# Wild Horse Wind Power Project

Final Environmental Impact Statement

Lead Agency: Energy Facility Site Evaluation Council



May 2005



STATE OF WASHINGTON

#### ENERGY FACILITY SITE EVALUATION COUNCIL PO Box 43172 • Olympia, Washington 98504-3172

May 16, 2005

Dear Reader:

Enclosed for your reference is the abbreviated form Final Environmental Impact Statement (FEIS) for the proposed Wild Horse Wind Power Project. This document is designed to supplement or correct information provided in the Draft Environmental Impact Statement (DEIS). The proponent, Wind Ridge Power Partners, L.L.C., has requested to construct and operate between 104 and 158 wind turbines that would generate up to 312 megawatts (MW) of wind power in Kittitas County, Washington. The proposed project would occupy approximately 165 acres of an 8,600-acre site two miles north of Vantage Highway at Whiskey Dick Mountain, roughly 11 miles east of the City of Kittitas.

Under Washington State law, EFSEC is responsible for siting and licensing the construction and operation of major energy facilities in Washington State. This Project is an alternative energy facility as defined in 80.50.020(17) Revised Code of Washington (RCW). Wind Ridge Power Partners chose to receive site certification from EFSEC for the Wild Horse Wind Power Project pursuant to RCW 89.50.060(2).

EFSEC is conducting its review as outlined in Chapter 80.50 RCW and Title 463 of the Washington Administrative Code (WAC). Under the Washington State Environmental Policy Act (SEPA), EFSEC is the state lead agency for facilities seeking state site certification pursuant to Chapter 80.50.RCW. EFSEC has completed this FEIS under contract with Jones & Stokes.

A DEIS was issued for public comment on August 4, 2004. The public comment period closed on September 10, 2004. A public comment hearing was held on August 24, 2004, in Ellensburg, WA. EFSEC received 32 written comment letters, along with oral comments from 17 individuals.

The FEIS was prepared from information received from agencies, organizations, and individuals who submitted written and oral comments on the DEIS, and from testimony and exhibits presented in the adjudicative hearings before EFSEC. Comments on the DEIS have resulted in changes in text and illustrations where appropriate. Chapter 1 of this FEIS contains an updated summary. Chapter 2 contains changes relative to the proposed action, the off-site alternative analysis, regulations, and agency and tribal coordination, as appropriate. Chapter 3 contains text revisions to the resource elements, off-site alternatives, and cumulative impacts evaluated in the DEIS. Chapter 4 includes copies of written comments and public hearing testimony concerning the DEIS, as well as responses prepared by the FEIS authors to the written comments and testimony.

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For further information regarding this proposal or to request additional copies of this FEIS, you may contact Irina Makarow at (360) 956-2047. The FEIS is also accessible on the Internet at <u>www.efsec.wa.gov</u>.

Timb

Allen J. Fiksdal Energy Facility Site Evaluation Council

## FACT SHEET

### Wild Horse Wind Power Project, Final State Environmental Policy Act (SEPA) Environmental Impact Statement (EIS)

**Lead Agency and Responsible Official:** Washington State Energy Facility Site Evaluation Council (EFSEC); Allen Fiksdal, EFSEC Manager, 925 Plum Street SE, Building 4, P.O. Box 43172; Olympia, WA 98504-3172; (360) 956-2152.

**Abstract:** Wind Ridge Power Partners LLC proposes to construct and operate between 104 and 158 wind turbines that would generate between 158 and 312 megawatts (MW) of wind power in Kittitas County, Washington. The proposed project would occupy approximately 165 acres of an 8,600-acre site two miles north of Vantage Highway at Whiskey Dick Mountain, roughly 11 miles east of the City of Kittitas.

The project would also include: (1) approximately 17 miles of new roads and improvements to roughly 15 miles of existing roads, (2) approximately 27 miles of underground and 2 miles of overhead 34.5-kilovolt (kV) electrical power lines, (3) approximately 14 miles of overhead 230-kV transmission feeder lines with associated construction trails, (4) potentially two new step-up stations, (5) one interconnection substation, (6) an approximately 5,000-square-foot operations and maintenance facility, and (7) up to six permanent meteorological towers. There would also be up to three on-site rock quarries and a batch plant associated with construction of the project facilities.

This EIS evaluates the environmental impacts of the proposed action under three project scenarios:

- <u>104-turbine/3 MW scenario</u>: This scenario represents the project configuration with the fewest proposed turbines. For turbines with a nameplate capacity of 3 MW each, up to 104 turbines would be sited for a total nameplate capacity of 312 MW.
- <u>136-turbine/1.5 MW scenario</u>: This scenario represents the "most likely" project configuration that would be chosen based on pricing and performance for wind turbine technology currently on the market. For turbines with a nameplate capacity of 1.5 MW each, 136 turbines would be sited for a total nameplate capacity of 204 MW.
- <u>158-turbine/1 MW scenario</u>: This scenario represents the project configuration with the most proposed turbines. For turbines with a nameplate capacity of 1 MW each, up to 158 turbines would be sited for a total nameplate capacity of 158 MW.

