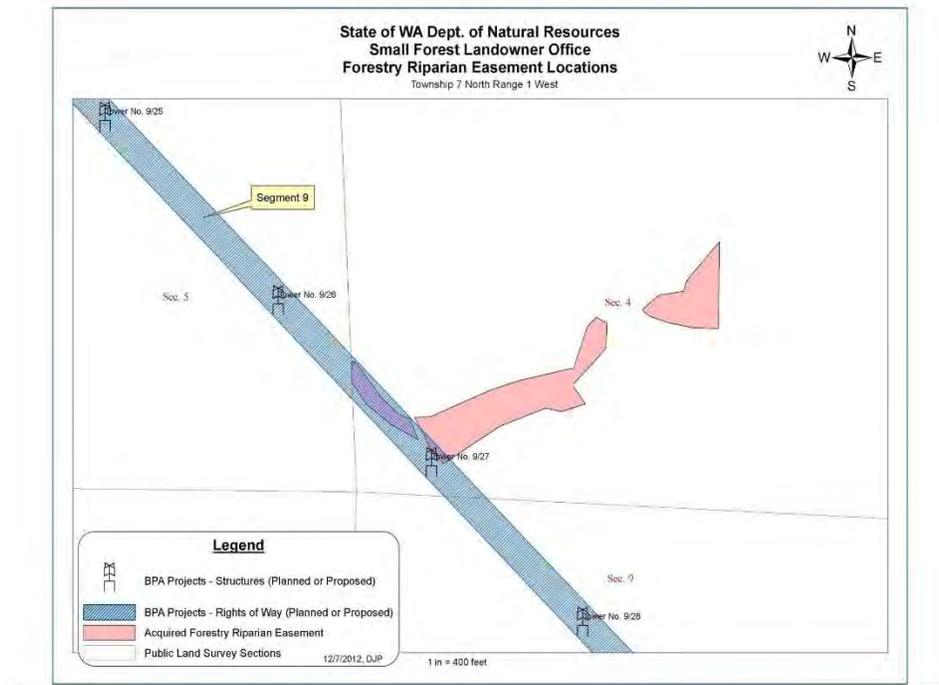
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WDNR Aquatic Lands

Habitat Conservation Plan

Appendix B - Species Considered

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Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
Amphibians & Reptile	Cascades frog (<i>Rana cascadae</i>)	FCo	G3; S4?	Yes	No	Watch	Not listed; Apparently secure; Low potential to affect; Insufficient biological information	Exclude	Apparently secure; Low potential to affect; Insufficient biological information
	Coastal tailed frog (<i>Ascaphus truei</i>)	FCo	G4; S4	Yes	Yes	Evaluation	Not listed; Apparently secure	Exclude	Apparently secure
	Columbia spotted frog (<i>Rana luteiventris</i>)	FCo; SC	G4; S4	Yes	Yes	Covered	Species of Concern; High potential to affect; Similar habitat requirements to other species	Include in as High Risk Species	High potential to affect; Similar habitat requirements to other amphibians, therefore little to no additional conservation cost/effort
	Northern leopard frog (<i>Rana pipiens</i>)	FCo; SE	G5; S1	Yes	Yes	Covered	State listed; Highly dependent upon freshwater wetlands; Extremely rare/critically imperiled in Washington	Include in as High Risk Species	Extremely rare/critically imperiled in Washington; Similar habitat requirements to other amphibians, therefore little to no additional conservation cost/effort
	Northern red-legged frog (<i>Rana aurora aurora</i>)	SC	G4; S4	Yes	No	Watch	Not listed; Apparently secure; Insufficient biological information	Exclude	Apparently secure; Insufficient biological information
	Oregon spotted frog (<i>Rana pretiosa</i> (spp. A))	FC; SE	G2G3; S1	Yes	Yes	Evaluation	State listed; Low potential to affect; Little to no overlap with authorized activities	Include in as High Risk Species	Occurs on state lands; Critically imperiled in Washington; Similar habitat requirements to other amphibians, therefore little to no additional conservation cost/effort
	Rocky Mountain tailed-frog (<i>Ascaphus montanus</i>)	SC	G4; S?	Yes	No	Watch	Not listed; Apparently secure; Low potential to affect; Insufficient biological information	Exclude	Apparently secure; Low potential to affect; Insufficient biological information

Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
Birds	Western toad (<i>Bufo boreas</i> (spp. A))	FCo; SC	G4; S3S4	Yes	Yes	Covered	Species of Concern; Medium potential to affect; Declining populations; Heightened sensitivity to anthropogenic effects	Include in as High Risk Species	Medium potential to affect; Declining populations; Heightened sensitivity to anthropogenic effects; Similar habitat requirements to other amphibians, therefore little to no additional conservation cost/effort
	Western pond turtle (<i>Clemmys marmorata</i>)	FCo; SE	G3G4; S1	Yes	Yes	Covered	State listed; Declining populations; Heightened sensitivity to anthropogenic effects	Include in as High Risk Species	Declining populations; Heightened sensitivity to anthropogenic effects
	American white pelican (<i>Pelecanus erythrorhynchos</i>)	SE	G3; S1	Yes	No	Evaluation	Not federally listed; Low potential to affect; Insufficient biological information	Exclude	Low potential to affect; Insufficient biological information
	Bald eagle (<i>Haliaeetus leucocephalus</i>)	Delisted	G4; S4	Yes	Yes	Covered	High potential to affect	Include as Species of Concern	Delisted; High potential to affect
	Black tern (<i>Chlidonias niger</i>)	FCo	G4; S4	Yes	Yes	Covered	Species of Concern; Low potential to affect; Highly dependent upon freshwater wetlands; Populations decreasing, with non-breeding adults ranked as imperiled with a "high" risk of extirpation.	Include as Species of Concern	Species of Concern; Populations decreasing, with non-breeding adults ranked as imperiled with a "high" risk of extirpation.

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Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
	Brandt's cormorant (<i>Phalacrocorax penicillatus</i>)	SC	G5; S3	Yes	No	Watch	Not listed; Low potential for affects; Insufficient biological information	Exclude	Low potential for affects; insufficient biological information
	Brown pelican (<i>Pelecanus occidentalis</i>)	FE; SE	G4; S3	Yes	Yes	Evaluation	Listed; High species/activity overlap rank for non-breeding birds	Include as Species of Concern	High species/activity overlap rank for non-breeding birds
	Cassin's auklet (<i>Ptychoramphus aleuticus</i>)	FCo; SC	G4; S3	Yes	No	Evaluation	Not listed; Apparently secure; Low potential to affect; Insufficient population information	Exclude	Apparently secure; Low potential to affect; Insufficient population information
	Clark's grebe (<i>Aechmophorus clarkii</i>)	None	G5; S2BS2N	Yes	No	Watch	Not listed; Apparently secure; Low potential to affect; Insufficient population information	Exclude	Apparently secure; Low potential to affect; Insufficient population information
	Common loon (<i>Gavia immer</i>)	SS	G5; S2BS4N	Yes	Yes	Covered	Sensitive Species; Medium potential to affect; Populations decreasing globally and breeding adults are listed as imperiled within Washington	Include as Species of Concern	Medium potential to affect; Populations decreasing globally and breeding adults are listed as imperiled within Washington
	Common murre (<i>Uria aalge</i>)	SC	G5; S4	Yes	Yes	Evaluation	Not listed; Species nests on cliff tops; Five of the six murre colonies in Washington are located in marine sanctuaries offering a high level of protection	Exclude	Species nests on cliff tops; Five of the six murre colonies in Washington are located in marine sanctuaries offering a high level of protection

Appendix B - Species Considered

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Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
	Eared grebe (<i>Podiceps nigricollis</i>)	None	G5; S2breeding, S4Non-breeding	Yes	No	Evaluation	No spatial overlap	Exclude	No spatial overlap with covered activities
	Harlequin duck (<i>Histrionicus histrionicus</i>)	None	G4; S2	Yes	Yes	Covered	Not listed; Medium potential to affect; Utilizes most aquatic habitat types in the state of Washington and listed as imperiled due to small populations	Include as Species of Concern	Medium potential to affect; Utilizes most aquatic habitat types in the state of Washington and listed as imperiled due to small populations
	Marbled murrelet (<i>Brachyramphus marmoratus</i>)	FT; ST	G3G4; S3	Yes	Yes	Covered	Listed species; High potential to affect	Include as Species of Concern	Forages exclusively in saltwater ecosystems
	Peregrine falcon (<i>Falco peregrinus</i>)	FCo; SS	G4; S2	Yes	No	Watch	Not listed; Medium potential to affect	Exclude	
	Purple martin (<i>Progne subis</i>)	SC	G5; S3	Yes	No	Watch	Not listed; Apparently secure; Low potential to affect	Exclude	Apparently secure; Low potential to affect
	Tufted puffin (<i>Fratercula cirrhata</i>)	FCo; SC	G5; S3S4	Yes	Yes	Evaluation	Not listed; Low potential to affect; Nests on the outer coast or within the Straits and rarely ventures inland; Potential affects primarily involve prey abundance	Exclude	Low potential to affect; Nests on the outer coast or within the Straits and rarely ventures inland; Potential affects primarily involve prey abundance
	Western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	FT; SE	G4; S1	Yes	Yes	Covered	Listed; Spatial overlap with authorized activities minimal, but 92 percent of habitat may be affected	Include as High Risk Species	Spatial overlap with authorized activities minimal, but 92 percent of habitat may be affected

Appendix B - Species Considered

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Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
Fish	Black rockfish (<i>Sebastes melanops</i>)	SC		Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude	Insufficient biological information
	Bocaccio rockfish (<i>Sebastes paucispinis</i>)	SC	G5	Yes	No	Evaluation	Not listed; Insufficient biological information	Include as Species of Concern	Proposed for listing; Potential use of eelgrass and kelp by juveniles.
	Brown rockfish (<i>Sebastes auriculatus</i>)	FCo; SC		Yes	Yes	Evaluation	Not listed; Little direct take associated with covered activities; Indirect effects encompass a relatively small percentage of available habitat	Exclude	Little direct take associated with covered activities; Indirect effects encompass a relatively small percentage of available habitat
	Bull trout/Dolly Varden (<i>Salvelinus confluentus</i>)	FT; SC	G3; S3	Yes	Yes	Covered	Listed; High potential to affect two of three life stages	Include as High Risk Species	High potential to affect two of three life stages
	Canary rockfish (<i>Sebastes pinniger</i>)	SC		Yes	No	Evaluation	Not listed; Low potential for affects	Include as Species of Concern	Proposed for listing; Potential use of shallow nearshore habitats by juveniles.
	China rockfish (<i>Sebastes nebulosus</i>)	SC		Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude	Insufficient biological information
	Chinook salmon (<i>Oncorhynchus tshawytscha</i>)	FT/FE; SC	G5; S3S4	Yes	Yes	Covered	Listed; High potential to affect two of three life stages	Include as High Risk Species	High potential to affect two of three life stages
	Chum salmon (<i>Oncorhynchus keta</i>)	FT; SC	G5; S3	Yes	Yes	Covered	Listed; High potential to affect two of three life stages	Include as High Risk Species	High potential to affect two of three life stages

Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
	Coastal cutthroat (<i>Oncorhynchus clarki clarki</i>)	Delisted - Taxonomic revision (DR)	G4; SU	Yes	Yes	Covered	Not listed; High potential to affect two of three life stages; Similar habitat requirements to other salmonids, therefore little to no additional conservation cost/effort	Include as Species of Concern	High potential to affect two of three life stages; Similar habitat requirements to other salmonids, therefore little to no additional conservation cost/effort
	Coho salmon (<i>Oncorhynchus kisutch</i>)	FC	G4; S3	Yes	Yes	Covered	Listed; High potential to affect two of three life stages	Include as High Risk Species	High potential to affect two of three life stages
	Copper rockfish (<i>Sebastes caurinus</i>)	FCo; SC		Yes	Yes	Evaluation	Not listed; Little direct take associated with covered activities; Indirect effects encompass a relatively small percentage of available habitat	Exclude	Little direct take associated with covered activities; Indirect effects encompass a relatively small percentage of available habitat
	Eulachon (<i>Thaleichthys pacificus</i>)	FC; SC	G3; S1?	Yes	No	Evaluation	Not listed; Insufficient biological information	Include as Species of Concern	Candidate species; Important prey species; Protected under programmatic forage fish strategy.
	Green sturgeon (<i>Acipenser medirostris</i>)	FT (Southern DPS)	G3; S2N	Yes	No	Evaluation	Not listed; Minimal distribution data	Include as High Risk Species	Southern Distinct Population listed; Forage in Willapa & Gray's Harbor; Potential impacts to prey resources associated with shellfish aquaculture.
	Greenstriped rockfish (<i>Sebastes elongatus</i>)	SC	G5; S4	Yes	No	Evaluation	Not listed; Apparently secure; Insufficient biological information	Exclude	Apparently secure; Insufficient biological information

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Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
	Leopard dace (<i>Rhinichthys latipatus</i>)	SC	G4; S2S3	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude	Insufficient biological information
	Margined sculpin (<i>Cottus marginatus</i>)	FCo; SS	G3; S2	Yes	No	Watch	Not listed; Occurs in higher order streams; Low potential to affect	Exclude	Occurs in higher order streams; Low potential to affect
	Olympic mudminnow (<i>Novumbra hubbsi</i>)	SS	G3; S2S3	Yes	Yes	Evaluation	Not listed; No spatial overlap	Exclude	No spatial overlap
	Pacific cod (<i>Gadus macrocephalus</i>)	FCo; SC	G4; S2S3	Yes	Yes	Evaluation	Not listed; Low potential to affect; Little direct take associated with covered activities; Indirect effects encompass a relatively small percentage of available habitat	Exclude	Low potential to affect; Little direct take associated with covered activities; Indirect effects encompass a relatively small percentage of available habitat
	Pacific hake (<i>Merluccius productus</i>)	FCo; SC	G5; S2S3	Yes	Yes	Evaluation	Not listed; Low potential to affect; Little direct take associated with covered activities; Indirect effects encompass a relatively small percentage of available habitat	Exclude	Low potential to affect; Little direct take associated with covered activities; Indirect effects encompass a relatively small percentage of available habitat

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Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
	Pacific herring (<i>Clupea pallasii</i>)	FC; SC	G3; S2S3	Yes	Yes	Evaluation	Not listed; High potential to affect; Little direct take associated with covered activities; Indirect effects encompass a relatively small percentage of available habitat	Include as Species of Concern	High potential to affect; Important prey species; Protected under programmatic forage fish strategy.
	Pacific lamprey (<i>Lampetra tridentata</i>)	FCo	G5; S2	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude	Insufficient biological information
	Pink salmon (<i>Oncorhynchus gorbuscha</i>)	None	G5; S2	Yes	Yes	Covered	Not listed; High potential to affect two of three lifestages; Similar habitat requirements to other salmonids, therefore little to no additional conservation cost/effort	Include as Species of Concern	Not listed; High potential to affect two of three lifestages; Similar habitat requirements to other salmonids, therefore little to no additional conservation cost/effort
	Pygmy whitefish (<i>Prosopium coulteri</i>)	SS	G5; S2	Yes	Yes	Evaluation	Not listed	Exclude	Not listed
	Quillback rockfish (<i>Sebastes maliger</i>)	FCo; SC	GU; SU	Yes	Yes	Evaluation	Not listed	Exclude	Not listed
	Redstripe rockfish (<i>Sebastes proriger</i>)	SC	G5; S3S4	Yes	No	Evaluation	Not listed; Apparently secure; Insufficient biological information	Exclude	Not listed; Apparently secure; Insufficient biological information
	River lamprey (<i>Lampetra ayresii</i>)	FCo; SC	G5; S1S2	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude	Not listed; Insufficient biological information

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Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
	Sockeye/Kokanee (<i>Oncorhynchus nerka</i>)	FT/FE; SC	G5; S2S3	Yes	Yes	Covered	Listed; High potential to affect two of three life stages	Include as High Risk Species	High potential to affect two of three life stages
	Steelhead (<i>Oncorhynchus mykiss</i>)	FT/FE; SC	G5; S5	Yes	Yes	Covered	Listed; High potential to affect two of three life stages	Include as High Risk Species	High potential to affect two of three life stages
	Surf smelt (<i>Hypomesus pretiosus</i>)	None		No	No	Watch	Not listed; Insufficient biological information	Include as Species of Concern	Important prey species; Protected under programmatic forage fish strategy.
	Tiger rockfish (<i>Sebastes nigrocinctus</i>)	SC	G4; S2	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude	Not listed; Insufficient biological information
	Umatilla dace (<i>Rhinichthys umatilla</i>)	SC	G1; S1	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude	Not listed; Insufficient biological information
	Vermillion rockfish (<i>Sebastes miniatus</i>)	None		No	No	Watch	Not listed; Insufficient biological information	Exclude	Not listed; Insufficient biological information
	Walleye pollock (<i>Theragra chalcogramma</i>)	FCo; SC	G5; S2S3	Yes	Yes	Evaluation	Not listed; Little direct take associated with covered activities; Indirect effects encompass a relatively small percentage of available habitat	Exclude	Little direct take associated with covered activities; Indirect effects encompass a relatively small percentage of available habitat
	Westslope cutthroat (<i>Oncorhynchus clarki lewisii</i>)	FCo	G4T3; S?	Yes	No	Watch	Not listed; Occurs in higher order streams; Low potential to affect	Exclude	Occurs in higher order streams; Low potential to affect

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Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
	White sturgeon (<i>Acipenser transmontanus</i>)	None	G4; S3BS4N	Yes	Yes	Evaluation	Not listed	Include as Species of Concern	Similar habitat requirements to green sturgeon; therefore inclusion provides benefit with little to no additional conservation cost/effort
	Widow rockfish (<i>Sebastes entomelas</i>)	SC		Yes	No	Evaluation	Not listed; Low potential to affect	Exclude	Low potential to affect
	Yelloweye rockfish (<i>Sebastes ruberrimus</i>)	SC	G4; SU	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude	Insufficient biological information
	Yellowtail rockfish (<i>Sebastes flavidus</i>)	SC	G4; S3	Yes	No	Evaluation	Not listed; Apparently secure	Exclude	Apparently secure
Marine Mammals	Blue whale (<i>Balaenoptera musculus</i>)	FE; SE	G2; S1S2	Yes	No	Watch	No spatial overlap with authorized activities; Insufficient biological information	Exclude	No spatial overlap with authorized activities
	Bowhead whale (<i>Balaena mysticetus</i>)	FE	G2; S1S2	Yes	No	Watch	No spatial overlap with authorized activities; Insufficient biological information	Exclude	No spatial overlap with authorized activities
	Gray whale (<i>Eschrichtius robustus</i>)	SS	G3G4; SZ	Yes	No	Watch	Not listed; Apparently secure	Exclude	Apparently secure
	Humpback whale (<i>Megaptera novaeangliae</i>)	FE; SE	G3; S2N	Yes	Yes	Evaluation	Listed; Low potential to affect; Little direct take associated with covered activities; Indirect effects	Exclude	Low potential to affect; Little direct take associated with covered activities; Indirect effects encompass a relatively small

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Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
								percentage of available habitat	
	Northern sea otter (<i>Enhydra lutris kenyoni</i>)	FCo; SE	G3G4; S2S3	Yes	Yes	Evaluation	Not listed; Low potential to affect	Exclude Low potential to affect	
	Right whale (<i>Balaena glacialis incl. australis</i>)	FE	G4G5; S1S2	Yes	No	Watch	Listed; No spatial overlap with authorized activities; Insufficient biological information	Exclude No spatial overlap with authorized activities; Insufficient biological information	
	Southern resident orca (<i>Orcinus orca</i>)	SE	G3G4; SZ	Yes	Yes	Covered	Listed; High potential to affect; Listed species	Include as Species of Concern Low to trace effects,	
	Steller sea-lion (<i>Eumetopias jubatus</i>)	FT; ST	G1; SU	Yes	No	Evaluation	Listed; Low potential to affect; Insufficient biological information	Exclude Low potential to affect; Insufficient biological information	
Molluscs	Ashy pebblesnail (<i>Fluminicola columbiana</i>)	None		No	No	Evaluation	Not listed; Insufficient biological information	Exclude Insufficient biological information	
	California floater (<i>Anodonta californiensis</i>)	FCo; SC	G3; S1S2	Yes	No	Evaluation	Accidental; Insufficient biological information	Exclude Insufficient biological information	
	Giant Columbia spire snail (<i>Fluminicola columbiana</i>)	FCo; SC	G3; S1S2	Yes	No	None	Not listed; Insufficient Information	Exclude Insufficient biological information	

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Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
	Idaho springsnail (<i>Pyrgulopsis idahoensis</i>)	None	G1	Yes	No	Watch	Federally listed; Low potential for affects; Insufficient biological information	Exclude Insufficient biological information	
	Lynn's clubtail (<i>Gomphus lynnae</i>)	FCo	G2; S1S2	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude Insufficient biological information	
	Masked dusksnail (<i>Lyogyrus sp. 2</i>)	None	G1G2; S1	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude Insufficient biological information	
	Nerite Rams-Horn (<i>Vorticifex neritoides</i>)	None	G1G; S?	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude Insufficient biological information	
	Newcomb's littorine snail (<i>Algamorda subrotundata</i>)	FCo; SC	G1G2; SNR	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude Insufficient biological information	
	Olympia Oyster (<i>Ostrea lurida</i>)	SC	G2; S2?	Yes	Yes	Evaluation	Not listed; Direct effects unlikely; Indirect affects encompass a relatively small percentage of available habitat	Exclude Direct effects unlikely; Indirect affects encompass a relatively small percentage of available habitat	
	Olympia pebblesnail (<i>Fluminicola</i>)	None	G2; S?	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude Insufficient biological information	
	Pinto (Northern) abalone (<i>Haliotis kamtschatkana</i>)	FCo; SC	G3; S2	Yes	Yes	Covered	Not listed; High potential affect from authorized activities	Exclude Primary threat poaching/overharvest; Minimal spatial overlap with authorized activities	

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Species		Listing Status	Natural Heritage Rank	Spatial Overlap	Potential Effects Analysis			Final Recommendation	Reasoning
Group	Name				Screened	Designation	Reasoning		
	Shorrface Lanx (<i>Fisherola nuttallii</i>)	None		No	No	Evaluation	Not listed; Insufficient biological information	Exclude	Insufficient biological information
	Washington dusksnail (<i>Ammicola</i> sp. 2)	None	G1; S1	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude	Insufficient biological information
	Western ridgemussel (<i>Gonidea angulata</i>)	None	G3; S1S2	Yes	No	Evaluation	Not listed; Insufficient biological information	Exclude	Insufficient biological information
Plants	Kalm's lobelia (<i>Lobelia kalmii</i>)	None	G5; S1	Yes	No	Watch	Not listed; No spatial overlap	Exclude	No spatial overlap
	Persistentsepal yellowcress (<i>Rorippa calycina</i>)	None	G3; S2	Yes	Yes	Evaluation	Not listed; Not documented in Washington	Exclude	Not documented in Washington
	Pygmy water-lily (<i>Nymphaea tetragona</i>)	None	G5; SH	Yes	No	Watch	Extirpated; Does not occur on state-owned aquatic land; Insufficient biological information	Exclude	Does not occur on state-owned aquatic land
	Water howellia (<i>Howellia aquatilis</i>)	None	G3; S2S3	Yes	Yes	Evaluation	Listed; No spatial overlap with authorized activities	Exclude	No spatial overlap with authorized activities
	Water lobelia (<i>Lobelia dortmanna</i>)	None	G4G5; S2	Yes	Yes	Evaluation	Not listed	Exclude	Insufficient biological information

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Appendix D – Proposed List of Protected Vegetation

Plant Species Review

The HCP defines potentially protected vegetation as native photosynthetic plants or algae that are either attached to or rooted in the substrate on state owned aquatic lands. Four groups of native aquatic vegetation are included: saltwater plants (seagrass and saltmarsh plants), kelps (algae in the order Laminariales), complex freshwater algae (stoneworts and brittle worts), and rooted freshwater plants (submerged, floating and emergent types). In order to be protected under the HCP, there needs to be evidence that a vegetation type provides important habitat for any of the HCP covered species during a portion of their life history. The following is a list of freshwater and marine/estuarine plant species that will be evaluated on a site by site and situational basis for protection on state owned aquatic lands. While all species within the four groups are potentially protected, the list is limited to species that occur in areas with a high likelihood of receiving project proposals. This list does not warrant protection of the listed plant species but should be used as a tool in a multifaceted review process of applications submitted to use state owned aquatic lands. It is a reference that should be used as a tool to assist with further evaluation and investigation to better determine plant species protection on state owned aquatic lands.

Species	Common Name	Family	General Location	Rationale	Comments
Freshwater Species					
<i>Alisma gramineum</i>	Water Plantain	Alismataceae	Lakes Shoreline (rarely submersed) Throughout WA.	Food and habitat for waterfowl and fish.	
<i>Alisma triviale</i>	Water Plantain	Alismataceae	Lakes Shoreline (rarely submersed) Throughout WA.	Food and habitat for waterfowl and fish.	
<i>Alopecurus</i> spp. (various)	Foxtails	Poaceae	Lakes, Rivers Shoreline Throughout WA.	Nutritious and palatable for wildlife.	<i>Some non-native sp. in WA. A. myosuroides is on the WA noxious weed list.</i>
<i>Brasenia schreberi</i>	Watershield	Cambomaceae	Lakes Floating (rooted 0.5 to 3m deep) Throughout WA.	Habitat for fish and aquatic insects. Seeds eaten by waterfowl. Leaves provide roosts for organisms.	
<i>Callitriche</i> spp. (various)	Water Starworts	Callitrichaceae	Lakes, Rivers (margins/slow) Free Floating Throughout WA.	Forage and habitat for aquatic insects and fish. Ducks eat foliage and seeds. Leaves can keep soil moist in a drawdown. Filters and absorbs toxins.	Not required to ID to species level because requires a 10-20x magnification of fruit. Some sp. introduced but similar in rationale.
<i>Carex</i> spp. (various)	Sedges	Cyperaceae	Lakes, Rivers Shoreline Throughout WA.	Seeds eaten by birds. Browsed by deer, elk and moose. Shoreline stabilizer.	Brackish tolerant.
<i>Ceratophyllum</i>	Coontail	Ceratophyllaceae	Lakes, Rivers	Habitat for juvenile fish.	Common in WA and

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<i>demersum</i>	Hornwort		(still/slow) Floating (rootless but modified leaves attach) Throughout WA.	small aquatic animals, and aquatic insects. Waterfowl eat seeds and foliage.	can be seen as a native weed.
<i>Ceratophyllum echinatum</i>	Coontail, Hornwort	Ceratophyllaceae	Lakes, Rivers (still/slow) Floating (rootless but modified leaves attach) Throughout WA.	Habitat for juvenile fish, small aquatic animals, and aquatic insects. Waterfowl eat seeds and foliage.	Rare plant list.
<i>Chara</i> spp.	Stoneworts, Muskgrass, Muskwort	Characeae	Lakes Holdfasts (algae, no roots but attaches) Shoreline to deep (~2in to 20m) Throughout WA	Food source for waterfowl esp. ducks. Protection for juvenile fish and invertebrates.	
<i>Comarum palustre</i>	Marsh Cinquefoil	Rosaceae	Lakes, Rivers (margin) Shoreline Throughout WA.	Leaves and seeds eaten by wildlife, especially waterfowl.	
<i>Cyperus</i> spp. (various)	Flatsedges	Cyperaceae	Lakes, Rivers Shoreline Throughout WA.	Food source for wildlife and birds.	<i>C. eragrostis</i> and <i>C. esculentus</i> are on the WA noxious weed list.
<i>Dulichium arundinaceum</i>	Threeway Sedge	Cyperaceae	Lakes, Rivers (slow/still) Shoreline (margin) Throughout WA.	Food for waterfowl.	
<i>Elatine</i> spp. (various)	Waterworts	Elatinaceae	Lakes, Rivers (slow/still) Shoreline Throughout WA.	Stabilizes the shoreline. Very few known locations in WA.	
<i>Eleocharis</i> spp. (various)	Spike rushes	Cyperaceae	Lakes, Rivers Shoreline Throughout WA.	Shoreline stabilizer if it covers a large area and many present.	Brackish tolerant.
<i>Elodea canadensis</i>	Elodeas	Hydrocharitaceae	Lakes, Rivers Shoreline (submersed) Throughout WA.	Food and habitat for fish, waterfowl, and wildlife.	Brackish tolerant.
<i>Elodea nuttallii</i>	Elodeas	Hydrocharitaceae	Lakes, Rivers Shoreline (submersed) Throughout WA.	Food and habitat for fish, waterfowl, and wildlife.	Brackish tolerant.
<i>Fontinalis antipyretica</i>	Aquatic Moss	Fontinalaceae	Lakes, Rivers Attached (rocks or logs in flowing water) Floating (loose or attached to substrate in	Habitat for aquatic insects, larvae, and other microorganisms. Small fish species will nest in it.	

