PUGET SOUND ENERGY

Puget Sound Energy
P.O. Box 97034
Bellevue, WA 98009-9734
PSE.com

May 15, 2025

Energy Facility Site Evaluation Council
P.O. Box 43172
Olympia, WA 98504-3172

**Re: Comments on the Draft Programmatic Environmental Impact Statement on Transmission Facilities in Washington State**

Dear Energy Facility Site Evaluation Council:

Puget Sound Energy, Inc. (PSE) appreciates this opportunity to comment on the Energy Facility Site Evaluation Council's (EFSEC's) Draft Programmatic Environmental Impact Statement for High Voltage Transmission Facilities in Washington State (Draft PEIS). PSE is the oldest and largest electric and gas utility company in the state of Washington. PSE provides electric power to approximately 1.2 million customers in a 6,000 square mile service territory within central and western Washington. PSE's generation facilities consist of a diversified mix of energy resources, including natural gas/oil, wind/solar, coal, and hydroelectric. To connect these resources to our customers, PSE owns and operates approximately 2,600 miles of electric transmission lines.

In 2019, Governor Inslee signed the Clean Energy Transformation Act (CETA) into law. CETA requires electric utilities to have a coal-free portfolio by December 31, 2025 and to have greenhouse gas neutral retail sales by January 1, 2030. By January 1, 2045, all generation and sales from electric utilities to retail customers are to be from clean energy resources. At the same time changing weather patterns (including record heat and prolonged periods of very hot and very cold weather), the addition of data centers, and the electrification of the transportation sector are materially increasing and changing our load growth patterns.

Grid decarbonization and load growth directly drive a critical need for new long-haul transmission in Washington. PSE is committed to working with our state regulators to develop transmission solutions that meet the requirements mandated by the state. Washington's clean energy deployments and emission reductions contribute to national carbon reduction goals while also helping to improve the nation's energy security and clean energy workforce development.

Following careful review by PSE subject matter experts, we respectfully submit the following narrative comments and the attached detailed comment spreadsheet on EFSEC's Draft PEIS. While there are places where the Draft PEIS finds success, PSE has significant concerns about the data and legal basis for many categories of environmental impact analysis and associated prescriptive mitigation measures. Of greatest concern, and as detailed in our comment spreadsheet, there are material aspects where the analysis is incorrect and unsupported by

PUGET SOUND ENERGY

Puget Sound Energy
P.O. Box 97034
Bellevue, WA 98009-9734
PSE.com

adequate data. In those cases, the Draft PEIS, in its current form, may both frustrate and impede a more programmatic approach to the siting and permitting of transmission facilities needed in Washington. As always, we invite any and all engagement from EFSEC on these comments so please do not hesitate to reach out to discuss further.

**A. The Draft PEIS Should be Carefully Reviewed for Consistency with SEPA.**

PSE respectfully requests that EFSEC undertake a full and detailed review of the Draft PEIS to ensure that the document is legally consistent with SEPA. One example of the Draft PEIS exceeding a lead agency's authority under SEPA, is where the Draft PEIS states that all *moderate* impacts must be subject to mitigation. Under SEPA, there is no legal basis for requiring mitigation for potentially moderate impacts. Substantive SEPA authority— which is the legal basis for a SEPA lead agency's mitigation authority— is limited to where there are probable *significant* adverse environmental impacts. Moreover, any exercise of substantive SEPA authority to condition a project with mitigation measures for probable significant adverse environmental impacts is discretionary in all cases. If the Draft PEIS proceeds unchanged, it effectively legislates new SEPA law, which we do not believe to be the legislature's intent in directing the drafting of this PEIS or likely EFSEC's intent.

**B. The General Requirements and Avoidance Measures Are Unnecessarily Prescriptive in Light of Otherwise Applicable Regulations and Actual Impacts of a Typical Transmission Line Project.**

The Draft PEIS's General Requirements and Avoidance Measures (GR&AM) appear to all but ensure that the ability to effectively tier to the Draft PEIS will be limited because it is likely impossible for *any* project to comply with all the GR&AM. Perhaps the best evidence of this is in the maps included at the end of each section of impact analysis. The GR&AM take an approach that requires complete avoidance of impacts to various environmental resources. The Draft PEIS cannot legislate or create new mandatory policy compelling the avoidance of all impacts. To our knowledge, that is a more stringent standard than has ever been applied in a SEPA EIS, which generally works to disclose and analyze potential impacts and evaluate and/or *recommend* avoidance, minimization and mitigation measures. More fundamentally, the Draft PEIS's total avoidance undermines the purpose, intent and function of SEPA in its entirety.

One example of the many instances where the GR&AM create standards that are not supported by fact or, in our opinion, science is the requirement for a 300-foot setback from all wetlands in Washington. The Draft PEIS does not provide a scientific basis for this broad, overly prescriptive measure on a category of impacts that are already subject to established regulatory schemes that provide for specific setbacks and mitigation that in most cases are a function of the ecological function of a wetland rather than "all wetlands." The seemingly arbitrary 300-foot setback (*i.e.*, it is unclear what transmission line-related impact requires this setback) strips

PUGET SOUND ENERGY

Puget Sound Energy
P.O. Box 97034
Bellevue, WA 98009-9734
PSE.com

SEPA leads of their duty to use best available science and in many cases requires a standard that is well in excess of what's required in their own codes.

Other environmental reviews of transmission lines do not make this mistake. Rather, they apply local, state and federal laws applicable to the impacted wetlands, recommend avoidance and minimization measures, and then require mitigation where impacts are unavoidable. *See generally,* WAC 197-11-330. Wetland regulation in Washington is a serious, science-based undertaking. The Draft PEIS should not impose an entirely new, unsupported requirement on much needed energy infrastructure facilities for categories of potential impacts that are regulated under established, science-based, systems.

**C. Any Required Mitigation Should be Based on Best Available Science and *Must* be Tied to a Potential Significant Adverse Environmental Impact.**

The Draft PEIS includes mitigation measures that are unsupported and not necessary for all transmission projects, and suggests that some of these measures are required for all project-specific applications. RCW 43.21C.408(3) states that projects that follow the recommendations developed in this Draft PEIS shall be "considered to have mitigated the probable significant adverse project-specific environmental impacts" under SEPA. However, the Draft PEIS includes mitigation measures that should not be required for all projects (not all transmission line projects will have probable significant adverse environmental impacts) and which are not required components of project-specific applications. The potential inapplicability of proposed mitigation measures should be clearly stated in the final PEIS.

**D. EFSEC Should Clearly Limit Any Recommendations on a Single Proprietary Evaluation Tool.**

The consultant who drafted the Draft PEIS used a proprietary, copyrighted software program that is owned by that consultant. It is not the only software or analytical approach available to SEPA lead agencies; however, the Draft PEIS appears to promote or, if misinterpreted, to require the use of the goldSET for projects seeking to tier to the Draft PEIS. To the extent that the PEIS promotes this product or otherwise puts a SEPA lead agency or applicant into the untenable position of having to decide whether they must use the Draft PEIS authors' proprietary product to complete the project-level analysis that the Draft PEIS steers them toward, EFSEC should set the record straight. Additionally, these types of tools tend to have finite lifespans. We do not believe that EFSEC intended to direct the use of this product, but again, PSE respectfully requests that the Draft PEIS clearly state that it is only one of many available tools and that tiering does not require its use.

PUGET SOUND ENERGY

Puget Sound Energy
P.O. Box 97034
Bellevue, WA 98009-9734
PSE.com

**E. EFSEC Should Consider the Avoidance and Mitigation Measures Required in Additional Analogous Environmental Review Documents.**

The Draft PEIS should look to additional environmental reviews to inform GR&AM, particularly as many significant transmission line projects have been reviewed pursuant to a National Environmental Policy Act Environmental Assessment/Mitigated Finding of No Significant Impact, which is more analogous to a SEPA Mitigated Determination of Nonsignificance. The U.S. Department of Energy ("DOE") has extensive experience in transmission line siting, rebuilds, modifications, and upgrades on projects that have since been built in both Washington and Oregon. The environmental review documents for these projects are informative and, as can be seen in our Attachment B, contain a very different approach to avoidance and mitigation.

**F. The PEIS Should Contemplate that Some Projects Will Not Require Additional SEPA Review.**

Finally, the document concludes that every transmission project ***must*** undergo more SEPA. This contravenes the legislature's intent, which is to allow full use of the PEIS, without more, where possible. RCW 43.23C.408(2)(b)(i) states that some projects should be able to use the PEIS's analysis "unchanged," and subsection (3) states that projects that follow the recommendations of the PEIS shall be "considered to have mitigated the probable significant adverse project-specific environmental impacts," meaning that no further environmental review or mitigation shall be required. However, the PEIS does not provide workable or practicable recommendations consistent with this statutory directive.

PSE greatly appreciates EFSEC's work in completing this Draft PEIS. It reflects a full engagement of a complex topic and we hope that our comments are taken in the productive spirit that they are intended. Washington needs transmission facility upgrades and new builds; we very much hope that our comments are taken seriously and that the final PEIS is right sized and helps us get there.

Sincerely,

Sara Leverette
Puget Sound Energy, Inc.
Asst. General Counsel/Director Environmental Services
Sara.leverette@pse.com
(503) 381-0281

# Attachment A

| Page | Section | Language | Comment |
|---|---|---|---|
| **GENERAL/THEMATIC COMMENTS** | | | |
| 3-3 through 3-11 and throughout PEIS | 3.1.3.1 General Conditions; 3.1.3.2 Avoidance Criteria | In the PEIS Decision Tree and throughout the document, the PEIS states that if a project does not comply with any General Condition or Avoidance Criteria, then the SEPA Lead Agency must complete additional environmental review and identification of mitigation. The PEIS further states, "Several avoidance criteria throughout this Programmatic EIS are designed to **avoid impacting an environmental resource altogether**." This principle is evident throughout the General Conditions and Avoidance Criteria. For example:<br>* Gen-3 requires projects to be "consistent with all applicable policies and ordinances," including Comprehensive Plan policies(i.e., planning policies that do not have the effect of development regulations);<br>* AVOID-1 requires projects to avoid known hazardous areas, even though development regulations allow some impact and development within/near hazardous areas; and<br>* AVOID-21 through AVOID-24 require avoiding any physical or visual impacts to historic, cultural, or tribal resources. | These standards frustrate the Legislature's intent in adopting the enabling statute for this PEIS. RCW 43.23C.408(2)(b)(i) states that some projects should be able to use the PEIS's analysis "unchanged," and subsection (3) states that projects that follow the recommendations of the PEIS shall be "considered to have mitigated the probable significant adverse project-specific environmental impacts," meaning that no further environmental review or mitigation shall be required. However, the PEIS does not provide workable or practicable recommendations. Avoidance of all impacts to environmental resources is an impossibly high standard and is not based on SEPA or any recognized legal standard. Under these standards, it is virtually impossible for any transmission project to use the PEIS without additional environmental review. This outcome frustrates the purpose of the enabling statute, which is to support more efficient and effective siting and permitting. In fact, the PEIS will likely make siting and permitting more difficult because it incorporates unachievable standards and implies a goal of zero impact, which projects simply cannot achieve. To avoid this outcome, the approach to the PEIS Decision Tree must be overhauled. |
| Throughout PEIS (e.g., 3-12) | | The PEIS contains various inaccurate statements regarding SEPA. For example:<br>* "When a SEPA Lead Agency reviews a project-specific application and identifies other probable significant adverse environmental impacts that were not accounted for in this Draft Programmatic EIS, additional<br>environmental review and project-specific mitigation measures are required." (p. 3-12) SEPA substantive authority and the imposition of mitigation is discretionary. RCW 43.21C.060 provides that a governmental action "may be conditioned" pursuant to SEPA (emphasis added). It is inaccurate to state that mitigation measures are "required," even for significant impacts.<br>* "When the following avoidance criteria cannot be met, additional environmental review and mitigation measures would be required to address related project-specific impacts." (p. 3-6) Given that the avoidance criteria are premised upon avoiding impacts entirely, the PEIS should not presume that the inability to meet avoidance criteria results in additional impacts or requires mitigation. The language should be changed from "would" to "could."<br>* In developing the Impact Determination Scale for use in the PEIS, the PEIS states a "precautionary approach has been taken for the assessment where information is currently unknown or unavailable." This language is repeated throughout the PEIS in the sections titled "Probable Significant Adverse Impact Determination" for each element of the environment. SEPA does not support a "precautionary" presumption of significance when information is unknown. | The PEIS should accurately incorporate and reflect SEPA's standards. The PEIS is not a policy document and should not attempt to influence how decision-makers exercise their discretion and substantive authority under SEPA. By applying incorrect standards - for example, by indicating that mitigation is "required" when it is not - the PEIS creates confusion and will likely make siting and permitting more difficult, again frustrating the Legislature's intent to streamline permitting of transmission facilities. |
| Throughout PEIS (e.g., 3-6 to 3-11) | | The PEIS makes statements or describes standards that are different from the applicable regulations and/or not supported by science. For example:<br>* AVOID-2 states, "Avoid impacts within 300 feet of all wetlands."<br>* AVOID-16 states, "Avoid a decrease in level of service (LOS) below level<br>C on roads used during construction and avoid additional LOS reductions during construction on roads already below level C."<br>* The PEIS's suitability map methodology sets a 775-foot buffer around "sensitive ecosystems and species at risk."<br>* Regarding EMF, the PEIS states, "While there are no federal regulations for public exposure to low frequency EMFs in the United States, . . . [a] safe, minimum distance of 100 feet from transmission facilities is recommended to minimize the health effects of EMFs (NIEHS 2024)." | These standards are more stringent than the applicable regulations. Critical areas ordinances (which are required by law to be based on best available science) do not establish a 300-foot buffer around all ordinances. Local, regional, and state standards generally allow for decreases below LOS C. The PEIS provides no citation to support the use of a 775-foot buffer. While the PEIS does cite a source for the 100-foot buffer relating to EMF, the cited source does not support such a buffer; in fact, the source does not suggest any buffer or separation distance. The use of unsupported standards or characterizations of impact will create confusion and will make permitting difficult by suggesting that transmission projects should be subject to standards that are more stringent than what the applicable regulations or science support. |
| Appendix 3.1-1 and throughout PEIS | | The PEIS includes mitigation measures that are unsupported and not necessary for all transmission projects, and suggests that some of these measures are required for all project-specific applications. For example:<br>* Mitigation measure Geo-7 requires applicants to "commit to a Phase 1 Environmental Site Assessment (ESA)" before construction of any facility and states that "[t]his is a required component of project-specific applications necessary for SEPA Lead Agencies to evaluate baseline conditions."<br>* Veg-4 through Veg-6 state that vegetation management plans, invasive species management plans, and revegetation plans are required components of project-specific applications.<br>* TR-5 calls for creation of a carpool program for commuting workers.<br>* SE-2 calls for an analysis of the temporary housing market. | RCW 43.21C.408(3) states that projects that follow the recommendations developed in this PEIS shall be "considered to have mitigated the probable significant adverse project-specific environmental impacts" under SEPA. However, the PEIS includes mitigation measures that should not be required for all projects and that are not required components of project-specific applications. For example, an upgrade or modification project within an existing corridor should not be required to prepare a Phase 1 ESA. Projects with a smaller scale or shorter construction timeframes do not warrant mitigation measures such as carpool programs or housing market analyses. Overbroad and over-inclusive mitigation measures will make permitting more difficult by creating a presumption that these measures should apply to all transmission facility projects. |

