



# Palouse Wind

## FINAL Environmental Impact Statement

SEPA Lead Agency:  
**Whitman County,  
Washington**

MARCH 2011

WHITMAN COUNTY  
*Department of Public Works*

Mailing Address:  
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March 31, 2011

Re: Palouse Wind Project

To Whom It May Concern:

Please find enclosed for your review a copy of the Final Environmental Impact Statement (FEIS) for the Palouse Wind Project in Whitman County, Washington.

Whitman County issued a Draft Environmental Impact Statement (DEIS) for this Proposed Action on November 18, 2010; an Addendum to the DEIS was issued on March 3, 2011.

The FEIS is the result of the formal public review of the DEIS documents and the comment periods that occurred from November 19 through December 20, 2010 (for the DEIS), and from March 3 through 14, 2011 (for the DEIS Addendum). Comments received in a timely manner have been considered and incorporated into the FEIS. In response to the comments on the DEIS documents, the FEIS provides additional information and analysis concerning the Proposed Action.

Together, the November 2010 DEIS, March 2011 DEIS Addendum, and this FEIS constitute the analysis required under the State Environmental Policy Act (SEPA). The DEIS, DEIS Addendum, and FEIS do not authorize the Proposed Action; rather, these are key documents that will be considered in the decision-making process for the Palouse Wind Conditional Use Permit application decisions.

**Project Location:** The Proposed Action is a commercial wind energy generating facility located in Whitman County in southeastern Washington, approximately 3 miles west of Oakesdale. The Proposed Action would be developed on approximately 9,000 acres of leased privately owned Agricultural District zoned land, nearly all of which is actively farmed and in wheat production.

**Appeal Provisions:** You may appeal the adequacy of the FEIS by filing a notice of appeal in accordance with Section 19.06.050 of the Whitman County Code with a \$500 filing fee (for costs incurred by the County in receiving, reviewing, and processing the appeal), within 14 calendar days after the issue date of this FEIS (March 31, 2011). **All notices of appeal must be filed by 5 pm on April 14, 2011.**

For further information regarding this proposal or to obtain electronic or additional copies of this FEIS, please contact Alan Thomson, Director, Whitman County Planning Department, 310 N. Main Street, 2nd Floor P.O. Box 430 Colfax, WA 99111-0430 (509) 397-5211.

Sincerely,



Alan Thomson  
Whitman County Planning Director

**Fact Sheet**

<b>Title</b>	Palouse Wind Energy Project, Final Environmental Impact Statement (FEIS)	
<b>Brief Description of Proposed Action</b>	The objective of the Proposed Action is to construct and operate a wind energy facility in Whitman County, Washington. The purpose is to generate renewable wind energy available for private and public utilities in order to meet the demand and need for renewable energy resources. This form of renewable energy qualifies under the definition of the State of Washington's Renewable Electricity Standard, Title 19 of the Revised Code of Washington (RCW). This statute mandates that by the year 2020, the state's largest electric utilities meet 15 percent of their retail electric load with renewable electricity (wind and solar energy, for example).	
<b>Location</b>	The Proposed Action is located in Whitman County in southeastern Washington, approximately 3 miles west of Oakesdale. The Proposed Action would be developed on approximately 9,000 acres of leased, privately owned Agricultural District zoned land, nearly all of which is actively farmed and in wheat production.	
<b>Applicant</b>	Palouse Wind, LLC	
<b>Proposed Implementation Date</b>	Construction of the Proposed Action will occur over a period of 3 to 12 months and is expected to begin in fall 2011. The schedule will depend on the Applicant's ability to obtain permits, as well as weather and ground conditions. Commercial operation of the wind energy facility is anticipated to start in 2012.	
<b>SEPA Lead Agency</b>	Whitman County Department of Public Works 310 N. Main Street, 2 <sup>nd</sup> Floor P.O. Box 430 Colfax, WA 99111-0430	
<b>Responsible Official</b>	Alan Thomson, Director Whitman County Planning Department	
<b>Contact Person</b>	Alan Thomson, Director, Whitman County Planning Department 310 N. Main Street, 2 <sup>nd</sup> Floor P.O. Box 430 Colfax, WA 99111-0430	
<b>Approvals and Certifications That May Be Required</b>	<b>Permit</b>	<b>Lead Agency</b>
<b>Federal</b>	FAA Non-Hazard Determinations	Federal Aviation Administration
	Form 7460: Notice of Proposed Construction or Alteration	Federal Aviation Administration
	Section 404—Coverage under Nationwide Permit	U.S. Army Corps of Engineers
<b>State</b>	Section 401—Water Quality Certification	Washington Department of Ecology
	Hydraulic Project Approval	Washington Department of Fish and Wildlife
	Cultural Resources Consultation	Washington Department of Archaeology and Historic Preservation
	National Pollutant Discharge Elimination System (NPDES) Permit	Washington Department of Ecology
	General Order of Approval for Concrete Batch Plants	Washington Department of Ecology

<b>State, Cont.</b>	General Order of Approval for Diesel-Powered Emergency Electrical Generators	Washington Department of Ecology
	Oversize/weight Haul Permits	Washington Department of Transportation
	State Road Access Permit	Washington Department of Transportation
	Utility Permit	Washington Department of Transportation
<b>County</b>	Compliance with State Environmental Policy Act (SEPA)	Whitman County Planning Department
	Conditional Use Permit (CUP)	Whitman County Planning Department
	Critical Areas Ordinance	Whitman County Planning Department
	Building Permit	Whitman County Building Department
	Franchise Agreement	Whitman County Department of Public Works
	Haul Road Agreement	Whitman County Department of Public Works
	County Road Access Permit	Whitman County Department of Public Works
	Onsite Sewage Disposal System	Whitman County Environmental Health
	Blasting Permit	Whitman County Department of Public Works
<b>Authors and Principal Contributors</b>	CH2M HILL is the principal author of the FEIS. Plateau Archeological Services prepared the cultural resources inventory and report, Northwest Wildlife Consultants, Inc. (NWC) prepared a wildlife ecological baseline report, Western Ecological Systems, Inc. (WEST) prepared a report on bats.	
<b>Date of Issuance of FEIS</b>	March 31, 2011	
<b>Final EIS Adequacy Appeal Deadline</b>	April 14, 2011	
<b>Date Final Action is Planned</b>	A hearing on the application for Conditional Use Permit (CUP) will be held during the second quarter of 2011. It is anticipated that the decision resulting from this hearing, which will constitute final action related to this EIS, will occur within 4 to 8 weeks from the CUP hearing date.	
<b>Subsequent Environmental Review</b>	Conditional Use Permit Hearing JARPA and Critical Areas Review, if needed Further environmental review of the specific wind turbine locations will be done during the Proposed Action's micrositing phase.	
<b>Cost of FEIS Copy to the Public</b>	Copies of this FEIS can be reviewed at the Whitman County Planning Department at the address above, at the main branch of the Whitman County Library in Colfax (102 S. Main Street, Colfax, WA 99111-1863), at the Rosalia branch library (402 S. Whitman Ave., Rosalia, WA 99170), and at the Oakesdale branch library (102 E. Steptoe Street, Oakesdale, WA 99158). Printed and electronic copies of the Final EIS are available from the Whitman County Planning Department at cost.	
<b>Previous Environmental Documents</b>	Palouse Wind Draft Environmental Impact Statement (DEIS), SEPA Lead Agency: Whitman County, Washington (November 2010) Addendum to the Palouse Wind DEIS (March 2011)	
<b>Location of Background Information</b>	You may access this FEIS and find additional information about the Proposed Action on the Whitman County Web site: <a href="http://www.whitmancounty.org/page.aspx?pn=Planning+Division">http://www.whitmancounty.org/page.aspx?pn=Planning+Division</a>	

# Executive Summary

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## Introduction

On July 27, 2010, Palouse Wind, LLC, (Palouse Wind) filed a Conditional Use Permit (CUP) application with Whitman County to construct and operate a commercial wind energy generation facility. An amendment to the CUP application was subsequently filed on February 24, 2011. The Proposed Action will consist of up to 65 wind turbines and associated facilities developed on approximately 9,000 acres of private land in Whitman County, Washington.