This abbreviated form Final Environmental Impact Statement (FEIS) for the proposed Wild Horse Wind Power Project is designed to supplement or correct information provided in the Draft Environmental Impact Statement (DEIS). The FEIS was prepared from information received from agencies, organizations, and individuals who submitted written and oral comments on the DEIS, and from testimony and exhibits presented in the adjudicative hearings before EFSEC. This Final EIS also includes comments submitted on the Draft EIS and the responses to those comment submissions. **Proposal's Sponsor:** Wind Ridge Power Partners LLC (Applicant), a subsidiary of Zilkha Renewable Energy, Houston, Texas.

**Date of Implementation:** Construction activities are expected to start in mid 2005 and last approximately one year. The start of construction depends on the date the governor of the state of Washington approves and executes the Site Certification Agreement for this project.

**List of Possible Permits, Approvals, and Licenses:** The Applicant filed an Application for Site Certification for the proposed Wild Horse Wind Power Project with EFSEC in March 2004. Therefore, EFSEC is the sole non-federal agency authorized to permit the proposed project. For informational purposes, Table 2-10 of the Draft EIS listed the major state and local permitting requirements preempted by EFSEC, as well as federal requirements. Not all listed permits and approvals may be required. The EFSEC Site Certification Agreement would provide construction and operational requirements and all other relevant local and Washington state permits and approvals for the project.

**Authors and Principal Contributors to EIS:** An independent consultant of EFSEC, Jones & Stokes, is the principal author of this Final EIS. The primary source of information used to prepare the Draft EIS is the Application for Site Certification prepared by Wind Ridge Power Partners LLC and its primary consultants: WEST, Inc.; CH2M HILL; Lithic Analysts; RAM Associates; Nierenberg, R., consulting meteorologist; Comsearch; and KTA Associates. EFSEC's Draft EIS for the Kittitas Valley Wind Power Project (EFSEC 2004) and Kittitas County's Draft EIS for the Desert Claim Wind Power Project (Kittitas County 2003) were also consulted. Additional primary sources consulted since the Draft EIS was issued include the Kittitas County Final EIS for the Desert Claim Wind Power Project (Kittitas County 2004), and new information from prefiled testimony, adjudicative hearing testimony and witness examination, and hearing exhibits (e.g. Development Agreement between Kittitas County and the Applicant [Appendix A] and the settlement agreement between Washington Department of Fish and Wildlife and the Applicant [Appendix B]).

#### Subsequent Environmental Review: None anticipated.

**Date of Final Lead Agency Action:** After EFSEC deliberates on the facts, testimony, and EIS contents, it will send a recommendation to the governor of the state of Washington to approve or deny the project (expected in spring/early summer 2005). The governor has 60 days to accept or reject the recommendation or to remand the recommendation to EFSEC for further investigation.

#### **Contact for Additional Information:**

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**Location of Background Information:** You may access the Draft EIS and this abbreviated Final EIS, and find additional information about the project, on the EFSEC Web site at www.efsec.wa.gov. Copies

of the Wild Horse Wind Power Project Application for Site Certification, EFSEC No. 2004-01, the Draft EIS and this Final EIS also are available for public review at the following locations:

Washington State Energy Facility Site Evaluation Council 925 Plum Street SE, Building 4 Olympia, WA 98504-3172 (360) 956-2121

Washington State Library Joel M. Pritchard Branch Point Plaza East 6880 Capitol Blvd. Olympia, WA 98504-2460| (360) 704-5200

Ellensburg Public Library 209 North Ruby Street Ellensburg, WA 98926 (509) 962-7250

Kittitas Public Library NE 2<sup>nd</sup> and Pierce Streets Kittitas, WA 98934 (509) 968-0226

Cost of EIS Copy to the Public: There will be no cost for the Final EIS.

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# Chapter 1

Updated Summary

# Chapter 1 SUMMARY

# 1.1 Introduction

Wind Ridge Power Partners, LLC (the Applicant) is proposing to build the Wild Horse Wind Power Project (WHWPP), a wind powered generation facility that would consist of up to 158 wind generation turbines and have an installed nameplate capacity of up to 312 megawatts (MW). The proposed project would be located along the ridge tops of Whiskey Dick Mountain, 2 miles north of Vantage Highway and 11 miles east of the City of Kittitas in Kittitas County, Washington. A map showing the project area location is presented in Figure 1-1. The project site has been selected primarily for its energetic wind resource and its access to existing high voltage transmission lines, which have adequate capacity to allow the wind generated power to be integrated into the power grid system.

The Applicant, in accordance with Chapter 463-42 Washington Administrative Code (WAC), filed an Application for Site Certification (ASC No. 2004-01) with the Washington State Energy Facility Site Evaluation Council (EFSEC) on March 9, 2004. The Applicant chose to obtain certification for the WHWPP according to the Revised Code of Washington (RCW) 80.50.060. EFSEC has jurisdiction over the evaluation of siting energy facilities such as the WHWPP. Upon completion of an environmental review, EFSEC will recommend approval or denial of the proposed wind facility to the governor of the state of Washington.