| | | | |
|---|---|---|---|
| 1-26 and throughout PEIS | 1.6.5 Related Environmental Impact Statements | The draft PEIS fails to look at any transmission rebuild/modification/upgrade federal NEPA environmental documents from Department of Energy, despite the DOE having the most experience with conducting environmental review on rebuilds. Further, there have been many WA transmission rebuilds that have undergone NEPA review, and the NEPA documents for them greatly inform impacts evaluations. | A comparison of this draft PEIS with three NEPA EAs for recent transmission rebuilds in Washington is attached and should be reviewed to more fully inform the multiple types of measures (General, Avoidance, BMP, mitigation) recommended in the final PEIS. As shown in the comparison, while there are multiple commonalities in measures recommended in the three NEPA EAs, there is little overlap with the draft PEIS. In particular, the General Conditions and Avoidance Criteria presented in the draft PEIS are not included in the NEPA EA documents. This comparison further reinforces that the draft PEIS applies standards and criteria that are inconsistent with regulations, science, and industry practice. |
| Throughout PEIS | | | The usefulness of the PEIS would be increased and would more effectively contribute to the efficiency of selecting, siting and permitting if it highlights comparative differences throughout based on brownfield v greenfield development, including both the impacts and the benefits of each. |
| **SPECIFIC COMMENTS** | | | |
| 1-6 | 1.5 | | The PEIS should not have excluded analysis of any land in Washington irrespective of ownership. The impacts of transmission to all land should have been studied, with the acknowledgment that special identified lands (Tribal reservations, certain parks, wildlife areas, etc.) would require additional authorizations before development could occur. |
| 1-11 | 1.6.1 | SEPA is intended to provide information to agencies, applicants, and the public to encourage the development of environmentally sound proposals. | This is an oversimplification of SEPA and an editorial comment on the purpose of SEPA. This statement should be removed and the specific provisions of RCW 43.21C cited to properly capture the purpose of SEPA. |
| 1-11 | 1.6.1 | SEPA applies to actions taken at all levels of government in Washington State. | This is not factually correct. SEPA does not apply to federal actions on federal lands nor does it apply to tribal actions on tribal lands as examples. |
| 1-12 | 1.6.1 | One of the first steps for an applicant to consider when initiating the SEPA environmental review process and preparing a proposal application is identifying the SEPA Lead Agency. | This is not factually correct. The applicant does not determine a lead agency. Per WAC 197-11-924 the first agency receiving a proposal determines the lead agency. |
| 1-13 | 1.6.1.1 | Based on the criteria outlined above, transmission facility project applications within the scope of this Draft Programmatic EIS generally can or are required to follow one of two SEPA environmental review processes: 1) EFSEC's certification process or 2) local government processes | This does not describe processes, but rather the entity responsible for the process. |
| 1-14 | 1.6.1.1 | Determination of Significance (DS): If the project is likely to have a significant adverse environmental impact, the SEPA Lead Agency must issue a determination of significance and begin preparing an EIS. | This is not accurate. Per RCW 43.21C.031 the term "probable" is included in the classification of impacts where an EIS is required to be prepared. |
| 1-14 | 1.6.1.1 | A SEPA Lead Agency conducting a project-specific environmental review for transmission facilities must begin with a review of this Draft Programmatic EIS. The review must consider and further evaluate any probable significant adverse environmental impacts associated with the project-specific application that were not analyzed in this Draft Programmatic EIS. If the review identifies additional probable significant adverse environmental impacts, the SEPA Lead Agency must identify specific mitigation measures to address the probable significant adverse environmental impacts. | This language is overbroad, as the PEIS only applies to electrical transmission facilities with a nominal voltage of 230kV or greater. The language also appears to presume that mitigation is required for impacts. |
| 1-25 | 1.6.4 Executive and Secretarial Orders | | Strongly recommend revisiting all orders that predate the current presidential administration to ensure they have not been repealed. |
| 1-25 | 1.6.5 Related Environmental Impact Statements | Vantage - Pomona, South of Tri-Cities Reinforcement, I-5 Corridor Reinforcement Project FEIS | The draft PEIS fails to look at any transmission rebuild/modification/upgrade federal NEPA environmental documents from Department of Energy despite the DOE having the most experience with conducting environmental review on rebuilds. All three cited federal NEPA documents are greenfield projects. However, there have been many WA transmission rebuilds that have undergone NEPA review and the NEPA documents for them greatly inform impacts evaluation, particularly but not only in rural areas. Energize Eastside upgrade EIS should not be the only source of reference for environmental impacts of upgrades, rebuilds, etc. |

| | | | |
|---|---|---|---|
| 2-1 | 2.1 | "Consistent with the Federal Energy Regulatory Commission (FERC) National Reliability Standards, low-voltage transmission facilities are generally defined as those below 100 kV, while high-voltage transmission facilities typically operate above 200 kV and can sometimes include the 100 to 200 kV range as well (FERC 2023)." | The standards that PSE follows are referred to as the North American Electric Reliability Corporation (NERC) Reliability Standards. While FERC governs NERC, all of the standards are developed and enforced by NERC. NERC also maintains the Bulk Electric System definition, which governs the voltage level of the transmission facilities that PSE plans and operates. It would be more appropriate to point to the BES definition than how FERC generally classifies transmission, especially given that this is not a formal FERC definition. |
| 2-1 | 2.1 | "The electricity again passes through a substation to decrease the voltage level to a safer and more usable intensity." | This language appears to suggest that distribution voltage is "safer and more usable," which is an inaccurate and confusing claim. Suggest rewording as follows: "The electricity again passes through a substation to decrease the voltage to rated distribution system levels to allow for safe delivery through the distribution system ." |
| 2-1 | 2.1 | "High-voltage transmission facilities can also be used to move large electrical loads from one substation to another to meet the National Energy Reliability Corporation (NERC) transmission system planning performance requirements and customer demands (NERC n.d.). " | This language is unclear and confusing. Transmission facilities are not used to "move large electrical loads" between substations, and that is not how the NERC planning performance requirements are met. Suggest rewording as follows: "High-voltage transmission facilities can also be used to move generation through a networked system from one substation to another to serve large electrical loads while meeting the National Energy Reliability Corporation (NERC) transmission system planning performance requirements and customer demands (NERC n.d.)." |
| 2-1 | 2.1 | " Increased development of transmission facilities also improves grid resilience by providing redundancy, backups, additional supply, and inter-grid connectivity…" | Rather than "inter-grid", the more commonly known term used in the industry is regional / inter-regional connectivity. |
| 2-1 | 2.1 | Overview of Transmission Facilities | This section does not include a discussion of high voltage direct current (HVDC) lines, which should be discussed. |
| 2-2 | 2.1 | Overview of Transmission Facilities | Important point not developed is that existing transmission facilities connect to legacy generation (e.g. coal/gas). New renewable generation will generally not be co-located near these legacy generation sites, so new transmission is likely needed. |
| 2-3 | 2.1.1 | Overhead Transmission references materials used in transmission structures. | The references to materials is not explained and is not relevant to the discussion. Futher, there are additional material types that are not discussed - for example, FRP, steel, ductile iron, and concrete. Each material has different properties, and the uses vary depending on the circumstances. Recommend deletion. |
| 2-3 | 2.1.1 | Overhead Transmission - LST versus TSP design choice | Note that there are also tubular steel towers now. |
| 2-3 | 2.1.1.1 | "The function of a substation is to transform electricity to a higher level of voltage, for efficient transmission over long distances, or a lower level of voltage, for easier and safer local distribution." | The characterization of local distribution as "easier and safer" is inaccurate and confusing - recommend deletion. |
| 2-4 | 2.1.1.1 | Figure 2.1-3: Transmission Substations | The picture on the left appears to depict a distribution substation. Suggest renaming the figure to "Examples of Substation Footprints". |
| 2-4 | 2.1.1.1 | "Transformers are the primary component of substations, and they serve the substations' primary function of stepping up or stepping down the voltage of transmitted power." | There are transmission switching stations that do not contain transformers. These are used to provide better connectivity and reliability to large load areas. |
| 2-5 | 2.1.1.3 | Obstruction Lighting and Marking (FAA marking and lighting requirements) | It is unclear whether this level of detailed information is helpful. - the discussion may be simplified by simply pointing to the FAA guidance and noting that FAA marking and lighting requirements may apply to individual projects. |
| 2-6 | 2.1.2 | Underground Transmission | This section starts of with multiple references to "benefits" of underground transmission. This section should eliminate the discussion of benefits, which is an editorial opinion, and focus on the specific characteristics of the activity. |

| | | | |
|---|---|---|---|
| 2-8 | 2.1.2 | " Upgrades or modifications of existing transmission facilities are often considered to improve efficiency and reliability and are required to ensure compliance with updated regulations and standards." | It is inaccurate to state that upgrades/modifications "are required to ensure compliance with updated regulations and standards." Suggest rewording as follows: "Upgrades or modifications of existing transmission facilities are often considered to improve efficiency and reliability or to ensure compliance with updated regulations and standards." |
| 2-9 | 2.2.1.3 | The PEIS discusses various approximate construction timelines for activities. | The PEIS should include an overarching statement that the timelines provided are approximate, and that construction timelines will depend on the project. The PEIS includes timelines that may not be accurate. For example, the PEIS states that advanced transmission technologies installation "could take approximately 3 to 12 months." Advanced technologies can encompass a variety of activities, and the stated timeline is not reasonable for some activities. |
| 2-9 | 2.2.1.3 | "Advanced grid software technology can include solutions such as dynamic line rating that focus on improvements in the control systems and decision-making processes." | It is worth noting that many dynamic line rating options on the market today do require the installation of hardware, such as advanced conductors or weather monitoring systems, and are not software-only technologies. |
| 2-10 | 2.2.1.3 | "The phases of transmission facility development analyzed in this Draft Programmatic EIS include construction, operation and maintenance, and upgrade or modification. The upgrade or modification to an existing transmission facility can occur after construction and during its operation and maintenance phase, but before decommissioning." | Suggest adding Upgrade or Modification under the Operation and Maintenance arrow in the diagram. |
| 2-10 | 2.3, Figure 2.3-1 | "The interconnection points determine the specific location for a new transmission facility or an upgrade or modification to an existing facility. Site characterization typically involves conducting desktop analyses, system planning studies, and, with agreement from the landowner(s), field surveys. " | The interconnection points may define transmission substation location, but does not define the routing of a transmission line. Suggest removing this statement or clarifying how transmission line routes and substation locations will be characterized/identified. Further, note that system planning studies do not involve site characterization. These studies identify the impacts of new/modified transmission infrastructure on the system without consideration of where the line will be physically located. |
| 2-11 | 2.3.1 | "Siting considerations typically include the transmission ROW width, identification of points of interconnection need, the geography of an area, and access to proposed or existing transmission infrastructure, such as substations." | Points of interconnection are not identified as a siting consideration. This should be struck from the sentence or the term "points of delivery" should be used instead. |
| 2-12 | 2.3.1 | Transmission Construction section quantifies PMs and Engineers as "around 10 to 20 individuals" and "Construction workers ranges from 50 to 200 workers" | These numbers are highly variable, depending on the project. Providing quantification is not helpful. |
| 2-12 | 2.3.2 | Vantage - Pomona, South of Tri-Cities Reinforcement, I-5 Corridor Reinforcement Project FEIS | Sequential construction activity should not be assumed, as the sequence can be affected by multiple variables. |
| 2-14 | 2.3.2 | Site Construction - Overhead Transmission; Underwater | This section lacks any discussion of water crossings. Details on the variety and construction techniques should be included. This should include underground methods where overhead transmission is changed to underground for water body crossing such as lake or large rivers.<br><br>Further, undersea cables were specifically excluded from the scope of the EIS in an earlier section. This section describes projects that would be excluded. the PEIS should provide additional clarification of what underwater crossings are covered by this document. |
| 2-15 | 2.3.2.2 | List of publications that establish design requirements. | Add citation to NESCASCE Manual of Practice #74 (Transmission Design), ASCE 141 (wood poles), ASCE 123 (concrete poles), ASCE 104 (FRP poles) |

| | | | |
|---|---|---|---|
| 2-18 | 2.3.2.2 | Supporting infrastructure for underground transmission facilities. Transition structures. "For underground lines less than 345 kV, a 60- 100-foot-tall transition structure similar in composition and construction to an overhead transmission support structure is installed." and "For underground lines of 345kV or greater, a transition station is needed." | This seems to imply that only transition structures are below 345kV, which is not true. PSE has transition stations for an underground 115kV line. |
| 2-20 | 2.3.2.2 | Post-construction monitoring and reporting. Maintenance and repairs. "It is anticipated that required maintenance and repairs would be addressed as soon as warranted or within a 12-month period." | For greater clarity/accuracy, suggest rephrasing to say "in accordance with the NESC." |
| 2-20 | 2.3.3.1 | Transmission decommissioning | The discussion should incorporate the fact that rather than decommissioning, some lines/facilities may be left for possible future use or to minimize disturbance. |
| 3-3 | 3.1.3.1 | Gen-3 – Consistency with Policies and Ordinances: This Programmatic Environmental Impact Statement assumes that projects will be consistent with all applicable policies and ordinances. | Policies do not have the rule of law. They should not be included as general consistency item. For example, a Comprehensive Plan is not a regulatory document. Additionally, the PEIS's statement that inconsistency with a single policy is sufficient to require additional environmental review is overbroad and unsupported, because consistency with every single policy is not a standard or requirement in Washington law. |
| 3-4 | 3.1.3.1 | When applicable design considerations cannot be met, additional environmental review would be required by the State Environmental Policy Act Lead Agency. | This is incorrect. There may be a rationale for why the measure cannot be met. |
| 3-4 | 3.1.3.1, General Conditions | Gen-5 states that if a project does not comply with any avoidance criteria, additional environmental review and mitigation will be required. The PEIS states, "Several avoidance criteria throughout this Programmatic EIS are designed to avoid impacting an environmental resource altogether." | Avoidance of all impacts to environmental resources is an unworkably high standard. If this is the standard applied, it is highly unlikely that any transmission project will be able to rely on the PEIS. This provision also frustrates the language of the enabling statute - which recognizes that one of the results of the Transmission PEIS is that it can be used unmodified for specific projects when appropriate, i.e., "if the project does not cause any probable significant adverse environmental impact not identified in the nonproject review" (see RCW 43.21c.538(2)(b)(i)), and is in contravention of the purpose of the legislation, which is to support more efficient, effective siting and permitting. |
| 3-4 | 3.1.3.1, Gen-4 Design Considerations | When a SEPA Lead Agency reviews a project-specific application and identifies other probable significant adverse environmental impacts that were not accounted for in this Draft Programmatic EIS, additional environmental review and project-specific mitigation measures are required. | The underlined section is incorrect. SEPA does not mandate, and this PEIS should not mandate, that mitigation is required for any/all substantial adverse environmental impacts identified at the project-specific level of SEPA review. Imposition of mitigation is a discretionary decision held only by the decision-maker as a matter of law. The PEIS is not a policy document, and should not attempt to influence how decision-makers exercise their own informed decision. |
| 3-6 | 3.1.3.2 | When the following avoidance criteria cannot be met, additional environmental review and mitigation measures would be required to address related project-specific impacts. | This statement indicates that additional review and mitigation is needed for all cases. This presumes that the inability to meet specific avoidance criteria would always result in additional impacts. That is not the case and it should be changed to "could". One example is siting in "contaminated soils". There is large range of contamination present across various areas of the state, not all of which is susceptible to impacts from construction. |
| 3-6 | 3.1.3.2, Avoidance criteria | AVOID-1 states, "Avoid known hazardous areas, including but not limited to, contaminated soils, geologically hazardous areas, landfills, and cutbanks." | This avoidance criterion appears to be designed to avoid all impacts. There is no authority (regulatory or scientific) cited to support this criterion. Regulations generally do not require avoidance of hazardous areas. |
| 3-7 | 3.1.3.2, Avoidance criteria | AVOID-2 states, "Avoid impacts within 300 feet of all wetlands." | This avoidance criterion appears to be designed to avoid all impacts. There is no authority (regulatory or scientific) cited to support this criterion. Further, this criterion is more stringent than what development regulations require, as regulations generally do not require avoidance of all impacts within 300 feet of all wetlands. There are multiple different wetland categories, from low to high quality. Critical areas ordinances (which are required to be based on the best available science, RCW 36.70A.172) provide allowances for certain impacts based on the categorization of the wetland, the required buffer, the type or level of impact, and other criteria.<br><br>In lieu of this avoidance criterion, a more appropriate standard would be to require applicants to comply with applicable wetland regulations. |