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			still water.) Throughout WA.		
<i>Heteranthera dubia</i>	Water Stargrass	Pontederiaceae	Lakes, Rivers Shoreline (up to 3m deep) Throughout WA.	Waterfowl eat foliage. Fish cover and habitat for invertebrates. Ducks eat leaves.	
<i>Hippuris montana</i>	Marestalk	Hippuridaceae	Lakes, Rivers Shoreline (shallow water/mud up to 2m deep) Throughout WA.	Seeds and vegetation eaten by waterfowl and shorebirds. Shelter for small animals. Cover for fish and amphibians.	
<i>Hippuris vulgaris</i>	Marestalk	Hippuridaceae	Lakes, Rivers Shoreline (shallow water/mud up to 2m deep) Throughout WA.	Seeds and vegetation eaten by waterfowl and shorebirds. Shelter for small animals. Cover for fish and amphibians.	Easily confused with <i>Equisetum</i> spp.
<i>Hydrocotyle ranunculoides</i>	Water Pennywort	Apiaceae	Lakes Shoreline (Floating mat/mud) Western WA.	Habitat for aquatic invertebrates. Rare.	
<i>Isoetes</i> spp. (various)	Quillworts	Isoetaceae	Lakes, Rivers Shoreline/Submersed (shallow to moderate) Throughout WA.	Deer feed on leaves and muskrats and waterfowl eat the fleshy corms. Intolerant of nutrient enrichment and can be an indicator of good water quality.	
<i>Juncus</i> spp. (various)	Rushes	Juncaceae	Lakes, Rivers Shoreline Throughout WA.	Birds use plant material for nests. Food and shelter for insects, birds and small mammals. Wetland plant material contribution. Removes access nutrients and heavy metals. <i>J. effusus</i> has been used as habitat during the breeding season for frog <i>Rana pretiosa</i> .	ID to sp. level not needed.
<i>Leersia oryzoides</i>	Rice cutgrass	Poaceae	Lakes, Rivers (slow/still) Shoreline (margin/mud) Throughout WA.	Provides food and cover for amphibious organisms and waterfowl.	
<i>Lipocarpus</i> spp. (various)	Halfchaff Sedge	Cyperaceae	Lakes, Rivers Shoreline Uncommon in WA.	<i>L. aristulata</i> is state threatened.	
<i>Lobelia dortmanna</i>	Lobelias, Water Dortmann's Cardinalflower	Campanulaceae	Lakes Shoreline (submersed up to 2m deep) Western WA.	Listed as Threatened in WA state.	ID during blooming season, can be confused for more common species.
<i>Marsilea</i> spp. (various)	Waterclover	Marsileaceae	Lakes, Rivers (slow/still) Shoreline (fern) Throughout WA.	Spore cases are eaten by waterfowl, and the plant provides fish shelter.	Some non-native sp. in WA.

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<i>Myriophyllum</i> spp. (various)	Watermilfoils	Haloragaceae	Lakes Submersed Throughout WA	Provides habitat for aquatic invertebrates, amphibians, and juvenile fish.	Three species are on the noxious weed list <i>M. spicatum</i> , <i>M. heterophyllum</i> , and <i>M. aquaticum</i> . <i>M. hippuroides</i> is a native that can be confused with <i>M. heterophyllum</i> .
<i>Najas flexilis</i>	Waternymphs	Najadaceae	Lakes, Rivers, Submersed (to 4m depth) Throughout WA.	Entire plant is eaten by waterfowl and considered one of their most important food sources. Provides shelter for small fish and insects.	Brackish tolerant.
<i>Najas guadalupensis</i>	Waternymphs	Najadaceae	Lakes, Rivers, Brackish Submersed (to 4m depth) Throughout WA.	Entire plant is eaten by waterfowl and considered one of their most important food sources. Provides shelter for small fish and insects.	Brackish tolerant.
<i>Nitella</i> spp.	Brittleworts	Characeae	Lakes Holdfasts (algae no roots but attaches) Shoreline to deep (~2in -20m) Throughout WA.	Important food source for waterfowl. Cover and food source for fish. Stabilizes soil.	
<i>Nuphar polysepala</i>	Yellow Waterlily	Nymphaeaceae	Lakes, Rivers (slow/still) Shoreline (up to 4m deep) Throughout WA.	Food source for mammals and waterfowl. Spawning habitat for fish. Floating and emergent veg for adult frogs. Plant eaten by pond turtle post partum.	
<i>Polygonum</i> spp. (various)	Floating Smartweed	Polygonaceae	Lakes, Rivers (slow/still) Shoreline (to deep water) Throughout WA.	Food for birds.	Has been moved to the genus <i>Fallopia</i> or <i>Persicaria</i> ID to species level for those on the WA noxious weed list.
<i>Potamogeton</i> spp. (various)	Pondweeds	Potamogetonaceae	Lakes Floating (rooted 0 to 6m deep) Throughout WA.	Seeds, tubers, and vegetation provide food and cover for aquatic animals and waterfowl.	<i>P. crispus</i> is on the WA noxious weed list.
<i>Ranunculus aquatilis</i>	Water Buttercup, Spearwort	Ranunculaceae	Lakes, Rivers Submersed Throughout WA.	Fruit eaten by waterfowl.	
<i>Ruppia cirrhosa</i>	Ditchgrass	Ruppiaceae	Lakes, River Submersed Throughout WA.	Cover and food for many aquatic species. All plant parts eaten by waterfowl. Used in restoration projects.	ID to sp. level not required, debatable if same species as <i>R. maritima</i> .
<i>Sagittaria</i> spp. (various)	Arrowheads	Alismataceae	Lakes Shoreline (rarely submersed) Throughout WA.	Eaten by waterfowl, beaver, muskrat, and porcupine.	<i>S. graminea</i> and <i>S. platyphylla</i> are on the WA noxious weed list.

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<i>Scheuchzeria paulustris</i>	Rannoch-rush	Scheuchzeriaceae	Lakes Shoreline Uncommon in WA.	Similar in growth and structure to other valuable shoreline species	
<i>Schoenoplectus</i> spp. (various)	Bulrushes	Cyperaceae	Lakes, Rivers Shoreline (up to 1.5m deep) Throughout WA.	Food, cover and nesting habitat for birds. Shoreline stabilizer and used for contaminated water treatment.	<i>S. mucronatus</i> is on the WA noxious weed list.
<i>Scirpus</i> spp. (various)	Bulrush	Cyperaceae	Lakes Shoreline Throughout WA	Food, cover and nesting habitat for birds. Shoreline stabilizer and used for contaminated water treatment.	Used in habitat restoration projects for stabilization and to increase diversity.
<i>Sparganium</i> spp. (various)	Bur-reeds	Scrophulariaceae	Lakes, Rivers Shoreline (1 to 2m deep) Throughout WA.	Food source and habitat for waterfowl and mammals. Known to absorb pollutants.	Used in restoration projects.
<i>Spartina gracilis</i>	Prairie Cordgrass	Poaceae	Lakes, Rivers Shoreline Mostly Eastern WA.	Wildlife cover, nesting habitat, and hunting area for various birds.	Many invasive <i>Spartina</i> species present in WA saltwater areas.
<i>Spartina pectinata</i>	Prairie Cordgrass	Poaceae	Lakes, Rivers Shoreline Mostly Eastern WA.	Wildlife cover, nesting habitat, and hunting area for various birds.	<i>S. pectinata</i> is uncommon in WA.
<i>Stuckenia pectinata</i>	Sago Pondweed	Potamogetonaceae	Lakes, Shoreline (submersed) Throughout WA.	Food source for ducks. Habitat for invertebrates and young fish.	Three species <i>S. pectinata</i> , <i>S. filiformis</i> , and <i>S. vaginatus</i> are so similar they can be lumped together.
<i>Torreyochloa</i> spp.	Weak Alkaligrass	Poaceae	Lakes, Rivers Shoreline Throughout WA.	Shoreline stabilizer and palatable.	
<i>Typha latifolia</i>	Cattail	Typhaceae	Lakes, Rivers Shoreline Throughout WA.	Filters runoff. Reduces nutrients and sediment loading. Eaten by pond turtles.	<i>T. angustifolia</i> is on the WA noxious weed list.
<i>Utricularia</i> spp. (various)	Bladderwort	Lentibulariaceae	Lakes, Rivers (slow/still) Shoreline (no roots but attaches) Throughout WA.	<i>U. gibba</i> , <i>U. intermedia</i> , and <i>U. minor</i> are all rare.	<i>U. inflata</i> is on the WA noxious weed list.
<i>Veronica</i> spp. (various)	Speedwells	Scrophulariaceae	Lakes, Rivers (slow/still) Shoreline (1 to 4in deep) Throughout WA.	Typically occurs with sedges and rushes.	
<i>Zannichellia paulustris</i>	Horned Pondweed	Zannichelliaceae	Lakes, Rivers Submersed Throughout WA.	Fruit and entire plant eaten by waterfowl and other birds. Habitat for small aquatic animals.	Brackish tolerant.
Marine/Estuarine Species					
<i>Agarum</i> spp.	Sea Colander	Laminariaceae	Marine Subtidal Attaches to rocks, wood and algae. Coast, Puget Sound	Used by salmonids, juvenile fish, and forage fish. Nursery habitat for rock fish. Herring spawn on this kelp.	This prostrate kelp is part of a large functional group in the Laminariales order.
<i>Alaria</i> spp.	Ribbon Kelp	Alariaceae	Marine	Used by salmonids,	These prostrate

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(various)			Low intertidal/subtidal Coast, Puget Sound	juvenile fish, and forage fish. Nursery habitat for rock fish. Herring spawn on this kelp.	kelps are part of a large functional group in the Laminariales order. They are associated with <i>Nereocystis</i> beds.
<i>Carex lyngbeii</i>	Lyngby Sedge	Cyperaceae	Estuarine Shoreline Coast	Seeds eaten by birds. Browsed by deer, elk and moose. Shoreline stabilizer.	Used as an indicator in riverine estuaries of the extent of marine influence.
<i>Costaria costata</i>	Five-rib Kelp	Costariaceae	Marine Low intertidal/shallow subtidal Attaches to rocks. Coast, Puget Sound	Used by salmonids, juvenile fish, and forage fish. Nursery habitat for rock fish. Herring spawn on this kelp.	This prostrate kelp is part of a large functional group in the Laminariales order.
<i>Cymathoera triplicata</i>	Three-ribbed kelp	Laminariaceae	Marine Lower intertidal and shallow subtidal Attaches to rocks up to 30m deep. Coast, Puget Sound	Used by salmonids, juvenile fish, and forage fish. Nursery habitat for rock fish. Herring spawn on this kelp.	These prostrate kelps are part of a large functional group in the Laminariales order. They are commonly associated with other species of kelp.
<i>Distichlis spicata</i>	Saltgrass	Gramineae	Estuarine Shoreline Coast, Puget Sound	Potential salmonid use.	Supports primary productivity of salt marshes.
<i>Egregia menziesii</i>	Feather Boa Kelp	Laminariaceae	Marine Upper subtidal Attaches to rocks up to 30m deep. Fully sheltered to fully exposed. Coast, Puget Sound	Habitat for Salmonids, juvenile rock fish, forage fish, and numerous invertebrates.	This floating kelp is part of a large functional group in the Laminariales order. Often co-occurs with Bull Kelp, Giant Kelp and other floating kelps.
<i>Jaumea carnosa</i>	Jaumea	Compositae	Estuarine Shoreline Coast	Potential salmonid use.	Supports primary productivity of salt marshes.
<i>Laminaria</i> spp. (various)	Brown Kelp	Laminariaceae	Marine/Estuarine Low intertidal/upper subtidal. Attaches to rocks. Coastal, Puget Sound	Used by salmonids, juvenile fish, and forage fish. Nursery habitat for rock fish. Herring spawn on this kelp.	These prostrate and stipitate kelps are part of a large functional group in the Laminariales order. <i>L. farlowii</i> , <i>L. longipes</i> , <i>L. ephemera</i> , <i>L. setchellii</i> and <i>L. sinclairii</i> are uncommon in WA.
<i>Macrocystis pyrifera</i>	Giant Kelp	Laminariaceae	Marine Low intertidal/subtidal Attaches to rocks. Open, Coast and Juan de Fuca.	Benefits to numerous fish and invertebrate species. Forage fish eggs attach.	This floating kelp is part of a large functional group in the Laminariales order.
<i>Nereocystis luetkeana</i>	Bull Kelp	Laminariaceae	Marine Upper subtidal	Habitat for Salmonids, juvenile rock	This floating kelp is part of a large

Appendix D – Proposed List of Effected Vegetation NEPA Draft 2012-07-26

C-6

Attachment 6

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14665

			Attaches to rocks up to 30m deep. Fully sheltered to fully exposed. Coast, Puget Sound	fish, forage fish, and numerous invertebrates.	functional group in the Laminariales order. Restoration methods with this species being researched.
<i>Phyllospadix</i> spp.	Surfgrass	Zosteraceae	Marine Low intertidal/subtidal. Attaches to rocky substrates in regions with moderate-to-high wave exposure. Coast, Puget Sound	Small organisms inhabit the canopy and rhizomes. Herring lay their eggs on surfgrass. Juvenile salmon utilize habitat. Nourishment for detritivores, fish and waterfowl.	Common in exposed areas along the Strait of Juan de Fuca, western Whidbey Island, and the San Juan Archipelago. Often occurs with <i>Zostera marina</i> . Roots often covered by sand.
<i>Pterygophora californica</i>	Woody kelp	Laminariaceae	Marine/Estuarine Low intertidal/subtidal. Attaches to rocks. Coastal, Puget Sound	Used by salmonids, juvenile fish, and forage fish. Nursery habitat for rock fish.	This stipitate kelp is part of the Laminariales order.
<i>Ruppia maritima</i>	Widgeongrass	Ruppiaceae	Estuarine Submersed Coast	Cover and food for many aquatic species. All plant parts eaten by waterfowl. Used in restoration projects.	ID to sp. level not required, debatable if same species as <i>R. cirrhosa</i> .
<i>Saccharina</i> spp. (various)	Brown Kelp	Laminariaceae	Marine/Estuarine Low intertidal/subtidal. Attaches to rocks. Coastal, Puget Sound	Used by salmonids, juvenile fish, and forage fish. Nursery habitat for rock fish. Herring spawn on this kelp.	These floating kelps are part of a large functional group in the Laminariales order.
<i>Salicornia virginica</i>	Pickleweed	Chenopodiaceae	Marine/Estuarine Low Elevation salt marsh, mud flat Western WA	Supports small copepods that salmonids feed on.	
<i>Scripus maritimus</i>	Seacoast Bulrush	Cyperaceae	Estuarine Shoreline Coast, Puget Sound	Potential salmonid use.	Supports primary productivity of salt marshes.
<i>Triglochin maritimum</i>	Seaside arrowgrass	Juncaginaceae	Estuarine Shoreline Coastal	Potential salmonid use.	Supports primary productivity of salt marshes.
<i>Zostera marina</i>	Eelgrass	Zosteraceae	Marine/Estuarine Intertidal up to 12m deep Western WA	Small organisms inhabit the canopy, including juvenile shellfish. Herring lay eggs on eelgrass. Juvenile salmon utilize habitat. Nourishment for detritivores.	

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14666

LAURA FERNANDEZ

03/21/2013

14666-1 | The I-5 route impacts WAY to many people and CHILDREN. Our children are our future. Putting the lines in their playground is dangerous and harmful. Not to mention how many homes this route would impact. Choosing the central or eastern line in the less populated areas also gives BPA better future growth potential.

14667

KAYE A NELSON

03/21/2013

14667-1 | BPA must not consider the existing right of way. There must be minimal human impact in the route selected and thousands of children would be subjected to EMF's.

14666-1 Comment noted.

14667-1 Comment noted.

14668

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

BPA's Proposed I-5 Corridor Reinforcement Project
Draft environmental impact statement comment form



Public review of and comment on this draft EIS will continue through March 1, 2013. Comments should be as specific as possible, with references to particular pages, sections and chapters. Additional or clarifying information that should be considered is helpful. Factual corrections are appreciated. BPA staff will review all comments received and respond to them in the final EIS.

Name (will be included with your comment in the final EIS) Casey & Deborah Warnke

Address

Please add me to the mailing list

Please remove me from the mailing list

Comments:

14668-1

We are in the Central Alternative route, Segment 28 with tower 4 on our property. The wires are going to go through the middle of our property with the tower ^{located} 400-500 feet away from our house. It is of a great concern to us because we have six children with the oldest one being ten years old. They still have their whole lives ahead of them and it isn't right to subject them to all the extra radiation coming from the wires. They already get too much from their everyday life! We are also very concerned about the large number of toxic pesticides that are used to combat unwanted growth. These could cause many health problems.

14668-2

Our children love to run around all over outside and play. That's why we live in the country; so they have the freedom to do that! If the wires go up on our land I will have to tell them they can't go outside for? when the pesticides are sprayed. They will also contaminate our drinking water because we have a well. How healthy can that be?

14668-3



Page 1 of 2

14668-1 According to Cowlitz County parcel data, Tower 28/4 is on the Abbey Foundation of Oregon's property. Please see the response to Comment 14328-6.

The EMF information specific to the commenter's area is provided in Table 7 and Figures 1 and 2 of Appendix F.

14668-2 Please see Section 3.15, Maintenance, for information about BPA's Vegetation Management Program. Prior to controlling vegetation, BPA would send notices to landowners and request information that might help in determining appropriate methods and mitigation measures (such as herbicide-free buffer zones around springs or wells).

14668-3 Please see the response to Comment 14160-1.

14668

A few other concerns:

14668-4 | It will totally ruin the value of our land tower will be in our beautiful view of

14668-5 | Mt. St. Helens

14668-6 | Uses up a big strip of land where we won't be able to grow trees (our land is timber land)

ruins the possibility of subdividing in the future

14668-7 | greatly decreases the value of our land and lessens the possibility of ever selling!

14668-8 | Our thoughts on the matter is you should use the East Alternative.

Cy Nault & Deborah Wah

Thank you for taking the time to give us your thoughts and help shape the future of this project. You are welcome to include additional pages as needed.

Forms and comments may be submitted in these formats:

Mail
I-5 Corridor Reinforcement Project
PO Box 9250
Portland, OR 97207

Email
i-5@bpa.gov

Phone
800-230-6593 (voice mail)

Fax
888-315-4503

Online
www.bpa.gov/goto/i-5

At public meetings
Place completed form in a comment box or give to a staff member

14668-4 Please see the response to Comment 14140-2.

14668-5 Please see the response to Comment 14627-1.

14668-6 Comment noted.

14668-7 Please see the response to Comment 14140-2.

14668-8 Comment noted.

14669

E L PERSONIUS

03/22/2013

14669-1

Protect our FAMILIES!! DO NOT build on the West Corridor, too many families will be affected. No study has indicated that the emissions are safe, specifically they have stated that children may even be at higher risk! The West option has too many families, children, and schools. Please DO NOT build in the WEST!

14670

BPA I-5 Project Team:

14670-1

I want to draw your attention to inconsistencies in your DEIS relating to your claims regarding access roads, versus what in fact has been proposed. Attached is a photo showing our property and the access road proposed for tower K-84. In 3.9, pg. 3-14, you state, "(Access) Roads are built within the transmission line right-of-way as much as possible if terrain and land use allow." What excuse do you have for what BPA has proposed doing to our beautiful rural home of 32 years? The long-established logging road, Lansing Lane, is no further from the proposed site of tower K-84 that is the front door of our house! My husband, a registered land surveyor, and I ran a preliminary road survey from the corner of Lansing Lane to the tower site. No wetlands were encountered; it never exceeded 10% grade - most of it was much less; and 70% of it would have fallen in the tower line right-of-way! That is what you state you try to achieve; instead, your design team chose to propose destroying our private driveway, the serenity of our home, and my cherished garden. That access road would be dredged through the middle of my 3 acre elk-fenced garden, through our electric and water lines, through numerous fruit trees and other ornamental trees and shrubs. And Federal Government employees would drive up through my garden, oh, just whenever they felt like it! I've worked hard to keep the deer and elk out; no fence can keep out the government, I guess.

14670-2

I understand it is a big deal, in 'certain areas,' to even contemplate pruning back branches that adjacent homeowners have allowed to grow into the existing right-of-way. It is very evident, however, that BPA feels the wholesale destruction of a *rural* home and garden is, well, not anything to worry yourselves about. In your Table 3-2, Mitigation Measure, under

14670-3

"Socioeconomics," you state that you "Compensate landowners at market value for any new BPA land rights for right-of-way or access road easements." But no compensation offered for

- 14669-1 Comment noted.
- 14670-1 BPA has identified the Central Alternative using Central Option 1 as the Preferred Alternative. Segment K is not included in the Preferred Alternative.
- 14670-2 We regret that we have given the commenter the impression that BPA is not concerned about destruction of rural homes and gardens. Since receiving comments on the Draft EIS, BPA has spent about a year meeting with landowners along the Preferred Alternative discussing concerns and impacts and adjusting the project design where possible.
- 14670-3 BPA would compensate landowners for real property rights that must be acquired for this project. The value of these rights would be determined by a Fair Market Value appraisal at the time of the appraiser's inspection. The appraisal would conclude with a value that represents the present value of all future benefits.

- 14670
- 14670-3 | completely destroying someone's lifetime home? When another far less invasive and far less
14670-4 | expensive option was readily available. Screaming out to your design team. What then?
- 14670-5 | By the way, I was told, in person, by a project team member in October of 2010 that "We have
done a low-level flyover over your property. We know exactly where you live." Almost makes
this destruction look intentional, doesn't it? It does to me.
- 14670-6 | Your map used a three-year-old (older, now) version of Google. Since that view, we have
planted 95 grapevines, constructed 10 new large masonry raised beds for the vegetable garden, and
watched the trees and shrubs mature considerably. Lansing Lane is still there, as shown.
- 14670-7 | Our private driveway, almost 3/4 mile long, was designed for our single-family use. It is narrow
and was constructed, 33 years ago, without ballast to prevent large rocks from working up and
interfering with plowing snow in the winter. For it to be used by heavy construction, it would have
to be entirely rebuilt.
- 14670-8 | You repeatedly stated in the November 2012 newsletter, which announced the 'preferred
alternative,' that all routes are still under active consideration; the threat to my home continues on
and on. Your assurances about attempting to minimize the impacts of access roads do not ring
true. I know there are many other rural residents whose privacy and beloved homes are also
callously threatened by proposed access road locations. It really does appear that some
homeowners' rights merit much more consideration from the BPA than those of rural homeowners.
- 14670-9 | Even, or perhaps especially, the 'rights' of those people who made a conscious choice to live next to
an existing BPA right-of-way and even an existing power-line.

Sincerely, Patti Olson

- 14670-4 Please see the response to Comment 14166-1.
- 14670-5 Comment noted.
- 14670-6 Please see the response to Comment 14670-1.
- 14670-7 BPA understands the commenter's desire to have updated information and learn about our project decisions as quickly as possible. We want to ensure that we provide a complete and comprehensive environmental review for consideration and comment. That takes time. The additional time allows BPA to consider the comments it has received about the project and complete environmental analysis of issues identified by landowners and stakeholders. This will help BPA make a well-informed decision about whether, and where, to build a new line and substations.
- 14670-8 Comment noted. Please see the responses to Comments 14670-1 and 14119-2.
- 14670-9 Comment noted.

14670



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Dear Luanna Grow,

14672

- 14672-1 Thank you for responding to my comments. You probably do not remember speaking with me at the BPA Amboy meeting where you and Doug Johnson could not answer my questions. I still am sincerely concerned and hopeful that should this project be placed on the preferred route Bonneville Power Administration will take responsibility for repairing this delicate and important Dispersal Corridor and "Snag Rich" ecosystem that currently sustains and maintains numerous Flora and Fauna and critical wetland especially as our human populations continue to grow. I am interested to know how you will mitigate for endangered species since they are numerous here, such as the Larch Mtn. Salamander(*Plethodon larselli*) and Cascade Torrent Salamander(*Rhyacotriton/cascadae*) BPA has worked to make a name for itself protecting fish in our area. I hope they will listen and take action to protect the vast plant life that will be destroyed and disrupted in such a large swath.
- 14672-2

Sincerely,

Erin Grover

14673

- 14673-1 ASAP send me the miles and acres Clark County will lose to a new transmission easement. I need the same for Cowlitz County too.

Cheryl Brantley
A Better Way for BPA

1 of 1

14672-1 A member of the project's vegetation management team attempted to contact the commenter to answer her questions. BPA was never able to connect with the commenter.

14672-2 Recommended mitigation measures for natural resources are identified in Chapters 14 through 19. Many of these mitigation measures have been coordinated with state and federal agencies including NOAA Fisheries, US Fish and Wildlife Service, the Corps of Engineers, Department of Natural Resources, Department of Fish and Wildlife, Department of Ecology, and Division of State Lands. BPA has also discussed mitigation measures with the tribes and local agencies in Washington and Oregon.

BPA will make a final decision about the project in the Record of Decision, including which mitigation measures would be implemented if the project were to move forward. Mitigation determined through permits or other requirements will continue after ROD.

14673-1 BPA contacted the commenter and referred her to Table 5-2, which shows acres of new easements required on public and private land by alternative. The EIS does not have this information separated by county.

14674

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

BPA's Proposed I-5 Corridor Reinforcement Project Draft environmental impact statement comment form

Public review of and comment on this draft EIS will continue through March 1, 2013. Comments should be as specific as possible, with references to particular pages, sections and chapters. Additional or clarifying information that should be considered is helpful. Factual corrections are appreciated. BPA staff will review all comments received and respond to them in the final EIS.

Name (will be included with your comment in the final EIS) Keith Forsyth

Address _____

Please add me to the mailing list

Please remove me from the mailing list

Comments:

I moved to Castle Rock, WA last year and opened an Antique Store in the downtown area (To Every Season Antiques @ _____). We moved here because of the town's location off of the interstate, its close proximity to Vancouver, Portland, Olympia, and Seattle, and the town's small town appeal. We have been open for one and one half years now and am doing okay and we see potential as we continue into 2013.

14674-1

However, BPAs intent to run high power lines through Castle Rock will have multiple negative effects on my business and our town. Castle Rock is struggling with its economy (like most of the country), and having high power lines run through/near by Castle Rock will deter potential home buyers, new businesses, and even tourists as our charming town will not have the same appeal. BPA must have alternative routes that will not interfere with the residents of Castle Rock and our livelihood. I humbly and respectfully request that you consider an alternative route that will not impact my business. Thank you.