EFSEC is evaluating the siting of the proposed WHWPP pursuant to the requirements of Chapter 80.50 RCW, and in accordance with the Washington State Environmental Policy Act (SEPA) (RCW 43.21C), is conducting an environmental review with this Environmental Impact Statement (EIS) (WAC 463-47). The information and resulting analysis presented in the Draft Environmental Impact Statement (DEIS) and this abbreviated Final Environmental Impact Statement (FEIS) are based primarily on information provided by the Applicant in the Application for Site Certification (ASC) No. 2004-01 (Wind Ridge Power Partners LLC 2004). Where additional information was used to evaluate the potential impacts associated with the proposed action, that information has been referenced. This FEIS also includes information from the Development Agreement (Kittitas County 2005) (Appendix A) between the Applicant and Kittitas County and the Settlement Agreement between the Applicant and Washington State Department of Fish and Wildlife (WDFW) (Appendix B), especially in regard to additional mitigation measures identified for the proposed project. EFSEC's environmental consultant, Jones & Stokes, conducted an analysis of off-site alternatives during the preparation of the DEIS.

The DEIS for the WHWPP was issued on August 3, 2004 for public comment. A public hearing to receive comments was held on August 24, 2004, in Ellensburg, Washington. The comment period for the DEIS closed on September 10, 2004. During the comment period, EFSEC received comments from tribes, agencies, organizations, and individuals. Comments were submitted in letters, on comment forms, orally at the public hearing, and by e-mail.

This abbreviated FEIS was prepared from information received from agencies, organizations, and individuals who submitted written and oral comments on the DEIS, and from testimony and exhibits presented in the adjudicative hearings before EFSEC. Comments on the DEIS have resulted in changes in text and illustrations where appropriate.

**Chapter 1** of the FEIS provides an updated summary of the EIS for the WHWPP. It briefly describes the Applicant's objective for the proposal, EFSEC's objective for review of the proposal, the Applicant's proposal, and the alternatives to the proposal that are evaluated in this EIS. Refinements to the proposed action, along with updates to the off-site alternative analysis, regulations, and agency and tribal coordination, have been revised in the FEIS as appropriate.

**Chapter 2** of the FEIS provides updates to the description of the proposed action, and no action and offsite alternatives. The detailed description of the proposed action, and no action and off-site alternatives is provided in Chapter 2 of the DEIS.

**Chapter 3** of the DEIS documented the affected environment, evaluated the proposed action and the alternatives, and provided mitigation measures for adverse impacts associated with the proposed action. Potential cumulative impacts of future wind generation facility development within Kittitas County were also presented. Chapter 3 of the FEIS contains text revisions to the resource elements, off-site alternatives, and cumulative impacts evaluated in Chapter 3 the DEIS.

**Chapter 4** of the FEIS includes copies of written comments and public hearing testimony concerning the DEIS, as well as responses prepared by the FEIS authors to the written comments and testimony. The remaining chapters of the FEIS provide updated supporting information for the EIS, as required by SEPA.

# 1.2 Purpose of and Need for Project

The purpose of the WHWPP is to construct and operate a new electrical generation resource using wind energy that would meet a portion of the projected growing regional demands for electricity. In the Pacific Northwest Electric Power Planning and Conservation Act, Congress established that development of renewable resources should be encouraged in the Pacific Northwest (16 USC § 839[1][B]). The Act defines wind power as a renewable resource (§ 839a[16]).

The project is designed to provide low cost renewable electric energy to meet the growing needs of the Northwest. The project has transmission and interconnection requests under review with the Bonneville Power Administration (BPA) and Puget Sound Energy (PSE). The Applicant has been in the process of marketing the electricity that would be produced by the WHWPP to local and regional utilities and power marketers. PSE has announced its intent to purchase the WHWPP. For further details, see Section 1.2.2, Wind Power Project Purpose and Need, below.

## **1.2.1 Need for Additional Power Generation Facilities**

Recent national and regional forecasts predict increasing consumption of electrical energy would continue into the foreseeable future, requiring development of new generation resources to satisfy the increasing demand. The Energy Information Administration published a national forecast of electrical power through the year 2025. In it, the administration projected that total electricity demand would grow between 1.8 and 1.9% per year from 2001 through 2025. Rapid growth in electricity use for computers, office equipment, and a variety of electrical appliances in the residential and commercial sectors is only partially offset by improved efficiency in these electrical applications (U.S. Energy Information Administration 2003).

The Western Electricity Coordinating Council (WECC) forecasts electricity demand in the western United States. According to WECC's most recent coordination plan, the 2001-2011 summer peak demand requirement is predicted to increase at a compound rate of 2.5% per year (WECC 2002).

Based on data published by the Northwest Power and Conservation Council (NWPCC), electricity demand for the Council's four-state Pacific Northwest planning region (Washington, Oregon, Idaho, and Montana) was 20,080 average MW in 2000 (NWPCC 2003).

As shown in Table 1-1, the Council's recently revised 20-year demand forecast projects that electricity demand in the region will grow from 20,080 average MW in 2000 to 25,423 average MW by 2025 (medium forecast), an average annual growth rate of just less than 1% per year. While the Council's forecast indicates that the most likely range of demand growth (between the medium-low and medium-high forecasts) is between 0.4 and 1.50% per year, the low to high forecast range used by the Council recognizes that growth as low as -0.5% per year or as high as 2.4% per year is possible, although relatively unlikely (NWPCC 2003).