| | | | |
|---|---|---|---|
| 3-7 | 3.1.3.2, Avoidance criteria | AVOID-3 states, "Avoid impacting areas sensitive to degradation[.]" | This criterion provides no definition for the term "areas sensitive to degradation" or "sensitive water features." This does not appear to be a term of art commonly used in development regulations. Without a definition, the term may result in confusion and differing interpretations. Further, the hydrology of Washington State is very diverse and most transmission projects, even small ones, would encounter water features, making these avoidance measure nearly impossible to comply with resulting in limited ability to use it. Recommend removing this avoidance criterion and instead adopt a standard requiring that an applicant comply with applicable critical areas and natural resource regulations. |
| 3-7 | 3.1.3.2, Avoidance criteria | AVOID-4 states, "Avoid having equipment or infrastructure within floodplains." | There are floodplain regulations address the installation of equipment or infrastructure within floodplains. Recommend removing this avoidance measure and instead adopt a standard requiring applicants to comply with the applicable floodplain regulations. |
| 3-7 | 3.1.3.2 | Avoid-5 – Areas of Rapid Channel Migration: Avoid having equipment or infrastructure in areas of rapid channel migration | This geographic area is inadequately defined. A specific definition or criteria should be added. |
| 3-7 | 3.1.3.2 | AVOID- -7, 8, and 9 require avoidance of impact to "sensitive ecosystems," "important and sensitive wildlife habitat," Important Bird Areas", "modeled movement corridors," etc. | These avoidance criteria cite to several 'designations' but those designations need to be carefully scrutinized for their regulatory effect. For illustration but not limitation, Important Bird Areas (IBA) are not designated for regulatory use. An IBA is not a PHS designated by WDFW. See https://wdfw.wa.gov/sites/default/files/publications/00165/wdfw00165.pdf. Rather, it is up to the local jurisdiction where a project is proposed to determine whether an IBA should be used as part of the local Critical Areas review. Importantly, the Washington Legislature says as much: RCW 79.70.110(5) states that "*Recognition of an important bird area* ***does not*** *require or* ***create critical area designation*** *under chapter 36.70A RCW*." Simply because an IBA is recognized through a defined process, it is not a regulatory tool in and of itself. A PEIS cannot establish state-wide binding policy, which this document attempts to do in a variety of places. The IBA is cited here just for illustration. The document needs to be reviewed by its authors to determine where non-regulatory, non-binding policies have been relied upon to develop General and Avoidance measures, and revised to remove those requirements because they are not grounded in legal authority. |
| 3-8 | 3.1.3.2 | AVOID-8 – Important Habitat: Avoid impacts on important and sensitive wildlife habitat, including | This list is too broad and would prohibit most transmission projects from relying on the PEIS. This list should be narrowed based on the specific impacts of transmission. For example, transmission would not likely have significant impacts on ungulate winter and summer range and appropriate temporal restrictions on construction along with appropriate restoration activities can address impacts. |
| 3-9 | 3.1.3.2 | AVOID-9 – Movement Corridors: | It is not clear how transmission would result in a barrier to wildlife movement. Poles are placed and wide intervals and do not result in human occupancy. This avoidance measures should be reconsidered and narrowed to features (like substations) that could impact movement. |
| 3-8 | 3.1.3.2, Avoidance criteria | AVOID-10 states, "Avoid impacts within the setbacks for wildlife and wildlife features identified in Appendix 3.6-1." | Appendix 3.6-1 provide setbacks and timing windows for several species, with citations. While the citations are helpful, most of the citations appear to be to specific studies, not to applicable local/state/federal guidelines. Further, it is unclear if the cited studies represent best available science; some studies are over 30-40 years old. |

| | | | |
|---|---|---|---|
| 3-8 | 3.1.3.2, Avoidance criteria | AVOID-13 states, "Avoid incompatible land uses and zoning. Demonstrate that there are no indirect or adjacent land use conflicts with private property owners or public land administrators." | The terms "incompatible" and "indirect or adjacent" conflicts are so vague that it could be applied to any situation where someone opposes transmissions facilities. Demonstrating compliance with land use regulations and/or obtaining land use permits should be deemed sufficient to qualify a project to fall within the PEIS and not require additional environmental review. |
| 3-9 | 3.1.3.2 | Avoid-16 - Decrease in LOS below Acceptable Levels | LOS C is too high of an LOS and generally LOS is allowed to temporarily decrease during construction. Short term impacts should not require avoidance. This measure should be removed. |
| 3-10 | 3.1.3.2 | Avoid-17-Night Sky | This avoidance measure is unnecessary. BMPs can be employed to avoid impacts to night sky. |
| 3-10 | 3.1.3.2 | Avoid-18 Exceptional Recreation Assets | This avoidance measure is too broad and is not targeted to recreation activities that are sensitive to transmission. In addition, instead of referencing a separate document the list should be included. It is not included anywhere in the document. |
| 3-10 | 3.1.3.2 | Avoid-22- Visual Impacts on Historic and Cultural Resources | This avoidance measure is overly broad; not all historic and cultural resources could be sensitive to visual impacts from transmission. The PEIS provides no support for these standards. |
| 3-11 | 3.1.3.2, Avoidance criteria | AVOID-25 calls for avoiding disproportionate impacts on vulnerable populations or overburdened communities. | This criterion is unsupported and undefined. |
| 3-11 | 3.1.3.2 | Avoid- 26- Displacing Residents or Housing Units | This avoidance measures is too strict. Loss of a single unit would render a project unable to meet this criteria and does not represent a significant adverse impact. At a minimum this should be tied to the exempt levels of demolition under the WAC that would not require ANY SEPA review. |
| 3-12 | 3.1.3.3 Mitigation Measures | The PEIS states that it was developed through consultation with other agencies and partners that have expertise in identifying probable significant adverse environmental impacts and ways to address those impacts. | The vast gap between BMPs and mitigation measures consistently included in multiple project-level NEPA EAs prepared by the federal Department of Energy for transmission upgrades in Washington and the measures in the PEIS do not reflect effective consultation with DOE, which has the most transmission upgrade environmental review experience in the United States. |
| 3.13 and throughout PEIS | Table 3.1-1 | In the discussion of impacts characterized as "moderate," the PEIS consistently states, "Moderate impacts have the potential to be significant." | This statement is inconsistent with SEPA's standards. SEPA defines "significant" as having "a reasonable likelihood of **more than a moderate adverse impact** on environmental quality" (WAC 197-77-794). This statement should not be included as it is potentially confusing. |
| 3-13 and throughout PEIS | 3.1.5 Probable Significant Adverse Impact Determinations | In developing the Impact Determination Scale for use in the PEIS, the PEIS states a "precautionary approach has been taken for the assessment where information is currently unknown or unavailable." This language is repeated throughout the PEIS in the sections titled "Probable Significant Adverse Impact Determination" for each element of the environment. | This methodology is impermissible under long-standing Washington SEPA law. While "precautionary" approach is undefined, the repeated use of this language in the Probable Significant Adverse Environmental Impacts sections suggests that the intent is to err on the side of assigning significance when information is unknown. An EIS must disclose where there is an absence or deficiency of information so as to inform an impact determination, but it may not guess or speculate. Further, WAC 197-11-080 does not support an approach that presumes significance in the absence of information. WAC 197-11-080(3)(b) documenting a "worst case analysis and the likelihood of occurrence, to the extent this information can reasonably be developed." If this information cannot be reasonably developed, the PEIS should make this disclosure but should not presume significance or create a worst case analysis. |
| 3-14 and throughout PEIS | | The PEIS uses GoldSET to develop suitability maps and discussions of suitability and siting decision criteria throughout the PEIS. which is a copyright'ed WSP product, is a 5 step analysis, only the first 3 of which are applicable at the programmatic level. | GoldSET is a proprietary product owned and copyrighted by WSP, the firm that authored the PEIS. GoldSET is a five-step analysis, and only the first three are applicable at the programmatic level, while the remaining two steps are applied at a project-specific level. The use of GoldSET throughout the PEIS steers developers and/or reviewing agencies toward use of the proprietary product to complete the review at the local SEPA Lead Agency level. Additionally, there is no discussion of other available methodologies that developers/agencies could use to develop suitability/route analyses. This practice could be perceived as undermining the objectivity of the analysis. |
| 3-14 and throughout PEIS | 3.1.6 Suitability Map | The PEIS's suitability maps and discussions were developed using the GoldSET approach. | Use of the author's proprietary GoldSET maps criteria yields an impossible and unacceptable outcome. The overlay of all the suitability maps results in demonstration that there are no areas in Washington that are suitable for transmission when considering each element of the built and natural environment. This frustrates the purpose of the PEIS per the enabling legislation. |

| | | | |
|---|---|---|---|
| 3-14 | 3.1.5 | "Identification of environmental impacts and assignment of significance ratings are based on professional judgment and information available at the time of writing." | Significance determinations should not be based on "best professional judgement". WAC 197-11-330 contains specific guidance for making such a determination. Each significance discussion needs to be made based on these provisions. |
| 3-14 | 3.1.6 | Suitability Map | The discussion of whether the programmatic EIS is "suitable" is misguided. In addition, more discussion of the purpose and use of the suitability maps should be included. This discussion must indicate that the suitability maps are not to be used to review site specific actions nor make a determination on whether a specific project is appropriate. |
| 3-19 and throughout PEIS | 3- all **Regulatory, Siting, and Design Considerations** subsections | Each of the cited sections states that "If the project does not comply with applicable laws and regulations or fails to adhere to design considerations or BMPs, additional project-specific environmental review and mitigation would be required." | There may be reasons why the PEIS alone is adequate for environmental review. The enabling legislation contemplates this, and a PEIS cannot mandate additional review preemptively. Also, the decision whether mitigation would be required is always a discretionary decision of the SEPA lead agency. A PEIS cannot preemptively determine that mitigation must be imposed at a project-specific level, because the specific project's facts must be considered. Many scenarios may disclose that additional mitigation is not required for very specific reasons. The sentence should be rephrased to state "...may be required". This statement needs to be made in each section of Ch 3. |
| 3-20 | 3.2-1 Table | Washington State Building Code | Transmission facilities are generally exempt from state building codes. |
| 3-44 | 3.2.3.2 | "The construction of transmission facilities often involves alterations to the landscape. Changes to topography or drainage patterns can occur during clearing and grading, the construction of access roads, and foundation excavation. The first step in constructing transmission facilities is often clearing vegetation and grading the land to create a stable foundation for structures. This process can alter the natural topography by leveling hills, filling valleys, and removing trees and other vegetation." | Overhead transmission projects generally work to follow the natural terrain, and rarely does it involve "leveling of hills" and "filling of valleys". A more accurate description of transmission construction should be included, and the resulting impact evaluation updated. |
| 3-44 | 3.2.3.2 Earth - Action Alternative/Construction phase | **Impact Determination**: Depending on the scale of the facility and site characteristics, the impacts on damage from a geological event or geohazard from the construction of underground transmission facilities, without mitigation measures incorporated, are anticipated to vary and could be low to high. Avoidance criteria or mitigation measures may be required to reduce the rating to a less than significant impact. | Compliance with the General Condition requiring compliance with applicable Critical Areas ordinances should yield a result that is less than high insofar as geohazard, and possibly from geologic event. |
| 3-50 | 3.2.4 Earth-Potential Mitigation Measures | "Geo-2 – Geotechnical Surveys: Conduct thorough geotechnical investigations to assess soil and rock conditions before construction begins. Rationale: This is a required component of project-specific applications necessary for SEPA Lead Agencies to evaluate baseline conditions. | The underlined language is incorrect, overbroad. A PEIS lacks authority to legislate or regulate so as to require a geotech survey for every transmission proposal, which fails to account for the Lead Agency's discretion and the nature and scope of the project-specific proposed work. |
| 3-51 | 3.2.4 Earth - Potential Mitigation Measures | GEO 3, 4, 5 and 8 | Unnecessary. General condition requiring compliance with all laws, regulations, environmental permits, plans, already accounts for this. |
| 3-51 | 3.2.4 Earth - Potential Mitigation Measures | GEO 7 - Geo-7 – Environmental Assessments: Perform detailed environmental assessments to identify potential contamination. Rationale: This is a required component of project-specific applications necessary for SEPA Lead Agencies to evaluate baseline conditions. | The underlined language is incorrect and overbroad. A PEIS lacks authority to legislate or regulate so as to require an environmental assessment as part of a project application, and fails to account for the Lead Agency's discretion and the nature and scope of the project-specific proposed work.. |
| 3-51 | 3.2.4 Earth - Potential Mitigation Measures | GEO 8 - Minimize impacts to sensitive soils. | Sensitive soils is undefined/vague, overbroad, and used without citation to applicable science, law, or regulation. Compliance with general condition requiring compliance with applicable laws adequately addresses. |
| 3-52 | 3.2.4 Earth - Potential Mitigation Measures | | Add the Washington Clean Air Act (RCW 70A.15) to the table of laws and regulations for air quality and add reference to the seven regional air quality agencies around the state (not only Ecology regulates air in Washington) |
| 3-78 | 3.3.3.2 | Increased Fugitive Dust Emissions | That impact discussion of construction fails to consider state and local air regulations regarding fugitive dust. The determination should be updated based on an assessment of these regulations. |
| 3-83 | 3.3.4 Air - Potential Mitigation Measures | Water Use & Importance bulleted items explaining why water is important to Washington | Recommend removal: this is editorial advocacy, not regulations |

| | | | |
|---|---|---|---|
| 3-94 and throughout PEIS | 3- all **Regulatory, Siting, and Design Considerations** subsections | Each of the cited sections states that cities and counties in Washington are subject to the Growth Management Act, RCW 36.70A. | This is partially correct, partially incorrect. All Washington counties and cities must comply with the Critical Areas provisions of RCW 36.70A (the Growth Management Act or GMA) and related regulations in WAC 165-195. However, not all counties do their planning under the remaining provisions of the GMA. Rather, there are various counties across the state (in both eastern and western WA) that plan under the Planning Enabling Act found in RCW 36.70 (the PEA). The land use planning requirements for the non-GMA counties and cities are vastly different than the requirements for GMA counties and cities. To the extent any of the PEIS analysis and avoidance, BMPs, mitigation measures are based on policies, statutory requirements or regulations are based on GMA provisions, these should be examined to determine whether the Planning Enabling Act contains identical requirements. If not, the analysis and recommended measures should be revised so that there is either consistency throughout or there are two tables of measures - one table for GMA counties/cities, and one table for PEA counties/cities. |
| 3-115 | 3.4.3.2 | Increased Water Usage: Construction activities often require water for dust control, concrete mixing, and other processes, which can strain local water resources. | The use of water for construction is temporary and for transmission projects does not involve great quantities. This impact characterization is not accurate or should be limited to areas where there is limited water available. |
| 3-115 | 3.4.3.2 | Temporary Water Diversions: Construction may involve temporary diversions of waterbodies to facilitate the building process, which can affect the availability of water downstream. | This impact characterization is not correct. Rules require that temporary diversion maintain downstream flows. |
| 3-116 | 3.4.3.2 | Impact Determination: Depending on the scale of the facility and site characteristics, the impact, without mitigation measures incorporated, is anticipated to vary and could be negligible to high. Avoidance criteria or mitigation measures may be required to reduce the rating to a less than significant impact. | This impact determination should not include a "high" designation. The description of impacts to water quantity or quality does not reach this level. |
| 3-116 | 3.4.3.2 | Damage to Infrastructure | The impact discussion does not accurately discuss impacts to infrastructure. Construction equipment, etc. is not infrastructure and impacts to project activities should not be included within impact discussions. If included this impacts should be characterized as low. |
| 3-210 | 3.5.4 Vegetation PMMs | Regarding vegetation management plans, invasive species management plans, and revegetation plans, the PEIS states, "This is a required component of project-specific applications necessary to demonstrate regulatory compliance and risk management." | The underlined statement is inaccurate and misleading. Requirements for project-specific transmission application are not uniform. The application requirements will vary depending the permitting jurisdiction, as well as the project itself. For example, projects within highly disturbed ROW may not require all of these plans. |
| 3-223 | 3.5.1.1 Suitability Map Methodology - Vegetation GoldSET Card – Low Conflict - Sensitive Ecosystems and Species at Risk<br><br>3.5.1.1 Vegetation GoldSET Card – Medium Conflict - Fragmentation of High Sensitivity Areas | "Note that a 775-foot buffer around Medium Conflict - Sensitive Ecosystems and Species at Risk was provided in the dataset."; "This criterion includes a 775-foot buffer around High Conflict - Sensitive Ecosystems and Species at Risk." | The PEIS provides no explanation or source for these 775-foot buffers. |
| 3-224 | 3.5.1.1 Vegetation GoldSET Card – High Conflict - Sensitive Ecosystems and Species at Risk | Note that a 300-foot buffer around wetland areas and a 100-foot buffer around PHS cave points were provided in the data set | The PEIS provides no explanation or source for these buffers. |
| 3-230 | 3.6.2.1 | Management Practices Field Guide for ESA 4 (d)<br>Habitat Protection (WSDOT 2018) | Simply because roads and transmission lines are both linear facilities does not mean that all impacts and measures apply equally to both. What study documents the applicability of highway management practices for wildlife to transmission? If this is not shown, remove this citation and eliminate analysis and measures based on it. |