In accordance with Washington Administrative Code (WAC) 197-11-050, Whitman County is the State Environmental Policy Act (SEPA) Lead Agency for this Proposed Action. Whitman County initiated environmental review of this proposal under the requirements of Chapter 43.21C of the Revised Code of Washington (RCW) by issuing a Determination of Significance, and requiring the preparation of an Environmental Impact Statement (EIS). The SEPA process enables the development of information about a proposal's probable adverse impacts and the potential measures to mitigate such impacts. The SEPA analysis is used by decision makers to develop mitigation measures that may be appropriate for the impacts identified. SEPA does not require the local government to deny a project because it has adverse impacts (or even significant adverse impacts) as compared to No Action.

An EIS is an informational and evaluative tool. This document provides the analysis required for Whitman County to consider those impacts and mitigation measures.

## Purpose of the Final Environmental Impact Statement

Whitman County directed the preparation of an EIS pursuant to RCW Chapter 43.21C, SEPA, WAC Chapter 197-11, and Whitman County Code (WCC) Chapter 9.04. As described in additional detail below (Overview of the Review Process), the County conducted scoping, issued a Draft EIS (DEIS) and the Addendum to the DEIS (DEIS Addendum) for public comment.

Whitman County considered the comments received on the DEIS and DEIS Addendum and prepared this Final EIS (FEIS). Based on these comments, this FEIS contains clarifications and additional environmental analysis, as appropriate.

The FEIS is presented in abbreviated format, and does not reproduce those elements of the SEPA analysis presented in the DEIS and DEIS Addendum that have not been revised or updated. This document presents the updated and revised information needed to complete the environmental analyses presented in the previous SEPA documents.

The analysis contained in the DEIS, the DEIS Addendum, and the FEIS, collectively, constitute the required environmental review under RCW Chapter 43.21C and WAC 197-11.

The FEIS is organized as follows:

**Section 1** presents the comment letters submitted to Whitman County and responses to the comments raised in the letters.

**Section 2** presents the revisions to the DEIS and the DEIS Addendum including, as appropriate:

- Updates to the Alternatives Considered
- Updates to the Proposed Action
- Updates to the Affected Environment, Environmental Consequences, and Mitigation for each of the 16 elements of the built and natural environment considered in the DEIS and DEIS Addendum, as needed
- Updates to the References section

The **Appendix** presents the *Preliminary Summary of Winter 2011 Avian Point Counts* report, which includes data from the avian point count surveys conducted by Northwest Wildlife Consultants, Inc. (NWC) from January 31, 2011 through March 9, 2011.

## Proposed Action Objective, Purpose, and Need

The objective of the Proposed Action is to construct and operate a wind energy facility in Whitman County, Washington. The purpose is to generate renewable wind energy available for private and public utilities in order to meet the demand and need for renewable energy resources. This form of renewable energy qualifies under the definition of the State of Washington's Renewable Electricity Standard, RCW Title 19. This statute mandates that by the year 2020, the state's largest electric utilities meet 15 percent of their retail electric load with renewable electricity (wind and solar energy, for example).

## Review Process

This environmental review was triggered by Palouse Wind's submittal of a CUP application to Whitman County on July 27, 2010, which was deemed complete by Whitman County on August 26, 2010. The CUP application included a SEPA Checklist. The Applicant requested that Whitman County, as lead agency, issue a Determination of Significance (DS) and prepare an EIS including cumulative impacts associated with other identifiable wind energy development in the Proposed Action area. Additional information was provided to Whitman County on August 19 and September 3, 2010.

On August 26, 2010, Whitman County published a Notice of Application (NOA) in the *Whitman County Gazette*. The County issued a notice of DS and a request for comments on the scope of the EIS. Both notices were published in the *Whitman County Gazette* (August 26, 2010) and the Washington State Department of Ecology's (Ecology's) SEPA Register (August 26, 2010). Whitman County circulated these notices to property owners; local, state, and federal agencies; and other interested persons.

The scoping comment period closed on September 16, 2010. Chapter 3 of the DEIS provided an overview of the scoping comments for each of the applicable resource areas discussed.

On November 18, 2010, Whitman County issued the DEIS for public and agency review and comment. Whitman County provided notice of the availability of the DEIS in accordance with WAC 197-11-455 and WCC Title 9. Notice of availability of the DEIS was published in the *Whitman County Gazette* on November 18, 2010. Notice of availability was mailed to federal agencies, representatives of tribal government, state agencies, local agencies, and business and individuals, as detailed in Appendix B of the DEIS.

On February 24, 2011, Palouse Wind submitted an Amendment to the CUP application to Whitman County. As described in the November 2010 DEIS, Palouse Wind had been assessing the characteristics of the wind resource on Steam Shovel Hill (described as the Steam Shovel Expansion Area [SSEA] in the November 2010 DEIS). These assessments provided positive results, and Palouse Wind submitted the amendment to include additional properties surrounding the periphery of the Steam Shovel Hill and Naff Ridge areas in the Proposed Action area. Altogether, the property additions increase the Proposed Action area to approximately 9,000 acres.

On March 3, 2011, Whitman County issued the DEIS Addendum for public and agency review and comment. The Addendum was prepared to include an expanded Proposed Action area, as detailed in the Amendment to the CUP application, and an increase in the potential Proposed Action build out to a maximum of 65 turbines. Whitman County provided notice of the availability of the DEIS Addendum in accordance with WAC 197-11-455 and WCC Title 9. Notice of availability of the DEIS Addendum was published in the *Whitman County Gazette* on March 3, 2011. Notice of availability was mailed to federal agencies, representatives of tribal government, state agencies, local agencies, and business and individuals.

The DEIS and DEIS Addendum were made available to the public for inspection at the Whitman County Planning Department (310 N. Main Street, Colfax, WA 99111), the main branch of the Whitman County Library in Colfax (102 S. Main Street, Colfax, WA 99111-1863), the Rosalia branch library (402 S. Whitman Ave., Rosalia, WA 99170), and the Oakesdale branch library (102 E. Steptoe Street, Oakesdale, WA 99158). The DEIS and DEIS Addendum were also posted electronically to Whitman County's Planning Department Web site. To be considered, comments had to be submitted in writing to the County office no later than close of business (5:00 pm) on December 20, 2010 for the DEIS, and by close of business (5:00 pm) on March 14, 2011 for the DEIS Addendum.

Timely comments on the DEIS and DEIS Addendum were received from 57 unique, interested parties (several individuals commented on both documents). Comment letters were received from state and federal resource agencies, tribal governments, local governments, businesses, non-profit groups, and private landowners. Of the comment letters, 35 expressed general support for the Proposed Action. Comment letters regarding the DEIS from the Washington Department of Fish and Wildlife (WDFW) and the Washington Department of Archeology and Historic Preservation (DAHP) were received after the noticed deadline for the DEIS comment period; a letter from WDFW regarding the DEIS Addendum was received after the noticed deadline for the DEIS Addendum comment period. Additionally, a number of private landowners submitted comment letters after the notice deadline. These letters were reviewed to determine if the agencies' or landowners' concerns had been raised in other comment letters, and if so, responses were cross-referenced to similar comments received within the public comment period. As discussed on pages ES-6 to ES-8 of the DEIS Executive Summary, Palouse

Wind has been actively involved in the consideration of wind energy in Whitman County, and has voluntarily conducted or participated in several outreach efforts. The following is an updated list of outreach activities that Palouse Wind conducted since the issuance of the DEIS on November 18, 2010:

- December 1, 2010: Meeting with Rick Winters, Superintendent of the St. John-Endicott School District
- December 6, 2010: Meeting with WDFW staff; Superintendent of the Oakesdale School District, Dr. Jake Dingman; Palouse Audubon Society; Palouse Prairie Foundation; Whitman County Noxious Weed Control Manager; and Oakesdale City Council
- January 7, 2011: The confidential *Cultural Resource Survey for the Palouse Wind Project*, January 2011, was provided to Whitman County, the Department of Archeology and Historic Preservation, and to the cultural resource managers of Confederated Tribes of the Colville Reservation, the Confederated Tribes and Bands of the Yakama Nation, the Nez Perce Tribe, the Coeur D'Alene Tribe for their review
- January 11, 2011: Meeting with Whitman County Council on Aging and Human Services
- January 11, 2011: Meeting with Washington Department of Commerce and Southeast Washington Economic Development Association
- January 20, 2011: Meeting with Washington State Department of Transportation (WSDOT) Spokane Regional Office staff
- January 2011: Comment letters on the confidential *Cultural Resource Survey for the Palouse Wind Project*, January 2011, were received from the Department of Archeology and Historic Preservation (January 31) and the cultural resource managers of the Confederated Tribes and Bands of the Yakama Nation (January 25) and Confederated Tribes of the Colville Reservation (January 28)
- January 21, 2011: Meeting with Erin Vincent, Eastern Washington Representative for Senator Patty Murray, to provide an overview of the Proposed Action
- February 18, 2011: Meeting with Rick Winters, Superintendent of the St. John-Endicott School District, to provide an overview of the Proposed Action and discuss possible development of a wind energy curriculum
- March 1, 2011: Presentation to the Pine Creek Conservation District
- March 9, 2011: Meeting with Tekoa School District Principal, Counselor, and Science Teacher to present an overview of the project and discuss possible development of a wind energy curriculum
- March 9, 2011: Meeting with Oakesdale School District Principal, Counselor, and Science Teacher to present an overview of the Proposed Action and discuss possible development of a wind energy curriculum