	Electricity Demand (Average Megawatts)		vatts)	Growth Rates (% Change)	
Forecast Scenario	2000	2015	2025	2000–2015	2000–2025
Low	20,080	17,489	17,822	-0.92	-0.48
Medium Low	20,080	19,942	21,934	-0.05	0.35
Medium	20,080	22,105	25,423	0.64	0.95
Medium High	20,080	24,200	29,138	1.25	1.50
High	20,080	27,687	35,897	2.16	2.35

#### Table 1-1. Projected Pacific Northwest Electricity Demand, 2000–2025

Source: NWPCC 2003

Generated power typically requires interconnection with a high-voltage electrical transmission system for delivery to purchasing retail utilities. The Applicant has submitted requests for transmission interconnection services for the project to both PSE and BPA. The project would connect to either or both of the PSE or BPA transmission systems that run in close proximity to the project site along of the following lines:

- Puget Sound Energy's Intermountain Power 115kV line, portions of which will be upgraded to 230 kV and intertie to Mid-C; and
- Bonneville's Grand Coulee to Olympia 287-kV line; and
- Bonneville's Columbia to Covington 230-kV line.

In summary, electrical consumers in the Northwest need increased power production to serve the predicted long-term increasing demand and high-voltage transmission lines to deliver the power.

### **1.2.2 Wind Power Project Purpose and Need**

Washington and the Northwest region face a growing medium and long-term demand for power. Many regional utilities are currently seeking to acquire new generating resources to meet their loads. More specifically, several regional utilities, including Avista, PSE, and PacifiCorp (doing business as Pacific Power in Washington) have all completed detailed studies and demand forecasts of their own systems as part of their Integrated Resource Plans (IRP) or Least Cost Plans (LCP) process with oversight from the

Washington Utilities and Transportation Commission (WUTC). As a result of their formal IRP or LCP processes, PSE, PacifiCorp and Avista have issued requests for proposals (RFPs) specifically for wind power and/or other renewable resources. Avista is seeking to acquire 50 MW, PSE is seeking to acquire a minimum of 150 MW, and PacifiCorp is seeking to acquire 500 MW. Thus the regional demand for wind-generated energy exceeds the existing regional supply.

The proposed WHWPP would help meet this growing regional demand for renewable, wind-generated electricity. In September 2004, PSE announced their intent to purchase the WHWPP. As stated in that announcement (Seattle Times 2004) PSE estimates that by 2008, it will need power sources that can generate 350 megawatts more power to serve its growing number of users. PSE has indicated that adding this and other wind power projects (PSE 2005), to the utility's portfolio of electric resources will help provide more control over PSE's power supply and minimize the risk to their customers from a volatile short-term energy market.

### 1.2.3 Transmission Feeder Line Purpose and Need

In order to deliver the energy generated by the project to customers, the project must be interconnected with the high voltage transmission grid. The nearest existing transmission lines of the appropriate voltage for interconnecting a project of this size are the PSE 115kV Intermountain Power line to the south of the project site and the BPA Schultz to Vantage 500 kV line west of the project site. In order to interconnect with these existing transmission lines, it is necessary to construct new feeder lines between the project site and these existing lines.

# 1.3 Decisions to Be Made

EFSEC has sole jurisdiction over the evaluation and licensing steps for siting certain major energy facilities in the state of Washington. Through its review EFSEC coordinates the comments and interests of state agencies that participate in the EFSEC review process. After issuance of this FEIS, EFSEC will make a recommendation to the governor of the state of Washington to approve or deny the WHWPP. If the Governor approves the siting of the WHWPP, EFSEC will issue a Site Certification Agreement (SCA) that will specify the conditions of construction, operation, and decommissioning and will act as an "umbrella" authorization that incorporates the requirements of all state laws and regulations.

At the time of issuance of the DEIS, EFSEC determined pursuant to WAC 463-28-030 that the WHWPP was not consistent with Kittitas County Land Use Plans and Zoning Ordinances. [reference: EFSEC Council Order No. 791, Order on Consistency with Local and Regional Land Use Plans and Zoning Ordinances, June 8, 2004]. However, in March 2005, Kittitas County provided a certificate of land use consistency to EFSEC, and EFSEC found the WHWPP to be consistent with Kittitas County Land Use Plans and Zoning Ordinances. As part of the County's resolution of land use consistency issues, Kittitas County approved the WHWPP designation as a subarea for its comprehensive plan, enacted a wind farm resource overlay zone for the project, and approved a Development Agreement with the Applicant; all contingent upon the approval of a site certification approved by the Governor.

EFSEC's jurisdiction would extend over the WHWPP, associated feeder lines, and other facilities owned and operated by Wind Ridge Power Partners. The WHWPP viability does not depend on interconnection with the BPA transmission system and can be achieved through the PSE system. If the Applicant formally requests interconnection to the BPA transmission system, BPA would be responsible for permitting, constructing, owning, and operating a new interconnection substation near its existing Schultz substation, as well as a new feeder line extension between the point of interconnection and the point of delivery. The environmental impacts of the BPA action would be reviewed in a separate process pursuant to the requirements of the National Environmental Policy Act (NEPA) (BPA 2003, Appendix A [DEIS]).