| | | | |
|---|---|---|---|
| 3-231 | 3.6.2.1 Ungulate Migrations of the Western United States, Volume 4 (Kauffman et al. 2024) | "Provides information on ungulate movement routes for species in the western United States, which can help transmission line developers avoid key areas." | This is a document intended to inform the development of policy. The policy itself is what should be used here. |
| 3-242 | 3.6.2.1 Affected Environment | Important Bird Areas | Importantly, RCW 79.70.110(5) states that "(5) "Recognition of an important bird area does not require or create critical area designation under chapter 36.70A RCW." In this case, the default regulatory authority should be critical areas designations of the jurisdiction where a transmission line is proposed. |
| 3-274 | 3.6.2.3 | "Modeled least-cost paths and corridors create a braided network in western Washington, connecting the Cascade Mountains to the west coast (WHCWG 2024b). These routes are fairly contiguous except when bisected by road networks and urban centers such as Olympia and Centralia. Notably, connectivity is currently impacted in this region by US Highway 12, Interstate 5, and State Route 8 (WHCWG 2024b). Conversely, habitat connectivity in the Columbia Plateau Ecoregion has been fragmented by land development limiting movement corridors to narrow bands between patches of remanent habitat" | The conclusions stated here seem improbable, and this discussion should be vetted with careful review of the cited authorities and by cross-reference to other authorities. The first conclusion states that notwithstanding Interstate 5, US Highway 21 and SR 8, the connectivity routes from the Cascade Mountains to the Pacific Ocean are "fairly contiguous" but that in eastern Washington, due to Interstate 90, development has so fragmented the habitat that movement corridors are limited to just narrow bands between patches of remanent habitat. In other words, animals have little problem moving around in Western Washington, but land is so degraded in Eastern Washington that little remains for corridor movement. Of the state's population of 7,705,281 (2020 Census), supported by human development, 6,037,688 are densely packed into Western Washington, leaving only 1,667,593 spread across nearly twice the land mass (24,472 square miles in Western WA vs. 46,620 square miles in Eastern WA). This does not seem credible. |
| 3-274 | 3.6.2.3 Wildlife - Migration Routes and Corridors | Modeled least-cost paths and corridors create a braided network in western Washington, connecting the Cascade Mountains to the west coast (WHCWG 2024b). These routes are fairly contiguous except when bisected by road networks and urban centers such as Olympia and Centralia. Notably, connectivity is currently impacted in this region by US Highway 12, Interstate 5, and State Route 8 (WHCWG 2024b). | These sentence are duplicated in a single paragraph. Delete the second presentation of same sentences. |
| 3-274 | 3.6.2.3 Wildlife - Migration Routes and Corridors | "The Washington State Department of Transportation has mapped and prioritized roadway habitat connectivity investments throughout the state. While this program does not identify wildlife movement corridors, it does identify areas of higher priority to improve wildlife habitat connectivity and reduce road-based mortality." | Paved roads and non-stop auto travel impacts and one-time construction impacts are wholly different. Please explain, with citation to authorities and BAS, why the effects of highways and road on migration and mortality are remotely relevant to effects on animal migration corridors and mortality from transmission rights of way, especially existing ROWs, are analogous or even relevant. |
| 3-276 | 3.6.3.1 Wildlife - Methods of Analysis | "Barriers to wildlife movement: occur when project features prevent or change species' ability to move across the landscape. Barriers can include physical constraints (e.g., fencing), as well as features that species may avoid crossing. Barriers to movement are considered qualitatively in this assessment based on existing literature, including modeled movement corridors. | Why is this even included as an enumerated specific impact to study? Fencing an entire ROW is not an industry practice. What features of transmission might species avoid crossing? |
| 3-284 | 3.6.3.1 Wildlife - Methods of Analysis | Multiple studies have found that infrastructure causes indirect impacts on wildlife and wildlife habitat that are greater than the sum of the direct habitat loss impacts (Benítez-López et al. 2010). | Again, please review the cited authority to determine whether the infrastructure cited in that study includes transmission lines and if so, what unique aspects of transmission lines impact wildlife and then, how that study influenced the impact determination. |
| 3-284 | 3.6.3.1 Wildlife - Methods of Analysis | There is limited research examining the impacts of light on wildlife. It is often difficult to separate the combined influence of industrial noise, artificial light, and edge effect on wildlife species. Artificial light has the potential to affect the timing of reproductive behavior of wildlife species (Kempenaers et al. 2010). | How did this single study inform the impact determination? |
| 3-284 | 3.6.3.1 Wildlife - Methods of Analysis | In general, wildlife are expected to respond to changes in noise levels that are 10 decibels (dB) above ambient levels, with some species avoiding construction by over a mile. | Lacks citation. |
| 3-285 | 3.6.3.1 Wildlife - Methods of Analysis | In oil and gas development projects, noisy areas have been shown to reduce mule deer habitat, with caribou and white-tailed deer similarly avoiding these areas (Rutherford et al. 2023). | Is the noise of oil and gas development analogous to transmission development? If so, cite authority. Did this study inform them the impact assessment and if so, how? |

| | | | |
|---|---|---|---|
| 3-310 | 3.6.3.2 | Mortality - Birds | The impact discussion mixes impacts from transmission and distribution. Since this document is for transmission the distribution discussion should be eliminated. |
| 3-334 | Table 3.6-2 Non-Regulatory Siting and Design Considerations | Management Recommendations for Washington's<br>Priority Species (MRWPS): Ferruginous Hawk (Watson<br>and Azerrad 2024) | Confirm that this new document does not suggest absolute 2-mile setback from unoccupied Ferruginous hawk nests; needs to require documentation that the nest even exists. The state's maps are not kept up to date and many historically noted nests no longer exist. |
| 3-357 | 3.6.1 Wildlife Suitability Map | Figure 3.6-4 through Figure 3.6-7 represent the suitability map for habitat, wi ldlife, and fish resources and identifies the appropriateness of areas using applicable laws and regulations, criteria specific to the siting of transmission facilities, and knowledge from subject matter experts. The suitability maps incorporate all the data, **conflict weights**, and impact categories to create a statewide perspective of all the potential wildlife impacts and least conflict or highest conflict areas; these four maps are a wildlife overhead suitability map, wildlife<br>underground suitability map, fish overhead suitability map, and fish underground suitability map. | The bolded term is unclear and undefined. If one were to overlay the suitability maps of this subsection (3.6 - Wildlife) alone, there is almost zero land in WA where conflicts are not moderate. How does this advance the efficiency or effectiveness of SEPA review? |
| 3-367 | 3.6.1.1 - Suitability Map Methodology | "Data used for wildlife cards included Priority Habitat and Species data from WDFW (including data such as grouse lek sites, colony locations, amphibian breeding sites, and snake hibernacula), critical habitat data from USFWS, **IBA locations**, and wildlife habitat<br>connectivity priority areas." | This provision is emblematic of the problem of using criteria that are not regulatory and are proprietary. The goldSET is meant as a developer's infrastructure routing and site selection tool. It is unclear if it is intended as tool to develop binding standards as will happen once this PEIS is final. When a non-binding factor like an IBA (just to illustrate and not meant to limit the effect of this comment throughout) becomes binding as an Avoidance Measure or informs a suitability map, and it is not clear how heavily that factor weighted the map itself, it becomes very difficult to accept that the EIS is factually or legally adequate. It is troublesome, to say the least, that the Suitability Maps for wildlife are incredibly exclusionary, and it is difficult to know how the IBA (in this example) was weighted. |
| 3-367 | 3.6.1.1 - Suitability Map Methodology | "Buffer distances for watercourses and waterbodies, and from important wildlife features were also based off the best available information, with the wildlife buffers that were used being found in Appendix 3.6-1." | Reference to Appendix 3.6-1 does not reveal how the buffer distances for watercourses and waterbodies, and from important wildlife features, were determined. How WERE they determined? |
| 3-414 | 3.8.2.4 Electromagnetic Fields | "The overarching consensus of the scientific panel reviews is that neither electric nor magnetic fields are conclusively likely to cause adverse health effects at the long-term, low-exposure levels associated with electrical transmission." "[T]he public health and safety impacts of EMFs remain contentious, with little consensus among researchers and regulatory bodies regarding their potential health effects." | The discussion in this section is contradictory and confusing. The last sentence is inaccurate; it is not the "overarching consensus of the scientific panel reviews," and it is misleading to characterize the scientific evidence as having "little consensus." The latter sentence should be deleted or rewritten. |
| 3-414 | 3.8.2.4 Electromagnetic Fields | "While there are no federal regulations for public exposure to low frequency EMFs in the United States, . . . [a] safe, minimum distance of 100 feet from transmission facilities is recommended to minimize the health effects of EMFs (NIEHS 2024)." | This recommendation is unsupported and appears to mischaracterize the reference cited. The PEIS References lists https://www.niehs.nih.gov/health/topics/agents/emf as the supporting URL for NIEHS 2024. This page does not contain this recommendation; in fact, the page states, "[A] magnetic field measuring 57.5 milligauss immediately beside a 230 kilovolt transmission line measures just 7.1 milligauss at a distance of 100 feet, and 1.8 milligauss at a distance of 200 feet, according to the World Health Organization in 2010." This statement indicates that the magnetic field within 100 feet of a transmission line is extremely low and at or below the ranges of standard household appliances. |
| 3-417 | 3.8.3.2 | Increase in Accidents and Injuries | The impacts determination over estimates impacts on this category. Federal and state worker safety laws do not appear to be factored into the discussion. |
| 3-421 | 3.8.3.2 Action Alternative | "While there are currently no laws regulating levels of EMF, due to the few implications, the effects of EMF should be minimized where possible. The safe distance from high-voltage transmission lines can vary, but a common guideline is to maintain a distance of at least 100 feet to reduce exposure (NIEHS 2024)." | See comments above for 3.8.2.4 Electromagnetic Fields. |
| 3-426 | 3.8.4 Potential Mitigation Measures | H&S-4 states, "Develop and apply an electromagnetic field (EMF) and electromagnetic interference (EMI) risk management strategy that regularly considers the consequence, likelihood, and significance of EMF and EMI[.]" | The PEIS characterizes the risk of EMF/EMI as either N/A, or nil to low, before applying mitigation. (See p. 3-430). This mitigation measure is not justified given the lack of risk of impact. |
| 3-426 | 3.8.4 Potential Mitigation Measures | H&S-5 requires establishment of an anonymous tip hotline for workers during construction and operation. | The intent, scope, and details of this mitigation measure is unclear. For example, it is unclear who is to operate the tip hotline, whether the hotline is expected to remain active throughout the transmission line's operations (spanning decades), and how this measure is warranted when the preceding impact analyses states that the risks to workers are generally considered low, particularly during operation. |

| | | | |
|---|---|---|---|
| 3-461 | 3.9.3.2 Action Alternative | "New easements or ROWs could also create perceived or indirect incompatibilities on adjacent or nearby property owners, including residents, visitors, and businesses." | The use of the word "perceived" invites subjectivity into the analysis. Assessment of land use incompatibility should be based on defined regulatory criteria, and the perception of incompatibility alone should not be characterized as an impact. |
| 3-511 | 3.10.4 Potential Mitigation Measures | TR-1 calls for completion of a traffic impact analysis. | A TIA may not be warranted for upgrades or modifications of existing facilities or for projects that utilize existing corridors, as such projects are unlikely to generate new impacts to transportation patterns. |
| 3-533 | 3.11.3.2 Action Alternative | "If existing utilities need to be de-energized or relocated to accommodate the construction of underground transmission facilities, temporary disruption to services would occur." | Service disruption is not a certain impact, as utilities may have redundancies to avoid disruption. |
| 3-537 | 3.11.3.2 Action Alternative | The PEIS notes an "increased risk of power outages at public service facilities" if the operation or maintenance of transmission facilities results in a power outage. | The assumption that projects may result in increased risk of power outages may not be supported. Rather, a failure to develop transmission facilities may result in increased risk, as existing facilities are not sufficient to meet the projected demand. |
| 3-537 | 3.11.3.2 Action Alternative | The PEIS notes an increased demand for fire protection, law enforcement, and emergency response services and states that the impact is expected to be negligible to high. | While demand for services may increase in response to an event, the PEIS does not support the conclusion that normal operation/maintenance of transmission facilities are associated with an increased demand for public services. |
| 3-566 | 3.12.3.3 | Impact Determination: Depending on the scale of the facility and site characteristics, the impact of degradation of the night sky, without mitigation measures incorporated, is anticipated to vary and could be low to high. Avoidance criteria or mitigation measures may be required to reduce the rating to a less than significant impact. | The impact characterization for these temporary construction impacts is not accurately characterized as High. |
| 3-567 | 3.12.3.3 | The PEIS's impacts analysis generally highlights the potential visual impact of transmission facilities. | The discussion should acknowledge that transmission facilities may be sited within existing transmission corridors or within existing road rights-of-way. Siting within existing corridors reduces the visual impact because viewer sensitivity is lower, and the existing corridor must be considered as part of the existing views. |
| 3-569 | 3.12.3.3 | Degradation in Aesthetics | This section characterizes rural areas as visually sensitive. There is no basis in policy for this characterization. Rural areas have varying characteristics and this makes no differentiation. This impact discussions should be updated. |
| 3-574 | 3.12.4 Potential Mitigation Measures | Vis-3 states, "Create varied, feathered vegetation edges for cleared areas and linear rights-of-way (ROWs) that are sinuous horizontally and layered vertically." | This language is unclear. The PEIS does not provide a citation for this standard, and it is unclear if this mitigation measure is consistent with industry best practices. |
| 3-575 | 3.12.4 Potential Mitigation Measures | Vis-4 states, "Use underground construction methods in areas with high scenic quality and/or open rural areas, depending on geologic conditions" | As noted in the PEIS, underground construction methods are significantly more costly. Using underground methods as a mitigation measure may not be prudent when transmission facilities may be sited in areas with high scenic quality and/or open rural areas without causing significant visual impact. |
| 3-575 | Vis-4 | Underground Construction: Use underground construction methods in areas with high scenic quality and/or open rural areas, depending on geologic conditions. | While this mitigation measure is effective, it is too costly to be widely used. Also, the applicability to open rural areas is not applicable. |
| 3-575 | Vis-6 | Visual Impact Assessment | Studies alone are not mitigation and should be characterized differently. |