## Significant Areas of Interest and Issues that were Considered in the Analysis

Comments submitted by the public and agencies on the DEIS and DEIS Addendum identified a range of topics. Section 1 of the FEIS contains the comment letters submitted to Whitman County. Each letter is identified with a unique alphanumeric code (e.g., WHI-1). Comment letters received for the DEIS Addendum are coded with an 'A' to distinguish them from DEIS comments (e.g., WHI-A-1). All comment letters are presented in Section 1 and are organized alphabetically by their unique codes. The following areas generated the most significant amount of interest as evidenced by the comment letters: visual impacts and shadow flicker analysis, low-frequency noise, health and safety, wildlife, particularly avian and sensitive species surveys, vegetation, particularly potential impacts to Palouse Prairie habitat, cultural resources, particularly traditional cultural properties, and socioeconomics including property values. Most of these issues had been raised during the scoping period and were addressed in the DEIS and DEIS Addendum. Issues that had not been previously raised were given consideration and resulted in revisions to the DEIS and DEIS Addendum text where appropriate. DEIS and DEIS Addendum text revisions are discussed and presented in detail in Section 2 of this FEIS.

## Updated Mitigation Measures and Conclusions

One of the results of an environmental review is the development of potential mitigation measures whose implementation may avoid or reduce impacts to the built and natural environment.

Mitigation measures recommended in the DEIS, DEIS Addendum, and FEIS will be used by Palouse Wind to refine the ultimate selection of individual turbine locations. In addition to implementing mitigation measures, the process of micrositing (a process during which the final locations of wind turbine generators, belowground electrical cables, and aboveground electrical transmission towers are determined) is also applied to the final site-specific design in an effort to reduce the impacts associated with the Proposed Action. The micrositing process occurs after comprehensive environmental and permit review and prior to actual construction.

The November 2010 DEIS presented a summary table of all recommended mitigation measures (Table ES-3). This table has been revised and updated to reflect additional mitigation measures suggested by the FEIS authors to mitigate for the impacts to the natural and built environment presented in the DEIS and DEIS Addendum. As in the DEIS and DEIS Addendum, mitigation measures presented in the FEIS are reasonably calculated to reduce, at times eliminate, and in several instances, enhance the impacts of the Proposed Action to the built and natural environment.

The mitigation measures presented in this analysis have been summarized in Table ES-3. Revisions to existing mitigation measures or new mitigation measures are indicated in this table using the following formatting: Deletions to text in the DEIS and DEIS Addendum are indicated by a strikethrough (example "~~deletion~~"). Additions are indicated by underlining the new text (example "addition").

As described in the November 2010 DEIS, impact avoidance will continue to be utilized and Best Management Practices (BMPs) will be applied to minimize impacts where appropriate.

Application of all of these measures, following the micrositing of the Facility, will limit and in most instances, eliminate the adverse impacts associated with the Proposed Action.

TABLE ES-3  
Summary of Impacts and Proposed Mitigation Measures for the Palouse Wind Project

Resource	Impact Topics Addressed	Proposed Mitigation Measures
Air	Construction and operational impacts on air quality (that is, particulates/fugitive dust and vehicle emissions)	<ul style="list-style-type: none"> <li>• All vehicles used during construction will comply with applicable federal and state air quality regulations for exhaust emissions.</li> <li>• Vehicles and equipment used during construction will be properly maintained to minimize exhaust emissions.</li> <li>• Carpooling among construction workers will be encouraged.</li> <li>• Vehicle operators will minimize engine idling time and equipment will be shut down when not in use.</li> <li>• Vehicle speeds on graveled county access roads used for the <u>Project Proposed Action</u> will not exceed 50 miles per hour (mph) in accordance with RCW 46.61.400 to minimize the generation of dust. Vehicle speeds on graveled <u>Project Proposed Action</u> private access roads will not exceed 25 mph to minimize dust emissions.</li> <li>• Encourage the use of alternate, paved roads, where available.</li> <li>• Truck beds will be covered in accordance with local, state, and federal requirements when transporting dirt or soil on public roads.</li> <li>• Construction materials that could be a source of dust will be managed to minimize fugitive dust emissions.</li> <li>• Dust-suppressant chemicals will be applied only when needed, and the application will be timed to avoid or minimize wash-off by rainfall.</li> <li>• Palouse Wind will abide by the terms outlined in the Haul Route Agreement with Whitman County.</li> <li>• Dust emissions resulting from use of county roads will be controlled according to the requirements of the County Haul Route Agreement.</li> <li>• Palouse Wind's private access roads will be maintained to minimize dust emissions during construction, operation, and decommissioning of the Facility.</li> <li>• Per WCC 19.61.060(5), Palouse Wind will: <ul style="list-style-type: none"> <li>– Obtain all applicable air emission permits and comply with all conditions</li> <li>– Re-vegetate any disturbed areas that are not permanently occupied by the Facility features</li> <li>– Comply with County road standards for dust control and erosion</li> <li>– Maintain a water truck onsite during construction for dust suppression.</li> </ul> </li> <li>• Also see mitigation measures in Geology and Soils and Water Resources.</li> </ul>
Vegetation	Construction and operational impacts on vegetative communities (that is land clearing and installation of impervious surfaces)	<ul style="list-style-type: none"> <li>• Studies will be completed prior to <del>Project</del> ground disturbance activities to identify <del>sensitive and</del> special status <del>species</del> <u>sensitive and special status species plant populations</u> to be avoided by <u>Project Proposed Action</u> design and micrositing.</li> <li>• Areas of identified <del>rare special status species</del> <u>rare special status species plant populations and areas of Palouse Prairie habitat</u> will be marked or flagged prior to <del>construction</del> <u>final site plan approval by Whitman County</u> and avoided to the extent possible during construction.</li> <li>• Micrositing will be implemented such that slight relocations of <u>Project Proposed Action</u> facilities may be made to avoid <del>rare special status species</del> <u>rare special status species plant populations and Palouse Prairie habitat</u> if encountered during construction.</li> <li>• Per WCC 19.61.060(6), Palouse Wind will: <ul style="list-style-type: none"> <li>– Limit construction disturbance by flagging <del>sensitive areas</del> <u>sensitive areas</u> special status species plant populations and conduct ongoing environmental monitoring by a qualified biologist or trained personnel during construction to assure that flagged areas are avoided.</li> <li>– Develop a reseeding/restoration and weed management plan, in consultation with the Whitman County Weed Control Board.</li> </ul> </li> <li>• Palouse Wind will implement habitat mitigation actions in accordance with the <i>Wind Power Guidelines</i> (WDFW, 2009) for disturbance in natural habitats. <u>Palouse Wind will consult with Whitman County, WDFW, and the Palouse Prairie Foundation regarding mitigation actions proposed for impacts to areas of Palouse Prairie (native grasslands). Palouse Wind shall document consultation before final site plan approval.</u></li> <li>• BMPs to protect vegetation will be implemented, for example: <ul style="list-style-type: none"> <li>– Protect trees, shrubbery, and other vegetation not designated for removal from damage caused by the Facility construction.</li> <li>– Implement erosion control and dust emission BMPs to prevent siltation of vegetation.</li> </ul> </li> <li>• If avoidance or minimization of impacts to <del>protected vegetation or protected plant species</del> <u>special status plant populations</u> is not possible, mitigation measures <u>would include one or more of the following as appropriate:</u> <ul style="list-style-type: none"> <li>— <del>Removal, conservation, and replanting of protected individual plants.</del></li> <li>— <del>Replanting of areas temporarily disturbed by construction activities with seed obtained from a qualified cultivator of rare plants.</del></li> <li>– <del>Seeding of additional approved area(s) with the same species.</del></li> <li>– <u>If restoration activities are proposed for impacts to Palouse Prairie habitat, follow scientifically based or established guidelines such as <i>Native Palouse Prairie Restoration (CP-25) Plantings</i> (Stannard, 2003; Skinner, 2005).</u></li> <li>– <u>When revegetation is proposed for areas temporarily disturbed by construction activities, select seed mixes appropriate to the pre-existing vegetation being restored; seed mixes will be weed free and obtained from a qualified cultivator.</u></li> <li>– <u>Select restoration measures that would have a reasonable rate of success should habitat restoration be selected as a means of mitigation.</u></li> </ul> </li> </ul>