Comment period extended until noon on March 25, 2013



1 of 1

- 14674-1 Section 24.4, Economic Productivity, describes the potential impacts of the project on economic development. Timber production, agriculture, urban and suburban development, and industrial uses can contribute to economic productivity. Transmission line construction and operation could affect the economic productivity of some resources by limiting their long-term revenue potential, but could contribute to long-term revenue potential in sectors that benefit from a reliable transmission system.

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N

BPA's Proposed I-5 Corridor Reinforcement Project
Draft environmental impact statement comment form

Public review of and comment on this draft EIS will continue through March 1, 2013. Comments should be as specific as possible, with references to particular pages, sections and chapters. Additional or clarifying information that should be considered is helpful. Factual corrections are appreciated. BPA staff will review all comments received and respond to them in the final EIS.

Name (will be included with your comment in the final EIS)

Address

Please add me to the mailing list

Please remove me from the mailing list

Comments: Route Seg. V 16& 17

- 14675-1 We are very upset and unhappy over your preferred route. We bought our homesite with 157 acres in 1949. A few years later we were able to purchase an additional 100 acres. This made a nice tree farm for us. Since then we have sold to six of our grandchildren (at a very low price) at least 6 acres so they could have one acre for a building site and still have enough for a tree farm; thereby still keeping most of it in trees. They have enjoyed the privacy and beauty of our woods where they can hunt and fish. Your proposed route goes through the middle of our tree farm and access roads would split it up even more.
- 14675-2 We are both elderly--86 and 97--and still enjoy living in our own home and hoped to have a few more years to enjoy the beauty and privacy, without the worry of a Powerline going through our li
- 14675-3 We would much prefer the route change that goes through the edge of our property , west to State land , then south on State land.

Feb 15, 2013
Harold P & Margaret Paladino



14675-1 Comment noted.

14675-2 Comment noted. Please see the response to Comment 14097-1.

14675-3 Please see the response to Comment 14328-5.

14675-4 Please see the response to Comment 14097-1.

14676

LORI ANN FINKAS

03/22/2013

14676-1 Dear BPA, I am one of those "affected landowners" on the I-5 project. Although we are not in direct line, we are in the "notification zone". What I find maddening is that is anyone bothering to measure the environmental impact? Seriously, I haven't seen any effort on the part of BPA to study this. Why do I know this? Because if you had, you would never have put the current route on your grid. Or maybe it just doesn't matter that the beautiful pair of eagles that reside directly on the proposed line won't have a home anymore. They have nested there for the past 10 years. I see them almost every day when they have young chicks. Do you care about our resident owl, which we see almost every day in the summer time? It sits in the tops of our trees hooting and hooting at the moon, and there is a little spotted owl which a new addition to our property. We saw him sitting in the drive way washing his prey of what I thought to be a small mouse in a puddle of water. We have cougar, bears, coyotes, deer (lots of deer).

We have a natural creek on our property, which also leads to swamp lands teeming with life, such as turtles, herons/cranes, and I assume small fish. There are millions of reasons why this is such a flawed plan. If it affects ONE person, or ONE animal, the cost is too high!!!!!!

14676-2 Why can't you just funnel your monies to the people that need electricity to make them put solar panels on top of their houses. Why should I suffer the cost of feeding their house, when then could do it themselves. I don't see your homes on the chopping block, nor those of your families. We are a small

14676-3 town with people hurting financially. This will ruin many. I hope you can sleep at night.

14676-4 The Army Corps of Engineers must issue a permit for this project. BPA has only requested to permit one alternative, the Central Alternative, Option 1. Since BPA chose the Troutdale alternatives over the Pearl alternatives because Troutdale has an existing right of way, I demand that BPA request a permit from the Army Corps of Engineering for its existing right of way the West Alternative, using double or triple circuit wires through wetlands or for the entire length of the West Alternative.

Lori Finkas - Citizen of the USA

- 14676-1 The EIS analyzes the potential effects of the project on wildlife species, as well as other resources. Wildlife presence and impacts on wildlife are discussed in Chapter 18, Wildlife.
- 14676-2 Please see the response to Comment 14144-2.
- 14676-3 Please see the response to Comment 14328-5.
- 14676-4 Please see the response to Comment 14596-5.

FOSTER PEPPER PLLC

Direct Phone
Direct Facsimile
E-Mail

March 21, 2013

VIA E-MAIL & U.S. MAIL

Bonneville Power Administration
I-5 Corridor Reinforcement Project
PO Box 9250
Portland, OR 97207

Re: City of Camas' Comments on BPA I-5 Corridor Reinforcement Project
Draft Environmental Impact Statement

Dear Sir/Madam:

1. INTRODUCTION

The City of Camas, Washington, ("City") comments regarding the Bonneville Power Administration's ("BPA's") proposed I-5 Corridor Reinforcement Project. The following comments address the City's review of BPA's Draft Environmental Impact Statement ("DEIS") dated November 2012. This letter is supplemental to the City's prior comments and communications to BPA, including but not limited to comment letter of March 19, 2012 and scoping comments on December 14, 2009.

14677-1

BPA has evaluated in its EIS no alternative that does not run through the City of Camas. The City recognizes that it has been over 40 years since BPA built a high-voltage transmission line in southwest Washington. As much as any community in the region, Camas understands the need for reliable power. Since 1970, the Camas population has grown from 5,790 to approximately 20,000. Since the late 1980s, the City has invested more than \$240 million in capital projects; developed a 1,400-acre business park; and, has become the home for many high-tech and financial corporations. But, Camas is already the host for an existing, above-ground high-voltage transmission line corridor with parallel tower arrays. BPA should not force Camas to fully bear the burdens of the entire region's demands for electric service.

Mitigation of any environmental impact will cost more than no mitigation. Here, the cost of the City's requested mitigation to underground approximately 1.4% of the project (only 1.09 miles of the 77-mile preferred alternative) will be more than offset by reliability, security, economic return over the life of the project, as well as view-impact mitigation and reduced economic impact on the City and its residents and businesses. Unfortunately, the DEIS does not adequately assess all reasonable alternatives; fails to evaluate all potential significant adverse impacts; and, does not adequately mitigate the identified impacts of the preferred alternative.

14677-1 Thank you for your comments. Specific comments are addressed below.

Camas Comment Letter
 March 21, 2013
 Page 2

2. THE CITY OF CAMAS

14677-2 2.1 Location. The City is located in Clark County, Washington, and includes an incorporated area of approximately 16 square miles, and substantial acreage in the Boulder Creek and Jones Creek drainages that support a City watershed for the City's public water supply. The corporate limits of the City generally include portions of Township 2 North, Range 3E, Sections 17, 20, 21, 27, 28, 29, 32, 33, 34, 35 and 36; portions of Township 1 North, Range 3 E, Sections 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16; and portions of Township 1 North Range 4E, Section 7. The City is north of the Columbia River, generally east of the City of Vancouver, and west of the City of Washougal. The City is an urban area, with an expanding job and residential population.

14677-3 2.2 Community and Land Use. The DEIS fails to adequately identify and analyze impacts to existing and planned land uses in the City. Camas has a magnificent natural setting of green spaces, mountains, water – all visual amenities. Environmental quality is an integral part of the City's plans and development regulations. The City of Camas Comprehensive Plan, Camas Shoreline Master Plan, and the Comprehensive Park and Recreation Plan emphasize the protection of quality of life, including public views and public places (viewpoints, parks, scenic routes, and view corridors identified in those plans). The City's development regulations carry forward that emphasis through protection of public views and other community elements. See Camas Municipal Code (CMC) at Chapter 16.33 CMC, "Public View, Open Space Protection And Historic Sites And Structures;" and, Chapter 8.52 CMC, relating to electric transmission facilities. The City understands the BPA claim of immunity from local public health and safety laws (including land use regulations). Notwithstanding that claimed immunity, NEPA requires BPA to adequately evaluate impacts on the local community. The DEIS does not satisfy NEPA's requirements to adequately identify and evaluate project impacts on Camas, and to discuss mitigation measures for those impacts.

3. ENVIRONMENTAL JUSTICE

14677-4 3.1 Executive Order 12898. The DEIS fails to adequately address Environmental Justice principles, including economic impacts on Camas residents and businesses. The City already bears the substantial burden of a significant BPA transmission corridor. The addition of an array of towers, twice the height of one of the existing tower lines, is unmitigated. BPA's DEIS fails to adequately identify, analyze and address Environmental Justice principles, as required by Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations). The Order requires BPA to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies or activities on minority or low income populations. BPA's broader alternatives analysis in Section 4.7.2 is devoid of any discussion whatsoever of Environmental Justice considerations. If no such impacts were identified outside of the action alternatives advanced in the DEIS, that fact further supports Camas' view that a disproportionate impact is occurring as noted above.

14677-2 Comment noted.

14677-3 Chapter 5, Land, discusses land use and ownership issues in the City of Camas. For land use plans, policies, and zoning consistency review, the City of Camas is discussed in Chapter 27, Consultation, Review, and Permit Requirements in the following sections: Section 27.26.1.2, Washington State Shoreline Management Act; Section 27.26.2.1, Critical Area Ordinances; Section 27.26.2.6, Clark County Comprehensive Plan; Table 27-1, Local Zoning Codes and Project Consistency; Section 27.26.2.10, City of Camas Comprehensive Plan; and Section 27.26.2.11, City of Camas Zoning Code.

Recommended mitigation measures are included in Chapters 5 through 22.

14677-4 Sections 11.1.9.1, Minority Populations and 11.1.9.2, Low-Income Populations, address Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, by describing low-income and minority populations in the project area. All action alternatives would include limited census tracts with minority or low-income populations, but effects to residents in these census tracts are the same in range and extent as to all other census tracts crossed by the action alternatives. Overall, although five out of the 43 census tracts crossed by the project reported low-income populations in 2013 (one of which was in the City of Camas), the median incomes of the block groups crossed by the project were higher than the respective county incomes, and poverty rates in those census tracts were lower than the county (and state) poverty rates. Therefore, impacts to low-income populations are not disproportionate to impacts on non-low-income populations living in the census blocks crossed by the project, as described in Section 11.2.2.9, Environmental Justice. No minority census block groups were identified in Camas. Additional tables and analysis are included in Appendix H, Environmental Justice Tables for BPA I-5 Corridor Reinforcement Project.

Camas Comment Letter
 March 21, 2013
 Page 3

3.2 Property Valuation and Impact on Public Services.

The DEIS, at Section 11.2.2.5, recognizes reduced property values associated with EHV transmission corridors (ranging in some studies from 1.65% to 11.23%). BPA understands that Washington state local governments are heavily dependent on property taxes. The reduction in the City's tax base in a property tax-dependent community has a direct impact on general fund services such as police and fire. But, the DEIS at Section 11.2.2.4 (page 11-16), provides no analysis of that impact, and no comparison of the impact of alternative alignments.

14677-5

BPA has apparently determined that adequate analysis of impacts and alternatives is satisfied with the single sentence comment that the project "would cause long-term decreases in government revenue by diminishing the base value of property subject to property taxation" *Id.* It is telling that this comment follows a statement in the immediately preceding section, Section 11.2.2.3, that project impacts on public services would be "low, as they would not diminish the supply of revenues and infrastructure for other purposes." These internal inconsistencies and simplistic analysis of impacts demonstrate a disregard for the project's impact on the Camas urban community.

4. ALTERNATIVES ANALYSIS

4.1 General.

BPA's consideration of alternatives is subject to the rule of reasonableness. The rule of reason "guides both the choice of alternatives as well as the extent to which the EIS must discuss each alternative." *Am. Rivers v. Fed. Energy Regulatory Comm'n*, 201 F.3d 1186, 1200 (9th Cir. 1999). In this DEIS, BPA has eliminated every alternative that does not run through Camas and its environs without a reasonable level of analysis and discussion when compared to the remaining action alternatives. Accordingly, BPA's approach does not pass scrutiny under the rule of reason and allow a reasoned choice of alternatives.

14677-6

NEPA stresses the importance of alternatives, such that alternatives analysis is the heart of NEPA. NEPA, as interpreted by the courts, is to prevent agency tunnel-vision, or an agency-mission mentality. NEPA mandates that agencies open the analysis in order to pursue environmentally preferable alternatives. BPA has not done so through this DEIS. Rather, it has dismissed reasonable alternatives without adequate analysis, and relied exclusively on its existing transmission line corridor through Camas as the only alternative.

4.2 Inadequate Consideration of Alternatives.

BPA has not given adequate consideration to reasonable alternatives. All of BPAs transmission line alternatives run through Camas. Federal agencies, like BPA, are required to rigorously explore and objectively evaluate all reasonable alternatives. *Greenpeace v. National Marine Fisheries Service*, 55 Supp.2d 1274-75 (W.D. Wash. 1999). BPA has not adequately analyzed and documented why no alternative will be advanced in the EIS process that avoids running the proposal directly through Camas. The existence of reasonable, but unexamined alternatives, renders an EIS inadequate. *Friends of the Southeast's Future v. Morrison*, 153 F.3d

14677-7

- 14677-5 Please see the response to Comment 14291-3.
- 14677-6 As discussed in the responses to Comments 14443-1 and 14596-1, BPA believes that it has complied with NEPA by considering a reasonable range of alternatives, that it has provided sufficient reasons in Section 4.7, Alternatives Considered but Eliminated from Detailed Study, for the elimination of certain alternatives from detailed study, and that the alternatives analyzed in detail in the EIS permit a reasoned choice from among a variety of alternatives.
- 14677-7 Please see the response to Comment 14677-6.

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14677-7 1059, 1065 (9th Cir. 1998); *see also Muckleshoot v. United States*, 177 F.3d 800, 814 (9th Cir. 1999). BPA's failure to consider alternatives other than those that are seemingly indistinguishable from one another renders the alternatives analysis inadequate. *See League of Wilderness Defenders v. Marquis-Brong*, 259 F.Supp.2d 1115, 1124 (D. Ore. 2003)(BLM EA/FONSI inadequate where defendant's EA only evaluated action alternatives that included salvage logging and not a "rehabilitation only" alternative).

14677-8 4.3 West Alternative. All of the alternatives run through Camas. While not BPA's preferred alternative, the West Alternative continues to be evaluated as an action alternative. The City of Camas strongly objects to the West Alternative as Segments 40, 41, 44, and 46 as well as 50 all run through Camas and have direct impacts on lands developed for or planned and zoned for economic development activities. That alignment creates a new corridor with substantial unmitigated environmental impacts. Further discussion on this can be found in the City of Camas letter to BPA dated March 19, 2012, at page 3.

5. UNDERGROUNDING

14677-9 "Electrical cable for power distribution systems has been placed underground for decades. In fact, it would be unusual today to even consider installing aerial power or communications cable in a new residential development, office park, government or institutional campus." 65 *Underground Construction* No. 6 (June 2010).

5.1 Long-term Economics.

Despite the increased cost of undergrounding, "there are areas, primarily in urban centers, where short segments of power transmission networks must be put underground. Today, advances in technology make it more feasible to bury high-voltage power cable." *Id.* The City of Camas has long-recognized this trend. As noted in earlier comment by the City to BPA, eighteen years' ago the City adopted standards for electrical transmission lines and distribution facilities. Ordinance 2030. BPA should be a leader in addressing this trend, particularly in light of the competition from the global economy:

14677-10 "In Germany, a country that stands near the top of world rankings for total wind capacity, distribution lines are mostly underground – a considerable factor in mitigating localized power outages caused by downed trees. Destruction of infrastructure during WWII explains why Germany has a more modern and reliable electricity system compared to the US. . . . Historically avoided due to premiums on installation and maintenance, underground transmission lines may be a solution to overcoming stateside NIMBY battles."

<http://thepowergeneration.blogspot.com/2011/01/opportunity-for-underground-electricity.html>. And, the lessons of Hurricane Sandy and the continual costs associated with repair and replacement of above-ground systems in the face of more extreme weather conditions cannot be ignored:

14677-8 BPA did consider the likely impacts to lands planned for development along the lower part of the West Alternative. Considering that, and numerous other issues and impacts related to each route, BPA did identify the Central Alternative using Central Option 1 as its Preferred Alternative.

14677-9 Comment noted.

14677-10 Please see the response to Comment 14283-1.

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- 14677-10 “It was well understood that the superstorm's harm would reach far beyond whatever wreckage it left in its path. Sandy's impact would spread far, wide, and quickly through the electric power grid—a vital lifeline that underpins every aspect of modern life, but one that is easily severed by falling trees and saltwater.”
- <http://news.nationalgeographic.com/news/energy/2012/11/121102-hurricane-sandy-power-outages/>. And while there is potential for damage to underground systems, “You can make watertight compartments for the stuff that's underground,” said Jeffrey Dagle, chief electrical engineer at the U.S. Department of Energy's Pacific Northwest National Laboratory.” *Id.*
- And, BPA admits that “[S]ituations where 500 kV EHV lines are constructed in urban/suburban are rare.” DEIS, Appendix D, at 27. Unlike the potential limitations for undergrounding that may occur in other settings (as discussed in DEIS Appendix D), there are no conflicts of use or access issues with construction of an underground system in the existing BPA corridor through Camas. That is clearly the most appropriate measure to address the project's objectives.
- 14677-11 5.2 Homeland Security. “Aside from cost, it is generally accepted that underground cable is more secure than overhead cable.” 65 *Underground Construction* No. 6 (June 2010). The DEIS does not adequately address the risks of terrorism to readily accessible overhead transmission lines. BPA does not serve the community by development of a taller tower array (to replace an existing array), leaving the same exposure to damage (natural or man-made) as exists today. The short-term savings are insufficient to support the long-term risk of such an approach.
- 14677-12 5.3 Mitigation of Social, Visual and Economic Impacts on Camas Community. The undergrounding of this new transmission system and capacity best serves BPA, its customers and the Camas community. The issues of environmental justice and land use are addressed above. In the next section, the City specifically addresses the inadequacy of the assessment of visual impacts.
6. VISUAL IMPACT
- 14677-13 6.1 Inadequate Assessment of Impacts. Appendix E, and Table 3.3, do not adequately assess the impacts of a new 230 kV double-circuit tower and a new 500 kV single-circuit tower arrays through the heart of the City of Camas. Attached to this letter is a City of Camas Visual Assessment Study that more clearly demonstrates the significant visual impact of the proposal on the Camas community. The Study provides a thorough assessment of the segment of the preferred alternative through the City, and 7 viewpoints not included in the DEIS.
- 14677-14 6.2 Lewis and Clark Trail Highway. The DEIS fails to adequately address impacts to the State Route (SR) 14 National Scenic Byway (Lewis and Clark Trail Highway). This issue is addressed in greater detail in Section 10, below.

- 14677-11 Chapter 23, Intentional Destructive Acts, addresses the risks of terrorism to transmission facilities and the impacts such acts could cause. The incremental increase in risk to landowners from the presence of the proposed project would be minimal.
- 14677-12 Comment noted.
- 14677-13 Please see the response to Comment 14171-10 for further explanation of the methodology used in the visual assessment. Additional photographs and simulations are included in the Final EIS for the Camas / Washougal area (see Figures 7-16 through 7-19). These additional viewpoints illustrate 4 locations viewing the alignment specifically within a suburban residential context.
- 14677-14 The Lewis and Clark Trail Highway is discussed in Chapter 6, Recreation, and Chapter 7, Visual Resources. Two existing transmission lines cross SR-14 and the new line is proposed to replace one of the existing lines in the same location. This is a very developed area of Camas, including commercial and industrial uses close to the crossing. Undergrounding the transmission line is discussed in Section 4.7.7, Undergrounding the Transmission Line, and Appendix D. Additional underground studies of the Washougal/Camas and Castle Rock areas are included as Appendix D1.

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7. CLEAN WATER ACT AND ESA

14677-15 The proposed alternatives do not represent the least environmentally damaging practicable alternative, as required by Section 404(b)(1) of the Clean Water Act. The action alternatives, all of which result in numerous river crossings in the vicinity of Camas, do not represent the least environmentally damaging practicable alternative, as required by section 404(b)(1) of the Clean Water Act, and its implementing regulations. The proposed transmission line alternatives cross the Columbia River, Lewis River, East Fork Lewis River, Coweeman River, Cowlitz River, Washougal River, Kalama River and many other creeks, streams and wetlands identified in the DEIS. A number of these crossing are, in fact, avoidable, under alternative transmission alignments. Other practicable alternatives exist that are capable of being implemented with due consideration to cost, logistics and technology.

14677-16 Minimization of impacts to ESA-listed species and critical habitat has not been adequately documented. The DES fails to adequately identify and study alternative alignments in the vicinity of Camas that would have less impact on ESA-listed species and their habitat.

8. SHORELINES AND WATERWAYS

14677-17 The proposed transmission line alternatives are inconsistent with the goals and policies of the City of Camas and the Clark County Shoreline Master Program, both of those programs approved by the State of Washington under the Shoreline Management Act (SMA), Chapter 90.58 RCW. The action alternatives would cross the Columbia River, Lewis River, East Fork Lewis River, Coweeman River, Cowlitz River, Washougal River, Kalama River and many other creeks, streams and wetlands identified in the DEIS. All of the action alternatives result in numerous crossings in the vicinity of the Columbia River and Camas, although a number of these crossing would be, in fact, avoidable, under alternative transmission alignments. BPA's transmission facilities will impact shorelines because they are sited over and within 200 feet of regulated shorelines and their associated wetlands.

The policies contained in RCW 90.58.020 call for preserving the natural character of shoreline areas and protection of the resources and ecology of shoreline areas. RCW 90.58.020. The siting of utility transmission lines are not exempt from these policies. The DEIS is inadequate as it contains no more than two paragraphs discussing impacts to areas governed by the State SMA and contains no discussion of how the action alternatives minimize impacts to shoreline areas.

9. SAFE DRINKING WATER ACT AND CITY WATER SUPPLY

14677-18 The DEIS fails to adequately analyze and mitigate impacts to the City's Watershed, which is used as a potable water source. A portion of segment 35 is planned to cross a City property (Section 4, T2N, R2E, WM) along the west property line. The City and its public water utility identifies three main concerns: water quality, loss of sustainable timber revenue, and access to the watershed.

- 14677-15 As described in Section 27.10, Clean Water Act, BPA has worked with the Corps to prepare a Section 404(b)(1) alternatives analysis evaluation. This analysis informs the Corps of the availability of practicable alternatives to the proposed project and identifies the least environmentally damaging practicable alternative.
- 14677-16 BPA is in consultation with the Services (USFWS and NOAA Fisheries) regarding impacts on federally listed species, and would implement any mitigation required through a Biological Opinion to lessen impacts on ESA listed species.
- 14677-17 As described in Section 28.4.1, Shorelines and Wetlands, BPA has worked with Ecology, and Clark and Cowlitz counties to address impacts from any proposed transmission facilities located within 200 feet of state shorelines or their associated wetlands.
- 14677-18 Please see responses below.

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14677-19 9.1 Water Quality. The City is opposed to any use of herbicides in areas that contribute flow to the drinking water intakes. Vegetation control must be by mechanical means. Slope stability and erosion control can also impact water quality and must be avoided. The DEIS does not adequately address mitigation measures in this area.

14677-20 9.2 Sustainable Timber. The City of Camas has adopted and is implementing a sustainable forest management plan for this area adjacent to the Jones Creek and Boulder Creek Watersheds. The preferred alternative appears to run through a portion of the forest management area that is associated with the City's watersheds. The forest management plan is available at http://www.ci.camass.wa.us/images/DOCS/WATER_SEWER/REPORTS/120312camasforest%20mgmtplanfinal.pdf. The resources from the forest management plan provide direct and sustainable revenues that impact water utility rates to the City residents and businesses. The first unit for sustainable harvest is in direct conflict with the proposed alignment. The City needs a clear understanding of what impacts the alignment will have on future harvest schedules. The DEIS fails to address this impact, or the impact on timber revenues to the City. DEIS Section 11.2.5 does not address impact on City revenues in this forest management area.

14677-21 9.3 Access. The DEIS acknowledges that BPA's preferred alternative would demand the most new road development of any alternative. The DEIS does not adequately address the impact of additional public access to the watershed, including issues for security and protection of the resource. Impacts include water quality, illegal hunting and off road vehicle impacts. Mitigation measures for these impacts are not identified. Additionally, BPA does not have current rights to cross City property in this area.

10. TRANSPORTATION

10.1 Inconsistency of Analysis.

14677-22 DEIS (Volume 1, pg 4-26) eliminated from further consideration the I-5 corridor since the "transmission towers would create a new safety hazard for motorists . . . and interfere with future highway expansion. . . . For these reasons, BPA eliminated this alternative from consideration." The DEIS does not identify (and should have identified) these "new safety hazards for motorists." Additionally, BPA fails to address why any such impacts or hazards were of such a scale to safety so as to eliminate the route from further consideration as an alternative.

14677-23 The Draft EIS does not apply the same consideration to local roads within Camas and SR-14 as it did to I-5. An equivalent evaluation of potential safety hazards to motorists and potential to interfere with future road expansion within the City of Camas is necessary. This analysis should include but not be limited to:

- the approximate ½ mile stretch of SR-14 and frontage road between Towers 52/11 and 52/13 as well as SE 11th Avenue; and
- the proximity of Tower 52/12 as a potential clear zone hazard for vehicles that run off the SR-14 exit or SE 11th Avenue.

14677-19 Impacts to water resources are discussed in Chapter 15. Water quality would be protected from herbicides and pesticides used for vegetation control as described in the response to Comment 14160-1. Water quality would be protected from oils, fuels, or other hazardous materials as described in Table 3-2 as follows: avoid storing, transferring, or mixing where accidental spills could enter surface or groundwater; have spill response and clean-up materials on site and clean up all spills immediately; maintain, fuel, and repair heavy equipment and vehicles using spill prevention and control measures; clean contaminated surfaces immediately following any spill incident; fixed bulk fuel storage facilities will meet or exceed containment requirements described in 40 CFR 112.7; all equipment fueling operations shall use pumps and funnels and absorbent pads; and equipment shall be refueled away from natural or manmade drainage conveyance including ditches, catch basins, ponds, wetlands, and pipes. Additional fueling requirements apply in some sensitive resource areas.

14677-20 Sections 11.2.4.3 through 11.2.7.3, Private and Non-DNR Public Timber Production have been revised to include the City of Camas timberlands. The impacts to these lands are included in Tables 11-10 and 11-11.

The timber analysis in Section 11.2, Environmental Consequences, is not intended to serve as an appraisal of the value of timber on individual properties. It is instead intended to provide information sufficient to allow BPA to compare timber-related impacts across alternatives. Timber landowners whose land the project would cross would have an opportunity to negotiate compensation with BPA. During those negotiations, specific details such as those raised in this comment may be addressed.

14677-21 BPA would access the new line using an existing road into the watershed. New, shorter sections of road would be built to access each of three towers proposed on the watershed but these would come off of the existing road. BPA does not anticipate that the existing road would generate additional unauthorized access. The new sections of road to the towers would not be accessible from any public road. If the existing road is not gated, BPA would work with the City of Camas to determine if a gate is appropriate or needed. Section 3.9, Access Roads, discusses gates. Section 5.2.2.2, Operations and Maintenance discusses unauthorized access. Section 15.2.2.1, Construction, discusses construction impacts, including impacts to stream hydrology. Although local impacts from sediment delivery could occur, properly implementing erosion control measures and best management practices would minimize the amount of sediment delivered to streams that are either crossed by access roads or otherwise impacted by surface disturbance. Please also see the response to Comment 14677-19.