| | | | |
|---|---|---|---|
| 3-612 | 3.13.3.2 | Action Alternative | The assessment of noise impacts fails to include anticipated noise levels. This fails to disclose noise levels anticipated from transmission. |
| 3-647 | 3.14.3.2 | "In some cases, construction activities could result in permanent closures of recreational spaces if they are no longer deemed viable for public use or if continued access would compromise public safety or environmental integrity. Permanent closure would have a long-term adverse effect on recreational facilities and users by restricting access to public land or areas with a long history of recreational use." | Siting of transmission facilities would seek to avoid long term permanent impacts to recreation activities. It would be extremely rare for a project to result in permanent closures, and any such closures would likely consist of small areas associated with pole placements or similar impacts. This section should be updated to reflect this and the resulting impact determination reflect the likelihood of this occurring. |
| 3-648 | 3.14.3.2 | Construction projects often have associated publicity that can raise awareness about recreational facilities, attracting new users who were previously unaware of them. Large construction projects can lead to more frequent use due to temporary construction workers. | This impact characterization is very speculative and should be eliminated. In addition, this characterization includes impacts from urbanization which is not part of the proposed action. These impacts should be removed. |
| 3-648 | 3.14.3.2 | Change in Integrity | Impacts from change in integrity should be qualified to apply only to those facilities where integrity could be impacted. Parks in urban areas are often already in situations where landscape conditions are dominated by urban features and development. Additional transmission facilities would not impact integrity of these features. This section should be updated. |
| 3-651 | 3.14.3.2 Action Alternative | The PEIS notes that access roads may have positive impacts on recreational facilities, serving as a "multipurpose access point for various uses, including off-highway vehicles, mountain biking, walking, snowshoeing and cross-country skiing, dogsledding, and hunting." | It should be noted that transmission corridors may have similar positive impacts on recreational facilities. It is not uncommon to site trails within utility corridors, and there are existing examples in Washington state. |
| 3-700 | 3.15.3.2 Action Alternative | "Introduction of a modern structure into the boundary of NRHP/NHL property could result in a negligible to high impact on these resources if setting is a significant aspect of integrity for the historic property"; "Introduction of modern structures into the viewshed of these historic resources could have a negligible to high impact on these resources if setting is a significant aspect of integrity[.]" | The nature of the setting should also be considered when assessing the impact. Many settings already incorporate and include the presence of modern structures and development. |
| 3-703 | 3.15.3.2 Action Alternative | The PEIS characterizes the risks of physical impacts to TCPs and Tribal resources as "moderate to high" and "moderately high", and appears to characterize the removal or loss of any vegetation identified as a TCP as a high impact. | The characterization of the level of risk is unsupported. Note that impacts can be lessened through minimized disturbance footprints and/or utilizing existing disturbed areas. Further, the degree of impact of loss of vegetation should consider factors such as the amount of loss, the prevalence of the remaining vegetation, and the ability to regrow vegetation. |
| 3-704 | 3.15.3.2 Action Alternative | The PEIS characterizes the risks of visual impacts to TCPs and Tribal resources as "moderate to high." | Similar to the comment above, the assessment of impacts must consider the existing baseline conditions and the degree to which modern structures are already part of the setting or viewshed. |
| 3-710 | 3.15.3.2 Action Alternative | "High impacts on Tribal resources and TCPs could result if the vegetation intersects locations where Tribal resources are hunted, gathered, or fished. High impacts on TCPs could result if the loss of vegetation diminishes the setting and feeling of the TCP." | The PEIS characterizes these risks as "high." Given the degree of considerations and the non-project nature of this analysis, risks should be characterized as a range. The PEIS does not provide support for characterizing the risk level at a single defined level, or for characterizing that risk level as "high." |
| 3-711 | 3.15.3.2 Action Alternative | The PEIS characterizes the potential impacts of upgrade/modification of overhead facilities as being "similar to those described for construction of new transmission facilities." | For other elements of the environment, the PEIS has consistently acknowledged that impacts of an upgrade/modification are likely to be lower compared to construction of new facilities. The PEIS does not provide any support for a different conclusion here. |

| | | | |
|---|---|---|---|
| 3-731 | 3.16.1 Regulatory, Siting, and Design Considerations | The PEIS cites several EOs as applicable legislation. | The current administration has issued several EOs with conflicting or contradictory provisions. We recognize that there are ongoing challenges to the validity/constitutionality of some of these EOs, and that the EOs may not align with state/local laws and policy. Given the recency and uncertainty, this background may be challenging to incorporate into the impacts analysis but, at a minimum, should be disclosed as relevant background. |
| 3-745 | 3.16.2 Affected Environment | The PEIS recognizes that the "economic benefits from infrastructure construction are often considered positive" but calls for a project-specific economic impacts analysis (EIA). | An EIA may not be warranted for all projects, particularly given the lack of an adverse impact. |
| 3-780 | 3.16.3.2 | Change in Home Values | This topic is very complex, and the impacts described are not based on any data or other studies cited and is mostly speculative. This section should be updated to cite specific empirical studies that have linked changes in housing costs to transmission construction. It should also reflect the conditions under which values could be impacted (e.g., proximity) and note where those end. Additionally, for a balanced discussion, the PEIS should also acknowledge that there are also many factors on property values that likely have a vastly greater impact on values than transmission lines. This should be acknowledged. |
| 3-775 | 3.16.3.2 | The PEIS describes a wide range of potential socioeconomic/EJ impacts. | Several of the impacts described in this section appear to be remote, speculative, and/or not based on data or studies. E.g., a "decreased sense of belonging" due to visual impacts, loss of employment due to adverse impacts to tourism or agri-tourism, permanent adverse effects from decreased housing availability, lowering of home values locally and on an area-wide basis, and generally broad claims of adverse impacts such as to "a population's overall well-being and social conditions." |
| Appendix 3.9-1 | Appendix 3.9-1, Washington County Comprehensive Plans | | There are likely additional comprehensive plan policies that support or align with transmission facility development, beyond those stated in the Appendix. For example transmission facility development supports economic development by increasing employment; improves reliability of utility services; increases tax revenues; and supports policies and goals related to decarbonization and addressing climate change. |

# Attachment B

**Comparison of Avoidance Criteria Between Draft Transmission PEIS and Federal Environmental Review Documents**

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| **PEIS AC** | | | | |
| Hazardous Areas:<br>• Avoid known hazardous areas, including but not limited to, contaminated soils, geologically hazardous areas, landfills, and cutbanks. | o | | | |
| Wetland Disturbance:<br>• Avoid impacts within 300 feet of all wetlands. | o | | | |
| Sensitive Water Features:<br>• Avoid impacting areas sensitive to degradation, including adjusting the layout of new transmission facilities to steer clear of sensitive water features. | o | | | |
| Floodplains:<br>• Avoid having equipment or infrastructure within floodplains. | o | | | |
| Areas of Rapid Channel Migration:<br>• Avoid having equipment or infrastructure in areas of rapid channel migration. | o | | | |
| Old-Growth and Mature Forests:<br>• Avoid old-growth forests, which include forests older than 200 years in western Washington and greater than 150 years in eastern Washington, and mature forests, which include forests greater than 80 years. | o | | | |
| Rare, Endangered, or Threatened Plant Species and Sensitive Ecosystems:<br>• Avoid impacts on rare, endangered, or threatened plant species and sensitive ecosystems. | o | | | |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| **Important Habitat: Avoid impacts on important and sensitive wildlife habitat, including:** | | | | |
| • National wildlife refuges, parks, and other state or federally protected areas | o | | | |
| • Washington State lands managed as wildlife areas, conservation easements, and other state managed lands for conservation. | o | | | |
| • Important Bird Areas. | o | o[1] | | |
| • Known stopover locations for migratory species. | o | | | |
| • Mapped critical habitat for federally listed species and habitat identified in state or federal management plans for state listed species. | o | | | |
| • Mapped ungulate winter and summer range. | o | | | |
| • Mapped habitat concentration areas. | o | | | |
| • Wetlands, including a 300-foot buffer. | o | | | |
| • Known bat maternity colonies and hibernacula. | o | | | |
| • Known snake hibernacula. | o | o[2] | | |
| • Washington Shrubsteppe Restoration and Resiliency Initiative greater sage-grouse core and corridor areas. | o | o[3] | | |
| Movement Corridors: | o | | | |

[1] Avoid construction or other disturbance within 0.6 mile of active or potentially active ferruginous hawk nest sites from March 1 through August 1. Avoid all historic ferruginous hawk nest site locations after March 1 until it is certain a particular location will not be used for nesting that breeding season. Midway-Benton No. 1 Transmission Line Rebuild Project - Mitigation Action Plan (page 4).

[2] "Minimize and, if practicable, avoid disturbance of potential snake hibernaculum." Midway-Benton No. 1 Transmission Line Rebuild Project - Revision Sheet for Final Environmental Assessment (page 17).

[3] Minimize the project ground disturbance footprint, including access road widths, particularly in special-status areas, which can include shrub-steppe. Midway-Benton No. 1 Transmission Line Rebuild Project - Mitigation Action Plan (page 4).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Avoid impacts on modeled movement corridors with medium to very high linkage as reported by the Washington Wildlife Habitat Connectivity Working Group unless the project is sited within or adjacent to an existing right-of-way or linear feature (e.g., a roadway). | | | | |
| Buffer Setbacks for Wildlife and Wildlife Features:<br>• Avoid impacts within the setbacks for wildlife and wildlife features identified in Appendix 3.6-1. Applicants would verify and update as new buffers are recommended by Washington State (e.g., Washington Department of Fish and Wildlife [WDFW], Washington State Department of Ecology). Buffers and setbacks would be reviewed with WDFW prior to the submittal of a project-specific application. | o | | | |
| Oil-Containing Conductor Cables:<br>• When installing underground transmission lines, avoid the use of oil-containing equipment for cooling. Cooling should be achieved through cross-linked polyethylene (XLPE) insulation material or other, best available technology. | o | | | |
| Heat Sources:<br>• Avoid collocation with other heat sources like steam mains. | o | | | |
| Land Use and Zoning Incompatibility and Conflicts:<br>• Avoid incompatible land uses and zoning. Demonstrate that there are no indirect or adjacent land use conflicts with private property owners or public land administrators. | o | | | |
| Civilian Airports and Military Installations: | o | | | |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Avoid impacts on civilian airports, surrounding runway protection zones, and military installations, such as the Yakima Training Center, National Security Area, and Boardman Geographic Area of Concern. | | | | |
| Non-Compliance with Utilities Accommodation Policy:<br>• Avoid planning, siting, and constructing transmission facilities that are not properly accommodated within highway rights-of-way (ROWs). | o | | | |
| Decrease in LOS below Acceptable Levels:<br>• Avoid a decrease in level of service (LOS) below level C on roads used during construction and avoid additional LOS reductions during construction on roads already below level C. | o | | | |
| Night Sky:<br>• Avoid impacts on areas managed for the protection of night sky. | o | | | |
| Exceptional Recreation Assets:<br>• Avoid impacts on, or within the viewshed of, exceptional recreation assets as defined by the Washington State Recreation and Conservation Office (RCO). | o | o[4] | | |
| Wilderness Areas:<br>• Avoid impacts on, or within the viewshed of, designated wilderness areas. | o | | | |
| Limit Closure of Recreation Resources: | o | | | |

[4] Site all construction staging and storage areas away from locations that would be clearly visible from sensitive scenic areas, as much as practical. Midway-Benton No. 1 Transmission Line Rebuild Project- Mitigation Action Plan (Page 4).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Consider closure and restrictions only after other mitigation strategies and alternatives have been explored. Avoid long-term closure and restriction of recreation resources lasting more than 24 months. | | | | |
| Physical Impacts on Historic and Cultural Resources:<br>• Avoid physical impacts on historic and cultural resources. | o | | | |
| Visual Impacts on Historic and Cultural Resources:<br>• Avoid visual impacts on historic and cultural resources. | o | | | |
| Physical Impacts on Tribal Resources and TCPs:<br>• Avoid physical impacts on Tribal resources, including first foods, and Tribal Cultural Properties (TCPs). | o | o[5] | | |
| Visual Impacts on Tribal Resources and TCPs:<br>• Avoid visual impacts on Tribal resources and Tribal Cultural Properties (TCPs). | o | | | |
| Disproportionate Impacts on Environmental Justice Communities:<br>• Avoid disproportionate impacts on vulnerable populations or overburdened communities. | o | | | |
| Displacing Residents or Housing Units:<br>• Avoid land acquisitions that result in displacing residents of housing units. | o | | | |
| **Midway-Benton MM** | | | | |

[5] "Restrict work areas, such as through the installation of exclusion fencing and matting, to avoid disturbance to cultural resource sites."; "Minimize construction footprints in areas containing identified ethnobotanical species of concern, where practical."; "Minimize workspace footprints within traditional cultural property (TCP) boundaries, as much as practical." Midway-Benton No. 1 Transmission Line Rebuild Project- Mitigation Action Plan (Page 4).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| **Land Use and Transportation** | | | | |
| • Reduce access road widths to 14 feet-wide, or less, to the extent possible. | | o | | |
| • Revegetate disturbed areas, with native seeds and plants, after the conclusion of construction, with the exception of those areas required to remain clear of vegetation to ensure the safety of the transmission line and access to the structures and in previously cleared staging areas. | | o | o | |
| • Keep construction activities and equipment clear of U.S. Department of Energy's Richland Operations Office (DOE-RL) access roads, to the extent possible. | | o | | |
| • Use water trucks or other measures to minimize fugitive dust during project construction. | | o | o | |
| • Coordinate the routing and scheduling of construction traffic with DOE-RL staff. | | o | o | |
| • Publicize road closures and traffic delays to minimize impacts to traffic. | | o | o | o |
| • Employ traffic-control flaggers and post signs warning of construction activity and merging traffic, when necessary, for short interruptions of traffic. | | o | o | |
| **Geology and Soils** | | | | |
| • Minimize the project ground disturbance footprint, particularly in areas prone to erosion (i.e., sandy soils) | | o | o | |
| • Limit the amount of time soils are left exposed. | | o | | |
| • Design roads to limit water accumulation and erosion; install appropriate access road drainage (ditches, water bars, cross drainage, or roadside berms) to control and disperse runoff | | o | o | o |
| • Develop revegetation strategies, including soil preparation as necessary, using site-specific methods developed for use within the Hanford Site. | | o | o | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| **Vegetation** | | | | |
| • Cut or crush vegetation rather than blade in areas that would remain vegetated to maximize the ability of native plants to resprout. | | o | | |
| • Prepare soils if needed prior to seeding. | | o | | |
| • Collaborate with the DOE-RL to determine and carry out the best control measures deemed locally effective for weed control during construction and over the life of the line | | o | | |
| • Conduct invasive weed surveys prior to and following construction to determine potential weed spread and appropriate corrective actions. | | o | o[6] | o |
| • Where possible, treat identified infestations prior to construction either manually, mechanically, and/or chemically. | | o | | |
| • Air- or water-pressure wash vehicles and other equipment that have been in weed infested areas at established blow or wash stations upon leaving the infested areas to prevent spreading weeds to uninfected areas during construction. | | o | o[7] | o |
| • Monitor and treat existing and new infestations during construction on a minimum annual basis and for 3 years after construction. | | o | o[8] | o |

[6] Assess whether noxious weeds have spread or increased in abundance as a result of construction activities using the results of the pre-construction noxious weed survey conducted for the Proposed Action (Woodland Resource Services Inc. 2011). Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 4).
[7] Implement measures to minimize the introduction and broadcast of weed seeds during construction. Wash equipment and vehicles before entering construction areas. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 4).
[8] Periodically inspect reseeded sites to verify adequate growth. If necessary, implement contingency measures to ensure adequate growth and vegetation cover. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 4).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Use weed-free mulch, if mulch is used for erosion control. | | o | | |
| • Equip all vehicles with basic fire-fighting equipment, including extinguishers and shovels to prevent fires that could encourage weed growth. | | o | | |
| • Reduce access road widths to 14-feet-wide or less (instead of a maximum of 20 feet) to the extent possible. Reduce road width within Levels III and IV vegetation (e.g., 12-foot-wide maximum) as much as possible. | | o | | |
| • Reduce construction footprint to 50-feet by 50-feet instead of 50-feet by 100-feet or 100-feet by 100-feet in Levels III and IV habitat types, as much as possible. | | o | | |
| • Make BPA contractors aware of the locations of sensitive plants identified in the preconstruction botanical survey and establish site-specific avoidance strategies during construction. | | o | o[9] | |
| • Develop a soil and vegetation restoration plan prior to construction in coordination with DOE-RL and other interested parties. | | o | | |
| • Catalog all individual plants and clusters of special-status plant species that cannot be avoided and include in the soil and vegetation restoration plan measures to replace at least as many individual plants as were lost. | | o | o[10] | o |

[9] Install stakes or flagging in sensitive areas such as the vicinity of special status plant species populations (including those identified during pre-construction surveys) prior to construction, where needed to minimize disturbance and to restrict vehicles and equipment to designated routes. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 4).