TABLE ES-3  
Summary of Impacts and Proposed Mitigation Measures for the Palouse Wind Project

Resource	Impact Topics Addressed	Proposed Mitigation Measures
Wildlife	Construction and operational impacts on wildlife (that is habitat loss, direct mortality, short and long term displacement, avian and bat collision)	<ul style="list-style-type: none"> <li>• <u>Palouse Wind will conduct a spring 2011 raptor nest survey prior to final site plan approval by Whitman County. This survey will include the Proposed Action area described in the DEIS Addendum and a 2-mile buffer around it.</u></li> <li>• <u>Palouse Wind will conduct additional weekly avian use point count surveys from old and new locations during the months of January through March 2011 within the Proposed Action area prior to final site plan approval by Whitman County.</u></li> <li>• After decommissioning, the Facility footprint will be restored <u>to the extent restoration is desired by the landowners (and consistent with code and permit requirements) and in order to reflect adjacent cropland or habitat communities existing at the time of restoration to the reasonable extent possible and to minimize permanent impacts to fish and wildlife habitat.</u></li> <li>• Proper drainage, erosion control plans, and stormwater management practices will be implemented during the operation of the Facility, avoiding impacts on aquatic habitat downstream of the Proposed Action area.</li> <li>• Consultation with Whitman County will be completed to ensure compliance with the County's Critical Areas requirements.</li> <li>• <del>Relevant recommendations provided in the WDFW Wind Power Guidelines (2009) will be implemented.</del></li> <li>• Per WCC 19.61.060(6):             <ul style="list-style-type: none"> <li>– Construction disturbance will be limited by flagging sensitive areas and conducting ongoing environmental monitoring during construction to assure that flagged areas are avoided.</li> <li>– A reseeding/restoration and weed management plan for riparian and upland areas will be prepared and implemented in consultation with the Whitman County Weed Control Board.</li> </ul> </li> <li>• <u>Palouse Wind will conduct additional avian use point counts in the Naff Ridge area west of U.S. Highway 195 and in the Steam Shovel Hill area prior to final site plan approval by Whitman County. Results of these surveys will be provided to Whitman County and to WDFW.</u></li> <li>• <u>Palouse Wind will conduct an additional raptor nest survey in areas located within a 2-mile buffer of the Proposed Action area that were not surveyed as reported in Appendix C of the DEIS; this additional survey will be conducted in the spring season prior to beginning construction.</u></li> <li>• <u>Palouse Wind will establish a Technical Advisory Committee (TAC) by the time commercial operations of the Proposed Action commence in order to examine the results related to avian and bat monitoring data and to make recommendations to Whitman County on monitoring and adaptive management measures. The TAC shall include representatives from Whitman County. Representatives from WDFW and USFWS, as well as landowners and other avian-interested stakeholders, will be invited to participate in the TAC as appropriate.</u></li> <li>• <u>Prior to final site plan approval by Whitman County, any raptor nests identified during the raptor nest surveys will be verified so that species- and lifecycle-appropriate construction buffers can be established to minimize disturbance.</u></li> <li>• Palouse Wind will consult with appropriate local, state, and federal agencies to establish timing of and extent of construction buffers for protected species. Construction personnel will be instructed to avoid driving over or otherwise disturbing areas outside the designated construction areas.</li> <li>• Per WCC 19.61.060(7):             <ul style="list-style-type: none"> <li>– All overhead electrical transmission and collector lines will be constructed consistent with the existing Avian Power Line Interaction Committee (APLIC) recommendations for raptor protection on power lines and other such commonly accepted industry or regulatory standards.</li> </ul> </li> <li>• Per WCC 19.61.060(8):             <ul style="list-style-type: none"> <li>– The appropriate recommendations for impact avoidance and minimization provided in the <i>Wind Power Guidelines</i> (WDFW, 2009) that reasonably address <del>project</del> <u>Proposed Action</u> impacts will be implemented.</li> <li>– Palouse Wind will coordinate with WDFW and local habitat/wildlife experts regarding turbine siting before making final site decisions.</li> <li>– Prior to construction, a raptor nesting survey will be conducted during breeding season to identify active raptor nest sites within 1 mile of the Project site.</li> <li>– Un-guyed permanent meteorological towers will be installed, minimizing adverse avian impacts from these structures as recommended by the 2009 WDFW Wind Power Guidelines.</li> <li>– All carcasses of livestock, big game, etc. will be identified and removed from within the <del>project</del> <u>Proposed Action area</u> that may attract foraging eagles or other raptors.</li> <li>– The <del>Project</del> <u>Proposed Action</u> will be monitored for a minimum of 1 year following <del>project</del> Facility start-up to estimate bird and bat fatality rates using standard protocol. Palouse Wind shall report bird fatalities observed for the life of the <del>project</del> Proposed Action to WDFW and USFWS on a quarterly basis, unless and until these wildlife agencies waive or reduce this reporting requirement.</li> </ul> </li> <li>• At riparian crossings, if any, overhead lines will include markers and other protection devices to increase visibility of lines to birds.</li> <li>• Exterior lighting of the Facility will be minimized and full cut-off lighting will be used (except for lighting required by the FAA). <u>Motion sensors and timers will be used for exterior security and substation lighting.</u></li> <li>• Travel speeds on private access roads will be limited to 25 mph to minimize the risk of collisions with wildlife.</li> <li>• Also, see mitigation measures listed for Water Resources, Wetlands, and Vegetation.</li> </ul>

TABLE ES-3  
Summary of Impacts and Proposed Mitigation Measures for the Palouse Wind Project

Resource	Impact Topics Addressed	Proposed Mitigation Measures
<b>Wetlands and Other-Waters</b>	Construction and operational impacts to wetlands and waters (that is wetland cut and fill, bed and bank alteration, erosion, noxious weed introduction)	<ul style="list-style-type: none"> <li>• To the <del>maximum extent possible</del> <u>reasonable and practicable</u>, construction staging areas, stormwater management facilities, roads, underground cables, turbine foundations, transmission poles, and other associated infrastructure will be located outside wetlands and their associated buffers.</li> <li>• If wetlands and their buffers cannot be avoided, the <del>Project</del> <u>Proposed Action</u> will comply with applicable local, state, and federal regulations.</li> <li>• A final wetland delineation will be conducted prior to <del>construction</del> <u>final site plan approval by Whitman County</u> for facilities located in areas that have not been <del>filed</del> <u>field</u> surveyed. Should additional jurisdictional wetland resources be found that may be impacted, appropriate state and federal agencies will be consulted.</li> <li>• The number of stream crossings will be minimized to the greatest extent practicable.</li> <li>• See mitigation measures listed for Water Resources (water quality impact mitigation) and Vegetation (noxious weed control).</li> </ul>
<b>Geological and Soil Resources</b>	Geologic hazards including seismic effects, slope instability, topographic alterations and erosion  Temporary and permanent soil disturbance and conversion of natural soils to artificial surfaces	<ul style="list-style-type: none"> <li>• Private access roads will be designed and constructed to ensure stability and to minimize dust emissions resulting from wind erosion.</li> <li>• The Proposed Action will comply with specifications and BMPs contained in its NPDES permit and Stormwater Pollution Prevention Plan (SWPPP) to reduce erosion potential.</li> <li>• When possible, roads, collector lines, cabling trenches, and communication lines will share construction corridors to minimize ground disturbance.</li> <li>• The contractor will submit a Master Safety Plan <u>that</u> complies with WCC Chapter 19.60 and contains information including methods proposed that will: <ul style="list-style-type: none"> <li>– Describe how fly rock or blast debris shall be prevented.</li> <li>– Control access to the blasting site during loading and blasting.</li> <li>– Notify local residents and construction workers of an impending blast.</li> <li>– Handle misfires or undetonated explosives.</li> </ul> </li> <li>• Blasting activities will be conducted by professionally trained and certified explosive experts and will employ industry-standard techniques and comply with WCC Chapter 19.60 <u>that includes</u>: <ul style="list-style-type: none"> <li>– A separate permit from Whitman County Public Works</li> <li>– Written notification within 1,000 feet of blasting</li> <li>– \$1,000,000 bond for damages</li> <li>– Proof of certification or license for explosives</li> <li>– Road flagging (<del>may be needed</del>) <u>if necessary</u></li> <li>– Shutting off power (<del>may be needed</del>) <u>if necessary</u></li> <li>– Clean up</li> </ul> </li> <li>• Explosives will be limited to the smallest amount needed to conduct the excavation. The blasting professional will consider the distance to existing structures and design blasting event to ensure minimal emissions of ground vibrations.</li> <li>• Per WCC 19.61.060(9): <ul style="list-style-type: none"> <li>– Stormwater drainage systems will be designed and implemented, in consultation with a professional engineer, to ensure that minimal erosion will occur.</li> <li>– After construction, the site will be monitored for erosion on a regular schedule as approved by Ecology or Whitman County, and after large rainfall or snowmelt events and corrective actions taken as necessary.</li> </ul> </li> <li>• Per WCC 19.61.060(10), structural foundations and buildings will be designed in accordance with applicable International Building Code requirements and local building code provisions for the relevant seismic zone and for steep design.</li> <li>• Also see Wetlands and Water resources.</li> </ul>