# 1.4 **Description of Alternatives**

Six alternatives are evaluated in this EIS. Alternatives include the Proposed Action Alternative, (constructing and operating the WHWPP and associated components), four off-site alternative locations (Kittitas Valley, Desert Claim, Springwood Ranch, and Swauk Valley Alternatives), and the No Action Alternative (not constructing and operating the proposed action). In addition, three design scenarios are considered as part of the Proposed Action Alternative. These alternatives are described below.

# 1.4.1 Proposed Action

The proposed project is to construct and operate a wind power project located on high open ridge tops between the towns of Kittitas and Vantage at a site located above the Kittitas Valley. The project would include wind turbine generators (WTGs) that would be constructed in rows along the open ridge tops of Whiskey Dick Mountain. The size and number of wind turbines to be used for the project depends on a number of factors, including wind turbine economics and availability at the time of construction. The resulting nameplate capacity of the project would depend on the final model and nameplate rating of turbine selected. Therefore, to evaluate a "reasonable range" of potential impacts associated with the WHWPP, this EIS evaluates the potential impacts of the proposed action on the natural and built environment under three project scenarios:

- 104-turbine/3 MW scenario: This scenario represents the project configuration with the fewest proposed turbines with the largest WTG. For turbines with a nameplate capacity of 3 MW each, up to 104 turbines would be sited for a total nameplate capacity of 312 MW.
- 136-turbine/1.5 MW scenario: This scenario represents the "most likely" project configuration that would be chosen based on pricing and performance for wind turbine technology currently on the market. For turbines with a nameplate capacity of 1.5 MW each, 136 turbines would be sited for a total nameplate capacity of 204 MW.
- 158-turbine/1 MW scenario: This scenario represents the project configuration with the most proposed turbines with the smallest WTG. For turbines with a nameplate capacity of 1 MW each, up to 158 turbines would be sited for a total nameplate capacity of 158 MW.

The wind generation facility would consist of several prime elements that would be constructed in consecutive phases. A site layout illustrating these key elements is shown in Figure 1-2. A permanent footprint of approximately 165 acres would be required to accommodate the proposed turbines and related support facilities. The majority of the project footprint (turbine strings) would be sited along the ridge tops (Figure 1-3). The facilities, equipment, and features that would be installed as part of the proposed project include the following:

- Approximately 17 miles of new roads;
- Improvements to roughly 15 miles of existing roads;
- Approximately 27 miles of underground 34.5-kV collection system power lines;
- Approximately 2 miles of overhead 34.5-kV collection system power lines;
- Approximately 14 miles of overhead 230-kV transmission feeder lines;
- One or two step-up substations;
- One interconnection substation;
- Operations and maintenance (O&M) facility of approximately 5,000 square feet;
- Parking area for the O&M facility approximately 300 feet x 300 feet;

- Visitor's kiosk; and
- Up to six permanent meteorological towers.

The project would be constructed across a land area of approximately 8,600 acres in Kittitas County in area currently zoned as Forest and Range and Commercial Agriculture. The majority of the WHWPP site and proposed interconnect points lie on privately owned land. Parts of the project site lie on land the Applicant has secured under a long term-lease with the DNR. One portion of the proposed site is owned by the WDFW that is currently under review by WDFW for possible lease to the Applicant. The Applicant has obtained wind option agreements with landowners for all private lands within the project site boundary and transmission feeder line corridors.

## 1.4.2 Alternatives Considered But Rejected

Consideration was given to alternative power generation technology and alternative wind turbine design. Several types of wind energy conversion technologies have been developed over the past three decades and include 1) vertical axis Darrieus wind turbines, 2) two-bladed downwind wind turbines, 3) smaller three-bladed upwind wind turbines (500 to 750 kilowatt [kW]), and 4) larger 3-bladed upwind wind turbines (1 to 3 MW). The three-bladed, upwind, horizontal axis is currently the preferred technology, based on proven reliability and commercial viability. Details of the consideration of other technologies and the reasons for eliminating them from further consideration are discussed in Section 2.5, "Alternatives Considered but Eliminated from Detailed Study."

The Applicant utilized a number of key criteria to design the proposed project layout. The proposed layout was defined during the project development phase based on the results of Applicant-commissioned surveys and studies. The project infrastructure was sited to avoid all documented locations of sensitive environmental resources within the project area. Details of the consideration of other project layouts and the development of the layout of the proposed action are discussed in Section 2.5.2, "Consideration of Alternative Project Layouts."

## 1.4.3 Off-Site Alternatives

Consideration was given to other possible sites available for wind power generation within Kittitas County. Consistent with the SEPA Rules, specifically WAC 197-11-440 (5) and in response to scoping comments suggesting the viability of other sites for wind power project development, EFSEC conducted an independent evaluation (Jones & Stokes 2004) for off-site alternative locations within Kittitas County. The off-site alternatives analysis was conducted at a "non-project" level, consistent with WAC 197-11-442, at a level of detail sufficient to evaluate their comparative merits. The affected environment and impact analysis for each element of the environment evaluated for the off-site alternatives has been incorporated into the DEIS under the corresponding environmental resource. Detailed discussion of the screening and selection process of the off-site alternatives to be carried forward in this EIS is presented in DEIS Chapter 2, with updates presented in Chapter 2 of this FEIS.