[10] Conduct surveys for federally and state-listed plant species along proposed off-right-of-way (ROW) access roads and travel routes between line mile 17 and the Bell Substation prior to construction-related use of these access roads and travel routes. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 4).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Use seed and rooted planting materials in accordance with Section 7.7.2 of the Hanford Site Biological Resources Management Plan (DOE-RL 2001) that (1) represent a broad community (shrubs, forbs, grasses) and include species of plants that have cultural significance to the tribes, (2) are native to the Hanford Site, and (3) are the appropriate specific genetic or ecotypic derivation for the Hanford Site | | o | o[11] | o |
| • Implement restoration or stabilization actions as soon as is reasonably possible after ground disturbing activities. | | o | o | o |
| • Develop a plan, in cooperation with DOE-RL and other interested parties, to support off site restoration projects that would compensate for long-term or permanent sensitive vegetation loss, if needed | | o | | |
| **Wildlife** | | | | |
| • Minimize the project ground disturbance footprint, including access road widths, particularly in special-status areas, which can include shrub-steppe. | o | o | o[12] | o |
| • Reseed disturbed areas. | | o | o | o |
| • Prepare for fire control to protect habitats. | | o | | |

[11] Mulch and reseed disturbed, non-farmed areas once construction is complete using a predominantly native seed mix or a seed mix agreed upon with landowners to make it less likely that noxious weed infestations will expand within the study area. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 4).

[12] Avoid construction activities within high-use native habitats, especially riparian, shrubsteppe, and pine forest habitat, during spring to reduce the potential for impacting reproduction of various wildlife taxa, wherever possible. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 5).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Plant native shrubs, such as big sagebrush, to replace shrub cover temporarily lost during construction. | | o | | |
| • Reseed disturbed areas after construction and regrading are complete, at the appropriate time period for germination, with a seed mix recommended by DOE-RL and other Hanford land management agencies and in consultation with other interested parties, as appropriate. | | o | o[13] | |
| • Avoid construction or other disturbance within 0.6 mile of active or potentially active ferruginous hawk nest sites from March 1 through August 1. | o | o | o | o |
| • Avoid all historic ferruginous hawk nest site locations after March 1 until it is certain a particular location will not be used for nesting that breeding season. | | o | | o |
| • Develop a nest site protection plan that addresses construction-related impacts on Swainson's and red-tailed hawks, burrowing owl, long-billed curlew, and other bird species. | | o | o[14] | |
| • Continue to advise transmission maintenance crews on an annual basis of the occurrence (general and/or specific locations), seasons of use, and sensitivity of nesting migratory birds, raptors, and other special-status species that could be adversely affected by maintenance activities. These crews | | o | | |

[13] Mulch and reseed disturbed, non-farmed areas once construction is complete using a predominantly native seed mix or a seed mix agreed upon with landowners to make it less likely that noxious weed infestations will expand within the study area. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 4).

[14] Inspect danger trees for the presence of nesting avian species—cavity nesters, small and large stick nests—prior to removal to minimize impacts to nesting birds. Large stick nests (raptors) would be documented to species to determine whether they can be removed. No trees containing large stick nests would be removed during the nesting season, typically February 1 (owls) through July 30 (cavity nesters and raptors). Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 5).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| will incorporate this information into their maintenance planning and schedules to minimize adverse impacts on sensitive species. | | | | |
| • Minimize and, if practicable, avoid disturbance of potential snake hibernaculum. | o | o | | |
| **Water Resources** | | | | |
| • Prepare and implement, in coordination with DOE-RL, Spill Prevention and Response Procedures to prevent and contain accidental spills, including notification procedures. | | o | o[15] | o |
| • Locate refueling and servicing operations where spilled material cannot enter natural or manmade drainage conveyances (e.g., ditches, catch basins, ponds, wetlands, streams, and pipes). Use pumps, funnels, absorbent pads, and drip pans when fueling or servicing vehicles. | | o | | o |
| **Visual Quality** | | | | |
| • Site all construction staging and storage areas away from locations that would be clearly visible from sensitive scenic areas, as much as practical. | o | o | o[16] | |
| • Implement construction site maintenance and clean-up and keep construction areas free of debris. | | o | o | o |
| • Reseed disturbed areas. | | o | o[17] | o |
| **Cultural Resources** | | | | |

[15] Prepare and implement spill prevention and response plans to minimize the potential for spills of hazardous material. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 5).
[16] Locate construction staging areas away from sensitive viewers as much as possible. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 7).
[17] Reseed disturbed, non-farmed areas once construction is complete using a predominantly native seed mix or a seed mix agreed upon with landowners. Periodically inspect reseeded sites to verify adequate growth. If necessary, implement contingency measures to ensure adequate growth and vegetation cover. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 7).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Restrict work areas, such as through the installation of exclusion fencing and matting, to avoid disturbance to cultural resource sites. | o | o | o | |
| • Employ tribal monitors to be present during all ground-disturbing activities with the potential to affect cultural resources. | | o | o | o |
| • Implement BPA's Unanticipated Discovery Procedure for cultural resources. This procedure provides that: should ground-disturbing activities reveal any cultural materials (e.g., structural remains, Euro-American artifacts, or Native American artifacts), all activities in the vicinity of the find would cease. The BPA archaeologist, the Washington Department of Archaeology and Historic Preservation, and affected tribes would be notified immediately. | | o | o | o |
| • The Inadvertent Discovery of Human Remains Procedure would also require crews to cease construction immediately within 200 feet of any human remains, suspected human remains, or any items suspected to be related to a human burial (i.e., funerary items, sacred objects, or objects of cultural patrimony) encountered during project construction. The area around the discovery will be secured and the Benton County Sheriff, the BPA archaeologist, the State Historic Preservation Officer, DOE-RL archeologist, and the affected tribes would be contacted immediately. All response processes would be coordinated with DOE-RL staff in accordance with the agreements and management plans for the Hanford Site. | | o | o | o |
| • Minimize construction footprints in areas containing identified ethnobotanical species of concern, where practical. | o | o | | |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Minimize workspace footprints within traditional cultural property (TCP) boundaries, as much as practical. | o | o | | |
| • Revegetate TCP disturbance areas with native seed and vegetation species, as developed through consultation with interested tribes and DOE-RL. | | o | | |
| **Air Quality and Climate Change** | | | | |
| • Incorporate measures into a Fugitive Dust Control Plan, identified in consultation with DOE-RL, which would minimize dust in the dry, windy conditions at the Hanford Site | | o | o[18] | o |
| • Water or use palliatives on exposed soil surfaces in areas disturbed during construction. | | o | o | o |
| • Gravel access road surfaces in areas of sustained wind to reduce potential dust erosion. | | o | | |
| • Encourage construction personnel to travel at low speeds on access roads and at construction sites to minimize dust. | | o | o[19] | o |
| • Reseed disturbed areas to prevent dust from erosion. | | o | o | o |
| • Shut down idling construction equipment, if feasible. | | o | o[20] | o |
| • Ensure all vehicles are in compliance with applicable federal and state air quality regulations for tailpipe emissions. Certification that vehicles meet applicable regulations will be provided by contractors to BPA in writing. | | o | | |

[18] Use water trucks or other dust control measures to control dust during construction. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 7).
[19] Keep construction vehicles at low speeds (15 miles per hour) on unpaved access roads to minimize dust. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 7).
[20] Implement vehicle idling and equipment emissions measures. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 7).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Maintain and certify in writing that all construction equipment is in proper working condition according to manufacturer's specifications. | | o | o[21] | |
| • Locate all staging areas as close to construction sites as practicable to minimize driving distances between staging areas and construction sites. Locate staging areas in previously disturbed or graveled areas to minimize soil and vegetation disturbance where practicable. | | o | | |
| • Use the proper size of equipment for the job. | | o | | |
| • Use locally sourced rock for road construction, if possible. | | o | o | |
| **Noise, Public Health, and Safety** | | | | |
| • Ensure standard sound-control devices, including mufflers, are on all construction equipment and vehicles prior to and during construction. | | o | o | |
| • If blasting is required, take appropriate safety measures and follow all applicable regulations, including obtaining an explosives permit from DOE-RL Fire Department and obtaining a Prohibited Article Pass from DOE-RL Security. Lock up or remove all explosives from work sites at the end of the workday. | | o | | |
| • All off road driving must adhere to the latest revision of the Fire Marshal Bulletin. | | o | | |
| • Coordinate all helicopter landings daily with the Hanford Patrol. | | o | | |
| • Develop a helicopter refueling protocol, if needed. | | o | | |

[21] Keep all vehicle engines in good operating condition to minimize exhaust emissions. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (page 7).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Prepare and implement Spill Prevention and Response Procedures to prevent spills of hazardous materials and respond to emergency situations. | | o | o | o |
| • Prepare and maintain an on-site safety plan in compliance with state requirements. | | o | o | |
| • Prepare for fire control. | | o | | |
| • Coordinate activities the Hanford Patrol and Hanford Fire Department. | | o | | |
| • Fuel all highway-authorized vehicles off-site to minimize the risk of fire. Fueling of construction equipment that is transported to the site via truck and is not highway authorized will be done in accordance with regulated construction practices and applicable laws. Helicopters will be fueled and housed at local airfields or at staging areas. | | o | | |
| • Ensure that BPA contractors flying helicopters prioritize public safety during flights. For example, establish flight paths to avoid populated areas or schools. | | o | | |
| • Implement appropriate airport safety measures prior to construction. | | o | | |
| • Obtain appropriate Hanford excavation permits. | | o | | |
| • Report possible hazardous materials, toxic substances, or petroleum products discovered along the transmission line route that would pose an immediate threat to human health or the environment, including large dump sites, drums of unknown substances, suspicious odors, stained soil, etc. | | o | | |
| • Design, construct, and operate the new transmission line according to the National Electrical Safety Code. | | o | o | |
| • Restore reception quality if there is radio or television interference due to the transmission lines. | | o | | |
| **Creston-Bell MM** | | | | |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| **Land Use and Recreation** | | | | |
| • Distribute a schedule of construction activities to all potentially affected landowners. | | | o | o |
| • Schedule construction during periods when active farms along the corridor are likely to be fallow, where possible, to minimize the potential for crop damage. | | | o | o |
| • Compensate landowners for the value of commercial crops damaged or destroyed by construction activities. | | | o | o |
| • Revegetate disturbed areas after the conclusion of construction, with the exception of those areas required to remain clear of vegetation to ensure the safety of the transmission line and access to the structures. | | | o | |
| • Keep construction activities and equipment clear of residential driveways, to the extent possible. | | | o | o |
| • Use water trucks or other measures to minimize fugitive dust during project construction. | | o | o | |
| • Coordinate the routing and scheduling of construction traffic with Washington State Department of Transportation and county road staff. | | o | o | o |
| • Publicize road closures and traffic delays to minimize impacts to traffic. | | o | o | |
| • Coordinate construction in Riverside State Park with the Washington State Parks Lands Program. | | o | o | |
| • Employ traffic-control flaggers and post signs warning of construction activity and merging traffic, when necessary, for short interruptions of traffic. | | o | o | |
| **Geology and Soils** | | | | |
| • Locate offset replacement structures as far as possible from nearby streams and wetlands where adjustments are possible. | | | o | |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Space and size culverts, cross-drains, and water bars to prevent erosion. | | | o | o |
| • Minimize erosion, sedimentation, and soil compaction by conducting as much work as possible during the dry season when streamflow, rainfall, and runoff are low. | | o | o | o |
| • Prepare and implement a stormwater pollution prevention plan that addresses measures to reduce erosion and runoff and stabilize disturbed areas. | | | o | |
| • Limit heavy equipment use to minimize soil compaction, particularly during the critical erosion period (November through March). Do not operate equipment on saturated soils | | | o | |
| • Revegetate disturbed, non-farmed, areas with a predominantly native seed mix or a seed mix agreed upon with landowners. | | o | o | o |
| • Inspect and maintain access roads, culverts, and other facilities after construction to ensure proper function and nominal erosion levels. | | | o | o |
| • Inspect revegetation work and sites to verify adequate growth, and contingency measures as needed. | | | o | o |
| **Vegetation** | | | | |
| • Assess whether noxious weeds have spread or increased in abundance as a result of construction activities using the results of the pre-construction noxious weed survey conducted for the Proposed Action (Woodland Resource Services Inc. 2011). | | o | o | o |
| • Implement measures to minimize the introduction and broadcast of weed seeds during construction. Wash equipment and vehicles before entering construction areas. | | o | o | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Restrict construction activities to the area needed to work effectively to limit disturbance of native plant communities and to prevent expansion of noxious weed species. | | | o | o |
| • Mulch and reseed disturbed, non-farmed areas once construction is complete using a predominantly native seed mix or a seed mix agreed upon with landowners to make it less likely that noxious weed infestations will expand within the study area. | | o | o | |
| • Periodically inspect reseeded sites to verify adequate growth. If necessary, implement contingency measures to ensure adequate growth and vegetation cover. | | o | o | o |
| • Conduct surveys for federally and state-listed plant species along proposed off-right-of-way (ROW) access roads and travel routes between line mile 17 and the Bell Substation prior to construction-related use of these access roads and travel routes. | | o | o | |
| • Install stakes or flagging in sensitive areas such as the vicinity of special status plant species populations (including those identified during pre-construction surveys) prior to construction, where needed to minimize disturbance and to restrict vehicles and equipment to designated routes. | | o | o | o |
| • Minimize chip, sawdust, or brush accumulation in the ROW and haul these materials out, if possible. | | | o | |
| • Continue to implement weed control efforts in the ROW as part of ongoing vegetation management efforts. | | o | o | o |
| **Water Resources and Water Quality** | | | | |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Conduct all culvert installation/replacement work in the dry, either when there is no flow or by diverting flow from the stream culvert location during installation/replacement, as necessary, to avoid impacts on water quality. | | | o | o |
| • Keep disturbance to the minimum necessary when working in or near water bodies, and install stakes or flagging to restrict vehicles and equipment to designated routes and areas. | | | o | |
| • Retain vegetative buffers, where possible, to prevent sedimentation into water bodies. | | | o | |
| • Minimize erosion, sedimentation, and soil compaction by conducting as much work as possible during the dry season when stream flow, rainfall, and runoff are low. | | | o | o |
| • Install sediment barriers and other suitable erosion- and runoff-control devices, where needed, prior to ground-disturbing activities at construction sites to minimize offsite sediment movement. | | | o | |
| • Place construction vehicles or equipment at least 50 feet from any stream or wetland unless authorized by a permit or on an existing road. | | | o | |
| • Locate tensioning sites at least 50 feet from streams or floodplains. | | | o | |
| • Design and construct roads to minimize drainage from the road surface directly into water features. | | | o | o |
| • Prepare and implement spill prevention and response plans to minimize the potential for spills of hazardous material. | | o | o | o |
| • Keep spill prevention materials on site and with equipment. | | o | o | o |
| • Maintain vehicles and equipment in good working order to prevent oil and fuel leaks. | | | o | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Cover approaches to streams and crossings of streams in clean cobble rock to minimize erosion and sedimentation from BPA and landowner use, where appropriate. Steel plates and/or grates may also be used for driving surfaces across streams to minimize erosion and sedimentation, where appropriate. | | | o | |
| **Fish and Wildlife** | | | | |
| • Minimize potential impacts on salmonids by avoiding the use of fords wherever an alternative route is available. Alternately a temporary fish and water passage structure could be installed if water is present when the ford is in use. | | | o | o |
| • Conduct all culvert installation/replacement work in the dry, either when there is no flow or by diverting flow from the stream culvert location during installation/replacement, as necessary, to avoid impacts on fish species. | | | o | o |
| • Limit disturbance to the minimum necessary when working in or near water bodies and wetlands or their buffers. Install stakes or flagging to restrict vehicles and equipment to designated routes and areas. | | | o | |
| • Mark the transmission line with bird flight diverters over any major water body that may be a potential flyway for migratory bird species (water fowl) where appropriate, including the Spokane River and specifically identified wetlands and wetland complexes. | | | o | |
| • Inspect danger trees for the presence of nesting avian species—cavity nesters, small and large stick nests—prior to removal to minimize impacts to nesting birds. Large stick nests (raptors) would be documented to species to determine whether they can be removed. No trees containing large stick | | o | o | |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| nests would be removed during the nesting season, typically February 1 (owls) through July 30 (cavity nesters and raptors). | | | | |
| • Top and leave tall dead trees (snags) in place for wildlife habitat, where possible and appropriate, in accordance with BPA's Transmission System Vegetation Management Program Final Environmental Impact Statement (BPA 2000). | | | o | o |
| • Avoid construction activities within high-use native habitats, especially riparian, shrubsteppe, and pine forest habitat, during spring to reduce the potential for impacting reproduction of various wildlife taxa, wherever possible. | o | o | o | |
| • Gate and lock access and restrict vehicle traffic in areas where the ROW crosses habitats heavily used by wildlife. | | | o | |
| • Avoid construction-related disturbances within 1.2 miles (2 km) of known active leks between 05:00 and 09:00 from March 1 through April 30 to reduce potential impacts to Columbian sharp-tailed grouse during mating season (Stinson and Schroeder 2010). | o | o | o | o |
| • Prepare and implement a stormwater pollution prevention plan that addresses measures to reduce erosion and runoff and stabilize disturbed areas. | | | o | |
| • Minimize erosion, sedimentation, and soil compaction by conducting as much work as possible during the dry season when streamflow, rainfall, and runoff are low. | | | o | o |
| • Install sediment barriers and other suitable erosion- and runoff-control devices, where needed, prior to ground-disturbing activities at construction sites to minimize offsite sediment movement. | | | o | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Place construction vehicles or equipment at least 50 feet from any stream or wetland unless authorized by a permit or on an existing road. | | | o | |
| • Locate tensioning sites at least 50 feet from streams or floodplains. | | | o | |
| • Design and construct roads to minimize drainage from the road surface directly into water features. | | | o | o |
| • Prepare and implement spill prevention and response plans to minimize the potential for spills of hazardous material. | | o | o | o |
| • Keep spill prevention materials on site and with equipment. | | | o | o |
| • Maintain vehicles and equipment in good working order to prevent oil and fuel leaks. | | | o | o |
| **Wetlands** | | | | |
| • Locate roads and structures to avoid wetlands, whenever possible. | | | o | |
| • Design construction activities within wetlands to minimize unavoidable impacts, and coordinate with the U.S. Army Corps of Engineers and Washington Department of Ecology for appropriate permits. | | | o | o |
| • Flag or stake wetland boundaries in the vicinity of construction areas and avoid these areas during construction. | | | o | o |
| • Place construction vehicles or equipment at least 50 feet from any wetland unless authorized by a permit or on an existing road. | | | o | |
| • Locate tensioning sites outside of wetlands and buffers when possible. | | | o | |
| • Limit disturbance to the minimum necessary when working in wetlands or their buffers. | | | o | |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Place geotextile fabric around the work area when working on structures within 25 feet of wetlands to avoid depositing excavated material into the wetlands. Remove and stabilize material in an upland area. | | | o | o |
| • Store fuel and refuel machinery at least 200 feet from wetlands and waterways and inspect regularly for leaks. | | | o | o[22] |
| • Require an environmental specialist to meet with contractors and inspectors in the field and visit wetlands near or within construction areas to go over mitigation measures and any permit requirements. | | | o | |
| • Install sediment barriers and other suitable erosion- and runoff-control devices, where needed, prior to ground-disturbing activities at construction sites to minimize offsite sediment movement near wetlands. | | | o | o |
| • Underlay temporary fill for temporary roads in wetlands with geotextile fabric and remove all fill in compliance with applicable permits. | | | o | o |
| • Remove trees cut in wetland areas. | | | o | |
| • Vegetate disturbed wetland and buffer areas with appropriate native plant species and follow specific revegetation guidelines in permits. | | | o | |
| • Monitor disturbed wetlands for weed invasion and control in accordance with BPA's Transmission System Vegetation Management Program Final Environmental Impact Statement (BPA 2000). | | | o | |