14677-22 As stated in the EIS, the transmission towers themselves would create a new safety hazard for motorists because the median is extremely narrow in most areas, with little or no room to accommodate 500-kV towers or a 150-foot right-of-way. Any structure close to the roadway would be a hazard if an accident

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- 14677-22 occurred. Section 4.7.2.5, Interstate 5 Highway Median Alternative, also lists other reasons for eliminating this alternative from consideration.
- 14677-23 In 2010, BPA worked very closely with the Washington Department of Transportation during the SR-14 expansion project within the area of proposed towers 52/11 through 52/13. At the time, WDOT used the existing BPA easement for the construction/installation, use, and maintenance of SR-14 to a four-lane highway, off ramp, roundabout at Union Street, storm water treatment area, right-of-way fence, water line, and building a new bridge in the SR-14 highway right-of-way north of the existing Camas Slough Bridge. As part of the project, BPA's right to rebuild, upgrade and construct transmission lines, structures, and appurtenances was memorialized in a Land Use Agreement, dated March 8, 2010, between WDOT and BPA. Also contained in this agreement were safety requirements reflected in the design of all WDOT facilities constructed including the areas the commenter mentions. These designs were developed after many hours of coordination and analysis by BPA and WDOT engineers and provided for the safety of motorists and for the safety of BPA transmission facilities. These agreements are available from BPA or WDOT upon request.

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14677-24 | Additionally, as discussed above, in a post-911 era BPA must consider and evaluate the vulnerability of these towers to acts of terrorism due to their proximity and accessibility of these towers to the heavily-traveled roadways.

10.2 Scenic Highway.

The Lewis and Clark Trail Highway (SR-14 in Camas), is a Washington Scenic Byway and recognized by the National Scenic Byways Program. As recently as 2011, the national Scenic Byways Program awarded \$193,000 for SR-14 Scenic Byway projects in the area. http://www.bywaysonline.org/grants/funded/funded_report?report=summary_state&format=pdf. (SB -2011-WA-09).

Additionally, the Lewis and Clark Trail Highway Corridor Action Plan was adopted in September 2011. <http://www.wsdot.wa.gov/NR/rdonlyres/4BDEC9EB-5BA5-4AF2-B499-A866D5B1BF1E/0/LewisandClarkCMP.pdf>. This planning effort was funded by the State funds and an earlier federal Scenic Byways Program grant. The Plan was developed through extensive public involvement and reflects regional interests. As described in the Plan:

The plan creates important opportunities for interpretation and stewardship along the Washington segment of the Lewis and Clark National Historic Trail and provides the foundation for sustaining long-term development efforts associated with visitor interest in the history of the Lewis and Clark Expedition.

14677-25 | BPA must consider the impacts of its proposal on the Plan's purpose to leave a lasting legacy of improvements (interpretive, safety, infrastructure, heritage protection) along the Lewis and Clark Trail Highway; enhance visitors' experiences along the Lewis and Clark Trail Highway; and, encourage development of projects that are consistent with the values and perspectives of local tribes and communities along the trail route.

The following quote is prominent in the Plan:

*"The work that we are now doing is, I trust, done for posterity
 In such a way that they need not repeat it.
 We shall delineate with correctness the great arteries of this country.
 Those who come after us will fill up the canvas we begin."* - Thomas Jefferson

Consistent with the Plan and the Jeffersonian caution to plan with a future vision, BPA project planning and design efforts should address, not ignore, this important resource. Again, undergrounding of a short segment of the new transmission line corridor, within BPA's existing right of way, is the proper approach.

11. CONCLUSION

14677-26 | The City of Camas appreciates BPA's need for planning and, when necessary, development of additional transmission capacity throughout the region. However, the DEIS fails to adequately address the significant adverse environmental impacts on the Camas community of

14677-24 Chapter 23, Intentional Destructive Acts, discusses potential impacts from acts of terrorism.

14677-25 The Lewis and Clark Trail Highway is discussed in Chapters 6, Recreation, 7, Visual Resources and 27, Consultation, Review, and Permit Requirements.

Two existing transmission lines cross SR-14 and the new line is proposed to replace one of the existing lines in the same location. Undergrounding the transmission line is discussed in Section 4.7.7, Undergrounding the Transmission Line and Appendix D, I-5 Transmission Corridor Project Underground Route Study. Additional underground route studies of the Washougal/Camas and the Castle Rock areas are included as Appendix D1.

14677-26 Please see the response to Comment 14677-6 concerning the consideration of a reasonable range of alternatives in the EIS. In addition, BPA believes it has adequately addressed potential environmental impacts in the Camas area throughout Chapters 5 through 22 of the EIS.

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the greatly intensified use of new, above-ground 230 kV double-circuit tower and 500 kV single-circuit tower arrays.

14677-26 The heart of any reasonable alternatives analysis is the reasonable consideration of alternatives. BPA has not seriously evaluated any alternatives that do not run through the heart of the City of Camas. A disinterested reader of the DEIS is left with a firm and fair impression that BPA had already decided its course and has written a justification document, and not a reasonable analysis of alternative alignments and a balanced evaluation of environmental impacts.

14677-27 It is also evident to the City that the use of undergrounding in an urban environment, although recognized in the DEIS as a more secure and an increasing and more commonly accepted and employed practice, is given inadequate consideration by BPA. Instead, BPA relies on short-term cost considerations, only. Appendix D to the DEIS overstates the financial impacts of undergrounding by focusing on the entire length of the project, and not on the much more reduced financial impact of undergrounding within BPA's existing utility corridor through urban Camas. And, Appendix E understates the visual and financial impacts on the Camas community through reduced area property values, the resulting impact of lost tax revenues and reduced funding for community services.

14677-28 The City of Camas welcomes the opportunity to further discuss with BPA any of its comments and concerns. Please contact Phil Bourquin, Camas Community Development Director, 360.817.1562 or pbourquin@cityofcamas.us.

Sincerely,

Foster Pepper PLLC



P. Stephen DiJulio
Joseph A. Brogan

Attachment: Visual Impact Study

cc: Congressional Delegation
Corps of Engineers
Office of the Governor
State Energy Office
State Department of Commerce
Clark County
City of Washougal

14677-27 Please see the response to Comment 14283-1.

14677-28 BPA has and will continue to coordinate comments and concerns with the City of Camas through Mr. Bourquin.

14678

BRANTLEY FAMILY TRUST, CHERYL KAY BRANTLEY

03/24/2013

14678-1 I am writing on behalf of the Brantley Family Trust, which was established as a legacy for our children. Our properties are on route 26 and are not suitable for your towers or lines. We have worked hard to make this property accessible to my husband who lost his legs in Vietnam.

14678-2 We have wetlands/a pond that serves to supply native species with cover and food, some of these species would be considered threatened or endangered. We do not have the money to pay for a wetlands biologist or ecologist to survey our land to prove this to you, so if you did choose our property on route 26, we would expect BPA to pick up the tab. We have several outbuildings that WILL NOT be removed for your towers or lines.

14678-3 My husband's shop is one of the only things that provide him pleasure and you WILL NOT take that away from him if you choose our land for your property. BPA owns the majority of the West Alternative, which

14678-4 would be what the majority of people have stated to you to use. Most of your West Alternative is public land. "PUBLIC LAND FOR PUBLIC USE" I say and I say it loudly. If you choose our land to build your

14678-5 project or string lines across my property for your project, you will be taking our life savings that are planned to be passed on generationally. Take that away and you impact not only us, but the current and future members of our family. Mark my words, we will not lie down quietly and allow it to happen.

14679

MICHAEL BURNS

03/24/2013

14679-1 The current recommendation for the BPA corridor will cause a catastrophic forest fire. The blame of the loss of property and life will fall on the BPA. This is not a if but a when. 70 plus miles of the best timber land

14679-2 in the world will be lost for all of time! Not to mention the environmental devastation. Sediment delivery to our streams and loss of fish habitat. There is no logical reason for this line to go in! The leaders of the

14679-3 BPA must realize this is wrong and kill the deal. If it isn't killed, we will be! When the habitat dies, so do we!!!!!!!!!!!!!!!!!!!!1

- 14678-1 Thank you for your comments. Specific comments are addressed below.
- 14678-2 Segment 26 is not part of the Central Alternative using Central Option 1, BPA's Preferred Alternative. BPA's has conducted various environmental surveys on sections of roads, transmission line right-of-way, and substations needed for the Preferred Alternative.
- 14678-3 Segment 26 is not part of the Central Alternative using Central Option 1, BPA's Preferred Alternative.
- 14678-4 Comment noted.
- 14678-5 Please see the response to Comment 14328-5.
- 14679-1 Please see the response to Comment 14242-1.
- 14679-2 To avoid homes, much of the proposed 79-mile line would cross timber land. Landowners would be compensated for the timber removed and for an easement that would take a 150-foot wide path out of timber production. Impacts to streams and fish are covered in the EIS in Chapters 15 and 19.
- 14679-3 Comment noted. Chapter 1 describes the need for the project. Please also see the response to Comment 14316-2.

14680

PETER J MENZA

03/24/2013

I am a current resident along the existing right of way. BPA's recent release of information suggesting an alternate route was met with a modest sense of relief. The central alternative seems like a reasonable compromise. Ideally, BPA would select the route that will minimize the fiscal and physical impact these 500KV lines will have on the majority of landowners.

14680-1 Clearly, there are a number of factual items that play into this decision. EMF impact, wetlands impact, property / tax devaluation, aesthetic considerations, and the need for a larger right of way (ROW) to accommodate future community growth - my understanding is this will be the first new line in the area in the last 60 years . While the draft EIS offers some insight into the process and current mode of thinking, it still appears that BPA could select another option going forward and as such, leave all of us at continued risk. I am hopeful the Senior Leadership in BPA will support the existing selection noted in the draft EIS and put this long story to bed.

Thank you

PJM

14681

MARY J HARRIS

03/24/2013

14681-1 BPA, Thank you for listening to the majority of affected homeowners, and choosing an alternative that will have a lesser impact on SW Washington citizens. I have been a strong proponent of the gray line and was sorry to see that you rejected that line since it would have impacted the least number of citizens. I understand the concerns over the beauty of the rural lands and wildlife and property devaluations.

However, the most important consideration is the impact of EMF's on our children's health. It's extremely important to keep the 500KV lines away from the schools and densely populated neighborhoods that are teeming with children. I ask you to stay firm with your preference of the Central Alternative and keep the towers and lines away from the West alternative that impacts the most people. Thank you.

14680-1 Comment noted.

14681-1 Comment noted.

14682

SHELLEY O'BRIEN

03/24/2013

14682-1 In BPA's vision statement, BPA commits to responsible environmental stewardship. The environment is comprised of the land, water and air and all the life it contains. People are a part of that environment, and purposefully locating 500kV power lines next to schools, homes and businesses is not "responsible stewardship" with regards to the EMF emissions created by these power lines.

14682-2 With the worldwide studies on EMF and their effects on people, it would not be prudent to deny there is a possible link between cancers and EMF emissions. Prudent avoidance is the responsible decision in the location of these 500kV power lines. One person affected is one too many. With all the unoccupied land east of all the lines proposed, it is hard to imagine why BPA chooses lines close to any existing homes and schools and businesses.

If BPA has decided that the 500kV lines are necessary, locate them as far away from humans. Be responsible stewards of the human environment.

14682-1 Please see the response to Comment 14328-6.

14682-2 Comment noted.

Group type: Special interest group

Please ADD me to the mailing list.

Comment:

14683-1 Bonneville Power Administration: On behalf of A Better Way for BPA, a coalition of rural property owners in Cowlitz and Clark Counties, I submit the attached comments in regards to the I-5 Corridor Reinforcement Project Draft Environmental Impact Statement dated November 2012. The attach comments relate to the impact of the project on potable water supplies from potential contamination. If you should have any problems in opening this attachment or questions about its content, please do not hesitate to contact me.

Group type: Special interest group

Please ADD me to the mailing list.

Comment:

14683-2 Bonneville Power Administration: There was an error when I attempted to previously submit these comments. Thus, I am resubmitting as I am unsure if BPA actually received the submittal. On behalf of A Better Way for BPA, a coalition of rural property owners in Cowlitz and Clark Counties, I submit the attached comments in regards to the I-5 Corridor Reinforcement Project Draft Environmental Impact Statement dated November 2012. The attach comments relate to the impact of the project on potable water supplies from potential contamination. If you should have any problems in opening this attachment or questions about its content, please do not hesitate to contact me.

14683-1 Thank you for your comments.

14683-2 BPA received the attachment successfully from both attempts.



**Bricklin &
Newman
LLP**

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Reply to: Seattle Office

March 24, 2013

Bonneville Power Administration
I-5 Corridor Reinforcement Project
PO Box 9250
Portland, OR 97207
e-mail: I-5@bpa.gov

**RE: Comments on the November 2012 Draft Environment Impact Statement
for the I-5 Corridor Reinforcement Project –Potable Water Supplies**

Bonneville Power Administration:

I write on behalf of A Better Way for BPA and its members to provide comments on the Draft Environment Impact Statement for the I-5 Corridor Reinforcement Project (DEIS) in regard to the DEIS's failure to adequately address the impact of this project on potable water supplies, specifically as it relates to potential contamination of these supplies. Thank you providing the opportunity for the members of the communities impacted by this proposed project to comment.

14683-3

A Better Way for BPA is a coalition of rural property owners in Cowlitz County and Clark County working together to address concerns over the construction of the Bonneville Power Administration's (BPA) proposed I-5 Corridor Reinforcement Project in southwest Washington. A Better Way for BPA is concerned about the impacts - economical, environmental, and aesthetical - that the proposed transmission line will have in their communities. A Better Way for BPA believes that reasonable alternatives are available to BPA that will maintain a healthy and diverse environment in their southwestern Washington communities. Specifically, A Better Way for BPA asserts BPA failed to adequately disclose, discuss, and analyze potential contamination impacts to the Troutdale Aquifer, a sole-source aquifer underlying almost all of the project area.

A Potential for Toxic Contaminants to Endanger Southwest Washington's Water Source

14683-4

The Troutdale Aquifer underlays almost all of Clark County, from the Lewis River to the Columbia River and east towards Skamania County, and provides Clark County with 99 percent of its water supply. Regardless of the action alternative selected, the transmission line will transect the aquifer and have the potential to adversely impact the aquifer.

- 14683-3 Thank you for your comments. Specific comments are addressed below.
- 14683-4 EPA reviewed the Draft EIS and submitted comments in a letter dated March 25, 2013.

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14683-4 The Troutdale Aquifer is an EPA-designated sole-source aquifer. DEIS Map 15-3. The Safe Drinking Water Act, 42 USC §303h-3(e), requires that when a federally-financed assisted project with the potential for contamination is proposed, the Environmental Protection Agency (EPA) is to review the project. Given the known hazardous waste sites along routes and BPA’s acknowledgment that additional sites may be encountered, there is a potential for contamination that mandates EPA review. While the DEIS, at Section 15.1.5, recognizes the importance of the Troutdale Aquifer and its status as a sole-source aquifer, the DEIS is devoid of any reference to the EPA review process. DEIS Chapter 27 – Consultation, Review, and Permit Requirements. In fact, there is no reference to this requirement even in regards to recognized Superfund sites – the BPA Ross Complex and the Reynolds Metals Site.

14683-5 Given the significance of this issue, A Better Way for BPA retained the services of Richard Dyrland, a resource analysis and supervisory hydrologist, to review the DEIS in regards to the potential for toxic contaminants to enter water resources. Mr. Dyrland’s comments were submitted under separate cover but support the information presented within these comments.

- **Disclosure and Analysis of Contaminated Sites is Vital to a Reasoned, Informed Choice of Alternatives within the Troutdale Sole-Source Aquifer**

Since residents in rural areas are largely served by private wells that draw from the Troutdale Sole-Source Aquifer, the disturbance of contaminated areas from construction activities raises concerns about the potential for contaminants to enter the aquifer and, subsequently, the residents’ wells.

14683-6



The EPA’s review process mandated by the Safe Drinking Water Act would be especially important for this project given the depth to groundwater in areas with known contamination. DEIS Appendix J provides mapping that shows depth to groundwater, with areas having a depth of less than 60 inches (5 feet). Specifically, for Segment 28, the portion of the line that transects the International Paper Mill and Solid Waste contamination site (International Paper Mill), there is hash-marking on the map to show shallow groundwater and the maps denote two towers (Tower 28/8 and Tower 28/9) in the area of shallow groundwater. DEIS Appendix J, Map E-5; see also, Map E-6.

The DEIS acknowledges the presence of the contaminated International Paper Mill site. DEIS at 10-2; 10-14. However, there are actually multiple hazardous sites in the area. Segment 28 appears to pass through the area encompassed by both of these sites. The Chelatchie Tank Farm [Washington ID#30204] and the International Paper Mill [Washington ID#1031 and ID#1032], both of which are on Washington State’s Toxics Clean-Up Program list that is administered by

- 14683-5 Responses have been prepared for Mr. Dyrland's Comments 14775-1 through 14775-13.
- 14683-6 Hazardous waste and contaminated sites reported to environment regulatory agencies crossed by the project are summarized in Section 10.1.2, Toxic and Hazardous Substances. At known contaminated sites, before construction work would begin, EPA and state agencies (e.g., Ecology, ODEQ) would be notified and plans would be in place to address and mitigate any known or potential areas of contamination that may be encountered. In addition, as stated in Section 10.2.2.1, Construction, if unreported (non-BPA) contaminated media (soil, surface water, or groundwater) is encountered during construction, work would be stopped, and a qualified environmental specialist would be contacted to evaluate conditions. The environmental specialist would characterize the nature and extent of contamination to evaluate the threat to human health and the environment. Appropriate remedial actions, including notifications to the appropriate environmental regulatory agencies (EPA, Ecology, ODEQ, and local health departments), and approvals by the appropriate agency, would be implemented to reduce the hazards to safe levels so that construction work could proceed.

EPA reviewed the Draft EIS and submitted comments in a letter dated March 25, 2013.

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the Washington Department of Ecology.¹ Chelatchie was identified in 1991 with PCB's "Suspected" in soil and groundwater and some petroleum. International Paper was identified in 1996 with "Suspected" PCBs in soils as well as some other chemicals. Current Ecology documents continue to show these sites as awaiting cleanup, with the Chelatchie site ranked at a concern level of 4 and International Paper at both a 2 and a 5.² But, without an assessment, the true nature of the contamination and the true level of risk is simply not known.

14683-6



While these sites have been suspected of PCBs (and other chemicals), there is no record as to a delineation of the contamination or the potential for subsurface, illegally deposited wastes. The DEIS is devoid of such analysis, simply asserting that contamination is not likely or that BPA would further investigate. DEIS at 10-14.

NEPA requires disclosure of impacts prior to the decision-making process, not at some point in the future after the decision has been made. The construction of towers within this area may encounter groundwater and, if present, introduce contamination into the sole source aquifer that the surrounding community relies upon for its potable water supplies. The community's water source would be forever impacted if contamination were allowed, even accidentally, into the aquifer.

Having the information as to the potential of this occurring is vital information needing to be disclosed within the DEIS. If there is a high potential for contamination, then the route will

¹Washington Dept. of Ecology, Hazardous Site List (February 2013), excerpted. It must be noted that the International Paper site (EPA ID WAD039112750) was federally listed in the mid-1990s, but its status was changed and archived by the EPA, with the file comment being that it doesn't qualify for the federal Superfund list based on existing information. Source: EPA Website, accessed 1/28/2013. However, the lack of a Superfund label does not discount the potential contamination that could exist at this site.

² Ecology establishes a 1 to 5 ranking system as to concern for contamination, with 1 being the highest level and 5 the lowest. Source: Ecology website, accessed 1/28/2013.

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14683-6 | need to be revised in order to protect the water supplies of this area. Or, BPA will expose itself to the liability for the harm the residents endure.

14683-7 | Information related to the potential for toxic contamination is essential due to the groundwater water depth given the excavation demands of transmission towers. The DEIS, at Section 3.2.2, states that five types of tower footings could be used – plate footings, grillage footings, spread footings, concrete shaft footings, or micropile footings. The DEIS states that most towers of for this project would use plate or grillage footings. For plate footings, a 4x4 steel plate is buried about 11 feet deep. For grillage footings, a 15x15 steel I-beam assembly is buried at 14-16 feet deep. The DEIS states that the excavated area would be at least 2 feet larger than the plate or grillage footing. For the other footing types, the DEIS states that spread footings would be at a depth of 11 feet. So, in general, footing depth is 11-16 feet.

14683-8 | The DEIS states that groundwater can be contaminated by excavation of existing contaminated soils but that mitigation measures would minimize impacts. However, mitigation measures don't specifically address contaminated soils nor does the DEIS adequately reveal sites of contamination. Without knowledge, excavation could occur in undisclosed contaminated areas with the results devastating to the community.

14683-9 | The DEIS contains detailed diagrams of the BPA Ross Substation Complex (Figure 10-1) and the Reynolds Metal Company Site (Figure 10-2) that allow the decision-maker and the public to be aware of where contamination is located in relationship to the transmission line and its towers. The same type of on-site, specific, detailed information should be provided for the International Paper Mill and Chelatchie sites. To perform this type of analysis would not necessarily require disturbance of the site. Reliable technology is available, such as Ground Penetrating Radar, which can be used to properly ascertain the groundwater depth and, to discover and delineate unknown, subsurface waste sites.³ Thus, at a minimum, BPA should conduct a more thorough analysis of potential contamination sites, using federal, state, and local resources. Once a complete list of sites have been ascertained, BPA should perform an analysis as to the presence of contaminants and how the transmission line could impact the land and water resources in the area so that full and complete information is presented to the decision-maker and the public.

- **The DEIS must provide full and complete information as to recharge areas for the aquifer.**

14683-10 | In addition, while the DEIS does provide text and mapping as to the location of the aquifer and to designated Critical Aquifer Recharge Areas (CARAs), the DEIS provides information only as to Clark County; asserting no data is available for Cowlitz County. DEIS at 15-3. While Cowlitz County is not fully planning under Washington's Growth Management Act (GMA), RCW 36.70, it is still required to designate and protect critical areas. RCW 36.70A.060(2); 36.70A.172(1)(d). A CARA is one of the critical areas identified by the GMA and Cowlitz County has adopted regulations related to CARAs. See, RCW 36.70A.030(5)(b); Cowlitz County Code (CCC), Chapter 19.15 Critical Areas; CCC 19.15.160 Critical Aquifer Recharge Areas. Thus, the statement in the DEIS that no data exists for Cowlitz County is erroneous as the

³ See Attachments – *Ohio State University* (2000) *Journal of Geophysical Research Letters*; *Ruffel and Kulessa* (2009) *Environmental Forensics – Application of Geophysical Techniques to Identifying Illegally Buried Toxic Wastes*.

- 14683-7 Please see the responses to Comments 14683-6 and 14677-19.
- 14683-8 Please see the response to Comment 14683-6.
- 14683-9 In response to comments received and to further clarify any potential environmental risks, BPA has obtained and reviewed additional site investigation information from the Washington Department of Ecology and EPA Region X, regarding the International Paper Company Mill and Solid Waste sites near Chelatchie. In 1988, EPA conducted a preliminary site assessment of the mill site property to identify any potential contaminants associated with mill operations. In 1994, EPA again investigated the site, focusing on the solid waste landfill. This study included soil sampling for contaminants and the conduct of an electromagnetic survey (EMS) to identify any presence of buried containers or drums. The results of the soil sampling did not indicate contamination of concern. The EMS survey did not indicate the presence of any buried containers or drums. Based on this information, EPA determined that further investigation of the site (by EPA) was not warranted. In 1997, Ecology conducted a Site Hazard Assessment of the mill site, including sampling at various locations. Limited petroleum soil contamination was identified at the site of a gas pump island and near an above-ground diesel storage tank. The site was ranked a #5 (the lowest priority) for further cleanup. In 1997, the mill property owner hired an environmental contractor to excavate and remove the contaminated soil to an onsite land-farming and bioremediation treatment process facility to reduce contaminants to acceptable levels. BPA has proposed a route that largely avoids areas of the mill site where historic operations occurred.
- 14683-10 Please see the response to Comment 14654-4.

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14683-10 county is legally mandated to protect these areas from degradation. The DEIS should be corrected so that all information about this valuable sole-source aquifer.

Conclusion

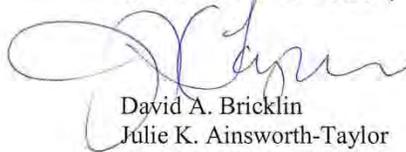
14683-11 The Bonneville Power Administration must not take lightly the potential for contamination of the Troutdale Sole-Source Aquifer. This aquifer provides potable water to thousands of residents within all of the action alternatives routes. Incomplete or archived data is no excuse for BPA's failure to adequately address this issue. The information is required in order for full disclosure and analysis of an alternative's impacts. All sites should have an on-site detailed analysis as to the location and depth of contamination so that remedial and protective steps may be taken to ensure the Troutdale Aquifer, or any water body, is protected from contamination.

A Better Way for BPA requests that BPA perform supplemental environmental analysis as to contaminated hazardous waste sites within the project alternatives' corridors and consult with the EPA as required by the Safe Drinking Water Act.

Thank you for your consideration of these comments.

Very truly yours,

BRICKLIN & NEWMAN, LLP



David A. Bricklin
Julie K. Ainsworth-Taylor
Attorneys for A Better Way for BPA

Enclosures

cc: Client

14683-11 EPA reviewed the Draft EIS and submitted comments in a letter dated March 25, 2013.

Two months later, the EPA broke through the cement pads and uncovered two buried tanks of creosote that were leaking into the surrounding soil.

Without the GPR data, the EPA probably wouldn't have found the buried tanks.

"The cleanup crew was hesitant to go to all that trouble and expense, until we showed them the data," said Guy.

"Whether the wood treatment company intentionally buried the creosote is a matter for the EPA to decide," Daniels said, "but this discovery confirms the usefulness of GPR for this application."

Daniels and his students will continue to inspect sites for the EPA as part of a cooperative agreement with that agency to further develop the technique.

They also received a grant from the National Science Foundation to improve the image quality of the 3-D maps they produce with GPR.

"As far as we know, we're the only group in the country that is working on this," Daniels said. The geophysicists will pursue this project together with researchers at Ohio State's Electroscience Laboratory.

#

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Contributed Articles

Application of Geophysical Techniques in Identifying Illegally Buried Toxic Waste

Alastair Ruffell¹ and Bernd Kulessa²

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²*School of the Environment & Society, University of Wales Swansea, Singleton Park, Swansea*

Ground-penetrating radar (GPR) is a rapid geophysical technique that we have used to assess four illegally buried waste locations in Northern Ireland. GPR allowed informed positioning of the less-rapid, if more accurate use of electrical resistivity imaging (ERI). In conductive waste, GPR signal loss can be used to map the areal extent of waste, allowing ERI survey lines to be positioned. In less conductive waste the geometry of the burial can be ascertained from GPR alone, allowing rapid assessment. In both circumstances, the conjunctive use of GPR and ERI is considered best practice for cross-validation of results and enhancing data interpretation.

Keywords: illegally buried waste, security, geophysics, resistivity, ground penetrating radar

The illegal burial of waste has become a major economic and environmental problem of the early 21st century, with concerns about this issue being tackled at high levels in national governments and the United Nations (2005). Legal disposal of waste, especially that of a toxic nature incurs considerable cost in transport, the running of a recycling plant and, in many countries, a tax on landfill (United Nations 2005). To avoid these costs, covert, often well-organized criminal operations have sprung up that dispose of waste (Ruffell and McKinley, 2008). The avoidance of costs to the criminal is a loss of revenue to the recycling plants as well as government tax collectors. However, these are only the beginning of the financial implications: once suspected through intelligence, such waste tips have to be detected, mapped (area and volume), characterized (waste type) and criminal charges brought against the perpetrator(s). Further costs are then involved in remediating the site (extraction and recycling or *in situ* monitoring or remediation). The total cost of illegal waste burial, if discovered, and charges brought can be far higher than legal disposal, yet the perpetrators frequently undertake this risk. The environmental implications of illegal waste disposal depend on the nature of the waste, but can include destruction of grazing, habitats, watercourses, groundwater supplies; ground subsidence, methane generation and release of toxic materials into the human environment/food chain.