## 1.4.4 No Action Alternative

Under the No Action Alternative, the project would not be constructed or operated, and the environmental impacts described in this EIS would not occur. The No Action Alternative assumes that future development would comply with existing zoning requirements for the project area, which is zoned Commercial Agriculture and Forest and Range. Permitted uses in the Commercial Agriculture zone include residential uses, greenhouses, and agricultural practices. Permitted uses in the Forest and Range zone include logging, mining, quarrying, and agricultural practices, as well as residential uses (Kittias County 1991). If the proposed project is not constructed, it is likely that the region's need for power

would be addressed by some combination of user-end energy efficiency and conservation measures, by existing power generation sources, or by the development of new renewable and non-renewable generation sources. Base load demand would likely be filled through the expansion of existing, or development of new, thermal generation such as gas-fired combustion turbine technology. Such development could occur at conducive locations throughout the state of Washington.

A base load natural gas-fired combustion turbine would have to generate 67 average MW of energy to replace an equivalent amount of power generated by the project (204 MW at 33% net capacity). (An average MW or "aMW" is the average amount of energy supplied over a specified period of time, in contrast to "MW," which indicates the maximum or peak output [capacity] that can be supplied for a short period.)

# 1.5 <u>Summary of Public Involvement, Consultation, and</u> <u>Coordination</u>

The Applicant has been communicating and meeting with agencies, Indian Tribes, the public, and nongovernmental organizations throughout the development of the proposed project and through the EIS process. Local, state, and federal agencies and tribal representatives the Applicant has consulted with including the following:

- Local Agencies: Kittitas County Planning Staff, Kittitas County Public Works Department, Ellensburg Fire District #2, Kittitas School District
- State Agencies: WDFW: Regional Staff and Managers, DNR, Washington State Department of Transportation (WSDOT), Office of Archeology and Historic Preservation (OAHP)
- Federal Agencies: BPA, United States Fish and Wildlife Service (USFWS), Federal Aviation Administration (FAA)
- Tribal Governments: Yakama Nation, Confederated Tribes of the Colville Reservation (CCT), Wanapum Tribe, and Spokane Tribe.

Details and dates of meetings and correspondence are contained in the DEIS Section 2.11, "Coordination and Consultation with Agencies and Indian Tribes", and have been updated in Section 2.11 of the FEIS.

EFSEC conducted public informational and EIS scoping meetings, whereby agencies and the public were invited to comment on the scope of the EIS. Two meetings, one for the agencies and a second for the general public, were held on April 22, 2004 at the Ellensburg County Fairgrounds to provide information on the project and to receive comments on the scope of the EIS. Public notices were mailed to local and regional newspapers, and press releases were issued to local and regional radio stations and newspapers. EFSEC also held a land use consistency hearing on the proposed project in Ellensburg on April 22, 2004.

EFSEC has contracted with the WDFW and the Washington State Department of Ecology (Ecology) to review and provide input regarding the Applicant's proposal. The WDFW was consulted to identify agency issues and concerns regarding the potential project impacts on vegetation, wetlands, wildlife, fisheries, and threatened and endangered species with the potential to occur in the project area, as well as to solicit guidance on project mitigation measures. Ecology was consulted to solicit their input regarding potential project impacts on wetlands, water resources and water quality, and air quality.

The DEIS for the WHWPP was issued on August 3, 2004 for public comment. A public hearing to receive comments was held on August 24, 2004, in Ellensburg, Washington. The comment period for the DEIS closed on September 10, 2004. During the comment period, EFSEC received comments from

tribes, agencies, organizations, and individuals. Comments were submitted in letters, on comment forms, orally at the public hearing, and by e-mail.

EFSEC also conducted adjudicative hearings on March 7 and 8, 2005, including a public witness testimony session. EFSEC accepted comments of a general nature regarding the project through March 11, 2005.

Project documents are available to the public on the EFSEC website and in local libraries.

# 1.6 Summary of Potential Impacts and Mitigation Measures

### **1.6.1 Introduction**

Potential environmental impacts from the WHWPP and the Alternatives are described in detail in Chapter 3 of the Draft EIS. In response to comments submitted on the Draft EIS, and to new information made available since the DEIS was issued in August 2004, the DEIS has been revised and those revisions appear in this FEIS.

Tables 1-2 and 1-3 below present potential impacts of the proposed action and the alternatives in a summarized format. The entries in Table 1-2 highlight the conclusions of the impact analyses presented in Chapter 3 of the DEIS and the updates in this FEIS. Table 1-3 presents the conclusions of impacts for the off-site alternatives as presented in the respective resource sections, are based on the off-site alternatives analysis prepared by EFSEC (Jones & Stokes 2004), and are supported by the environmental impact statements prepared for the Kittias Valley and Desert Claim projects. The entries for the proposed action and the alternatives describe impact conclusions for the key issues only; all issues are addressed in the impact analysis for the respective elements of the environment in Chapter 3.

Entries in Table 1-3 for the Desert Claim project have been revised based on the FEIS issued for that project (Kittitas County 2004). EFSEC is aware that since issuance of the FEIS for the Desert Claim project, the Kittitas County commissioners acted on April 5, 2005 to deny the Desert Claim application submitted to the County [reference: Notice of Decision – Final Resolution, Findings of Fact and Conclusion of Law – Desert Claim Wind Power Project].