TABLE ES-3  
Summary of Impacts and Proposed Mitigation Measures for the Palouse Wind Project

Resource	Impact Topics Addressed	Proposed Mitigation Measures
<b>Water Resources</b>	Stormwater runoff effects on water quality.	<ul style="list-style-type: none"> <li>• Facility design will be conducted to maintain existing natural surface drainage patterns to the maximum extent practicable.</li> <li>• Stormwater runoff off from constructed private access roads will be directed into roadway ditches; larger areas of disturbance will be designed to minimize surface water runoff and maximize infiltration into the ground.</li> <li>• Palouse Wind will obtain coverage under the Washington Department of Ecology construction stormwater general NPDES permit. Under the requirements of this permit Palouse Wind will implement an SWPPP and an Erosion and Sediment Control Plan (ESCP). Palouse Wind will implement BMP selection and design, and monitoring, inspection, and reporting practices as required by the permit.</li> <li>• Palouse Wind will adhere to stream buffers and surface water buffers to the maximum extent possible. If encroachment into buffers is necessary, Palouse Wind will comply with applicable requirements of Whitman County <u>Critical Area Ordinances</u>.</li> <li>• Water crossings will be designed to be in compliance with Whitman County <u>Critical Area Ordinances</u> and WDFW guidelines as applicable.</li> <li>• If work in streams or their buffers can't be avoided, work will be designed and conducted in accordance with applicable local, state, and federal regulations.</li> <li>• Floodplains will be avoided, to the maximum extent practicable. If floodplains are impacted, mitigation measures will be implemented per WCC 19.50.70(2) so impacts are unlikely.</li> <li>• The Proposed Action will comply with requirements of WCC 9.40 related to critical aquifer recharge areas and the Washington State Department of Health for wellhead protection areas.</li> <li>• A Spill Prevention Control and Countermeasures (SPCC) Plan will be prepared for construction and operations of the Facility.</li> <li>• Per WCC 19.61.060(9): <ul style="list-style-type: none"> <li>– Design and implement stormwater drainage systems in consultation with a professional engineer to ensure that minimal erosion will occur.</li> <li>– After construction, monitor the site for erosion on a regular schedule as approved by the Department of Ecology or Whitman County, and after large rainfall or snowmelt events, and take corrective action as necessary.</li> </ul> </li> <li>• See mitigation measures listed for Geological and Soil Resources.</li> </ul>
<b>Energy and Natural Resources</b>	Consumption of energy and natural resources during construction and operations	<ul style="list-style-type: none"> <li>• During construction, conservation measures will include construction waste recycling when <del>possible</del> <u>feasible</u> and <del>the coordination of promoting</del> <u>promoting</u> carpooling between construction workers to reduce vehicle emissions.</li> <li>• Operations BMPs for non-renewable resources such as water, fuel, and electricity may include the following conservation measures when cost effective: <ul style="list-style-type: none"> <li>– Installation of high efficiency electrical fixtures, appliances, and light bulbs in the O&amp;M facility.</li> <li>– Use of low-water flush toilets in the O&amp;M facilities.</li> <li>– Coordination of carpooling among operations workers.</li> <li>– Recycling of waste office paper and aluminum will be encouraged.</li> </ul> </li> </ul>
<b>Cultural Resources</b>	Potential physical disturbance of cultural resources	<ul style="list-style-type: none"> <li>• <u>Facilities will be sited to avoid identified historic resources to the maximum extent possible. If any historic resources identified during surveys previously completed cannot be avoided, the potentially impacted historic resources will be assessed for potential eligibility for listing on the NRHP prior to any ground disturbance within 100 feet (30.5 meters) of the resource. If DAHP deems the historic resource to be ineligible, ground disturbance will proceed. If DAHP deems the historic resource to be eligible, additional consultation will take place with DAHP.</u></li> <li>• <u>Prehistoric resources will be protected regardless of NRHP eligibility. Prior to the disturbance of any pre-historic resource, a permit from DAHP will be obtained per RCW 27.53.</u></li> <li>• <u>Palouse Wind will develop an Unanticipated Discovery Plan (UDP) prior to ground disturbing activities. This document will be submitted for review to the DAHP potentially affected tribes.</u></li> <li>• Per WCC 19.61.060(12): <ul style="list-style-type: none"> <li>– During construction, cultural resources will be flagged and avoided. Construction activities will be monitored by a professional to ensure that flagged cultural properties are avoided.</li> <li>– Construction workers will be trained on the need to avoid cultural properties and on procedures to follow if previously unidentified cultural properties, including Indian graves, are encountered during construction.</li> <li>– If any previously unidentified cultural resource properties are encountered during construction, construction activities will cease in the immediate vicinity of the site pending evaluation by a qualified archeologist and consultation with the Department of Archaeology and Historic Preservation to identify appropriate mitigation measures such as avoidance or scientific data recovery.</li> </ul> </li> <li>• <del>Palouse Wind will develop an inadvertent discovery plan and a cultural resources management plan.</del></li> <li>• If human remains were to be encountered during construction, work within 200 feet of the discovery would cease, the local law enforcement, <u>applicable State Historic Preservation Officer</u>, and county coroner would be notified in the most expeditious manner possible (Chapters 27.44, 68.50, and 68.60 RCW).</li> <li>• If <u>human</u> remains are determined to be associated with an archaeological site, the DAHP, and any affected tribes will be notified. Appropriate measures will be taken to ensure the site is protected from further disturbance until a treatment plan is agreed upon by all involved parties.</li> <li>• <u>If Proposed Action-related ground disturbance activities are to occur in areas that have not been surveyed, the area of ground disturbance will be surveyed according to the same methodologies described in FEIS Section 3.8.1. Survey results will be provided to DAHP and to potentially affected tribes. If the resources cannot be avoided, they will be evaluated for eligibility for listing on the NRHP; if deemed eligible by DAHP, additional consultation would occur between the DAHP and Palouse Wind regarding the mitigation measures that may be required.</u></li> <li>• <u>Ground disturbance within 200 feet (61 meters) of the fenced boundary of the Old German Methodist Cemetery will be monitored by a qualified archeologist.</u></li> <li>• <u>The final cultural resources report will be submitted to DAHP prior to issuance of the FEIS.</u></li> </ul>

TABLE ES-3  
Summary of Impacts and Proposed Mitigation Measures for the Palouse Wind Project