Environmental pressure to recycle material (at high cost), the growth of world population, continuing consumer society based economies (Europe, North America, South East Asia) and rising consumer culture (India and China) will result in the scenario just described becoming more and more common (see the discussion of the Basel Convention, 1992). Ireland has been a model for this problem since the mid-1990s, where in the Irish Republic *bona fide* recycling plants recycle waste. The most common scenario is for this material to be covertly shipped, often by another operator, north of the border to Northern Ireland (to hamper detection and law enforcement) where previously dug pits or abandoned quarries are quickly filled with high volumes of waste (hundreds of tons) and covered with soil, sediment, or vegetation for example. It is this situation we examine here, although it should be noted that other, sophisticated means of illegal disposal also occur—these cases are not detectable by geophysics and are not considered further here. The waste is often ‘household’—mixed rubbish, but can include medical and industrial wastes of varying toxicity. Recent work in southern Italy and in the Venice area (Bavusi, et al., 2006; Cardarelli and Di Filippo, 2004) has shown similar patterns of activity.

The problem outlined above requires a number of steps to remediate, a key part of which may include rapid geophysical site investigation. Before a geophysical survey of a possible waste site is considered, the site itself has to be found, usually through remote sensing (especially aerial or satellite thermal imagery, but also ultraviolet response to vegetation [Silvestri et al., 2005]) and intelligence (e.g., vehicle tracking, neighbor complaints of smell and noise, historic records). The site is then usually visited to assess ground conditions and a number of trial pits may

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14684

ANDREW J OGDEN

03/24/2013

This comment is in reference to the economic impacts to the Castle Rock area and northern Cowlitz County. The proposed transmission line runs through populated areas and vacant land prime for development. Castle Rock has no major industrial or commercial areas, so it and all of the local gov't. entities rely on residential property taxes for support.

First and foremost, large transmission lines decrease property values. Local tax districts are operating on a razor thin line. Any decrease in property values could have dire effects on these entities. Local schools, public safety agencies, and public works agencies could then be put in a position to have to reduce services.

14684-1 Furthermore, the proposed line cuts through some of the only viable land in our area for development. This would essentially cut off any chance for our community to grow. Without residential growth, there will be no way for local tax districts or businesses to expand or even maintain their current levels. As the housing market recovers, the chances for development increase. Our area is in desperate need for expansion, not limitation.

As a member of the local fire department I can say that every cent matters. A decrease in the overall valuation of our district would have a negative effect on our operations. We need the revenue from these proposed developments. Adding to the residential inventory of the area is the only way a bedroom community can survive. There are other options for this proposed line that would have far less effects on local communities like ours.

14684-2 It should also be noted, that the Castle Rock area will receive none of the benefits from this projects completion. If we get none of the benefit, why does our area bear the brunt of this project. The BPA should reopen the scoping for this project and consider other route options.

14684-1 Please see the responses to Comments 14291-3 and 14632-3.

14684-2 Please see the responses to Comments 14329-7, 14443-1, 14638-4, and 14494-2.

14685

GEORGE H KINSEY

03/24/2013

Several questions are raised by the DEIS that BPA has put out.

- 14685-1 1) ronaal correct Why is this project being constructed in Clark County when there will be no benefit to Clark County's residents (BPA has said in past public hearings that it would be!)? If electricity is to be delivered to residents and/or businesses in Clark County, where are the tap off points?
- 14685-2 2) It is obvious that the project is to benefit residents in Oregon and California. Now the questions is, why were all the Oregon routes originally proposed left out of the public scoping and the DEIS? If cost is BPA's answer, then let Oregon and California pay for the new lines and the higher construction costs with higher rates.
- 14685-3 3) Since Southwest Washington does not need additional power, why do its citizens have to suffer from the effects of having a new transmission line that no one wants? These questions and many more have yet to be addressed to the satisfaction of the citizens of Clark County. Until they are, construction should not be commenced.

- 14685-1 The I-5 Corridor Reinforcement Project would benefit utilities throughout the southwest Washington and northwest Oregon area. The primary purpose of this project is to keep pace with the increasing energy needs within the project area.

Demand is growing in the Portland, Vancouver and Longview areas together. The entire area draws on the I-5 transmission lines in much the same way. While population and therefore the quantity of power needed in northwest Oregon is higher than in southwest Washington, improved transmission is just as important to provide reliable power in the Vancouver area as it is the Portland area. This is because the power grid operates as an integrated system. Since there is very limited local generation, the area receives most of its power through the I-5 corridor transmission system and is especially reliant on the 500-kV system at times of peak summer demand.

Clark Public Utilities receives most of its power through BPA's transmission system. Electricity is delivered to homes and businesses by lower-voltage feeder lines connected to BPA's existing high voltage network. Power reaches Clark Public Utilities from three primary sources. The first is an existing 230-kV network from Allston Substation located near Rainier, Oregon, which carries power to Longview and ultimately through Lexington to Ross Substation in Vancouver. The second connection point is an existing 115-kV network connected to Troutdale Substation. The third connection is two 230-kV lines from north Portland in the St. John's area connected to Ross Substation in Vancouver.

- 14685-2 Please see the response to Comment 14443-1.
- 14685-3 Chapter 1 describes the need for the project. Please also see the response to Comment 14685-1.

14686

LAURA FERNANDEZ

03/24/2013

14686-1 It's real simple. The EMF study that you refuse to acknowledge says to keep the towers away from people. So the simple solution is to go east into the less populated areas. That would impact the least amount of people and not put the towers into our playgrounds. The thought process should be "When in doubt, move it out !!! Take the beast, east. . . .

14687

MICHAEL O'BRIEN

03/24/2013

14687-1 Aside from commenting on the technical issues of your power line expansion and the inherent conflict of interest in BPA conducting their own studies on expansion (I question how you can objective, especially in the face of lessened power requirements from areas outside of WA, the economic and market fragility of the alternative power sources and the 'rush to judgement' by excluding options prior to public involvement), I ask that you simply do the right thing. Not the convenient one, not the one that benefits you, not the easy one. The right decision is expressed in your Mission Statement, Vision and Code of Ethics. Put the Beast East -- it is the only option that does not adversely impact the people of this area, its economies and future. Pretty simple. Do you have the courage to do the right thing?

14687-2

14686-1 Comment noted.

14687-1 Comment noted.

14687-2 Section 4.7.2.4, Northeastern Alternative, North of Silver Lake, Washington; Section 4.7.2.7, Transmission Line Routes Bordering U.S. Forest Service and WDNR Land East of the Project Area; and Section 4.7.2.8, Transmission Line Route East to Bonneville Dam, explain why potential routes farther east were considered but eliminated from detailed study. BPA believes that the reasons provided in the EIS for eliminating these alternatives sufficiently explain their elimination.

14688

GEORGE H KINSEY

03/24/2013

Several questions are raised by the DEIS that BPA has put out.

- 14688-1 1) Why is this project being constructed in Clark County when there will be no benefit to Clark County's residents (BPA has said in past public hearings that it would be!)? If electricity is to be delivered to residents and/or businesses in Clark County, where are the tap off points?
- 14688-2 2) It is obvious that the project is to benefit residents in Oregon and California. Now the question is, why were all the Oregon routes originally proposed left out of the public scoping and the DEIS? If cost is BPA's answer, then let Oregon and California pay for the new lines and the higher construction costs with higher rates.
- 14688-3 3) Since Southwest Washington does not need additional power, why do its citizens have to suffer from the effects of having a new transmission line that no one wants? These questions and many more have yet to be addressed to the satisfaction of the citizens of Clark County. Until they are, construction should not be commenced.

14688-1 Please see the responses to Comments 14494-2 and 14685-1.

14688-2 Please see the response to Comment 14443-1.

14688-3 Please see the response to Comment 14685-1.

14689

ANOTHER WAY BPA, RICHARD VAN DIJK

03/24/2013

Originally presented at Joint County Commissioners meeting at the fairgrounds Nov 10, 2010

Even after letting BPA know we were onto their game, they totally ignored everything.....saying it would take a year or two more...If they had done it, they would be no worse off than today. The schedule hasn't exactly held up has it.

Mr. Administrator, we know from Freedom of Information Act requests exactly how Secretary Chu required BPA to 'test' an accelerated NEPA process; and, to placate him with a speedy shortcut, you and your staff created a closed-door decision to exclude an Oregon option from this EIS. You hid it behind self-fulfilling reports, memoranda and emails, many written by former BPA employees rehired as contractors; and, we know, since these same folks that retired as manager of the Project Management group and as a Senior Project manager, just how close to the politics and practicalities of this project they were and still are.

These 'revolving door' insiders gave you the key words and hand-picked numbers with which you could 'justify' your predetermination, that Southwest Washington must provide the countryside and human corridor for this transmission line project, and that Oregon would be protected and preserved.

14689-1

It is clearly obvious that these analyses should have been written by unbiased, uninvolved and neutral experts. Using insiders for these analyses was neither ethical nor transparent and conflicts with your core values of openness and trust. Based on these spurious and tainted analyses, you come and tell us that we should lie down and allow you to build your transmission line and destroy the quality of OUR lives in our natural, human environment.

Mr. Administrator, very few of the assertions made in the past year by your public relations professionals have stood up to close and reasonable scrutiny. So few, that we do not think your NEPA EIS can legitimately or ethically continue. With no Oregon Option, the whole scope is skewed and lacks any semblance of unbiased neutral appraisal. We have asked repeatedly that you reopen the scope of this process to include the Oregon options; you arbitrarily and capriciously locked the Oregon options away from public discussion to keep Secretary Chu's impatience with BPA in check.

It is too late. We assert that you need to shut down this EIS, now. You need to start again, from the beginning, with no predetermined politically-motivated exclusions, and then allow the community and the courts to judge whether the resulting decision has met the letter and the spirit of the applicable laws.

14689-2

We know, Mr. Administrator, just how tiny the projected load growth in our Southwest Washington communities. This pales in comparison to the far more significant growth projections for Oregon - Portland, Salem and so on. We know that your PR professionals selectively cherry pick and gerrymander the load growth numbers to grossly inflate the proportional impact of Clark and Cowlitz counties.

- 14689-1 The opinions of the commenter are noted. BPA believes it has fairly and reasonably considered potential alternatives for the proposed project, and that it has provided sufficient rationale for eliminating potential routes in Oregon from detailed study in the EIS. Please also see the responses to Comments 14110-1 and 14443-1.
- 14689-2 Comment noted. Chapter 1 describes the need for the project. Please also see the response to Comment 14329-7.

14689-2 All of us know full well that you need us to believe our whole region's way of life, the survivability of civilization as you want us to know it, is dependent upon this project. We know you think we should shut up and stop our challenges, and that we will bring chaos and mayhem to the whole West Coast unless we turn our land, our houses, our farms, and our scenery of hills and valleys and trees and rivers, into a convenient bypass for the benefit of the Wall Street bankers and Canadians, and Californians, and Oregonians - with precious little benefit for Clark or Cowlitz counties.

14689-3 We know, Mr. Administrator, your project managers have given you some dollar figures that show by taking the Oregon route it would cost a few million dollars more than ripping Southwest Washington apart. Mr. Administrator, you know full well how trivial those dollars are compared to the millions and billions you spend over the years on the fish and the millions more you are now spending in Oregon for even more fish habitat in Oregon's rivers.

We, Mr. Administrator, do not want you to value fish any less, or to value Oregonians any less; we want you to value the people of Clark and Cowlitz counties as much as them. We want you to keep this questionable project from causing all the harm where it does none of the good. It belongs in Oregon; and if you believe we will accept anything less, Mr. Administrator Wright, you are entirely, and completely, utterly, Mr. Administrator, Wrong.

- 14689-3 Comment noted. In considering potential alternate routes for the proposed project, BPA did not engage in the sort of comparative valuation that the commenter suggests; rather, consistent with NEPA, BPA evaluated potential routes in light of the considerations identified at the beginning of Section 4.7, Alternatives Considered but Eliminated from Detailed Study.

BPA's Proposed I-5 Corridor Reinforcement Project Draft environmental impact statement comment form

Public review of and comment on this draft EIS will continue through March 1, 2013. Comments should be as specific as possible, with references to particular pages, sections and chapters. Additional or clarifying information that should be considered is helpful. Factual corrections are appreciated. BPA staff will review all comments received and respond to them in the final EIS.

Name (will be included with your comment in the final EIS)

Paula Overholtzer

Address

(Already on the mailing list.)

BPA's "Divide and Conquer" Strategy:

Divide: I've visited my Dole Valley neighbors enough to have observed their sentiment regarding the BPA proposal for Central Alternative routing: "We won our fight. This one's your fight." By coming up with so many possible alternatives, you were able to fragment your opposition. There is no way people will (in general) stand together on this. If my neighbors vehemently oppose the Central Alternative, they know that your next proposal might end up "back over (their) land and houses." Some of them are still bedraggled after the organized, high-energy opposition of 2009 and 2010. (I was hiking the Appalachian Trail and teaching in China during those years, or I'd have been more involved back then, too.)

14690-1

Conquer: Since announcing your project in 2009, you have met and spoken with thousands of stakeholders at public meetings. Your mailing list includes nearing 14,000 people, and you've reviewed more than 4,000 public comments. Obviously, people have expressed interest in the invasion. The problem is that people will not "hang on forever." As you have certainly noticed, the number of BPA or BPA-contracted employees at each of the public meetings held in December 2012 or January/February 2013 far outnumbered the concerned citizens who attended. Over time, people simply fade away. No matter how passionate they originally feel about the topic, they're not paid to attend the meetings the way you are, as federal government employees. You have a definite advantage: you can go on and on and on. For you, its a paycheck. In the end, you've got \$ 459 million to spend. Yee-haw!

So, in the big "Chess Game of Life," you have strategically played your pieces well.

Divide and Conquer. Check-mate!

You can tell that I think about this a lot,
Paula Overholtzer

Paula Overholtzer

February 12, 2013

14690-1 Comment noted.

**Comment To the US Army Corps of Engineers
and Bonneville Power Administration**

regarding: NWS-2011-346

February 5, 2013

14690-2 | In President Obama's 2013 Inaugural Speech, he challenged Americans to "maintain forests and waterways." He challenged us to "preserve our planet." For me, this hit home. I am relieved that protection of our fragile planet is still a high priority for some. The Army Corps of Engineers is supposed to be the agency responsible for investigating, developing, maintaining, and protecting the nation's water and related environmental resources. This is therefore their opportunity to set the example.

If the Bonneville Power Administration were focused on maintaining and protecting our earth's environments, behavior would change. Rather than invading rural landscapes, the new power-line would be built according to the plan of 70 years ago. A nearly complete right-of-way serving "98% of the total distance required" already exists down through Cowlitz and Clark Counties. **Restructure that!** Power lines already straddle wetlands; access roads are already in place. Rebuild the current towers as mega-towers capable of transmitting 500 kV power. (Building on the current right-of-way would mean easier surveillance and maintenance, too.) Reduce any new "human footprint" by simply re-working the current footprint!

14690-3 | I understand the need for infrastructure in America. Having lived in and traveled throughout China during 2010-2011, I have experienced a place where infrastructure for transportation of people and products, industrialization, and modernization seems the very highest priority of Chinese government, with waterways and rural landscapes certainly being sacrificed in the deal. Let's do it differently in America. Let's figure out how to have both infrastructure and amazingly healthy, natural environments.

In this case of the BPA proposal to build new transmission lines, towers, and access roads down through rural Clark County, a more appropriate route is available. South of the Lewis River, most of the "West Alternative" is within the Portland Basin, which is relatively flat terrain, already filled with ice-age sediment. Most soils there would have low or moderate soil erosion potential, in contrast to Central and eastern alternatives which involve steep slopes "susceptible to landslides," with "very severe" soil erosion "hazards." * (These are facts that should be of significance to the Army Corps of Engineers!)

Sediments delivered to streams would have the least impact in the West Alternative because in the existing right-of-way "clearing (has) already occurred." Long-term changes in watershed conditions would be minor. Riparian vegetation would be cleared at the least number of forested crossings of fish-bearing streams, causing the least new impact; stream crossings have already been altered! 86% of the floodplain area of the West Alternative has already been cleared! In contrast, the most potential for sediment into streams occurs in the Central Alternative because "new right-of-way must be cleared." Riparian vegetation would be cleared at the greatest number of fish-bearing stream crossings, causing the greatest impact on stream temperatures, fish, and large woody debris (habitat) potential.* (These are facts that should be of significance to the Army Corps of Engineers!)

14690-4 | **Two other points to ponder:** Why were the originally proposed routes down through Oregon

14690-2 Comment noted.

14690-3 Though all routes meet the electrical requirements and transmission planning standards BPA follows, the West and Crossover alternatives would site more of the new line adjacent to our existing transmission system, which inherently decreases reliability because it increases the likelihood of losing more than one line at a time.

The Preferred Alternative helps minimize impacts to wetlands and waterways, and we believe the Corps would ultimately be able to issue the required permits to build this proposed route. The Corps is responsible for protection and regulation of wetlands and water ways of the United States.

14690-4 Please see the response to Comment 14472-3.

14690-4 (the "Pearl Lines") dropped so quickly? Those routes seemingly could have incorporated infrastructure that had been built to accommodate the old Trojan Nuclear Power Plant.....makes more sense! Why is the existing right-of-way route ("West alternative") not perceived as the compromise between the "need" for more power transmission capacity and the need to protect our rural landscapes? I've been told that the Pearl Lines were dropped because of the availability of the "West Alternative".....so, use it!!

14690-5 The State of Washington's guidelines for forest and agriculture practices would be disregarded by one federal agency, BPA, while another federal agency, the US Army Corps of Engineers, condones this! (No surprise, I guess.) Wetlands would be filled and cleared, streams and rivers would be crossed. Fish would trade the cooling shade of trees and foliage along stream-banks for herbicide-laden run-off. Wildlife habitats would become fragmented. The potential for disturbing historic Native American cultural sites is obviously higher in the areas where modern human activity has not already obliterated any archaeological resources. The visual impact of swaths of forested land cut to accommodate power lines is horrific! How can this be tolerated?

14690-6 The comment made by J. Courtney Olive on May 12, 2010, still holds true: **"BPA notes, with some trepidation, that the process of building new transmission across the Northwest to serve California will not be easy..."** No, people concerned about Clark County's forested environments, cherished waterways, wildlife, and landscapes have determined not to make things easy for you, BPA!

14690-7 Ideally, human consumers will figure out how to reduce their personal impacts on the environment. I am hopeful that our species can do just that. One way that the Army Corps of Engineers could set the example is to make the "footprint" on the environment as non-invasive as possible. If BPA's transmission lines are inevitable, then the Corps should only permit BPA to use their own "West Alternative."

Paula (Larwick) Overholtzer



phone:

e-mail:

14690-8 *Note: Specific info described herein was gleaned from the summary of the draft environmental impact statement prepared for the I-5 Corridor Reinforcement Project, published in November 2012.

14690-5 Please see the response to Comment 14472-4.

14690-6 Please see the response to Comment 14472-5.

14690-7 Please see the response to Comment 14472-6.

14690-8 Comment noted.

14691

VIVIAN VAN DIJK

03/24/2013

Statement read by Vivian van Dijk at the BPA 'Listening meeting' December 8th, 2011.....

Did BPA listen, nope...just used our objections to develop counter arguments

We appreciate BPA making possibly the only decent decision it's made in the past two years, that is to delay the DEIS until the new year.

14691-1 We like to think it was our pressure, but more likely it was the thought of having irate senators and members of congress on the phone, they, themselves, stirred up by us, we, the people.

Yes, we, the folks that pay the power bills, have absolutely nothing to gain, and in fact, we have a whole lot to lose if BPA flies in the face of reason and logic and persists in trying to build this line across the populated areas of Clark and Cowlitz counties.

BPA has a clear three-way choice

1 Does the line get built at all? In the last two years BPA has presented a wondrous range of magical numbers that they claim prove that this line is needed. We have successfully challenged each set of assumptions, and we have compelled BPA to re-imagine its justifications.

14691-2 In the process, BPA has pressured both Clark and Cowlitz PUDs to support its logic. But, neither utility has got behind this because, in part, they know that they will not see one microwatt of energy from this proposed enhancement to the CANADIAN California Electronic Expressway.

The only half-plausible sets of numbers that BPA has shown the world - indicate that any increase in local load that this line might carry, is actually in Oregon, and only, in Oregon. For that, they would cheerfully and without an iota of remorse, rip the heart out of generations of Washingtonians by destroying their homes, neighborhoods and landholdings.

2 If eventually the line is built, be it in five years or fifteen, BPA must espouse the principles it touts in other areas, such as the current Network Open Season reform, to let costs follow causation.

14691-3 Southwest Washington is not the cause for needing this line, Oregon and California are. Let them carry the burden for this, build the line in Oregon where it clearly belongs, or way out east and let the profiteering merchants in Oregon, California and Canada pay the extra costs.

Why does BPA think it can justify assaulting Southwest Washington and its citizens? It is for the sake of corporate profits, for Portland General, the Los Angeles Dept. of Water, and Power and British Columbia's Powerex?

14691-4 3 If, despite all our appeals for reason, BPA proceeds to build this towering insult to sanity, homes, neighborhoods and landholdings, then, for the sake of our souls and for the sake of our property, build it where it will do least harm. Build the beast way out east on lands already owned by the Federal

- 14691-1 Comment noted.
- 14691-2 Chapter 1 describes the need for the project and the Network Open Season process. See Sections 1.1.2.4, Existing Obligations and New Requests for Transmission Service and 1.1.3, Planning for Transmission Additions in the I-5 Corridor. Please also see the response to Comment 14329-7.
- 14691-3 Please see the response to Comment 14329-7.
- 14691-4 Please see the response to Comment 14353-3.

- 14691-4 Government, or the State, or that which can easily be obtained from corporate timberland owners who can be bought off with a lot fewer dollars than it takes to save the salmon.
- Every time we turn around, BPA has thrown yet a few more million dollars at some worthy and no doubt necessary wildlife or fish habitat project that contribute to making the fish in the Columbia River some of the most staggeringly expensive on the planet. Curiously, most of these projects are in Oregon, Idaho or Montana, and very few, if any at all, in Washington.
- 14691-5 These millions of dollars, for the most part, stay in the communities where they are spent. And as I said, these monies are not spent in Washington
- Yet, BPA plans to strip mine a several hundred foot wide swath right through the heart of Southwest Washington, leaving nothing behind except scarred homesteads, scarred neighborhoods and a scarred countryside. And let us not forget the scarred hearts of those who have been involuntarily dispossessed by the callous disregard BPA has, for people. All it would take to mitigate the impacts of this line on people and their property is a few dollars, a few tens of millions, to be precise. This sounds like a lot, until you compare it with the \$850 million BPA spends - EACH AND EVERY YEAR - on fish.
- Perhaps, fellow citizens, we should make like Kevin Costner in the movie *Waterworld* - grow gills and fins. Then perhaps, we, along with the salmon, might have a fighting chance

14691-5 According to the website www.cbfish.org, BPA spent \$194.7 million in Fiscal Year 2015 on fish and wildlife mitigation projects (capital and expense). The state-by-state breakdown for the states the commenter mentions is: Washington, \$65.3 million; Oregon, \$50.3 million; Idaho \$43.5 million; Montana, \$3.6 million. This information and more details on additional allocations and costs are available at: <http://www.cbfish.org>.

See also the response to Comment 14353-3.



Board of Commissioners

County Administration Building
207 Fourth Avenue North
Kelso, WA 98626
TEL (360) 577-3020
FAX (360) 423-9987
www.co.cowlitz.wa.us

March 22, 2013

COMMISSIONERS

Michael A. Karnofski
District 1
Dennis P. Weber
District 2
James Misner
District 3

Bill Drummond, Administrator
Bonneville Power Administration
PO Box 3621
Portland, OR 97208-3621

Dear Mr. Drummond:

CLERK OF THE BOARD
Vickie Muegrove

14692-1

Cowlitz County Commissioners would like to comment in the strongest terms possible on your draft environmental impact statement (EIS) and preferred alternative which BPA released recently. As you are well aware, the I-5 Corridor Reinforcement Project has been a controversial issue in Cowlitz and Clark Counties. This BPA project will have major impacts on Cowlitz County residents and negatively impact our local governments' financial stability.

14692-2

We respectfully ask that BPA move the line north to stay out of the Castle Rock growth area and realign the route to impact the fewest number of residences. Using existing right-of-way would be a significant disruption to Cowlitz County residents and their neighborhoods. With ample undeveloped open space and forestland, much of it already publicly owned, Cowlitz County supports a route further east than the so-called preferred alternative.

14692-3

Regardless of the route finally chosen, we also request mitigation of lost assessed value this project will cause Cowlitz County and other local governments. As a county heavily dependent on property taxes to support parks, roads, trails, boat launches and other recreation and conservation purposes, your project will decrease property assessments while setting aside right-of-way land from other public uses. Since the benefits of the power transmission will not directly benefit residents in our county, appropriate mitigation will help us make up for lost revenue needed to further support important public goals.

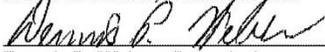
14692-4

Sincerely,

**Board of County Commissioners
Of Cowlitz County, Washington**

Absent - excused
Michael A. Karnofski, Chairman

Absent-excused
James R. Misner, Commissioner


Dennis P. Weber, Commissioner

Cc: Commissioners' Record
Building and Planning

14692-1 Thank you for your comments. Specific comments are addressed below.

14692-2 Comment noted.

14692-3 Please see the response to Comment 14291-3.

14692-3 Please see the response to Comment 14306-4.

14693

WILLIAM HANLEY

03/22/2013

14693-1 The best decision is to build these towers over non-populated areas. The central and or eastern sections are the only way. All other areas would be disastrous for everyone living in Clark County. Consideration should be given to high levels of EMT, tax reductions on private properties, thousands of families, and school children. These above mentioned considerations should be top priority in your decision.

14694

JOEL B ACKER

03/24/2013

14694-1 Our family wanted a chance to move out into the woods, for all four of our children to have a chance to grow up in an area where they could observe rare wildlife and continue with their science and arts educations in a place that would be natural, beautiful, and protected.

14694-2 We garden using organic methods, raise chickens, keep bees, and help our children by augmenting their education with science and biology that we teach at home. Our oldest daughter (10) loves to paint scenes that she finds in the woods around our home. We also teach them to learn to respect the environment, and care for their surroundings. On the eastern border of our small property lies a class-3 creek, currently protected by a forest buffer. The children have named it 'Summer Creek', as it's a year-round creek on our property. This creek, and it's buffer, lie in line with the P-Line proposed for the I-5 Corridor Reinforcement Project.

14694-3 The current proposal is that the forest buffer is to be clearcut and ultimately the creek destroyed. The water quality of the stream will be destroyed, perhaps the water quality of the well from which our family gets our drinking water. If vegetation is to be controlled by herbicides, that will further aggravate the health of the area by introducing those chemicals into our ecosystem. Needless to say, we are severely dismayed that the BPA chose this route which destroys a lot of forest and riparian area, including our home. Destroying the value of our home, introducing health concerns to the entire area by introducing herbicides into one of the major tributaries to Upper Lacamas Creek, and wiping out an area

14694-4 home to many species, some of which could be threatened or endangered.

Please reconsider this decision, as it has serious impact on our family, and on the health and safety of humans and wildlife throughout the area.

Thank You,

Ben Acker.

14693-1 Comment noted.

14694-1 Comment noted.

14694-2 Please see the response to Comment 14097-1. The proposed location of the line has been modified and is over 3,300 feet east of the commenter's home along Segment P.

14694-3 Please see the response to Comment 14694-2.

Section 3.15, Maintenance, describes BPA's vegetation management program. Prior to controlling vegetation, BPA would send notices to landowners and request information to help determine methods used, including herbicide-free buffer zones.

14694-4 Please see the response to Comment 14694-2.