[22] Refuel and maintain equipment away from natural or manmade drainage conveyances, including streams, wetlands, ditches, catch basins, ponds, and culverts. Alvey-Fairview Transmission Line Rebuild Project - Mitigation Action Plan (page 5).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Construct permanent access roads with adequate cross culverts or other methods to maintain the existing hydrologic regime. | | | o | |
| **Floodplains** | | | | |
| • Minimize erosion, sedimentation, and soil compaction by conducting as much work as possible during the dry season when streamflow, rainfall, and runoff are low. | | | o | o |
| • Delineate construction limits as specified in the stormwater pollution prevention plan, using sediment fence or straw wattles or similar erosion and stormwater control Best Management Practices (BMPs) to eliminate discharge into floodplains. | | | o | |
| • Identify the locations of 100-year floodplains on project maps for contractors and restrict tensioning sites to areas outside floodplains, where possible. | | | o | |
| • Locate all staging areas at least 200 feet from Federal Emergency Management Agency designated floodplains. | | | o | |
| • Inspect and maintain access roads, culverts, and other facilities after construction to ensure proper function and nominal erosion levels. | | | o | o |
| **Visual Quality** | | | | |
| • Schedule all construction work during daylight hours to avoid noise and the use of nighttime illumination of work areas. | | | o | |
| • Use non-reflective conductors and insulators on all replacement structures. Treat tower steel on the two new lattice towers to reduce reflectivity. | | | o | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Avoid storing construction equipment and supplies on residential streets or access roads directly adjacent to residential property, to the greatest extent possible. | | | o | |
| • Incorporate BMPs for the control of erosion and dust associated with construction of access roads to minimize permanent visual impacts on nearby residential viewers. | | | o | |
| • Reseed disturbed, non-farmed areas once construction is complete using a predominantly native seed mix or a seed mix agreed upon with landowners. Periodically inspect reseeded sites to verify adequate growth. If necessary, implement contingency measures to ensure adequate growth and vegetation cover. | | o | o | o |
| • Locate construction staging areas away from sensitive viewers as much as possible. | | o | o | |
| • Require contractors to maintain clean construction sites. | | o | o | o |
| **Air Quality** | | | | |
| • Use water trucks or other dust control measures to control dust during construction. | | o | o | o |
| • Keep construction vehicles at low speeds (15 miles per hour) on unpaved access roads to minimize dust. | | o | o | o |
| • Keep all vehicle engines in good operating condition to minimize exhaust emissions. | | o | o | |
| • Implement vehicle idling and equipment emissions measures | | o | o | o |
| **Socioeconomics and Public Services** | | | | |
| • Distribute a schedule of construction activities to all potentially affected landowners. | | o | o | o |
| • Coordinate with local farmers and landowners to minimize potential construction-related disruptions. | | | o | |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Compensate landowners for the value of commercial crops damaged or destroyed by construction activities | | | o | o |
| • Coordinate the routing and scheduling of construction traffic with Washington State Department of Transportation and county road staff. | | o | o | o |
| **Cultural Resources** | | | | |
| • Restrict work areas to avoid disturbance to seven cultural resource sites. Employ an archaeological monitor at four of the sites to further ensure impacts are avoided. | | o | o | o |
| • Stop all activities in the vicinity of the find if ground-disturbing activities reveal any cultural materials (e.g., structural remains, Euroamerican artifacts, or Native American artifacts) per BPA's Inadvertent Discovery Procedure for projects. Notify the BPA archaeologist, the Washington Department of Archaeology and Historic Preservation (DAHP), and affected tribes immediately. | | o | o | o |
| • Stop operations immediately within 200 feet of the find if human remains, suspected human remains, or any items suspected to be related to a human burial (i.e., funerary items, sacred objects, or objects of cultural patrimony) are encountered during project construction. Secure the area around the discovery and immediately contact the Lincoln or Spokane County Sheriff, the BPA archaeologist, the State Historic Preservation Officer (SHPO), and the affected tribes. | | o | o | o |
| **Noise Public Health and Safety** | | | | |
| • Locate equipment as far away as is practical from noise-sensitive uses | | | o | |
| • Require all construction equipment powered by gasoline or diesel engines to have sound control devices that are at least as effective as those originally provided by the manufacturer. | | o | o | |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Require all equipment to be operated and maintained to minimize noise generation. | | o | o | |
| • Prohibit gasoline or diesel engines from having unmuffled exhaust. | | | o | |
| • Prepare and maintain a safety plan that would detail how to manage hazardous materials such as fuel, and how to respond to emergency situations. This plan, prepared prior to the start of construction, would be kept on site at all times. | | o | o | o |
| • Hold crew safety meetings at the start of each workday to review potential safety issues and concerns | | | o | |
| • Secure the site at the end of each workday, as much as possible, to protect equipment and the general public. | | | o | |
| • Comply with all fire safety laws, rules, and regulations of the State of Washington and prepare a fire prevention and suppression plan to meet BPA, local authority, and land manager requirements. | | o | o | |
| • Construct and operate the new transmission line to comply with the National Electric Safety Code. | | o | o | |
| • Notify the BPA Contracting Officer's Technical Representative immediately if a hazardous material is discovered that could pose an immediate threat to human health or the environment and stop work in that area until the site is properly cleaned up | | o | o | |
| • Ground fences and other metal structures on and near the transmission line corridor during construction to limit the potential for shocks. | | | o | |
| **Climate Change** | | | | |
| • Implement vehicle idling and equipment emissions measures. | | o | o | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Encourage carpooling and the use of shuttle vans among construction workers to minimize construction-related traffic and associated emissions. | | | o | |
| • Locate staging areas as close to construction sites as practicable to minimize driving distances between staging areas and construction sites. | | | o | |
| • Locate staging areas in previously disturbed or graveled areas to minimize soil and vegetation disturbance where practicable. | | | o | |
| • Encourage the use of the proper size of equipment for the job to maximize energy efficiency. | | | o | |
| • Use alternative fuels for generators at construction sites, such as propane or solar, or use electrical power where practicable | | | o | |
| • Reduce electricity use in the construction office by using compact fluorescent bulbs and turning off computers and other electronic equipment every night. | | | o | |
| • Recycle or salvage non-hazardous construction and demolition debris where practicable. | | | o | |
| • Use local rock sources for road construction. | | o | o | |
| Alvey- Fairview MM | | | | |
| **Land Use and Recreation** | | | | |
| • Provide a construction schedule to all potentially affected landowners | | o | o | o |
| • Post a construction schedule in affected recreational areas. | | o | | o |
| • Maintain existing access to residences and other areas during construction. | | | o | o |
| • Schedule construction during periods when active farms along the corridor are likely to be fallow, to the extent practicable, to minimize the potential for crop damage. | | | o | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Leave gates as they were found to avoid disturbances to livestock. | | | | o |
| • Limit construction activities to the existing right-of-way and easements to minimize impacts to crops. | | | | o |
| • Coordinate with individual landowners to ensure that new or temporary access roads and gates and construction and maintenance activities would minimize disruptions to agricultural and commercial operations. | | | | o |
| • Compensate landowners for the value of commercial crops damaged or destroyed by construction activities. | | | o | o |
| • Coordinate with local agencies to avoid construction activities that could conflict with their own construction activities. | | o | o | o |
| • Install permanent gates at selected locations to minimize unauthorized use of BPA access roads and unauthorized entry to BPA right-of-way as part of project construction. | | | | o |
| **Geology and Soils** | | | | |
| • Place new structures in existing structure holes to the maximum extent practicable to reduce ground disturbance. | | | | o |
| • Conduct project construction, including tree removal, during the dry season when rainfall, runoff and stream flow are low to minimize erosion, compaction, and sedimentation, to the extent practicable | | | o | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Follow Landslide Investigation and Mitigation guidance or other current geotechnical engineering guidance to minimize impacts from structure replacement and road work in known landslide hazard areas (Transportation Research Board, 1996). | | | | o |
| • Contact BPA geotechnical specialists if geotechnical issues, such as new landslides, arise during construction. | | | | o |
| • Install sediment barriers and other appropriate erosion-control devices where needed to minimize sediment transport. | | | | o |
| • Retain vegetative buffers where possible to prevent sediment from entering waterbodies. | | | | o |
| • Control runoff and prevent erosion on access road improvements by using low grades, water bars, and drain dips. | | o | | o |
| • Properly space and size culverts on access roads. | | | | o |
| • Use water trucks on an as-needed basis to minimize dust and reduce erosion due to wind. | | | | o |
| • Till or scarify compacted soil at structure sites prior to reseeding. | | | | o |
| • Reseed disturbed areas with a native seed mix as soon as work in that area is completed. | | o | o | o |
| • Inspect reseeded and revegetated areas to verify adequate growth; implement contingency measures as needed. | | | o | o |
| • Conduct construction activities in coordination with agricultural activities to the extent practicable. | | | | o |
| • Assist farm operators in restoring productivity of compacted soils for structure sites on agricultural lands. | | | | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Allow agricultural activities to resume on temporarily disturbed lands as soon as construction is complete. | | | | o |
| • Stabilize permanently disturbed areas for new access roads with a top layer of pavement or gravel for the roadway and revegetate the roadway shoulders. | | | | o |
| • Inspect and maintain facilities to ensure proper function and nominal erosion levels after construction. | | | o | o |
| **Vegetation** | | | | |
| • Demarcate vegetation clearing limits prior to disturbance | | | | o |
| • Clearly mark trees identified for removal and demarcate tree removal disturbance limits and staging areas. | | | | o |
| • Use existing road systems (including forest/farm access roads), where practicable, to access structure locations. | | | | o |
| • Minimize the construction area (footprint) to the extent practicable, especially within wetlands and adjacent waterbody crossings. | | | | o |
| • In sensitive vegetation areas, install construction "envelopes" of silt fencing, weed free straw wattles, or other barrier materials around construction sites to prevent vehicle turnaround, materials storage, or other disturbance outside designated construction areas. | | o | o | o |
| • Place materials storage and staging areas in upland areas (away from wetland/waterbodies). | | | | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Implement appropriate measures to minimize the introduction and broadcast of weed seeds/propagules, including inspection of vehicles before entering construction areas and appropriate equipment cleaning measures. | | o | o | o |
| • Conduct as much work as possible during the dry season when stream flow, rainfall, and runoff are low to minimize erosion, sedimentation, and soil compaction. | | | | o |
| • Return temporarily disturbed areas to the original (pre-construction) contours and conduct site restoration and revegetation measures as soon as practicable following construction | | o | | o |
| • Reseed disturbed areas with native grasses and forbs to ensure appropriate vegetation coverage and soil stabilization prior to the beginning of the rainy season (November 1). | | o | | o |
| • Inspect seeded sites to verify adequate growth and implement contingency measures as needed. | | o | | o |
| • Conduct a noxious weed survey within the transmission line right-of-way prior to construction to more specifically identify existing infestations of noxious weeds. | | o | | o |
| • Visit existing noxious weed infestations and conduct preemptive measures to minimize transport and expansion of weed occurrences during construction; flag infestations for avoidance (as practicable) during construction. | | o | | o |
| • Minimize ground disturbance in proximity to existing noxious weed populations during construction. | | | o | o |
| • Install and use weed wash stations at selected locations along the transmission line right-of-way. | | | o | o |
| • Minimize disturbance to vegetation; only remove vegetation that would interfere with the proposed construction activities. | | | o | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Return temporarily disturbed areas to their original (pre-construction) contours and conduct site restoration and revegetation measures before or at the beginning of the first growing season following construction. | | | | o |
| • Restore all temporarily disturbed soils resulting from roadwork (e.g., spoil areas, cut/fill slopes, staging areas, etc.) according to BLM requirements and agency Biological Opinions for seeding and mulching. | | | o | o |
| • Replant native riparian species at specified bridge/culvert replacement locations during the dormant season (November 1 to February 1). | | o | o | o |
| • Salvage and stockpile selected topsoil for replacement on cut/fill slopes to improve site restoration and plant establishment. | | | | o |
| • Conduct a weed survey prior to construction to identify infestation areas. BPA would target existing infestation areas on BLM land for BLM-approved treatment prior to construction; BPA would perform follow-up monitoring and treat infestation areas after construction if needed. | | o | o | o |
| • Install and use weed wash stations at selected locations along the transmission line right-of-way. | | | o | o |
| • Conduct post-construction site restoration monitoring with at least three field visits per year until site stabilization is achieved. | | o | o | o |
| **Streams and Fish** | | | | |
| • Conduct in-water work in the Coast Fork Willamette River subbasin between July 1 and September 30, or during ODFW biologist-approved extensions. | | | | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Conduct in-water work in the Umpqua, South Umpqua, and Coquille subbasins between July 1 and September 15, or during ODFW biologist-approved extensions. | | | | o |
| • Conduct fish salvage according to National Marine Fisheries Service (NMFS)/ODFW requirements (NMFS/NOAA , 2000; ODFW, 2014). | | | | o |
| • Divert stream flow around the work area and maintain downstream flow during construction. | | | o | o |
| • Isolate in-water work areas prior to culvert and bridge installations. Dewater work area as necessary for construction and to minimize turbidity. Do not discharge turbid water to streams. | | | o | o |
| • Install culverts, bridge crossings in accordance with NMFS/ODFW fish passage requirements. | | | o | o |
| • Restrict construction vehicles and equipment access to access roads and existing work areas only. Return temporary disturbance areas for bridge, culvert, and road work to pre-existing contours and seed. | | | o | o |
| • Dispose of waste material generated from access road work in a stable upland site approved by a geotechnical engineer or other qualified personnel, smooth to match adjacent grades, and seed for stability. | | | | o |
| • Conduct soil disturbing activities during dry conditions to the greatest extent practicable. | | | | o |
| • Outslope access roads (e.g., 2 to 5%), maintaining natural drainage patterns and minimizing interceptions and concentration of upgradient runoff when practicable (e.g., less than 7%slopes). | | o | o | o |
| • Utilize minimum of 18 inch diameter pipes for replacements and installation of additional cross-drains. | | | | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Install cross-drains at a slope steeper than road slope and skew approximately 30 degrees from perpendicular to the road to help with self-cleaning. | | | | o |
| • Install cross-drains long enough so that outlets extend beyond road fill. | | | | o |
| • Excavate cross-drain inlets to allow for initial sediment influx after construction. | | | | o |
| • Armor first 25 feet of ditch upgradient from cross-drain and catch basin with rock (e.g., pit-run/jaw rock or equivalent) to decrease the water's energy and slow flow. | | | | o |
| • Armor cross-drain outlets (e.g., pit run/jaw rock, slash, or equivalent) to decrease the water's energy and slow flows. | | | | o |
| • Design headwaters culverts (non-fish drainages) for the 100-year storm event and include a blockage allowance when sizing culverts to minimize future maintenance needs. | | | | o |
| • Size non-fish culverts to provide a free flow condition for the 100-year storm event. | | | | o |
| • Develop a spill prevention and spill response plan prior to rebuild construction. | | o | o | o |
| • Maintain emergency spill control materials, such as oil booms and spill response kits, on-site at each bridge/culvert replacement site at all times and ready for immediate deployment. | | | o | o |
| • Include small sorbent booms (sausage booms), sorbent sheets/pads and socks, vermiculite/kitty litter, duct tape, heavy duty garbage bags, zip ties, and nitrile gloves in spill kits. Restock materials within 24 hours if used. | | | | o |
| • Outfit heavy machinery (e.g., excavators) with fire extinguisher, shovel, first aid kits, and caps and plugs for machine hydraulic lines and associated attachments (e.g., hammer/plate compactor, etc.). | | | | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Stockpile and make available large sorbent booms, straw bales, straw wattles, and turbidity curtains at each specified bridge/culvert replacement site to quickly respond to any spills or turbidity and erosion concerns during construction. | | | o[23] | o |
| • Store, fuel, and maintain all vehicles and other heavy equipment (when not in use) in a designated upland staging area located a minimum of 150 feet away from any stream, waterbody, or wetland or where any spilled material cannot enter natural or manmade drainage conveyances. | | | | o |
| • Confirm equipment is clean (e.g., power-washed) and that it does not have fluid leaks prior to contractor mobilization of heavy equipment to site. Inspect equipment and tanks for drips or leaks daily and make necessary repairs within 24 hours | | | | o |
| • In the event of a spill, immediately contain the spill, eliminate the source and deploy appropriate measures to clean and dispose of spilled materials in accordance with federal, state, and local regulations. | | | | o |
| Wetlands, Floodplains, and Groundwater | | | | |
| • Avoid and minimize wetland/waters impacts where possible by re-routing access roads, decreasing road width, or only crossing wetlands during the dry season. | | | | o |
| • Obtain and comply with applicable Corps of Engineers Clean Water Act and State of Oregon Removal/Fill permits for all work in wetlands or streams. | | | o | o |
| • Identify and flag wetland boundaries before construction. | | | o | o |