Resource	Impact Topics Addressed	Proposed Mitigation Measures
<p><b>Visual Resources and Aesthetics</b></p>	<p>Construction dust plumes, visibility of laydown areas, turbine appearance, turbine visibility, visibility of other project Proposed Action components, light and glare, and sky glow</p>	<ul style="list-style-type: none"> <li>• Most of the collector systems will be buried underground; however, where this is not feasible, portions may be carried overhead.</li> <li>• Sensors and switches will be used to keep Facility lights off when not required.</li> <li>• Mitigation for impacts to aviation safety resulting from Facility structures will be determined through consultation with FAA during the micro-siting process. An effort will be made to limit or minimize the visual effects of lighting, to the maximum extent possible in compliance with FAA requirements. <del>Facility lights typically used to meet FAA requirements will to some extent be shielded from ground level view due to a constrained (3 to 5 degree) vertical beam.</del></li> <li>• Lighting fixtures, except those required by the FAA for safety purposes, will be shielded, hooded, and oriented towards the ground so that direct rays of light do not shine onto neighboring properties or serve as a source of light pollution (per WCC 19.61.060(13)(b)).</li> <li>• A clean looking facility will be maintained and will be free of debris and unused or non-functioning equipment by: storing equipment and supplies offsite (post-construction), and removing damaged or unusable equipment from the site (per WCC 19.61.060(13)(c)). Per WCC 19.61.060(13)(d), Palouse Wind will choose anti-reflective paint colors for turbine towers and blades that are a neutral non-obtrusive color such as white, off-white, or gray. Colors will reduce glare of the wind turbines, but will be required to meet the FAA's daytime lighting and marking standards. Buildings at the O&amp;M facility will be painted earth-tone colors that are similar to colors in the nearby landscape (browns, beiges, or grays are preferable).</li> <li>• There will be no signs posted that would be visible from any public road, other than the manufacturer's or installer's identification, appropriate warning signs, or owner identification on a wind generator, tower, building, or other structure associated with the Proposed Action (per WCC 19.61.060(13)(e)).</li> </ul>
<p><b>Health and Safety</b></p>	<p>Health and safety impacts including risk of fire or explosion, release of toxic materials, ice throw, thrown turbine blade fragments, turbine tower collapse; terrorism, sabotage, or vandalism; shadow flicker; electric and magnetic fields; and traffic or aircraft accidents.</p>	<ul style="list-style-type: none"> <li>• Palouse Wind will coordinate with Fire District No. 7 (Rosalia) and Fire District No. 10 (Oakesdale/Farmington) regarding fire response and protection, <del>and emergency services</del> applicable during construction, operation, and decommissioning phases of the Facility; information provided to the fire districts <del>would will</del> include elements such as hazardous materials stored onsite and their locations, maps showing placement of access roads, emergency response communication information (contacts and phone numbers) and emergency evacuation routes.</li> <li>• A <del>Project</del> Health and Safety Plan will be prepared and implemented in a timely fashion to <del>cover address the possible safety risks involved in the construction and operation activities, which will manage and control safety risks as well as</del> <u>and to</u> guide responses in the case of emergency situations at the Facility. Palouse Wind will comply with applicable <u>occupational safety</u> and <u>health</u> requirements.</li> <li>• Palouse Wind will develop and implement Construction Spill Prevention and Control Plan in accordance with applicable local, state, and federal requirements. The plan will include provisions for <u>monitoring of petroleum leaks from vehicles, provision for clean up and containment materials onsite, protocols for spill reporting and clean up, and appropriate implementation of fuelling areas if vehicle fuelling is to be conducted onsite.</u></li> <li>• Palouse Wind will develop and implement an Operations Spill Prevention and Control Plan in accordance with local, state, and federal requirements. Any hazardous waste material generated by Facility construction and operation will be disposed of in a manner specified by local and state regulations or by the manufacturer.</li> <li>• A Phase I Assessment will be conducted prior to <del>construction</del> <u>final site plan approval by Whitman County</u> to determine the potential for hazardous waste sites located within the micro-siting corridor.</li> <li>• The <del>Project Proposed Action</del> will avoid identified hazardous waste sites if possible; if they cannot be avoided or if they are unexpectedly encountered during construction, they will be managed in accordance with Washington State Dangerous Waste Regulations WAC 173-303.</li> <li>• <del>Project Facility Proposed Action</del> components will comply with applicable setback requirements <del>as adequate setback is an important factor in minimizing many safety concerns including ice throw, blade throw, turbine tower collapse, shadow flicker, and electromagnetic fields (EMF).</del></li> <li>• <u>Should the County receive notice during Proposed Action operations of shadow flicker events occurring at adjacent residential structures, the County shall advise the Project Operator and shall arrange for the verification of the claim in accordance with applicable County code provisions. If verified, the Project Operator shall design possible measures to reduce or eliminate the shadow flicker event, subject to County approval.</u></li> <li>• Turbines will be equipped with rotor and overspeed controls.</li> <li>• Turbines will be equipped to remotely switch off when site personnel detect ice accumulation. Staff will be trained to recognize icing conditions and specific approach protocols will be in place should work near turbines be required while these conditions exist. While ice remains on the turbine structures, access to turbines by site personnel will be restricted based on manufacturer's recommendations. <u>Should the County receive notice, during Facility operations, of ice throw events occurring in an area that gives rise to a safety concern, the County shall advise the Project Operator and shall arrange for the verification of the claim in accordance with applicable county code provisions. If verified, the County and the Project Operator shall address possible measures, in accordance with the turbine manufacturer's recommendations and warranties and in consultation with recommended industry practices, to reduce or eliminate ice throw events. The Palouse Wind Project Operator will consult to develop appropriate measures to reduce the potential for impacts associated with ice throw and will consult the turbine manufacturers' specifications and recommendations for operation of the turbine during icing events. If necessary, mitigation to address the issue will be developed by the County in consultation with Palouse Wind</u></li> <li>• The turbines will include several inherent safety features <del>(that is, fully independent braking systems)</del> that provide increased fire protection and reduce the possibility of health and safety risks.</li> <li>• The wind turbines will meet international design and manufacturing safety standards for tower, blade, and generator design, and be certified by a professional engineer. Quality Assurance/Quality Control (QA/QC) inspections will be conducted according to industry standard practices.</li> <li>• Turbines will be shut down at manufacturer's recommended maximum wind speeds to avoid structural damage.</li> <li>• Turbine parts will be transported with proper signage and permits from the Washington State Department of Transportation.</li> <li>• Per WCC 19.61.040: <ul style="list-style-type: none"> <li>– Turbines and meteorological towers will have lighting and markings that meet FAA requirements.</li> <li>– Meteorological towers and guy wires shall be fenced sufficient to prevent unauthorized access. The fence shall be at a minimum six feet high.</li> </ul> </li> <li>• Per WCC 19.61.060(15): <ul style="list-style-type: none"> <li>– Palouse Wind will comply with state occupational health and safety standards</li> </ul> </li> </ul>

TABLE ES-3  
Summary of Impacts and Proposed Mitigation Measures for the Palouse Wind Project