14696

EDWARD A RAYNER, CARL RUESTIG, JUSTIN TIKKA

03/24/2013

- 14696-1 | BPA When I first heard about this I thought it would not affect my family and I. Turns out I could be wrong.
- 14696-2 | The high voltage line will be running about 60 to 70 steps from my front door. 1st concern I need something in writing stating that these high powered lines will not harm my children in any way and by talking to the project manager it seems I will not get a letter stating this. Our children ride there bikes and play in this area.
- 14696-3 | 2nd concern We moved out in the country for privacy and the natural landscape. Not for some noisy wire floating in the air, and a 10 to 15 story high metal object next to our front yard.
- 14696-4 | 3rd concern This will lower our property value and if we get into financial trouble will make it very hard to sell our home.
- 14696-5 | 4th concern We have our home listed on 4salebyowner.com, we had a very interested buyer until they heard about this power line going in.
- 14696-6 | In all I understand we need to have electricity. There should be an alternative to this case and should be fairly easy to do. Please install line on north side of existing pacific corp lines. This would make our family safer. It is also the same wish of my neighbors Ed Rayner and Carl Ruestig.
- 14696-7 | I know you would have the same feelings as I if you lived here.
- Best Regards Justin

- 14696-1 The proposed line is located about 270 feet north of the commenter's house on WDNR property.
- 14696-2 Please see the response to Comment 14332-1.
- 14696-3 Comment noted. Please see the response to Comment 14696-1.
- 14696-4 Please see the response to Comment 14140-2.
- 14696-5 Comment noted.
- 14696-6 Please see the response to Comment 14097-1.
- 14696-7 Comment noted.

14697

JUDY D GLASS

03/24/2013

Attention: Bill Drummond BPA Administrator

14697-1

Dear Mr. Drummond: I have recently reviewed various letters expressing anger and outrage from landowners near the proposed Central line. These landowners essentially suffer from the "Not in my Back Yard" syndrome. They are first-rate egocentric examples of our human weakness and failings. The angry comments list many reasons for their demands that you choose the Western ROW instead of the Central line. The Central line landowners do not, however, comment on the increased incidence of childhood leukemia in our thousands of babies (born and unborn) and children who live near the Western ROW.

I attended a BPA/citizen homeowner meeting several years ago at the Clark County Fairgrounds. The meeting was attended by Mr. Steve Wright and Mr. Doug Johnson as well as others. Mr. Wright acknowledged in his speech that the BPA is aware of an increased incidence of childhood leukemia in children who live near high-voltage lines. I recall quite vividly that he acknowledged an increase of 11-12 additional leukemia cases in children living near 500 kV lines and he opined that of those increased cases, approximately 1 to 1.5 of those increased cases would die. He stated that most of the children would not die, given the use of chemotherapy. Mr. Wright then stated, "A few must suffer for the good of the many."

14697-2

Mr. Drummond, I ask you: Does Mr. Wright's opinion that a few children are expendable for the good of constructing a I-5 Reinforcement line represent the position of BPA and the DOE? Does our government know that they will kill some of our children if they build on the Western ROW and yet write it off as "unavoidable" and necessary? Even third world countries practice prudent avoidance!

Mr. Wright stated that the majority of children with leukemia these days go into remission and do not die. Mr. Wright failed to mention to our audience that the children who do go into remission continue to SUFFER from sequelae of their treated leukemia. They have various side effects and symptomatology for the rest of their lives. This fact is contained in several medical publications recently, as I am sure you are no doubt aware. Your I-5 Reinforcement line decision must not be a political decision.

Our babies are guaranteed the right to life, liberty and pursuit of happiness in this democracy. They do not deserve to become ill because Google, Intel and Facebook want more electrical power. Let our large corporations that pay little income tax foot the bill for constructing the 500 kV lines totally away from populated areas. We must make this land safe for our precious children; they do not deserve to be killed or maimed in the name of industrial advancement. Mr. Wright was wrong. The youngest amongst us must not suffer for the good of our Googles and Facebooks and Apples. This is a moral issue.

14697-3

BPA has done enough research over the past 25 years to know that constructing 500 kV lines in populated areas is WRONG. BPA CANNOT JUSTIFY BUILDING THE REINFORCEMENT ON THE WESTERN ROW. Please consider the children as your first priority and build with conspicuous avoidance of populated areas.

Respectfully submitted,
Judy Glass
Vancouver, WA

14697-1 Comment noted.

14697-2 Please see the response to Comment 14328-6.

14697-3 Comment noted.

14698

JEFF K PETERSEN

03/24/2013

- 14698-1 My family resides at [address]. Our property is just over 5 acres, and ranges from approximately 200 ft to 500 ft in elevation. Our home has an expansive view to the south of Smith Mountain and Longview Timberlands.
- 14698-2 Based on the Draft EIS maps provided for the preferred alternative, as well as conversations with project surveyors while on my property, we would see at least 2 towers and as many as 4 from our home as the line travels up and over Smith Mountain (located in the far southern portion of section F and the beginning of section G). The primary reason we purchased our property was for the view and southern exposure, and the view is without a doubt the feature which adds most value to our property. Needless to say, we do not want to look at transmission lines from any point on our property, but especially not from the house or deck.
- There are numerous nearby residential properties to the east, west, and north of ours which will also have heavily impacted views (based on the fact that they also have expansive views of Smith Mountain). My preferred alternative is one that has not been adequately considered for this project, and which I believe the majority of affected residents would by far prefer: using the existing right-of-way and double circuiting the line (the lines marked as numbers 9 & 24 from Lexington Substation to Ross Substation on BPA maps).
- When it comes to minimizing impacts on environment, landowners, visual resources, and cost of project, no other alternative could possibly come close. The existing right-of-way and transmission line which crosses Rose Valley Road a few miles SW of my home already travels from Castle Rock to Vancouver, and if double circuited, any impacts near that line would be minimal compared to securing and clearing an entirely new right-of-way.
- 14698-3 This alternative is also consistent with the Cowlitz County Comprehensive Plan, which states that all expansion of utility lines should adhere to its guidelines, and specifically emphasizes doubling of uses for utility right-of-ways to minimize impacts. The Plan even suggests "double and triple deck lines" to achieve this objective. I understand that there are potential technical and reliability issues with double circuiting. However, I believe they can be mostly, if not entirely, overcome if BPA simply makes the effort to do so. Double and triple circuiting has been accomplished elsewhere and is being planned by other power agencies in other areas of the USA and Canada.
- Furthermore, the agency could gain the goodwill of the majority of SW Washington residents by truly choosing the option with the least impacts. And from a public relations perspective, BPA would gain positive notoriety for choosing a cost saving, forward-thinking, and low-impact alternative. It should come as no surprise that most residents living in rural areas of Cowlitz and Clark County live where they do because they like it, and prefer to be away from the noise and clutter of cities.
- 14698-4 When I scrutinize the preferred alternative, particularly the area which would obstruct my view, I find it difficult to understand why BPA chose to head south over Smith Mountain where it has, where the

- 14698-1 Comment noted.
- 14698-2 The EIS acknowledges that the proposed project would affect visual resources in communities, natural areas, and near a large number of residences, with potential low-to-high impacts on these resources. Through project design and recommended mitigation measures, BPA has worked to minimize potential impacts to visual resources for all action alternatives. Mitigation measures are provided in Chapter 3, Project Components and Construction, Operation, and Maintenance Activities; Chapter 7, Visual Resource; and Appendix E. Economic impacts are discussed in Chapter 11, Socioeconomics, and impacts to property values are addressed in Section 11.2.2.5, Property Values.
- 14698-3 Please see the response to Comment 14460-1.
- 14698-4 In the Coweeman River area, the Preferred Alternative was located to minimize the following: direct impacts to homes, impacts to logging operations and impacts to natural resources. Where the Preferred Alternative crosses the Coweeman River, the nearest home is well over 500 feet away, and crosses only timber production lands owned by Columbia Timberlands and a smaller private parcel. To move the Preferred Alternative more than 2 miles to the east beyond residences would increase the length of the transmission line, creating more impacts to timber production lands and possibly increasing environmental impacts.

14698-4 easternmost significant subdivisions are located along the Coweeman River. Smith Mountain is also one of the highest peaks in the vicinity at just under 2000 ft, so I am baffled why it makes sense to travel almost to the top as it heads south, particularly when there are lower ridgelines nearby. Moreover, if the line must go through all of this rural territory with year-round residences nearby, why can it not travel just a few miles farther to the east where few, if any, residences would be able to see it?

14698-5 Thank you in advance for your consideration and response.

Sincerely,

Jeff Petersen,

[address]

14699

PETER J MENZA

03/24/2013

14699-1 I am a current resident along the existing right of way (ROW). BPA's recent disclosure with respect to the draft EIS and selection of the central alternative was met with measured relief.

There are a number of factual items that would dictate BPA take the least punitive route as it relates to the majority of the population at risk. While some might argue the existing ROW presents an easy solution, that position would be costly on many levels.

The fiscal implications - i.e. tax ramifications, the physical impact, health issues EMF, aesthetic considerations and overall drop in property values would have a deleterious effect on a large swath of SW Washington residents.

14699-2 While the central route presents a reasonable solution, BPA should explore further options that would take advantage of newer technology to expand the grid capacity while mitigating the impact on all of the residents in question.

Respectfully, PJM

14698-5 Thank you for your comments.

14699-1 Comment noted.

14699-2 BPA does not know which newer technology the commenter refers to. BPA is a leader in high-voltage transmission line design. Newer technologies being developed may help expand transmission grid capacity. BPA, through its involvement and membership in organizations such as the Electric Power Research Institute, will continue to follow evolving technologies in the industry.

14700

STEVEN S FINKAS

03/22/2013

14700-1 Dear BPA, I am one of those "affected landowners" on the I-5 project. Although we are not in direct line, we are in the "notification zone". What I find maddening is that is anyone bothering to measure the environmental impact? Seriously, I haven't seen any effort on the part of BPA to study this. Why do I know this? Because if you had, you would never have put the current route on your grid. Or maybe it just doesn't matter that the beautiful pair of eagles that reside directly on the proposed line won't have a home anymore. They have nested there for the past 10 years. I see them almost every day when they have young chicks. Do you care about our resident owl, which we see almost every day in the summer time? It sits in the tops of our trees hooting and hooting at the moon, and there is a little spotted owl which a new addition to our property. We saw him sitting in the drive way washing his prey of what I thought to be a small mouse in a puddle of water. We have cougar, bears, coyotes, deer (lots of deer). We have a natural creek on our property, which also leads to swamp lands teaming with life, such as turtles, herons/cranes, and I assume small fish. There are millions of reasons why this is such a flawed plan. If it affects ONE person, or ONE animal, the cost is too high!!!!!!

14700-2 Why can't you just funnel your monies to the people that need electricity to make them put solar panels on top of their houses. Why should I suffer the cost of feeding their house, when then could do it themselves. I don't see your homes on the chopping block, nor those of your families. We are a small

14700-3 town with people hurting financially. This will ruin many. I hope you can sleep at night.

14700-4 The Army Corps of Engineers must issue a permit for this project. BPA has only requested to permit one alternative, the Central Alternative, Option 1. Since BPA chose the Troutdale alternatives over the Pearl alternatives because Troutdale has an existing right of way, I demand that BPA request a permit from the Army Corps of Engineering for its existing right of way the West Alternative, using double or triple circuit wires through wetlands or for the entire length of the West Alternative.

Steven Finkas

14700-1 Please see the response to Comment 14676-1.

14700-2 Please see the response to Comment 14144-2.

14700-3 Please see the response to Comment 14328-5.

14700-4 Please see the response to Comment 14596-5.

14701



Pacific Power |
Rocky Mountain Power

March 20, 2013

I-5 Corridor Reinforcement Project
PO Box 9250
Portland, OR 97207

Subject: Comments on the I-5 Corridor Reinforcement Project November 2012 Draft Environmental Impact Statement

To whom it may concern,

PacifiCorp appreciates the opportunity to provide comments regarding Bonneville Power Administration's ("BPA") I-5 Corridor Reinforcement Transmission Project Draft Environmental Impact Statement ("EIS"). We want to ensure that BPA understands, and the final EIS adequately reflects, how the recommended action impacts PacifiCorp and its customers. These impacts include loss of PacifiCorp's ability to adequately meet environmental regulatory compliance measures and limitations to the operation, maintenance and/or upgrade of PacifiCorp's facilities. The draft EIS also does not adequately address possible adverse reliability impacts to PacifiCorp facilities.

PacifiCorp requests that BPA consider not only PacifiCorp's existing rights and uses but potential adverse effects on how PacifiCorp will be able to meet its load service obligation into the future. PacifiCorp wants to make certain that as BPA completes the project review process, the final documents provide PacifiCorp an adequate ability to maintain compliance with all federal, state, local or other regulatory requirements associated with the Lewis River hydroelectric projects and PacifiCorp's transmission facilities. PacifiCorp requires the ability to operate, maintain, upgrade and/or expand existing facilities as required to support current and future load service requirements in a compliant manner. All impacts of the proposed project on PacifiCorp should be accounted for, mitigated by and offset by BPA for the life of the effected facilities in a way that does not increase cost or risk to PacifiCorp or its customers and does not reduce reliability.

PacifiCorp has long recognized the need to develop business practices, both on public and private lands, which are in harmony with valid and appropriate land use and regulatory requirements. We are committed to maintaining our cooperative relationship with regulatory agencies and stakeholders in our stewardship of land and unique resources.

Attached are comments that reflect PacifiCorp's assessment of the draft EIS relative to PacifiCorp's Federal Energy Regulatory Commission ("FERC") regulated transmission system and PacifiCorp's FERC regulated Lewis River hydroelectric projects. PacifiCorp's expectation is that the attached comments, in conjunction with good faith consultation with PacifiCorp, will allow BPA to produce a final EIS that adequately recognizes and provides suitable protections to

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14701-1

14701-1 Thank you for your comments. Specific comments are addressed below.

BPA met with PacifiCorp transmission and hydro staff, executives, and the Lewis River Terrestrial Coordination Committee (TCC) early in the project scoping phase and later in the environmental analysis and engineering design phases of the project. This coordination effort helped to inform the design and minimize impacts to PacifiCorp's infrastructure on and off PacifiCorp lands and minimize impacts to PacifiCorp's Wildlife Habitat Management Plan (WHMP) lands. This effort also helped to identify appropriate measures to mitigate unavoidable impacts and allow PacifiCorp to maintain compliance with the Federal Energy Regulatory Commission (FERC) license requirements for its Lewis River hydroelectric projects and transmission lines.

BPA also believes that the EIS provides a reasonable analysis of the proposed project's potential impacts on the environment, and identifies appropriate measures to mitigate or avoid those impacts.

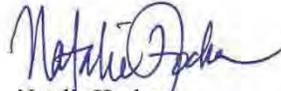
enable PacifiCorp to continue operating the unique resources in the project area now and into the future.

14701-1 For questions regarding PacifiCorp's comments or to discuss PacifiCorp's concerns and how they may be addressed, please contact Brian Fritz, Director of Transmission Services (503-813-7237, brian.fritz@pacificorp.com) for transmission issues and Todd Olson, Director of Environmental Compliance (503-813-6657 or todd.olson@pacificorp.com) for hydroelectric project issues including wildlife and recreation.

Sincerely,



Mark Tallman
VP, Renewable Resources
PacifiCorp Energy



Natalie Hockey
Sr. VP, Transmission and System Operations
PacifiCorp

cc:

Lewis River Terrestrial Coordination Committee (see Attachment D)
Lewis River Aquatic Coordination Committee (see Attachment E)

Attachments:

Attachment A – Comments on Bonneville Power Administration's (BPA) I-5 Corridor Reinforcement Project Draft Environmental Impact Statement with respect to impacts to PacifiCorp's Wildlife Habitat Management Plan lands
Attachment B – Comments on Bonneville Power Administration's (BPA) I-5 Corridor Reinforcement Project Draft Environmental Impact Statement with respect to impacts to PacifiCorp's Recreation Resources
Attachment C – Comments to Bonneville Power Administration's I-5 Corridor Reinforcement Project Draft Environmental Impact Statement with respect to impacts to PacifiCorp's Transmission Services
Attachment D – List of Lewis River Terrestrial Coordination Committee Members and Alternates
Attachment E – List of Lewis River Aquatic Coordination Committee Members and Alternates

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14701

Attachment A

SUBJECT: Comments on Bonneville Power Administration's (BPA) I-5 Corridor Reinforcement Project Draft Environmental Impact Statement with respect to impacts to PacifiCorp's Wildlife Habitat Management Plan lands

ISSUE:

The Bonneville Power Administration's (BPA) I-5 Corridor Reinforcement Project Draft Environmental Impact Statement (draft EIS) released in November 2012 identifies a preferred route for a new BPA 500-kilovolt (kV) transmission line. The preferred route crosses project boundaries and Wildlife Habitat Management Plan (WHMP) lands for PacifiCorp's Yale and Merwin Hydroelectric Projects licensed by the Federal Energy Regulatory Commission (FERC). WHMP lands are managed according to their respective FERC license requirements as mitigation for ongoing hydroelectric project effects and are overseen by the Lewis River Terrestrial Coordination Committee (TCC). The TCC is comprised of representatives from PacifiCorp, the Public Utility District of Cowlitz County (Cowlitz PUD), federal, state, local and tribal governments and nongovernmental organizations that ensure compliance with WHMP goals and objectives, and has the authority in determining mitigation requirements as necessary for adverse impacts to the WHMP lands.

14701-2

This document summarizes PacifiCorp's and Cowlitz PUD's (collectively the Utilities) obligations and the proposed BPA I-5 Corridor preferred route potential effects on the Utilities' commitments under the FERC licenses, United States Fish and Wildlife Service's (USFWS) Biological Opinion, Lewis River Settlement Agreement, and WHMP. The BPA preferred route directly impacts PacifiCorp's WHMP lands and mitigation responsibilities for those lands; however any change in the USFWS's Biological Opinion for the Lewis River licenses as a result of the BPA action will also impact Cowlitz PUD (USFWS 2006). At the end of this document PacifiCorp includes recommended revisions and/or actions to be included in a final Environmental Impact Statement (EIS) which BPA should prepare in review of proposed project.

Information used in this analysis has been provided by BPA and its contractors, as well as by PacifiCorp's internal GIS data and analyses of stream buffers, wetlands and shorelines. Additionally, PacifiCorp and TCC members used existing knowledge and information to evaluate impacts to species and their habitat (e.g. northern spotted owl [*Strix occidentalis caurina*] and riparian and wetland buffers as described in the WHMP.

14701-3

BPA's preferred route, Central Route Option 1, includes corridor route L segments 15 and 23. The Central Route Option 1 crosses over lands owned and managed by PacifiCorp and are described as follows (draft EIS Page 4-10):

"Segments 15 and 23 parallel an existing PacifiCorp line. From towers L/1 to L/5 the route crosses the Lewis River within a quarter mile of Merwin Dam recreational area owned by PacifiCorp. PacifiCorp also manages much of their land in this area for the benefit of wildlife. The route continues east through rural and forested land. From towers L/5 to L/9 the route parallels an existing PacifiCorp 115-[kV] line on the south side.

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14701-2 Comment noted.

14701-3 Comment noted.

14701

- 14701-3 | Between towers 18/1 and 18/22 the route continues east parallel to the existing PacifiCorp 115-kV line, and at Tower 18/22, it continues east on new right-of-way, crossing rural residential and forested land.”

BACKGROUND:

- 14701-4 | In February 2010, BPA met with the TCC and presented several proposed transmission line corridors that would cross WHMP lands. The TCC expressed several concerns regarding corridors bisecting recreation management areas, bald eagle (*Haliaeetus leucocephalus*) nest/roost areas, and old-growth habitat. To update current data and knowledge, PacifiCorp requested BPA hire consultants to conduct vegetation cover type mapping and winter roost eagle surveys along routes proposed on WHMP lands. On May 11, 2011, BPA and Mason, Bruce & Girard (MB&G), consultants to BPA, presented results of these studies to the TCC. During discussion, the TCC was informed that the BPA-proposed study area boundary on PacifiCorp’s property included the 75 feet each side from center of transmission line plus an additional 200 feet from the right-of-way (ROW). This additional 200 feet, referred to as the safety backline, was represented to the TCC as standard BPA practice to ensure all potential hazard trees within reach of the line would be removed. Vegetation is allowed to re-grow in the safety backline, as long as trees do not reach a height that would threaten the transmission line. Clearing to the safety backline would result in a 550-foot wide clearing (275 feet from centerline) along the entire length of the selected transmission line route. Regardless of whether the safety backline area is cleared initially, the BPA would have the right to clear any trees that would reach the line and therefore the TCC must assume this area is precluded from reaching certain WHMP objectives.

In addition to the impact of clearing a 550-foot path, the TCC believes additional impacts may occur along the edges of the transmission line clearings (e.g. edge effect). Clearing will result in a significant increase in potential for wind damage to adjacent forested habitat (e.g. blown-down trees). Wind damage potential depends on many variables, such as age of the surrounding timber, aspect, slope and soil types. Therefore it is difficult to accurately assess the impacts to WHMP lands, but as a worst-case-scenario it is expected to extend into the stand a distance equal to the height of one to two site-potential trees from the back line.

At this time, the TCC believes that a complete assessment of impacts and recommendations for mitigation of BPA’s proposed transmission line across WHMP lands cannot be fully completed until BPA issues a Record of Decision. BPA should understand that any changes made from the existing recommended route (tower locations, backline etc.) will have a corresponding incremental change to environmental impacts.

WILDLIFE HABITAT MANAGEMENT PLAN:

- 14701-5 | The requirement for protection of PacifiCorp-owned Lewis River lands for wildlife habitat originated in the November 30, 2004, Lewis River Settlement Agreement reached with 26 parties including state, federal, tribal, local governments and nongovernmental organizations concerning the relicensing of the Lewis River Hydroelectric Projects (Merwin, Yale, Swift No. 1 and Swift No. 2). The agreement required PacifiCorp to develop a WHMP in consultation with parties to

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- 14701-4 Early in the project, for purposes of mapping and surveys, a worst case scenario was used to explain the project to affected stakeholders and also to obtain more information. With further design, field work, and continuing coordination with PacifiCorp, BPA has completed a danger tree analysis and a full safety backline, as mentioned above, is not proposed. Danger trees are proposed to be removed on PacifiCorp lands and this information has been included in the EIS.

An analysis of the indirect edge effects on old-growth forests by clearing the right-of-way for a new transmission line has been added to both Chapter 17, Vegetation, and Chapter 18, Wildlife.

Also, BPA has worked with the TCC and other stakeholders to gather information that has helped to develop appropriate mitigation which would be implemented if and when the project moves forward. Discussions will continue with the TCC and PacifiCorp after the Record of Decision and before construction (if BPA decides to build the project).

BPA has updated its impact assessments in the EIS based on route modifications made to reduce overall environmental impacts.

- 14701-5 Comment noted.

14701

the agreement for lands identified in the Settlement Agreement. The ongoing purpose of the WHMP is to offset habitat impacts and associated wildlife losses resulting from continued operation of the Lewis River Projects by protecting, mitigating and enhancing existing wildlife habitat on the Licensees' owned and/or controlled lands associated with the Projects. Over a two-year period between 2006 and 2008, PacifiCorp worked with stakeholders to develop the Wildlife Habitat Management Plan (PacifiCorp 2008). On May 29, 2009, the WHMP was approved by the FERC. The Plan includes specific habitat and species management goals and objectives as well as plan-wide goals and objectives for invasive plant management, raptor management, public access management and monitoring. The following are habitat and plan-wide goals that are applicable to this assessment:

14701-5

- Old-growth Habitat Management,
- Wetland Habitat Management,
- Raptor Site Management,
- Forestland Habitat Management,
- Invasive Plant Species Management,
- Riparian Habitat Management,
- Public Access Management, and
- Transmission Line Rights-of-Way (ROW) Habitat Management.

The following sections compare the WHMP habitats, goals and objectives identified to the applicable draft EIS resources (e.g. wildlife, vegetation, wetlands) for WHMP lands within the preferred route.

Wetland (draft EIS Chapter 16):

Riparian and Wetland Habitat Management (WHMP Chapters 5 and 6)

Riparian and wetlands habitats are discretely managed in the WHMP; however the goals and objectives are similar.

Riparian Habitat goal is to:

Protect, maintain, and/or enhance riparian areas to include a diversity of native plant species and vegetation structures to benefit wildlife species that use riparian habitats.

14701-6

- **Objective a:** Identify and establish buffers to protect, maintain, and enhance riparian habitat structure and functions, using the following guidelines as a minimum when planning forest management activities:
 - (1) 300 feet (90 m) or the height of two site potential trees, whichever is greater, for perennial fish-bearing streams that potentially support bull trout (*Salvelinus confluentus*) or anadromous fish
 - (2) 300 feet (90 m) for perennial fish-bearing streams that support residential fish species only
 - (3) 150 feet (45 m) for perennial nonfish-bearing streams

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- 14701-6 BPA recognizes the importance of minimizing project impacts to riparian and wetland habitats managed and protected under the WHMP. These lands have been specifically designated for the benefit of fish and wildlife species and have been set aside as mitigation to offset the impacts caused by the operation of the Lewis River hydroelectric projects. During the design phase, BPA engineers have adjusted tower locations to avoid and minimize potential impacts to wetlands and riparian habitats where possible. Mitigation for unavoidable impacts would be developed to compensate for losses in wetland and riparian habitats.

(4) 100 feet (30 m) for intermittent streams

Buffer widths are measured horizontally from the ordinary high-water mark or the outer margin of the channel migration zone and are applied to both sides of the stream. Buffers will be larger for streams showing evidence of mass wasting or erosion.

14701-6

Table 6.2.1 Recommended Riparian Buffers for Streams with Mass Wasting

Water Type	Buffer Widths
Type 1 and 2 streams; or Shorelines of the State, Shorelines of Statewide Significance	250 feet (75 m)
Type 3 streams; or other perennial or fish-bearing streams 5-20 feet (1.5-6.1 m) wide	200 feet (61 m)
Type 3 streams; or other perennial or fish-bearing streams <5.0 feet (1.5 m) wide	150 feet (46 m)
Type 4 and 5 streams; or intermittent streams and washes with low mass wasting potential ¹	150 feet (46 m)
Type 4 and 5 streams; or intermittent streams and washes with high mass wasting potential ¹	225 feet (68 m)

Source: Knutson and Naef 1997

¹ Mass wasting is a general term for a variety of processes by which large masses of rock or earth material are moved down slope by gravity, either slowly or quickly.

Reduced riparian buffer widths and other management activities are only allowed for the purpose of meeting specific wildlife habitat objectives.

The Wetland Habitat Management goal is to:

Protect, maintain, and/or enhance wetlands to provide a diversity of native amphibians, waterfowl, and other wildlife species.

14701-7

- **Objective e:** Identify and establish buffers to maintain and protect wetland habitat and functions using the following guidelines as a minimum when planning forest management activities: (1) 150 feet (45 m) as measured from the edge of the hydric vegetation, or height of one site potential tree, whichever is greater, for wetlands greater than or equal to 1.0 acre (0.4 ha); and (2) 100 feet (30 m) as measured from the edge of the hydric vegetation, or the height of one site potential tree, whichever is greater, for wetlands less than 1.0 acre (0.4 ha). Buffer widths are measured horizontally from the edge of the hydric vegetation. Reduced buffer widths and other management activities would only be allowed for the purpose of meeting specific wildlife habitat objectives.

Table 1 shows the amount of affected acres per stream and wetland type.

- 14701-7 The protection of high-quality wetlands and the avoidance of project impacts to wetlands are important project goals for BPA. During the design phase, towers and other project features were relocated to avoid and minimize direct impacts to wetlands and wetland buffers, wherever feasible. Mitigation would be developed to compensate for unavoidable impacts caused by clearing and construction.

Table 1. Summary of Aquatic Buffer Acreage Potentially Affected by proposed BPA Transmission Corridor.