The proposed project has been designed to minimize impacts on the natural and built environment. Table 1-3 provides a summary of mitigations inherent to the project design, including studies conducted to avoid potential impacts, project design features, construction practices and operations practices.

In addition to the mitigation measures presented in Table 1-3, the Applicant has proposed to mitigate for all permanent and temporary impacts on habitat caused by the project in accordance with the ratios outlined in the WDFW Wind Power Guidelines (WDFW, August 2003).

A mitigation parcel has been identified within the 8,600-acre project area. The mitigation parcel is T18N, R21E, Section 27, except for a portion of this section that would be developed as part of the project. String "L" follows a ridgeline that bisects Section 27 from north to south. The area set aside for project mitigation is estimated at approximately 600 acres, which is more than the required replacement habitat under the WDFW Wind Power Guidelines. The Applicant has agreed to fence this parcel to eliminate livestock grazing, assuming the land ownership and grazing practices of adjacent properties at the time the project goes into operation would require fencing to remove livestock from this parcel.

The Applicant is proposing to fence several springs within the project area to eliminate livestock degradation in addition to Section 27. Fencing used for the mitigation parcel and the springs would be

designed to keep livestock out but allow game species to cross. The Applicant intends to coordinate with WDFW regarding fence specifications.

The WDFW Wind Power Guidelines were followed during the selection of Section 27 as a mitigation site for the project. Section 27 provides opportunity for "like-kind" replacement habitat of equal or higher habitat value than the impacted area and it occurs in the same geographical region as the impacted habitat. Furthermore, since the Applicant has an option to purchase the property if the project goes forward, the Applicant can provide legal protection and protection from degradation for the life of the project. Consistent with WDFW's guidelines, permanent impacts on habitat would be replaced at a ratio equal to or greater than 1:1 for grassland and 2:1 for shrub-steppe.

Additional benefits of Section 27 as a mitigation parcel for the project include:

- Protection of a segment of Whiskey Dick Creek;
- Continuity of habitat with adjacent state lands; and
- Preservation of a diversity of habitats.

Use of Section 27 as a mitigation parcel would result in protection of an approximately 1-mile segment of Whiskey Dick Creek near its headwaters. Protection of waterways and their adjacent riparian habitat provide significant benefits above and beyond replacement of "like-kind" habitat at agreed upon ratios. Protection of this segment of Whiskey Dick Creek provides benefits for water quality, wildlife, and species diversity. In addition, Section 27 is adjacent to state-owned lands. DNR administers Section 34 to the south and WDFW administers Section 26 to the east. Use of Section 27 for mitigation would provide continuity of habitat with these adjacent state-owned sections. Finally, a variety of habitat types that occur in the general project area are found in Section 27, so a diversity of habitat types would be preserved. These include shrub-steppe (moderate and dense), herbaceous, herbaceous/rock outcrop, and woody riparian.

### Table 1-2. Summary of Potential Impacts of Proposed Action (Including Transmission Feeder Lines[s]) and No Action Alternative

3.1	Earth	Resources

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW		
Construction Impacts					
Changes to local topography/area of temporary ground disturbance	289 total acres disturbance	356 total acres disturbance	401 total acres disturbance		
Cut-and-fill requirements	326,693 cubic yards	328,866 cubic yards	326,891 cubic yards		
Import sand and gravel fill requirements	52,575 cubic yards	53,686 cubic yards	51,875 cubic yards		
Off-site excavation spoils disposal	0 cubic yards	0 cubic yards	0 cubic yards		
Operation and Maintenance Impacts					
Erosion potential/area of permanent ground disturbance	165 acres	165 acres	165 acres		
Earthquake hazard	Low	Low	Low		
Volcanic hazard	Low	Low	Low		
Landslide hazard	Low	Low	Low		
Decommissioning Impacts					
	Same as most likely scenario.	Similar to, but less than construction impacts. Extent depends on fate of access roads.	Same as most likely scenario.		
		Decommissioning would consist of removing above-ground facilities and their associated foundations to a depth of 3 feet below the			

#### 3.1 Earth Resources

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
		surface level. Overhead power lines and associated structures would be removed if not utilized by the applicable utility (PSE or BPA). The substations could convert to Utility ownership. Underground facilities would be left in place subject to landowner approval. Removal of the O&M facility would be coordinated with the applicable landowner. Reclamation procedures would be in accordance with site-specific requirements and techniques commonly used at the time of decommissioning,	
		revegetating all disturbed areas.	