Resource	Impact Topics Addressed	Proposed Mitigation Measures
		<ul style="list-style-type: none"> <li>- During Facility construction and all welding operations, a readily accessible water truck and chemical fire-suppression materials will be available onsite to allow immediate fire response</li> <li>- Facility staff will be provided with cellular or onsite phones to enable timely communication with the Fire Department and other emergency services.</li> <li>- Site entrances will be fenced as appropriate and signs warning of electrical dangers with emergency contact numbers (for example, phone numbers of emergency responders) will be posted. Palouse Wind will maintain a phone number and identify a responsible person for the public to contact with inquiries and complaints throughout the life of the project <u>Proposed Action</u>.</li> <li>- The Facility will be monitored for evidence of unauthorized entry and provide additional security as appropriate.</li> <li>• <u>The Proposed Action shall be sited to minimize turbine blade interference with radio, telephone, and television signals.</u></li> <li>• Also, see mitigation measures listed for Traffic and Transportation.</li> </ul>
<b>Land Use</b>	Temporary land use disturbances during construction and permanent land use disturbances during operations	<ul style="list-style-type: none"> <li>• Palouse Wind will continue to coordinate with landowners regarding co-location of facilities on farmland, thereby leading to better placement and minimizing impacts to farming activities.</li> <li>• Palouse Wind will communicate with participating landowners throughout all phases of the Proposed Action. Palouse Wind will time construction of facilities so as to minimize impacts to active agricultural practices.</li> <li>• Per WCC 19.61.040 and 19.61.060(1), Palouse Wind will comply with applicable setback requirements, (see Figure 2-1).</li> <li>• Per WCC 19.61.060(6), construction disturbance will be limited by flagging sensitive areas and conducting ongoing environmental monitoring during construction to assure that flagged areas are avoided.</li> <li>• Also, see mitigation measures in Traffic and Transportation.</li> </ul>
<b>Recreation</b>	Access to recreational resources during construction and operations	<ul style="list-style-type: none"> <li>• To the extent that private recreation (that is, hunting) may continue to take place on the Proposed Action site, Palouse Wind will coordinate with participating landowners to ensure that such practices are conducted in a manner protective of Proposed Action facilities and Facility staff and hunter safety.</li> </ul>
<b>Transportation</b>	Increased traffic volumes and roadway hazards during construction; impacts to aviation	<ul style="list-style-type: none"> <li>• <u>Palouse Wind will obtain all necessary WSDOT permits to access, modify ingress and egress to, or transport regulated loads on state managed roadways.</u> <ul style="list-style-type: none"> <li>- <u>Palouse Wind will consult with WSDOT while developing the Traffic Management Plan required by Whitman County.</u></li> <li>- <u>Palouse wind will obtain trip permits for oversize and overweight loads.</u></li> </ul> </li> <li>• To minimize impacts to local traffic and ensure access for emergency vehicles, Palouse Wind will implement the following measures when and where appropriate: <ul style="list-style-type: none"> <li>- Project manager and County staff will meet prior to <del>construction</del> <u>final site plan approval by Whitman County</u> to outline steps for minimizing construction traffic impacts, including conflicts where state-imposed roadway restrictions could affect transporter routes.</li> <li>- <u>Notices Palouse Wind or its contractor will provide advance notification</u> to adjacent landowners <del>will be distributed</del> when construction takes place in the vicinity of their homes or businesses to help minimize access disruptions.</li> <li>- All construction vehicles will yield to school related vehicles (such as school busses) and will lower their speed when approaching a school bus or bus stop along the transporter route.</li> <li>- <u>Advanced warning and proper roadway signage would be placed on US 195 and county roads to warn motorists of potential vehicles entering and exiting the roadway.</u></li> <li>- <u>Palouse Wind will evaluate the need for potential left-turn channelization, turning radii enhancements relative to US 195 intersections, and other improvements to accommodate the projected traffic volumes on US 195 based on USDOT's Manual on Uniform Traffic Control Devices, Part 6 – Temporary Traffic Control and WSDOT's Design Manual, Chapter 10 – Work Zone Safety and Mobility. Palouse Wind will consult with Whitman County and WSDOT in developing the Traffic Management Plan to ensure traffic concerns are addressed.</u></li> <li>- When slow or oversized wide loads are being hauled, appropriate vehicle and roadside signing and warning devices would be deployed. Pilot cars would be used as WSDOT dictates, depending on load size and weight.</li> <li>- Carpooling among the construction workers would be encouraged to reduce traffic volume to and from recreation the Proposed Action site.</li> <li>- Detour plans and warning signage would be provided in advance of any planned traffic disturbances.</li> <li>- Flaggers would be employed as necessary to direct traffic when large equipment is exiting or entering public roads to minimize risk of accidents. Should the County receive notice, during Facility construction, of transportation events that give rise to a safety concern, the County shall advise the County Engineer and Project Construction Manager, who shall review the Traffic Management Plan and address additional safety measures, including flagging, as may be appropriate to the situation.</li> <li>- If lane closure must occur, adequate signage for potential detours or possible delays would be posted.</li> <li>- Advance notification will be provided to emergency providers and hospitals when public roads may be partially or completely closed.</li> <li>- Emergency vehicles will be given the right of way as required by local, state, and federal requirements.</li> </ul> </li> <li>• Site access roads and an entrance driveway to the O&amp;M facilities onsite would be constructed to service truck movements of legal weight and provide adequate sight distance.</li> <li>• Internal access roads will be designed to accommodate emergency vehicles per Goal 1 of the transportation element of the Whitman County Comprehensive Plan. Police, fire, medical, and first responder vehicles will be able to access and navigate the internal site roads, and all access roads will meet applicable fire safety standards described in the Whitman County Fire Code.</li> <li>• Traffic control requests will be coordinated through the WSDOT Traffic Engineer and the County Public Works Department abiding by seasonal county road restrictions.</li> </ul>

TABLE ES-3  
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Resource	Impact Topics Addressed	Proposed Mitigation Measures
		<ul style="list-style-type: none"> <li>• A haul and approach route will be developed in coordination with the appropriate jurisdictional authorities.</li> <li>• Permanent private Facility access roads will be maintained by Palouse Wind for the life of the Facility.</li> <li>• Tracked vehicles and heavy trucks will be restricted to approved transporter roads to prevent damage to surface and base of county roads.</li> <li>• Prior to commencement of construction, Palouse Wind will provide the Public Works Department with a traffic management plan per WCC 19.61.060(3) that includes:             <ul style="list-style-type: none"> <li>– Public roads to be utilized by the Proposed Action will be identified. Provisions will be made for a qualified third-party engineer who will document road conditions prior to <del>construction</del> <u>final site plan approval by Whitman County</u> and again within 30 days after construction is complete or as weather permits. Palouse Wind will enter into a County road-use agreement for the repair of damage to public roads resulting from Proposed Action activities.</li> <li>– Ingress and egress points will be located and improved (if needed) in order to assure adequate structural and operational capacity for existing and projected traffic volumes and to provide efficient movement of traffic, including existing and anticipated agricultural traffic and projected construction traffic.</li> <li>– All applicable governmental permits or approvals will be obtained, including: permits to access state or county roads (if needed), construction within state or county right-of-ways, overweight and oversize loads, weight restricted bridges and structures, haul route agreements, etc.</li> <li>– A franchise agreement will be obtained pertaining to the long term use of public right-of-ways for underground utilities, above ground utilities, private facility features, and private infrastructure.</li> <li>– All weather access roads (including graveled roads) suitable to accommodate year-round emergency response vehicles and equipment, will be provided to within 150 feet of any built structure or surface activity area.</li> <li>– Engineering studies, plans, or reports necessary to substantiate any engineering related elements of the plan will be prepared.</li> <li>– Planned phasing requirements of the traffic management plan (if required) will be described to accommodate multi-phase or multi-year construction plans.</li> </ul> </li> <li>• <del>Operation and maintenance of the Facility would not have limited effects on traffic.</del></li> <li>• Wind turbines and permanent meteorological towers will be lit according to a plan approved by FAA and in the case of met towers, comply with Chapter 19.61.040(1).</li> <li>• <del>To address necessary road improvements, the applicant</del> <u>The Applicant</u> will coordinate with Whitman County Public Works <u>in advance of construction to identify necessary improvements to public roads.</u> The following measures shall be taken and effects addressed before building permits are issued:             <ul style="list-style-type: none"> <li>– Palouse Wind will provide information on the time of year for transport, number of trips, types of vehicles, material hauled, weight, width, and height of anticipated loads on each road segment. The anticipated source location for products used in the construction and maintenance of the <del>project</del> <u>Proposed Action</u> (including aggregate sites, concrete batch sites, and water) will also be provided.</li> <li>– Geometric features that may be affected by long or wide loads will be identified. These include potential overhead obstructions, utility pole locations, sharp curves, tight turning radii at intersections, and residences along the proposed haul route. Potential effects will be addressed.</li> <li>– A geotechnical report shall be prepared and all features that may be structurally insufficient for the proposed traffic volume or loads will be identified.</li> <li>– Palouse Wind will comply with county road standards for dust control and erosion and shall maintain a water truck onsite during construction for dust suppression.</li> <li>– All materials used on county roads shall meet the requirements for materials and placement in the most current version of the WSDOT Standard Specifications for Road, Bridge, and Municipal Construction.</li> <li>– When mitigation work occurs on county roads, Palouse Wind will reimburse the county for reasonable road inspection costs.</li> <li>– Financial security will be developed and agreed to prior to <del>construction</del> <u>final site plan approval by Whitman County</u> to address road maintenance issues and damages that arise during construction.</li> </ul> </li> </ul>

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Summary of Impacts and Proposed Mitigation Measures for the Palouse Wind Project