Water/Stream Type	Buffer Width	Acreage of WHMP land Potentially Affected by Proposed Corridor
Seasonal, Non-fish Stream (Ns)	100 feet buffer either side	2.48
Perennial, Non-fish Stream (Np)	150 feet either side of stream	14.03
Wetland	Wetlands >1.0 acre in size 150 feet; wetlands < than 1-acre and reservoir Shoreline = 200 feet	1.44 (This acreage is NOT included in the total because the shoreline buffer overlaps the wetland buffers)
Lewis R. Shoreline	300 feet	15.44
TOTAL		31.95

14701-7

Riparian/Wetland habitat and the respective buffers probably provide some of the most diverse, dynamic and complex terrestrial habitats in the Pacific Northwest. Riparian and wetland habitat buffers provide a number of important ecosystem functions, including stream-bank stabilization, stream temperature control, flood control, and wildlife habitat. These habitats also contribute to the aquatic food web and provide structural diversity by contributing large woody debris to stream or wetland systems. Riparian and Wetland habitats are designated by the Washington Department of Fish and Wildlife as a Priority Habitat in Washington and the buffers identified on WHMP lands reflect this priority.

14701-8

The preferred transmission corridor would potentially affect 31.95 acres of WHMP wetland/riparian habitat and/or their associated buffer on PacifiCorp land by clearing vegetation to the safety backline, access road construction, and increased erosion associated with construction and clearing. Even though transmission lines can often span portions of a riparian area or stream without all vegetation being removed it is unknown at this time to what extent this will be possible and limits full evaluation of the impacts of WHMP riparian and wetland habitat. PacifiCorp has extensive experience in managing riparian and wetland habitats within transmission ROW's and understands the limitations to vegetation height, potential conflicts with transmission line clearances and unintended introduction of invasive plants in these habitats but until the ROD is release and the ability to span WHMP riparian and wetland habitat are known, full evaluations of the impacts are limited.

Vegetation Resources (draft EIS Chapter 17):

14701-9

The draft EIS categorizes land and vegetation cover types into seven general vegetation types: mature forest, forest, production forests, shrubland, herbaceous, rural landscaped, and urban/suburban landscaped. PacifiCorp completed a similar categorization of their WHMP lands (PacifiCorp and Cowlitz PUD 2004). A comparison of the draft EIS categories to the WHMP vegetation cover types and the acres that may potentially be affected by the preferred route is provided in Table 2 (see page 9). WHMP vegetation cover types Old-growth, Forestlands, and Transmission line ROW have been identified as critical WHMP habitat and have specific goals and objectives assigned to them. These are discussed individually below.

- 14701-8 BPA recognizes and agrees with PacifiCorp's assessment of the importance of the habitat values provided by wetland/riparian areas and buffers that may be impacted by transmission lines and road construction. BPA has inventoried and delineated these important habitats on PacifiCorp land and has adjusted tower and access road locations to avoid important habitats where possible. BPA has also determined the amount of clearing needed for danger trees beyond the proposed right-of-way. BPA will continue to work with PacifiCorp staff and the TCC to provide a full and accurate account of impacts and to ensure that mitigation actions meet PacifiCorp's WHMP.
- 14701-9 BPA recognizes PacifiCorp's responsibility to manage its WHMP lands according to the FERC license requirements and the importance of PacifiCorp's habitat goals and objectives for WHMP lands. To maintain safe operation of the transmission line, BPA would need to remove tall-growing vegetation, including mature trees, within and adjacent to the right-of-way. The existing dam, recreation area, mitigation lands, existing transmission lines, additional PacifiCorp and other utility proposed lines, and the existing fish hatchery facilities have all presented challenges in routing a new high-voltage line and associated access roads through this area. Design, environmental, cultural, and forest crews have been on site and located the line and access roads to minimize impacts, to the extent possible, on existing and future planned facilities, and habitats. BPA will continue to work with PacifiCorp and the TCC to identify appropriate measures that mitigate for unavoidable impacts caused by clearing and construction.

14701

Old-growth Habitat Management (WHMP Chapter 4)

The Old-growth Habitat goal is to:

Protect and maintain existing old-growth conifer stands and identify mature conifer stands to develop into old-growth habitat.

The specific objectives are pertinent to the preferred transmission route are further identified as:

- 14701-9
- **Objective b:** Protect and maintain existing old-growth conifer stands to provide high quality habitat for pileated woodpeckers (*Dryocopus pileatus*), other cavity nesters, and other species over the life of the licenses.
 - **Objective c:** Protect and manage forested buffers adjacent to streams, wetlands, and reservoir shorelines to promote the development of large trees where appropriate, and to provide connectivity between existing old-growth conifer stands over the life of the licenses.
 - **Objective d:** Within 5 years of the Lewis River WHMP implementation, identify and evaluate specific mature conifer stands or other areas that could improve habitat connectivity between old-growth stands or increase number or size of old-growth patches, and develop a schedule to manage/protect these areas as appropriate.

14701-10

A combination of PacifiCorp's existing vegetation cover type data (PacifiCorp and Cowlitz PUD 2004), the BPA Vegetation Cover Type Mapping Survey Report prepared by Mason, Bruce & Girard (MB&G 2011b), and field verification by PacifiCorp's employees were used to identify impacts of old-growth habitat and mature conifer. These acres are the areas of potential effect for clearing of the proposed transmission line corridor ROW and safety backline, but do not include edge effect impacts. These acreages would otherwise (per the WHMP objectives above) be managed to promote the development of large trees and provide connectivity between existing old-growth conifer stands.

14701-11

The loss of old-growth habitat and structure as part of the preferred transmission line route violates not only the USFWS's Biological Opinion (see Wildlife Resource) but the very intent to manage for and benefit a broad range of wildlife, fish and native plant species. The preferred route would result in a seven percent loss of all the old-growth currently mapped on WHMP lands. The influence of clearing adjacent to old-growth timber stands can extend from 16 to 137 meters into the stand and may cause wind-throw or other mortality (Chen et al. 1992). In addition, this may increase desiccation and drying from the increased influence of light, which may affect species growth and community composition. These secondary effects are not included in this assessment, but decreased ecological function to the old-growth stands on WHMP lands is anticipated.

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14701-10 Please see the responses to Comment 14701-4 and 14701-9.

A discussion of forest edge effects from clearing the right-of-way for a new transmission line was added to Chapter 17, Vegetation. Edge effects on wildlife are discussed in Chapter 18, Wildlife.

14701-11 See the response to Comment 14701-9. A discussion of edge effects from vegetation clearing including changes in sub-canopy climate conditions, increased temperature and humidity variation, increased light levels, and increased risk of windthrow has been added to Chapter 17, Vegetation.

Forestland Habitat Management (WHMP Chapter 12)

The Forestland Habitat goal is to:

Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage.

The specific objectives pertinent to the proposed BPA action are further identified as:

- 14701-12
- **Objective a:** Provide a range of alternatives for developing and maintaining a mix of forage and cover for elk.
 - **Objective b:** Over the life of the licenses, maintain or create at least eight snags (\geq 20 inches dbh), green retention trees (\geq 15 inches dbh), or wildlife reserve trees per acre if available within each harvest area.
 - **Objective c:** At the Management Unit level, promote forest habitat diversity for wildlife by increasing or maintaining minor native tree species (e.g., cottonwood [*Populus* spp.], big-leaf maple [*Acer macrophyllum*], western redcedar [*Thuja plicata*]) composition where appropriate site conditions exist over the life of the licenses.

14701-13

Forestland is a general term for upland areas dominated by trees; it encompasses all forest types, structures, and age classes. The composition, structure, and habitat quality of forestlands for wildlife vary greatly. Western redcedar is a dominant, co-dominant or sub-dominant species in many of the Upland Mixed and Mature Conifer forest stands identified in the MB&G surveys (MB&G 2011b). The MB&G surveyors recorded a total of 308 western redcedar trees within the survey area including two polygons representing particularly high concentrations of western redcedar. Black cottonwood trees (54 total trees) are scattered throughout the preferred route. Because most surrounding private, state and industrial forest lands are managed for single species primarily consisting of Douglas-fir, both the black cottonwood and western redcedar are identified in the WHMP as species that promote forest habitat diversity and are retained as a Best Management Practice on WHMP lands.

14701-14

As identified in the objectives, snags are a significant habitat component that will be negatively affected by the presence of a transmission ROW and additional access roads. Maintaining snags is an important habitat component in all habitats and would be negatively impacted by the clearing of transmission line ROW's, access roads and adjacent habitat. Snags are specifically identified as management objectives in the WHMP objectives for old-growth habitat, riparian habitat, wetland habitat, shrublands and all managed forestland. All stream, shoreline and wetland buffers are also managed to provide snags and coarse woody debris as foraging, roosting, nesting and perching habitat for a variety of priority species (pileated woodpecker [*Dryocopus pileatus*], bald eagle, etc.). Snags provide critical habitat for both primary and secondary cavity nesters and loss of this habitat component would represent non-compliance with WHMP objectives. Potential loss of snags from the preferred corridor is best represented by looking at the total acres in the vegetation survey area shown in Table 2. While the exact number of existing snags cannot be determined from this table, an estimated 80 percent of the vegetation cover types would be expected to provide snags (excluding ROW and Developed cover types).

14701-12 Please see the response to Comment 14701-9.

14701-13 Please see the response to Comment 14701-9.

Potential impacts on wildlife from the removal of their preferred habitat, including mature and old growth forestland, is provided in Chapter 18, Wildlife.

BPA completed a timber cruise (statistical sample) of this area more recently in 2014. The cruise compiled data within the proposed 150 foot right-of-way and danger trees outside the right-of-way boundary. A total of 49 Black cottonwood trees and 193 Western red cedar were identified as needing to be removed for the project.

14701-14 Snags are a WDFW Priority Habitat and are discussed in Section 18.1.2.6, Snags and Logs (Snag-Rich Areas). Impacts on snags for the action alternatives are compared in Table 18-5, WDFW Priority Habitats Impacted by Right-of-Way Clearing (Acres) and Transmission Line Crossing (Miles). The degree of impacts on snag-rich areas varies among the action alternatives. The Preferred Alternative has been revised to completely avoid snag-rich areas.

If BPA decides to build this project, it would continue to work with PacifiCorp and the TCC to address the issue of potential snags.

14701-14

The number of snags could be determined based on requirements described in the WHMP; 4 snags/acre greater than 20 inches in diameter in old-growth managed habitat and at least 8 trees/acre managed as snags or wildlife reserve trees in managed forest habitat. Therefore an estimated total loss would be 27 snags in the Mature Forests types and 314 snags in the Production Forests and Forest types.

14701

Table 2. draft EIS General Vegetation Types compared to WHMP Vegetation Cover Types within the Preferred Corridor Area of effect

draft EIS General Vegetation Types	draft EIS Definition	WHMP Vegetation Cover Type	WHMP Definition (PacifiCorp and Cowiitz PUD 2004)	Acreage Potentially Affected by Proposed Corridors
Mature Forests	Mature forest includes older forested areas typically dominated by coniferous trees over 80-years old with a diameter at breast height (dbh) over 21 inches. This vegetation type also includes old-growth forest, which is forest with at least eight trees per acre that either have a dbh greater than 32 inches, or are more than 200-years old, and form a multi-layered canopy with occasional small openings. (draft EIS 17.1.1.1 Page 17-2)	Old-Growth Conifer Forests (OG)	Greater than 70% of canopy coverage is composed of conifer. Avg. stand diameter >26 in dbh. Stands forming a multi-layered canopy with occasional small openings. Greater than 4 snags/acre >20 in dbh. Greater horizontal and vertical canopy structure than is generally found in mature conifer stands.	5.58
Production Forest	Production forest was identified by the locations of large timber company landholdings in the project area.(draft EIS 17.1.1.3 Page 17-3)	Mature Conifer Forests (M)	Greater than 70% of canopy coverage is composed of conifer. Avg. stand diameter 21" to 26" dbh. Canopy structure has a relatively uniform vertical and horizontal texture.	0
		Seedling/Sapling Conifer Forests (SS)	Greater than 70% of canopy coverage is composed of conifer. Avg. stand diameter <8" dbh.	0.77
		Pole Conifer (P)	Greater than 70% of canopy coverage is composed of conifer. Avg. stand diameter 8" -15" dbh. Even-aged stands with relatively uniform structure.	6.74
		Pole Conifer-thinned (P-t)	Greater than 70% of canopy coverage is composed of conifer. Avg. stand diameter 8" -15" dbh. Even-aged stands with relatively uniform structure. Stand has been thinned since late 1980s.	0.0

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Table 2. draft EIS General Vegetation Types compared to WHMP Vegetation Cover Types within the Preferred Corridor Area of effect

draft EIS General Vegetation Types	draft EIS Definition	WHMP Vegetation Cover Type	WHMP Definition (PacifiCorp and Cowlitz PUD 2004)	Acreage Potentially Affected by Proposed Corridors
Forest	The forest vegetation type includes forests with at least 30 percent areal cover by trees younger than 80-years old, or with a dbh less than 21 inches. Forest has a greater diversity of shrubby and herbaceous species in the understory than in the mature forest and production forest Chapter vegetation types. Forests in the project area may be dominated by conifers or by a combination of conifers and hardwoods. They include small stands in some urban and suburban settings and expansive stands in more remote areas. The forest vegetation type likely includes some small tracts of privately owned forests managed for production. (draft EIS 17.1.1.2 Page 17-2)	Mid-Successional Conifer (MS)	Greater than 70% of canopy coverage is composed of conifer. Avg. stand diameter 16" to 21" dbh. Even-aged stands with relatively uniform structure.	3.18
		Riparian Deciduous (RD)	Greater than 70% deciduous canopy coverage and located within a riparian zone.	0.47
		Upland Deciduous (UD)	Greater than 70% deciduous canopy coverage and located within a riparian zone. Deciduous forests with trees >10 "dbh located outside of riparian zone.	4.66
		Upland Mixed (UM)	Greater than 30% and less than 70% conifer or deciduous forests. Mixed forest with trees >10" dbh located outside of riparian zone.	18.48
		Riparian Mixed (RM)	Greater than 30% and less than 70% conifer or deciduous forests. Mixed forest with trees >10" dbh located within a riparian zone.	1.61
		Young Upland Mixed (YUM)	Greater than 30% and less than 70% conifer or deciduous forests. Mixed forest with trees <10" dbh located outside of riparian zone.	6.99

Table 2. draft EIS General Vegetation Types compared to WHMP Vegetation Cover Types within the Preferred Corridor Area of effect

draft EIS General Vegetation Types	draft EIS Definition	WHMP Vegetation Cover Type	WHMP Definition (PacifiCorp and Cowlitz PUD 2004)	Acreage Potentially Affected by Proposed Corridors
Forest	The forest vegetation type includes forests with at least 30 percent areal cover by trees younger than 80-years old, or with a dbh less than 21 inches. Forest has a greater diversity of shrubby and herbaceous species in the understory than in the mature forest and production forest Chapter vegetation types. Forests in the project area may be dominated by conifers or by a combination of conifers and hardwoods. They include small stands in some urban and suburban settings and expansive stands in more remote areas. The forest vegetation type likely includes some small tracts of privately owned forests managed for production. (draft EIS 17.1.1.2 Page 17-2)	Mid-Successional Conifer (MS)	Greater than 70% of canopy coverage is composed of conifer. Avg. stand diameter 16" to 21" dbh. Even-aged stands with relatively uniform structure.	3.18
		Riparian Deciduous (RD)	Greater than 70% deciduous canopy coverage and located within a riparian zone.	0.47
		Upland Deciduous (UD)	Greater than 70% deciduous canopy coverage and located within a riparian zone. Deciduous forests with trees >10 "dbh located outside of riparian zone.	4.66
		Upland Mixed (UM)	Greater than 30% and less than 70% conifer or deciduous forests. Mixed forest with trees >10" dbh located outside of riparian zone.	18.48
		Riparian Mixed (RM)	Greater than 30% and less than 70% conifer or deciduous forests. Mixed forest with trees >10" dbh located within a riparian zone.	1.61
		Young Upland Mixed (YUM)	Greater than 30% and less than 70% conifer or deciduous forests. Mixed forest with trees <10" dbh located outside of riparian zone.	6.99

Table 2. draft EIS General Vegetation Types compared to WHMP Vegetation Cover Types within the Preferred Corridor Area of effect

draft EIS General Vegetation Types	draft EIS Definition	WHMP Vegetation Cover Type	WHMP Definition (PacifiCorp and Cowlitz PUD 2004)	Acreage Potentially Affected by Proposed Corridors
Shrubland	Shrubland includes areas with at least 30 percent areal cover by shrubs and tree saplings. In the project area, shrubland occurs in existing transmission line rights-of-way where vegetation management requires the regular removal of tall-growing vegetation, in recently harvested production forest, and in fallow fields. Because shrublands develop following a disturbance, they are susceptible to invasion by non-native plants from infested areas. Because of this, and given the prevalence of non-native plants in the region, shrublands are likely to have low native plant diversity in the project area. (draft EIS 17.1.14 Page 17-4)	Shrubland (SH)	Less than 10% forested canopy coverage. Comprised of >30% vegetation cover. Ground cover consists of greater than 50% shrub species.	0.00

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Table 2. draft EIS General Vegetation Types compared to WHMP Vegetation Cover Types within the Preferred Corridor Area of effect

draft EIS General Vegetation Types	draft EIS Definition	WHMP Vegetation Cover Type	WHMP Definition (PacifiCorp and Cowlitz PUD 2004)	Acreage Potentially Affected by Proposed Corridors
Herbaceous	The herbaceous vegetation type includes pasture and cropland, and native upland and wetland prairie. (draft EIS 17.1.1.5 Page 17-4)	Transmission Line ROW (ROW)	Site characterized by human disturbance, development, or modification. Area is within the cleared transmission line right-of-way corridor. Type code is used as a modifier to other cover type categories.	10.57
	Herbaceous wetlands include Palustrine emergent wetlands, aquatic bed wetlands, and open water. (draft EIS 17.1.1.5 Page 17-6)	Unconsolidated Shore (gravel bars) (RUS) Scrub-Shrub Wetland (PSS)	Site characterized by open water or wetland vegetation, soils, and hydrology. Riverine habitat intermittently flooded or exposed with unconsolidated substrate and <30% vegetative cover, except pioneering plants. Palustrine habitat dominated by woody shrubs and stunted trees, less than 20 feet tall.	1.70 0.64
Rural landscaped	The rural landscaped vegetation type includes the vegetation in farmyards, small pastures or cultivated areas a few acres in size, and low-density residential development. (draft EIS 17.1.1.6 Page 17-6)	Developed (DV)	Site characterized by human disturbance, development, or modification. Developed with commercial buildings and /or facilities that are not PacifiCorp owned.	0.0
Urban/suburban landscaped	The urban/suburban landscaped vegetation type includes the vegetation in mid-to-high-density development, including commercial, residential, and industrial areas. Vegetation primarily occurs in highly fragmented patches of non-native street trees, lawns, and ornamental landscaping, although some native plant communities may occur in parks or other public spaces. (draft EIS 17.1.1.7 Page 17-7)	Project Facility (PF)	Developed with buildings and/or facilities that are part of PacifiCorp hydro project.	2.15
		Disturbed (DI)	Exposed bare ground due to human caused activities or contains non-native invasive shrub species	0.22
		Recreational (REC)	Site characterized by human disturbance, development, or modification. Within the boundary of recreation facility.	1.04
Total				64.80

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Invasive Plant Species Management (WHMP Chapter 13)

The Invasive Plant Species Management goal is to:

Work to prevent the establishment and spread of noxious weeds currently listed by the Washington State Noxious Weed Control Board and Clark, Cowlitz, and Skamania County weed control boards, and other undesirable or invasive plants identified by the TCC.

14701-15

Invasive Plant Species Management is not specific to any one vegetation cover type or management area but invasive plant species proliferate in disturbed areas such as transmission line ROWs. Transmission line ROWs are recognized as corridors that promote the establishment and spread of invasive plant species and require regular management to prevent establishment and spread to other areas. The linear nature of these areas promotes the rapid spread of wind borne seed and those carried in through the network of roads related to managing the transmission line. Because PacifiCorp has specific internal requirements regarding what herbicides may be used on its lands, these same restrictions would therefore be required for management under a BPA transmission line located on project lands.

Transmission Line Rights-of-Way (ROW) Habitat Management (WHMP Chapter 10)

The Transmission Line Rights-of-Way Habitat Management goal is:

*While allowing for the safe and reliable transmission of electricity, promote the establishment and maintenance of desirable vegetation on utility-owned lands in transmission line rights-of-way to provide habitat for wintering deer (*Odocoileus hemionus*) and elk (*Cervus elaphus*) and a diverse mix of shrub and other early-successional habitats.*

14701-16

The specific objectives pertinent to the proposed BPA action are further identified as:

- **Objective a:** Manage and develop patches of desirable shrubs in the transmission rights-of-way and along edges to break up line-of-sight distances and provide screening/hiding cover for elk and multi-layered habitat structure for birds. Evaluate alternative techniques to provide security cover and reduce line-of-sight where needed.
- **Objective b:** Identify and manage suitable areas within transmission line rights-of-way to provide “enhanced forage” for elk and deer. Enhanced forage is defined as a mix of grasses and forbs that are considered forage species by elk and deer that may be mowed, fertilized, and/or seeded.
- **Objective c:** Identify and provide screening cover for deer and elk, where needed, along public roads that cross transmission rights-of-way.

Transmission line ROW management requires significant man-power resources to conduct inspections, coordinate with vegetation control contractors and to ensure that goals and objectives are being achieved.

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- 14701-15 Please see Section 3.15 in Chapter 3, Project Components and Construction, Operation, and Maintenance Activities and Section 17.2.2.2, Operation and Maintenance in Chapter 17, Vegetation for discussions of the steps BPA would take to assess any noxious weed spread caused by the project and to implement noxious weed controls. BPA would work with PacifiCorp to ensure that any herbicides applied to noxious weeds within cleared right-of-way will be compatible with herbicide use approved for PacifiCorp lands.
- 14701-16 Please see the response to Comment 14701-9.

Wildlife Resources (draft EIS Chapter 18):

The BPA preferred route will impact PacifiCorp's ability to meet terms and condition of the USFWS's Biological Opinion, which states (USFWS 2006 Pg. 116):

“For those lands managed under the WHMPs, no suitable spotted owl nesting habitat [old-growth and mature conifer stands] would be removed.”

- 14701-17 The USFWS's Biological Opinion is based on the settlement agreement conditions which directed the WHMP measures, and it concluded that PacifiCorp's management is not likely to jeopardize the continued existence of the spotted owl. The USFWS also concluded that the WHMP implementation would not likely jeopardize the continued existence of the bald eagle. In preparation of the Biological Opinion, USFWS could not have anticipated the construction of the BPA transmission line across the primary flight corridors of bald eagles accessing roost and foraging areas along the river or the loss of suitable spotted owl nesting habitat.

WHMP Raptor Management (WHMP Chapter 14)

The WHMP has a goal and objectives specific to managing and protecting raptors, including northern spotted owl, northern goshawk, and bald eagles.

The Raptor Management goal is to:

*Provide and protect habitat for, and minimize or avoid disturbance to, raptors, including bald eagles (*Haliaeetus leucocephalus*), buteos, ospreys (*Pandion haliaetus*), accipiters, and owls.*

- 14701-18 The bald eagle is a Washington State sensitive species and receives federal protections under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. PacifiCorp has developed a Bald Eagle Management Plan (BEMP) as part of the WHMP to satisfy the Washington State Bald Eagle Protection Rule (Washington Administrative Code [WAC] 232-12-292). According to guidance outlined in the BEMP, bald eagle roost monitoring will be conducted when activities with the potential to disturb roosting eagles (e.g., timber harvest operations, construction) occur within 0.25 mile of suitable roosting habitat (old-growth and mature forests) to determine if the area is occupied by roosting eagles during the key wintering period of November 15 – March 31 (PacifiCorp 2010).

- 14701-19 At the request of PacifiCorp, BPA hired MB&G environmental consultants to survey the proposed Central Route area near Merwin dam that consists primarily of an old-growth Douglas-fir (*Pseudotsuga menziesii*) and western redcedar dominated forest (MB&G 2011). This site provides excellent bald eagle foraging habitat due to congregations of fish and waterfowl at the base of Merwin dam, multiple suitable perch and roosting locations, and protection from inclement weather provided by the steep slope and dense timber. At the completion of both years of surveys, it was concluded that bald eagles were utilizing the area and could potentially use the site for night roosts although a communal roost was not confirmed (MB&G 2011). BPA's preferred Central Route would directly remove a portion of this suitable habitat for all species of

- 14701-17 Please see the response to Comment 14701-9. In addition, BPA prepared a Biological Assessment that was submitted to the Services in spring 2015. BPA expects the Services to issue a Biological Opinion. BPA will continue to work with PacifiCorp and the Services to identify appropriate measures to mitigate for unavoidable impacts.
- 14701-18 Please see the response to Comment 14701-9. Raptors are discussed in Chapter 18, Wildlife. BPA is consulting on the spotted owl with the USFWS under Section 7 of the Endangered Species Act (see Section 27.2, Endangered Species Act of 1973). BPA continues to work with the USFWS to determine ways to protect all ESA listed species if BPA's Administrator decides to build the project.
- 14701-19 Please see the response to Comment 14628-1.

14701-19 raptors but specifically affect (disturb) an important flight path along the Lewis River that bald eagles use to access foraging areas and roost sites.

14701-20 PacifiCorp has consulted with the USFWS on forest management with respect to managing suitable spotted owl roosting and foraging habitat on WHMP lands. Suitable roosting and foraging habitat was defined as mid-successional and upland mixed vegetation types. The development of small clearcuts in these forest types for other wildlife habitat purposes was recognized as adversely affecting the northern spotted owl. However, the protection measures provided for old-growth, mature conifer and extensive buffers for streams and reservoirs that may eventually develop into suitable habitat allowed the USFWS to determine that the implementation of the WHMP would not likely jeopardize the continued existence of the northern spotted owl (USFWS 2006). For clearcuts to be conducted in dispersal habitat, at least 50 percent of the Utilities (PacifiCorp and Cowlitz PUD) owned lands would need to provide dispersal habitat at any point in time. The BPA's preferred route corridor through WHMP lands will reduce the Utilities forest land management capabilities based on permanent loss of additional dispersal habitat and will compound the impact with a loss of suitable nesting habitat. The additional harvest of both suitable nesting habitat (old growth and mature conifer; 5.58 acres) and approximately 30.0 acres of dispersal habitat would be cumulative to PacifiCorp's proposed actions over the life of the 50-year licenses.

WHMP Public Access Management (WHMP Chapter 15)

The Public Access Management goal is to:

Minimize disturbance to wildlife and protect their habitats while managing access for non-motorized recreation, which includes legal hunting and fishing, and activities associated with implementation of the WHMP.

The specific objectives pertinent to the proposed BPA action are further identified as:

- 14701-21
- **Objective b:** Monitor the effectiveness and condition of road closure barriers at least annually and make any necessary repairs or modifications in a timely manner.
 - **Objective d:** Prior to constructing new roads or making major improvements (widening, paving) to existing roads, identify and implement measures to minimize impacts on wildlife habitat.
 - **Objective g:** Provide vegetated buffers along roads open to the public, where needed, to conceal big game and other wildlife using adjacent habitat.

The addition of roads associated with BPA's transmission ROWs will require additional access control, prevention of erosion, management of water control structures at road crossings, and managing vegetation buffers along public roads to conceal big-game and other wildlife. Managing to prevent unauthorized motor vehicle access along roads requires more than just gates and includes monitoring and enforcement of PacifiCorp's policies to protect the WHMP mitigation lands from disturbance.