[23] Store fuel and refuel machinery at least 200 feet from wetlands and waterways and inspect regularly for leaks. Creston-Bell Transmission Line Rebuild Project - Mitigation Action Plan (Page 6).

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Install erosion-control measures prior to work in or near wetlands (e.g., silt fences, straw wattles, and other sediment control measures) and reseed disturbed areas as required. | | | o | o |
| • Place new poles installed in wetlands inside a four-foot diameter corrugated metal pipe. This measure would help prevent leaching of wood preservative to surrounding wetlands or waters. | | | | o |
| • Deposit and stabilize all excavated material not reused in an upland area outside of wetlands. | | | | o |
| • Avoid construction within wetlands to protect wetland functions and values, where possible. Avoid using these areas for construction staging, equipment or materials storage, or fueling of vehicles. | | | o | o |
| • Use existing road systems, where possible, to access structure locations. | | | | o |
| • Remove all temporary fill and geotextile fabric and revegetate temporary roads built in wetlands after use. | | | o | o |
| • Restore all temporary disturbance areas to original contours and decompact, if necessary. | | | o | o |
| • Replant all temporary disturbance areas within wetlands with native species and remove or control invasive plants until native plants are well-established. Monitor revegetated wetland areas for three years. Use herbicides to control vegetation near wetlands in accordance with BPA's Transmission System Vegetation Management Program Final Environmental Impact Statement /Record of Decision (BPA 2000) to limit impacts to water quality. | | | o | o |
| • Purchase wetland mitigation bank credits and/or in-lieu fee program mitigation credits, and/or participate in payment-in-lieu programs as mitigation for 264,905 square feet (6.08 acres) of permanent wetland impacts | | | | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Purchase 3.2 credits at the Coyote Prairie North Mitigation Bank to replace lost wetland functions and values for 3.2 acres of wetland impact in the Coast Fork Willamette River watershed. | | | | o |
| • Purchase 2.40 credits from either the Cow Hollow Mitigation Bank or the Umpqua Interior Foothills In-Lieu Fee Program to replace lost wetland functions and values for the 2.39 acres of wetland impact in the Upper and South Umpqua River watersheds. | | | | o |
| • Purchase 0.28 credit at either the Cow Hollow Mitigation Bank or the Umpqua Foothills In-Lieu Fee Program to mitigate for 0.49 acre of impacts and purchase of 0.21 credit from the Oregon State Payment-in-Lieu Program. | | | | o |
| • Deposit and stabilize all excavated material not reused in an upland area outside of floodplains. | | | | o |
| • Install erosion-control measures prior to work in or near floodplains. | | | | o |
| • Avoid construction within floodplains to protect floodplain function, where possible. | | | o | o |
| • Prepare and implement a storm water pollution prevention plan. | | | o | o |
| • Inspect and maintain tanks and equipment containing oil, fuel, or chemicals for drips or leaks to prevent spills onto the ground or into waterbodies. | | | | o |
| • Maintain and repair all equipment and vehicles on impervious surfaces away from all sources of surface water. | | | o | o |
| • Refuel and maintain equipment away from natural or manmade drainage conveyances, including streams, wetlands, ditches, catch basins, ponds, and culverts. | | o | o | o |
| • Provide spill containment and cleanup and use pumps, funnels, and absorbent pads for all equipment-fueling operations. | | o | | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Keep, maintain, and have readily available appropriate spill containment and cleanup materials in construction equipment, in staging areas, and at work sites. | | o | o | o |
| • Place sorbent materials or other impervious materials underneath individual wood poles at pole storage and staging areas to contain leaching of preservative materials. | | | | o |
| • Place poles located in wetlands inside metal culverts backfilled with crushed rock to help prevent leaching of the preservative material into surrounding areas. | | | | o |
| • Install erosion control measures prior to work in or near floodplains. | | | o | o |
| • Monitor revegetation and site restoration work for adequate growth; implement contingency measures as necessary. | | | | o |
| • Monitor erosion control BMPs to ensure proper function and nominal erosion levels. | | | | o |
| **Wildlife** | | | | |
| • Install bird diverters where the line crosses rivers, wetlands, or other high bird-use areas, and would be technically feasible. | | | o | o |
| • Minimize the construction area to the extent practicable. | | o | o | o |
| • Leave a small percentage of cut and felled danger trees as snags in upland and wetland areas within the transmission line as additional habitat/structure for wildlife, particularly small mammals and amphibians. | | | | o |
| • Top, trim, or girdle a percentage of designated danger trees to create snags (e.g., in higher quality habitat areas) to reduce impacts to vegetation and wildlife species, such as small mammals and amphibians. | | | o | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Limit removal of Fender's blue butterfly host or nectar plants to the minimum necessary for construction. | | | | o |
| • Restore areas cleared for construction to pre-construction condition. | | | | o |
| • Re-vegetate disturbed areas with weed-free seed mixes and plantings that include nectar plants for Fender's blue butterfly. | | | | o |
| Implement the following construction timing restrictions: | | | | |
| • Northern spotted owl critical breeding period: No work within established disturbance distance between March 1 and July 7 (See Section 2.1.7 of the Final EA for additional information on wildlife restrictions). | o | o | o | o |
| • Marbled murrelet MAMU A locations: No work between April 1 and August 5. Between August 6 and September 15, start work two hours after dawn and stop work two hours before dusk. Marbled murrelet MAMU B locations: Start work two hours after dawn and stop work two hours before dusk between April 1 and September 15 (See Section 2.1.7 of the Final EA for additional information on wildlife restrictions and Section 3.6 for more information on MAMU A and B locations). | o | o | o | o |
| • Fender's blue butterfly adult flight season: No work in line miles 1 and 2 between April 15 and July 7. | o | o | o | o |
| • Provide support for USFWS's research activities benefiting ESA-listed species. | | | | o |
| **Cultural Resources** | | | | |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Stop work immediately and notify local law enforcement officials, appropriate BPA personnel, the Oregon State Historic Preservation Office (SHPO), and the interested Tribes if cultural resources (either archaeological or historical materials) are discovered during construction activities. | | o | o | o |
| • Develop an Inadvertent Discovery Plan that details crew member responsibilities for reporting in the event of a discovery during construction. | | o | o | o |
| • Stop construction in the area immediately should human remains or burials be encountered. Secure the area, placing it off limits for anyone but authorized personnel, and immediately notify proper law enforcement, the BPA archaeologist, the Oregon SHPO, and the Tribes. | | o | o | o |
| • Implement any additional mitigation measures for cultural resources identified by the Oregon SHPO through the Section 106 consultation process. | | o | o | o |
| **Visual Quality** | | | | |
| • Use non-reflective insulators (e.g., non-ceramic insulators or porcelain) to reduce refraction and glare. | | | o | o |
| • Focus construction lighting on work areas to minimize spillover of light and glare. | | | | o |
| • Require that contractors maintain a clean construction site and remove all construction debris. | | o | o | o |
| **Socioeconomics and Public Services** | | | | |
| • Maintain access to all businesses, residences, and public facilities during construction | | | | o |
| • Coordinate with utility providers that share BPA right-of-way to determine the exact locations of utilities and minimize service disruptions to other utility lines. | | | | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Compensate landowners at market value for any new land rights required to acquire new, temporary, or permanent access roads on private lands and apply for applicable permits to obtain new access rights on public lands. | | | o | o |
| **Noise, Public Health, and Safety and Electromagnetic Fields** | | | | |
| • Since there would be no significant changes to the noise environment in the vicinity of the line, and no impacts would result from operational activities, no avoidance, minimization, or mitigation measures would be needed | | | | o |
| • BPA would implement spill prevention and response BMPs as described earlier in this table under the Streams and Fish section to avoid, minimize, or mitigate impacts to public health and safety from the Proposed Action. | | o | o | o |
| • Since there would be no significant changes to the electric and magnetic fields in the vicinity of the line, and no impacts would result from operational activities, no avoidance, minimization, or mitigation measures would be needed. | | | | o |
| **Transportation** | | | | |
| • Prepare a notice about construction activities and a proposed schedule for posting on the Oregon Department of Transportation's (ODOT) traffic advisory web site called Trip Check (http://www.tripcheck.com). | | | o | o |
| • Schedule construction activities at transmission line crossings of Interstate 5 and Oregon Route 99 so as to avoid lane closures during peak travel times, as determined in coordination with ODOT. | | | | o |

| Avoidance Criteria ("AC")/ Mitigation Measures ("MM") | PEIS | Midway-Benton | Creston-Bell | Alvey-Fairview |
|---|---|---|---|---|
| The "o" is used to symbolize that the AC or MM is present in the environmental review document.<br><br>**What do the highlights mean:**<br>• **NO HIGHLIGHT →** AC/MM in a single environmental review.<br>• **PINK →** Symbolizes two environmental reviews which have the same or similar language for an AC or MM.<br>• **GREEN →** Symbolizes three environmental reviews which have the same or similar language for an AC or MM.<br>• **BLUE →** Where all four environmental reviews have the same or similar language for an AC or MM. | | | | |
| • Use traffic safety signs and flaggers to inform motorists and manage traffic during construction activities on affected roads. | | | | o |
| • Repair damage to roads caused by construction. | | | | o |
| • Keep construction activities and equipment clear of residential driveways to the extent possible. | | | | o |
| **Air Quality and Greenhouse Gases** | | | | |
| • Use water trucks to control dust during construction | | o | o | o |
| • Keep all vehicles in good operating condition to minimize exhaust emissions. | | o | o | o |
| • Turn off construction equipment during prolonged periods of non-use. | | o | o | o |
| • Drive vehicles at low speeds (less than 5 miles per hour) on access roads and the BPA easement to minimize dust during high dust conditions. | | o | o | o |