Resource	Impact Topics Addressed	Proposed Mitigation Measures
<b>Public Services and Utilities</b>	Increased demand on public services (police, fire, medical services, schools, communication, sewage, solid waste, water supply, stormwater, electricity, and natural gas).	<ul style="list-style-type: none"> <li>• Palouse Wind will arrange with MedStar or other <del>such appropriate</del> private provider for helicopter transportation service if operations personnel are seriously injured and require evacuation from a remote location within the Proposed Action area.</li> <li>• Palouse Wind will coordinate with emergency and fire response providers during the preparation of an Emergency Action Plan, a Fire Prevention Plan, and an Operational Safety Plan to establish the appropriate <del>preventative</del> <u>preventive</u> safety measures on site, for example: <ul style="list-style-type: none"> <li>– If needed, provide fire districts with keys to a master lock system that will enable emergency personnel to unlock gates that will otherwise limit access to the Facility.</li> <li>– Use spark arrestors on all power equipment (that is, cutting torches and tools) during extremely dry conditions to prevent fire.</li> <li>– Construct junction boxes with a graveled footprint for fire protection and maintenance.</li> <li>– Carry fire extinguishers in all maintenance and construction vehicles.</li> <li>– Minimize vehicle contact with dry vegetation through the use of non-gasoline-powered and/or high-clearance vehicles.</li> <li>– Collect sanitary wastes in portable toilets during construction. Disposal of sanitary wastes will be managed through a contract with a portable toilet waste vendor.</li> <li>– Install onsite septic system at O&amp;M facilities as required by applicable regulations. Consult with the County Environmental Health Department and obtain any required permits prior to <del>construction</del> final <u>site plan approval by Whitman County</u>.</li> <li>– Dispose of hazardous materials in accordance with all applicable state and federal laws and regulations.</li> <li>– Dispose of construction debris to the county landfill for disposal.</li> </ul> </li> <li>• A Decommissioning Plan will be prepared and implemented in accordance with County code (WCC 19.61.60(14)) before building permit issuance. All applicable local and state regulatory requirements will be complied with, including obtaining demolition permits and complying with permit conditions for removal of existing turbines and structures from the site. Demolition debris will be recycled or disposed of in facilities authorized to accept the materials.</li> <li>• Also, see mitigation measures listed for Health and Safety.</li> </ul>
<b>Noise</b>	Increased ambient noise levels at nearby receptor locations, resulting from construction or operations.	<ul style="list-style-type: none"> <li>• Implement construction and maintenance work-hour controls so that most noise-generating activities occur between 7 a.m. and 10 p.m., which will reduce the impact during sensitive nighttime hours.</li> <li>• Minimize the number of heavy-duty haul trucks traveling through the area during nighttime hours.</li> <li>• Maintain equipment in good working order and use adequate mufflers and engine enclosures to reduce equipment noise during operation.</li> <li>• Noise modeling of the final Facility layout will be conducted to ensure compliance with maximum noise emission limits.</li> <li>• As per WCC 19.61.060(4), during construction and operations, the Facility will comply with applicable state noise standards.</li> </ul>
<b>Socioeconomics</b>	Potential population growth, housing for Construction and Operations Workforces, employment creation, economic contributions, local fiscal impacts	<ul style="list-style-type: none"> <li>• As the vast majority of socioeconomic impacts of the Proposed Action are beneficial to surrounding communities, no socioeconomic mitigation measures are proposed.</li> </ul>

## Conclusions

Through micrositing and implementation of BMPs and mitigation measures, the Proposed Action will address impacts on the 16 resource areas analyzed within the DEIS, the DEIS Addendum, and the FEIS. The following outlines the impact conclusions for each resource area; a summary of mitigation measures for each element of the environment addressed in this SEPA review is presented in Table ES-3.

### Air Quality

The impacts of the Proposed Action on air quality resources could include air pollution in the form of exhaust emissions and fugitive dust particles generated by construction, operation, and decommissioning of the Facility. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts to air resources.

### Vegetation

The impacts of the Proposed Action on vegetation resources are related primarily to ground disturbance. Direct impacts to vegetation include disruption or removal of rooted vegetation. No direct impacts are anticipated to special status plant species. Areas of identified special status species plant populations and areas of Palouse Prairie habitat will be marked or flagged prior to construction and avoided to the extent possible during construction. Indirect impacts to vegetation and special status plants could include introduction of noxious weeds, or fragmentation of populations. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to vegetation resources.

### Wildlife

The impacts of the Proposed Action on wildlife resources are primarily related to habitat displacement and disturbance. Wind projects may potentially impact birds (and bats) through collisions with the turbines, meteorological towers, and overhead transmission lines, or through disturbance from operations and maintenance activities. Collisions are usually the main concern with operations. Impacts can vary between different bird and bat populations and groups. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to wildlife resources. While DEIS Figure 2-2 showed a maximum turbine height of 426 feet, the analyses were conducted using a maximum turbine height of 492 feet. The updated illustration was presented in the DEIS Addendum.

### Wetlands and Surface Waters

The impacts of the Proposed Action on wetlands and surface waters resources are primarily related to land disturbance. Potential impacts to wetlands and surface waters include both direct impacts, such as removal or fill activities, as well as indirect impacts, such as increased erosion and sedimentation and noxious weed introduction, any of which can result in reduction of wetland function. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to wetlands and surface waters resources.

## Geological and Soil Resources

The impacts of the Proposed Action on geological and soil resources may include soil erosion, slope instability (including landslides and creep), seismic hazards (that is, earthquakes), collapsing soils, shrinking/swell of soils, and blasting hazards. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address adverse impact related to geological and soils resources.

## Water Resources

The impacts of the Proposed Action on water resources could include erosion (both from wind and precipitation events), which may lead to sediment being transported offsite or deposited in local drainages. Increased sedimentation within drainages could affect the hydraulic performance of the streams, as well as the water quality and nutrient loading of the streams. Facility construction equipment could compact native ground, modifying the infiltration capacity of the native ground. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to water resources.

## Energy and Natural Resources

The impacts of the Proposed Action on energy and natural resources are related primarily to the quantities of electricity, water, fuel, sand and gravel, and other renewable and nonrenewable resources required to construct, operate, and decommission the Facility. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to energy and natural resources.

## Cultural Resources

The impacts of the Proposed Action on cultural resources are primarily related to construction activities. These activities have the potential to impact cultural resources if the construction of the wind farm, access roads, and ancillary facilities will physically disturb the setting or attributes of a cultural resource which is considered significant. Additional impacts could occur as the result from the inadvertent discovery of cultural resources during construction. The mitigation measures provided in Section 3.8 of the DEIS, DEIS Addendum, and this FEIS include conditions for addressing inadvertent discoveries. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to cultural resources.

## Visual Resources and Aesthetics

The impacts of the Proposed Action on visual resources and aesthetics are primarily related to the possibility that the turbines and associated project facilities could alter the viewed landscape. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to visual resources and aesthetics.

## Health and Safety

The impacts of the Proposed Action on public health and safety resources are primarily related to the possibility that human activities or natural events related to the construction, operation, or decommissioning of the Facility may cause harm to the general population. Ice throw is another potential threat to public health and safety that may occur during Facility operation. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to public health and safety resources.

## Land Use and Agriculture

The impacts of the Proposed Action on land use resources are related to land disturbance that will occur as a result of construction and operation of the Facility. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to land use and agriculture resources.

## Recreation

The impacts of the Proposed Action on recreation resources may include impacts to visual resources, tourism, and activities such as photography. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to recreation resources.

## Transportation

The impacts of the Proposed Action on transportation resources could include a temporary increase to traffic volumes during construction and minor increases during operation of the Facility. Potential impacts may also result from additional oversize truck traffic during transportation of large turbine parts. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to transportation resources.

## Public Services and Utilities

The impacts of the Proposed Action on public services and utilities resources are related to fire protection, police, medical services, schools, communications, electricity, gas, transmission line, sewer, solid waste, and water supply services. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action address impacts related to public services and utilities resources.

## Noise

The impacts of the Proposed Action on noise are related to both the noise from construction activities, which would generate short-term impacts at some residences during the construction period, and the noise generated by Facility operations. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to noise resources.

## Socioeconomics

The impacts of the Proposed Action on socioeconomic resources are related to population and housing, employment, property values, and the fiscal impacts derived from the construction and operation of the Facility. Through the implementation of the mitigation measures outlined in Table ES-3, the construction, operation, and decommissioning of the Proposed Action will address impacts related to socioeconomic resources.

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## Appendix

Preliminary Summary of Winter 2011 Avian Point Counts