14701-22 BPA's proposed access roads to towers L3 and L4 as shown in the draft EIS include stream crossings that are avoidable using existing nearby access roads. Using existing roads decreases

14701-20 Please see the response to Comment 14701-9. Completed design and field surveys on PacifiCorp land have allowed BPA to decrease the amount of suitable nesting and dispersal habitat that would need to be harvested for the project.

14701-21 New and improved access roads needed on PacifiCorp land would not be considered public roads. At PacifiCorp's request, these roads would be gated. Yearly systemwide inspections are done by BPA maintenance crews to identify needed repairs to existing lines and access roads.

The existing dam, recreation area, mitigation lands, existing transmission lines, additional PacifiCorp and other utility proposed lines, and the existing fish hatchery facilities have all presented challenges in routing a new high-voltage line and associated access roads through this area. Design, environmental, cultural, and forest crews have been on-site and located the line and access roads to minimize impacts, to the extent possible, to existing and future planned facilities, and habitats. BPA will continue to work with PacifiCorp and the TCC to identify appropriate measures that mitigate for unavoidable impacts caused by clearing and construction.

14701-22 Design, environmental, cultural, and forest crews have been on site and relocated towers L3 and L4 and associated access roads to minimize impacts to existing and future planned facilities, and habitats.

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14701-22 unnecessary vegetation removal and thereby minimizes impacts on wildlife habitat as is the objective in the WHMP. In addition, the location of the L3 transmission tower is within a fenced security perimeter for the Merwin Hydro Control Center. Establishing a tower in this location will require moving PacifiCorp's existing security fence to ensure unauthorized access is maintained.

14701-23 PacifiCorp has developed and maintains a public boat launch and parking facility that will at a minimum be temporarily unavailable to the public during construction of the proposed BPA transmission line. As this is a required facility under the terms of PacifiCorp's license, it will be necessary to ensure access and loss of use minimized.

14701-24 Although transmission ROWs can be managed to provide good elk forage habitat when managed correctly, the corridors can also contribute to elk vulnerability due to long site distances along the corridors especially where they cross public roadways. The proposed transmission line ROW parallel to PacifiCorp's ROW could pose significant threats to effective management and development of small interspersed forage and cover habitat components for big game species. Like roads, managing to prevent unauthorized motor vehicle access along transmission ROW's requires more than just gates and includes monitoring and enforcement of PacifiCorp's policies to protect the WHMP lands from disturbance.

Additional Wildlife Resource Comments

14701-25 The draft EIS (Section 18.1.1.1 Page 18-3, Section 18.1.2.8 Page 18-9, Table 18-2 Page 18-14, Section 18.1.4.2 page 18-18, Section 18.2.6.3 page 18-55, Section 18.2.6.4 page 18-56, Section 18.2.7.3 page 18-63) describe the Rocky Mountain tailed frog (*Ascaphus montanus*) as occurring within the study area. This species' range is restricted to the Blue Mountains in southeast Washington (Washington Herp Atlas, 2009). The coastal tailed frog's (*Aschaphus truei*) range is within the study area and has documented observations in the vicinity of the proposed corridor (Washington Herp Atlas, 2009).

14701-26 Table 18.2 on pages 18-12 through 18-14 of the draft EIS list special-status species with the potential to occur in the study area list. Each of the following species have been observed on PacifiCorp's lands near the Central Route study area and should be documented as occurring in all of the Central Alternative Options.

- Band-tailed pigeon (*Columba fasciata*)
- Bufflehead (*Bucephala alebeola*)
- Great blue heron (*Ardea Herodias*)
- Hooded mergansers (*Lophodytes cucullatus*)
- Olive-sided flycatcher (*Contopus cooperi*)
- Pileated woodpecker (*Dryocopus pileatus*)
- Wood duck (*Aix sponsa*)
- Columbian black-tailed deer (*Odocoileus heminous ssp. columbianus*)
- Northern red-legged frogs (*Rana aurora*)
- Vaux's Swift (*Chaetura vauxi*)

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- 14701-23 BPA would work with PacifiCorp to minimize impacts to this facility during construction. Any impacts would be temporary.
- 14701-24 Please see the response to Comment 14701-9. Please also see the responses to Comments 14246-2, 14357-2 and 14457-2.
- 14701-25 The WDFW PHS database identifies “tailed frog” within some alternatives. The common and scientific names have been corrected to coastal tailed frog and *Ascaphus truei*, respectively and the accompanying discussions have been updated.
- 14701-26 Table 18-2, Special-Status Wildlife Species that Occur in the Study Area, lists those special-status species with the potential to occur along the action alternatives (based on habitat) and identifies those that are documented to occur within a 2-mile-wide corridor in the study area based on information in the databases listed in the Sources footnote of the table. Although some of the species PacifiCorp has observed on their land were not in the referenced databases for the Central Alternative, the project's effects on these species' preferred habitat have been accounted for in Chapter 18, Wildlife.

14701-27 Section 18.2.8 Recommended Mitigation Measures on paged 18-64 of the draft EIS 8th bullet regarding gate and signing road access to prevent human encroachment should specifically state that additional barriers will be used at gates or in other areas as needed to prevent unauthorized motorized vehicle access, such as all-terrain vehicles, on to the transmission line ROW and access roads.

SUMMARY OF EFFECTS:

14701-28 PacifiCorp and the TCC have reviewed the vegetation cover type and eagle survey reports prepared by MB&G (MB&G 2011) for BPA and have reviewed the WHMP requirements to determine the effects of the preferred BPA route corridor. While certain aspects of the proposed transmission line may be mitigated, it is the opinion of PacifiCorp and the TCC that certain compliance obligations cannot be resolved without violating the Utilities' Biological Opinion, the Lewis River Settlement Agreement, and the Merwin and Yale Project FERC licenses article for Use and Occupancy. Specifically, the old-growth habitat loss, wetland, and riparian habitat effects are identified as a significant impact to the overall WHMP. The following list is a summary of the effects of BPA's proposed project:

14701-29 • The BPA project will impact PacifiCorp's ability to meet a key habitat term and condition of the USFWS's Biological Opinion.

14701-30 • The loss of old-growth habitat and structure violates the Utilities' USFWS's Biological Opinion and WHMP intent which is to manage for and benefit a broad range of wildlife, fish and native plant species.

14701-31 • The preferred transmission route would affect 31.95 acres of wetland/riparian habitat and/or their associated buffer by vegetation clearing-to-backline, potential access road construction, and increased erosion.

14701-32 • The preferred transmission route would affect a total of 64.8 acres of Wildlife Habitat Management lands that are managed according to their respective FERC license requirements as mitigation for ongoing hydroelectric project effects.

14701-33 • Old-growth coniferous forest as a resource on WHMP lands is intended to be preserved, maintained and expansion is to come in the maturing riparian and shoreline buffers that are impacted by the preferred route.

14701-34 • Snags provide critical habitat for both primary and secondary cavity nesters and loss of this habitat component would represent non-compliance with WHMP objectives. An estimated 27 snags in the Mature Forests types and 314 snags in the Production Forests and Forest types would be removed by clearing of transmission line ROWs, access roads and adjacent habitat.

14701-27 Please see the responses to Comments 14246-2, 14357-2 and 14457-2.

14701-28 Please see the response to Comment 14701-1.

14701-29 Please see the response to Comment 14701-1.

14701-30 Please see the response to Comment 14701-1.

14701-31 Please see the responses to Comments 14701-6, 14701-7 and 14701-8.

Design, environmental, cultural, and forest crews have been on site and relocated towers and associated access roads to minimize impacts to existing and future planned facilities, and habitats. Amount of acreage impacted has been reduced.

14701-32 Please see the response to Comment 14701-9. In addition, design, environmental, cultural, and forest crews have been on site and relocated towers and associated access roads to minimize impacts on existing and future planned facilities, and habitats. As a result, the amount of acreage impacted has been reduced.

14701-33 Please see the response to Comment 14701-9.

14701-34 Please see the response to Comment 14701-14.

- 14701-35 • The edge effect of transmission line clearings may result in wind damage to adjacent forested habitat (e.g. blown-down trees) a distance equal to the height of one to two site-potential trees from the back line.
- 14701-36 • Because most surrounding lands are managed for Douglas-fir, both the black cottonwood and western redcedar are identified in the WHMP as species that promotes forest habitat diversity and are retained as a Best Management Practice on WHMP lands. The MB&G surveyors recorded a total of 308 western redcedar trees and 54 black cottonwood trees within BPA's preferred route.
- 14701-37 • BPA's preferred route will cross a primary flight path for bald eagles accessing a foraging area near Merwin dam.
- 14701-38 • BPA's preferred route would remove a portion of suitable habitat for all species of raptors but specifically affect (disturb) an important bald eagle flight path along the Lewis River that eagles use to access foraging areas and roost sites.
- 14701-39 • Bald eagle roost monitoring will be conducted when activities with the potential to disturb roosting eagles (e.g., timber harvest operations, construction) occur within 0.25 mile of suitable roosting habitat (old-growth and mature forests) to determine if the area is occupied by roosting eagles during the key wintering period of November 15 – March 31 (PacifiCorp 2010).
- 14701-40 • Elk vulnerability will be greater due to long site distances along the new corridors especially at locations crossing public roadways.
- 14701-41 • Coastal tailed frog, not rocky mountain tailed frog, are within the range of the study area and has documented observations in the vicinity of the proposed corridor (Washington Herp Atlas, 2009).
- 14701-42 • Several species included in the Table 18.2 on pages 18-12 through 18-14 of the draft EIS are noted as not having a documented occurrence within the preferred route, however several of these species are commonly observed on PacifiCorp's WHMP lands and many were documented as occurring in the Phase II Technical Study Report Northern Goshawk Surveys on PacifiCorp Mitigation Land (MB&G 2012A) .
- 14701-43 • Any herbicide applied on WHMP lands would need prior approval from PacifiCorp before using for vegetation management under a BPA transmission line.
- 14701-44 • Transmission line ROW management will require significant man-power resources from PacifiCorp to conduct inspections, coordinate with vegetation control contractors and to ensure that goals and objectives are being achieved.
- 14701-45 • Additional roads associated with the transmission ROWs will require additional access control, erosion prevention, management of water control structures at road crossings,

- 14701-35 Please see the response to Comment 14701-10.
- 14701-36 Please see the response to Comment 14701-9.
- 14701-37 Please see the response to Comment 14628-1.
- 14701-38 Please see the response to Comment 14628-1.
- 14701-39 BPA would avoid construction activities within 0.25 mile of any active nests of peregrine falcon, bald eagle, and golden eagle during the breeding seasons for these species, as determined in consultation with the USFWS and WDFW.
- 14701-40 Elk are discussed in Section 18.1.4.2, Other Special-Status Wildlife Species, and the environmental consequences for elk are discussed for each alternative in Section 18.2, Environmental Consequences.
- 14701-41 Please see the response to Comment 14701-25. This has been corrected.
- 14701-42 Please see the response to Comment 14701-26.
- 14701-43 BPA would work with PacifiCorp to ensure that any herbicides applied to noxious weeds within cleared right-of-way on PacifiCorp lands will be compatible with PacifiCorp approved herbicide use.
- 14701-44 BPA would coordinate with PacifiCorp when access and operation/maintenance activities are required. Section 3.15, Maintenance, in Chapter 3, Project Components and Construction, Operation, and Maintenance Activities, discusses BPA vegetation management and coordination of activities with underlying landowners.
- 14701-45 Please see the response to Comment 14701-21.

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- 14701-45 | and managing vegetation buffers along roads to conceal big-game and other wildlife. As well as managing to prevent unauthorized motor vehicle access along roads.
- 14701-46 | • Additional roads associated with the transmission ROWs should avoid stream crossings where feasible and should use existing roads to the extent possible.
- 14701-47 | • Managing transmission ROWs to prevent unauthorized motor vehicle access along transmission ROWs will require gates, monitoring and enforcement of PacifiCorp's policies.
- 14701-48 | • Section 18.2.8 Recommended Mitigation Measures on paged 18-64 of the draft EIS 8th bullet regarding gate and signing road access to prevent human encroachment should specifically state that additional barriers will be used where needed to prevent unauthorized motorized vehicle access, such as all-terrain vehicles, on to the transmission line ROW and access roads. A complete assessment of BPA's proposed transmission line across WHMP lands cannot be fully evaluated until BPA issues a Record of Decision.

RECOMMENDED REVISIONS/ACTION:

- 14701-49 | As noted above, BPA's preferred transmission line route has substantial impact to wildlife habitat on lands owned by PacifiCorp and subsequently the species that use such habitat. Construction and implementation of BPA's project is in direct conflict with PacifiCorp's compliance with FERC project licenses, the USFWS's Biological Opinion, and the Lewis River Settlement Agreement. PacifiCorp wants to make certain that as BPA completes the project review process, the final documents provide PacifiCorp an adequate ability to maintain compliance with all federal, state, local or other regulatory requirements associated with the Lewis River hydroelectric projects and PacifiCorp's transmission facilities. PacifiCorp requires the ability to operate, maintain, upgrade and /or expand existing facilities as required to support current and future load service requirements in a compliant manner. All impacts of the proposed project on PacifiCorp should be accounted for, mitigated by and offset by BPA for the life of the effected facilities in a way that does not increase cost or risk to PacifiCorp or its customers and does not reduce reliability. PacifiCorp's position is that BPA must take responsibility for directly performing any needed mitigation, using BPA employees or BPA contractors, to the greatest extent possible and subject to a formal agreement with the Utilities. The Utilities also expect to be fully reimbursed for all adverse costs of BPA's action. This includes increased costs to compliantly meet all regulatory requirements as well as any adverse impacts to hydro operations and the projects' ability and flexibility to generate and transmit power. BPA cannot assume that PacifiCorp will perform all of BPA's mitigation obligations and that BPA can simply reimburse the company.
- 14701-50 |

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- 14701-46 Design, environmental, cultural, and forest crews have been on site and relocated towers and associated access roads to minimize impacts to existing and future planned facilities, and habitats.
- 14701-47 Please see the responses to Comments 14246-2, 14357-2, and 14457-2.
- 14701-48 Please see the responses to Comments 14246-2, 14357-2, and 14457-2.
- 14701-49 Please see the response to Comment 14701-1.
- 14701-50 Please see the response to Comment 14701-1.

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- PacifiCorp and Cowlitz PUD. 2004. Vegetation cover type mapping. Territorial resources [TER] 1.1 to 1-.38 *in* PacifiCorp, and Public Utility District No. 1 of Cowlitz County. June 2003. Final licensee's 2001 technical study status reports for the Lewis River Hydroelectric Projects, Merwin Hydroelectric Project, Federal Energy Regulatory Commission No. 935, Yale Hydroelectric Project, Federal Energy Regulatory Commission No. 2071, Swift No. 1 Hydroelectric Project, Federal Energy Regulatory Commission No. 2111, Swift No. 2 Hydroelectric Project, Federal Energy Regulatory Commission No. 2213.

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ATTACHMENT B

SUBJECT: Comments on Bonneville Power Administration's (BPA) I-5 Corridor Reinforcement Project Draft Environmental Impact Statement with respect to impacts to PacifiCorp's Recreation Resources – Public Access

14701-51

In November 2012 the Bonneville Power Administration (BPA) released the I-5 Corridor Reinforcement Project Draft Environmental Impact Statement (draft EIS). This document identifies a preferred route for a new BPA 500-kilovolt (kV) transmission line that will cross PacifiCorp's Yale and Merwin Hydroelectric Projects Federal Energy Regulatory Commission (FERC) Project boundaries. Of concern is the impact to recreational use within the project boundary.

ISSUE:

14701-52

The draft EIS, on page 6-14, describes impacts to recreational users that include "in-water construction activities, noise, dust, and visual intrusions from helicopters and barges into the scenic character" at the Columbia River crossing location. However, other sites, such as the crossing just downstream of Merwin Dam are not addressed. As mentioned, users most affected would be "fishermen or boaters along and on the river". Given the proposed general construction timeframe, we assume the peak activities downstream of Merwin dam would occur during the August to late September timeframe. This is a period when fishing use reaches high levels from Merwin dam downstream where fishermen are seeking fall Chinook, coho and summer steelhead. We also assume access to the parking area up the hill from the Merwin boat ramp would be closed. Likely impacts to the immediate area include: 1) loss of ability to launch from the Merwin boat ramp; 2) loss of ability to access the parking area for the Merwin boat ramp for potential shore fishing; and, 3) inability to access prime fishing areas from a boat launched further downstream. The Merwin boat ramp and access parking are part of the lower river recreation site components of PacifiCorp's FERC Merwin license. This construction impacts PacifiCorp's ability to meet requirements specific to the Merwin boat ramp location.

- 14701-51 Comment noted. Recreation is discussed in Chapter 6.
- 14701-52 A potential construction schedule is unknown at this time but given the location, construction timing would likely be influenced by potential nesting and roosting in the area and high recreational use of the lake, boat ramp, and associated parking facilities in the summer months. Fortunately, the Merwin Dam area is accessible during other times of the year when recreation use is very low to non-existent and nesting and fledging of young does not occur. There would be no permanent impacts to recreational use at the Merwin Dam facilities and the Lewis River. Temporary impacts to fishing would occur from the parking area and road to the boat launch being closed for a few days while the line is strung across the river. This is required for safety reasons. Tower construction and the associated noise, dust, and visual intrusion could also distract visitors as they drive towards the lake, park, and enjoy picnics or other outdoor activities. Visitors would not be allowed near the construction area. These impacts would only occur if BPA could not conduct stringing operations in the late fall, winter, or spring when boating and lake use might be very low or non-existent. Temporary impacts from construction activities would be low-to-moderate depending on whether construction would occur during peak or off-peak use times.

ATTACHMENT C

SUBJECT: Comments on Bonneville Power Administration's (BPA) I-5 Corridor Reinforcement Project Draft Environmental Impact Statement with respect to impacts to PacifiCorp's Transmission Services

14701-53

In November 2012 the Bonneville Power Administration (BPA) released the I-5 Corridor Reinforcement Project draft Environmental Impact Statement (draft EIS). This document identifies a preferred route for a new BPA 500-kilovolt (kV) transmission line that will cross PacifiCorp's Yale and Merwin Hydroelectric Projects Federal Energy Regulatory Commission (FERC) Project boundaries and will run parallel and cross over PacifiCorp's related electrical infrastructure.

This document summarizes PacifiCorp's concerns with the proposed BPA I-5 Corridor preferred route. Included are recommended revisions and/or actions to be included in a final Environmental Impact Statement (EIS) which BPA should prepare in review of proposed project.

ISSUES:Issue 1 – Impacts to existing transmission infrastructure

14701-54

PacifiCorp is concerned that the draft EIS does not address possible impacts to existing electrical infrastructure. The alternate project routes parallel and cross numerous existing infrastructures yet possible impacts and mitigation steps are not identified in the documentation nor does it appear that analysis was completed to address this issue. This issue is of most concern near PacifiCorp's Merwin Hydroelectric Project and at the Columbia River crossing.

Recommended Revision/Action

The final EIS should address possible impacts to existing electrical infrastructure and outline the mitigation steps required to ensure no impacts are imparted to existing infrastructure by the proposed transmission line. Additionally the final EIS should include the details of the analysis completed to show the impacts or that no impacts are imparted through paralleling or crossing of existing infrastructure with the proposed transmission line. The final EIS needs to include mitigation actions to be taken to alleviate any possible impacts to the existing infrastructure including but not limited to submittal and finalization of a Wire Crossing Agreement for all line crossings.

Issue 2 – Use of existing transmission line right of way for access to the proposed line

14701-55

The draft EIS maps show proposed access roads that cross and/or follow existing transmission line rights of way. PacifiCorp is concerned that the document does not address possible impacts to the existing rights of way or that the document outlines no plan to discuss this with current holder of those rights or with the underlying landowners. PacifiCorp notes that any new rights will need to be acquired from the underlying landowner.

14701-53 Comment noted.

14701-54 BPA engineers have met many times with PacifiCorp engineers on the location of proposed facilities at Merwin Dam and Troutdale where PacifiCorp has existing and proposed new facilities. PacifiCorp requirements have been taken into account in the design and location of the proposed project. Likewise, BPA will continue to work directly with other impacted utilities.

14701-55 Please see the responses to Comments 14701-1 and 14701-54.

- Recommended Revision/Action*
- 14701-55 The final EIS should address possible impacts to existing electrical infrastructure rights of way and outline the mitigation steps required to ensure no impacts are imparted to existing infrastructure by the proposed transmission line. Additional information should outline the proposed plan to be followed in obtaining the access roads rights of way including those plans that include actions with the current rights of way holder and the underlying landowner.
- Issue 3 – North American Electric Reliability Corporation and Western Electricity Coordinating Council
- 14701-56 The draft EIS does not address possible impacts to current reliability standards associated with line crossing or parallel line siting of the proposed transmission line to existing transmission lines. Nor does the document address possible operating impacts to existing transmission infrastructure associated with the placement of the proposed line as would be addressed in Western Electricity Coordinating Council reviews and approvals.
- Recommended Revision/Action*
- The final EIS should address possible actions being taken to identify and address possible impacts to existing electrical infrastructure along with possible mitigation of impacts. Additional information should be provided that outlines the plan to be followed in acquiring needed Western Electricity Coordinating Council Path Rating reviews and approvals for the proposed transmission line.
- Issue 4 – Removal or rebuild of existing towers
- 14701-57 Chapter 5 Land, states that “All existing tower removal or rebuilds occurs in existing right of way causing no additional impacts”. PacifiCorp is concerned that the statement and chapter does not make it clear if this pertains only to the proposed route rebuild on the Bonneville Power Administration’s system or if this will include proposed rebuilds of other transmission facilities owned by others.
- Recommended Revision/Action*
- The statement should be clarified to indicate what existing facilities may be removed or rebuilt. PacifiCorp also suggests that prior to removal, relocation or rebuild of any existing infrastructure that Bonneville Power Administration enter into an agreement with the current facilities’ owner outlining all actions to be taken and that this action be included as a mitigation step in the final EIS.
- Issue 5 – Proposed route near PacifiCorp’s Merwin facility
- 14701-58 Appendix C e Segment Photomaps pp 228 – 284, sheet 46 of 57 in the file shows the possible line route crossing the Lewis River just downstream from PacifiCorp’s Merwin Hydroelectric

- 14701-56 Please see the response to Comment 14701-54.
- 14701-57 Text has been added in Chapter 5, Land, that clarifies the actions pertaining to BPA facilities. Any removal, relocation, or rebuild work of non-BPA utilities would be closely coordinated among the utilities, including developing any agreements.
- 14701-58 BPA has coordinated engineering design and project location with PacifiCorp to minimize impacts to existing facilities and also to a proposed PacifiCorp and Cowlitz PUD double-circuit line in this area. Appendix C1 shows the new design that minimizes impacts to existing and new infrastructure and the environment.

14701-58 Project. PacifiCorp is concerned that segment L1 to L3 would encroach on existing Merwin facilities. Although there are no dimensions on the drawing, current land use appears to limit open space between a PacifiCorp transmission line and Merwin facilities at 125 to 135 feet and it appears that the proposed line easement would at a minimum encroach on PacifiCorp's existing line easement. The draft EIS does not address these impacts or possible mitigation, PacifiCorp is concerned that the proposed line will result in impacts to existing infrastructure without a mitigation plan.

Recommended Revision/Action

PacifiCorp proposes that additional analysis and detail be provided on this proposed segment that provides details on possible impacts to PacifiCorp's infrastructure and proposed mitigation measure if required.

Issue 6 – Sundial substation location

14701-59 Appendix C d Segment Photomaps pp 171 – 227, sheet 31 of 57 in the file shows the proposed location of the Sundial substation, the southern terminus of the proposed project. From the map it appears that the substation footprint will encroach on an existing PacifiCorp transmission line location. PacifiCorp is concerned that the proposed substation will impact the existing transmission line and that the draft EIS does not address this possible impact nor provide any mitigation information.

Recommended Revision/Action

PacifiCorp proposes that additional analysis and detail be provided on this proposed segment that provides details on possible impacts to PacifiCorp's infrastructure and proposed mitigation measure if required.

- 14701-59 BPA has coordinated engineering design and project location with PacifiCorp at the Sundial substation site. A portion of the PacifiCorp Albina-Troutdale line would be removed and rebuilt to accommodate the new substation on Lot 12. Lot 11 is the preferred location for the substation. Chapter 4 in the EIS has been updated with the new design that minimizes impacts to existing infrastructure and the environment.

ATTACHMENT D

Lewis River Terrestrial Coordination Committee Members and Alternates.

TCC Member	Organization	Alternate
No representative at this time	American Rivers	To be named
Public Works Director	City of Woodland	To be named
No representative at this time	Clark County	To be named
No representative at this time	Cowlitz County	To be named
Nathan Reynolds	Cowlitz Indian Tribe	Erik White
No representative at this time	Cowlitz-Skamania Fire District No. 7	To be named
No representative at this time	Fish First	To be named
No representative at this time	Lewis River Citizens at-large	To be named
Mariah Stoll-Smith Reese	Lewis River Community Council	To be named
No representative at this time	Lower Columbia River Fish Recovery	To be named
Michelle Day	National Marine Fisheries Service	To be named
No representative at this time	National Park Service	To be named
No representative at this time	North County Emergency Medical	To be named
Kirk Naylor	PacifiCorp Energy (PacifiCorp Co-Chair)	Kendel Emmerson
Diana M. Gritten-MacDonald	PUD of Cowlitz County (PUD Co-Chair)	To be named
Bob Nelson	Rocky Mountain Elk Foundation	Bill Richardson
Paul Pearce	Skamania County	To be named
No representative at this time	The Native Fish Society	To be named
No representative at this time	Trout Unlimited	To be named
No representative at this time	US Bureau of Land Mgmt	To be named
LouEllyn Jones	US Fish & Wildlife	To be named
Mitch Wainwright	USDA Forest Service	To be named
Peggy Miller	Washington Dept of Fish & Wildlife	Eric Holman
No representative at this time	Washington Interagency Committee	To be named
No representative at this time	Woodland Chamber of Commerce	To be named
Bob Rose	Yakama Nation	Joanna Meninick

ATTACHMENT E

Lewis River Aquatic Coordination Committee Members and Alternates.

ACC Member	Organization	Alternate
Kathryn Miller	American Rivers	To be named
Public Works Director	City of Woodland	To be named
No representative at this time	Clark County	To be named
No representative at this time	Cowlitz County	To be named
Shannon Wills	Cowlitz Indian Tribe	Craig Olds
No representative at this time	Cowlitz-Skamania Fire District No. 7	To be named
Jim Malinowski	Fish First	To be named
No representative at this time	Lewis River Citizens at-large	To be named
Mariah Stoll-Smith Reese	Lewis River Community Council	To be named
Jeff Breckel	Lower Columbia River Fish Recovery	Pat Frazier
Michelle Day	National Marine Fisheries Service	Bryan Nordlund
No representative at this time	National Park Service	To be named
No representative at this time	North County Emergency Medical	To be named
Frank Shrier	PacifiCorp Energy (PacifiCorp Co-Chair)	Erik Lesko
Diana M. Gritten-MacDonald	PUD of Cowlitz County (PUD Co-Chair)	To be named
No representative at this time	Rocky Mountain Elk Foundation	To be named
Paul Pearce	Skamania County	To be named
Bill Bakke	The Native Fish Society	To be named
Kathryn Miller	Trout Unlimited	To be named
No representative at this time	US Bureau of Land Mgmt	To be named
LouEllyn Jones	US Fish & Wildlife	Lindsay Wright
Dave Hu	USDA Forest Service	Adam Haspiel
Eric Kinne	Washington Dept of Fish & Wildlife	To be named
No representative at this time	Washington Interagency Committee	To be named
No representative at this time	Woodland Chamber of Commerce	To be named
Bob Rose	Yakama Nation	To be named
No representative at this time	WA Recreation & Conservation Office	To be named

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