#### 3.1 Earth Resources: Mitigation Measures

#### **Erosion Control during Construction**

- Before construction begins, a detailed Stormwater Pollution Prevention Plan (SWPPP) would be developed and approved by EFSEC for the project to reduce the potential for
  erosion and pollutant discharge from the site during construction and operation activities. The SWPPP would meet the requirements of Ecology's General Permit to
  Discharge Storm Water and General sand and gravel permit, and the requirements of a National Pollution Discharge Elimination System (NPDES) Stormwater Construction
  Permit.
- The Stormwater Pollution and Prevention Plan (SWPPP) would include both structural and non-structural Best Management Practices (BMPs). Structural BMPs include installation of silt fences and other physical controls to divert flows from exposed soils or to limit runoff and pollutants from exposed portions of the site. Nonstructural BMPs include materials handling protocols, disposal requirements, and spill prevention methods.
- The SWPPP would be prepared along with a detailed project grading plan by the Engineering, Procurement, and Construction (EPC) contractor when design-phase topographic surveying and mapping are completed for the site.
- BMPs would be site-specific for slopes, construction activities, weather conditions, and vegetative buffers. Clearing, excavation, and grading would be limited to the
  smallest areas necessary to construct the project.
- All construction practices would emphasize erosion control through such measures as using straw mulch, erosion control blankets, vegetating disturbed surfaces, retaining
  original vegetation wherever possible, directing surface water runoff away from denuded areas, keeping runoff velocities low by minimizing slope steepness and length, and
  providing and maintaining stabilized construction entrances.
- Erosion control measures to be implemented for access road development include maintaining vegetative buffer strips between the affected areas and any nearby receiving waterways; installing sediment fence/straw bale barriers on disturbed slopes and other locations shown in the SWPPP; using straw mulch at locations adjacent to an affected road; providing temporary sediment traps and synthetic mats downstream of seasonal stream crossings; installing silt fences on steep, exposed slopes; and planting affected areas with designated seed mixes.

#### 3.1 Earth Resources: Mitigation Measures

- During construction, silt fences, hay bales, or matting would be placed on the down-slope side of crane pads.
- Design specifications and further details for excavation, blasting, and other activities associated with the removal and preparation of quarry materials for project construction
  will be included in the project plans and specifications. This information and a reclamation plan for the rock quarries will be provided to EFSEC for review and approval
  prior to start of construction.

#### **Erosion Control during Operation and Maintenance**

Operational BMPs would be adopted, as part of the SWPPP, to prevent stormwater pollution by implementing good housekeeping, preventative, and corrective maintenance
procedures; steps for spill prevention and emergency cleanup; employee training programs; and inspection and record-keeping practices as necessary. Operational BMPs
would include prompt cleanup and removal of spillage, regular pickup and disposal of garbage, regular sweeping of floors in the O&M, HAZMAT data sheet cataloguing and
recording, and proper storage of containers.

#### Earthquakes

- Project facilities would be designed in accordance with current engineering standards, either the Uniform Building code (UBC) or the International Building Code (IBC) requirements and those of Kittitas County (the 1997 UBC).
- A detailed geotechnical evaluation and field survey would be completed to ensure turbine locations and other project elements would not lie immediately above a high-risk fault.
- The wind turbines would be equipped with vibration sensors that would automatically shut down the turbine in the event of a severe earthquake.
- The Applicant would prepare detailed emergency plans to protect the public health and safety and environment on and off the project site to mitigate for potential hazards during an earthquake.

#### Volcanic Hazards

• In the event of damage or potential impact from a volcanic eruption, the project facilities would be shut down until safe operating conditions return. On-site emergency plans would be prepared to protect human health, safety, and the environment.

#### Landslides

• No project facilities would be constructed on unstable slopes or landslide-susceptible terrain. Prior to project construction, additional geotechnical explorations, including drilling and ground-penetrating radar surveys, would be completed as necessary to delineate the limits of the landslide area to establish sufficient setback distances for project facilities.

#### **Unique Features**

• Should unique physical or unique geological features such as petrified gingko deposits be discovered at the site during construction, work would be halted and the project manager would immediately contact appropriate personnel at EFSEC and the Washington State Historic Preservation Office to coordinate an appropriate response.

#### **Contaminated Soils**

 In the unlikely event that contaminated soils are encountered, the Applicant would notify EFSEC and appropriate personnel with the Washington State Department of Ecology. Contaminated soils would be handled and disposed of according to state and local requirements.

#### **Decommissioning Plans**

Both an Initial and Final Site Restoration Plan (pursuant to WAC 463-42-655 and in consultation with Kittitas County) would be prepared and approved by EFSEC for the

#### 3.1 Earth Resources: Mitigation Measures

project. The plan would be developed with the active participation of the County, in consultation and coordination with EFSEC, and would be submitted to the County for its review and approval, provided however, such approval shall not be unreasonably withheld. Reclamation procedures would be based on site-specific requirements and techniques commonly employed at the time the area is to be reclaimed, and would include regrading, adding topsoil, and reseeding all disturbed areas. If the overhead transmission feeder lines could not be used by the utility, all structures (including the portion of pole foundations within 3 feet of below the ground surface), conductors and cables would be removed.

#### 3.1 Earth Resources: No Action Alternative

Under the No Action Alternative, the project would not be constructed or operated and the impacts described above would not occur. Development by others could occur at the project site in accordance with Kittias County's existing Comprehensive Plan and zoning regulations. The project site is currently zoned Commercial Agriculture and Forest and Range. Depending on the location, type, and extent of future development at the project site, impacts on earth resources could be similar to or even greater than the proposed action. If long-term energy needs are to be met, development of new renewable and non-renewable generation sources might be required. It is estimated that a base load combustion turbine facility generating 60 average megawatts (aMW) of power could require approximately 14 acres for the plant site. Renewable generation sources might require substantially greater land area for a facility site.

Construction of a base load gas-fired combustion turbine projects may also result in greater disturbance of earth resources compared to the WHWPP because of the possible need to establish a gas pipeline to the facility and electrical transmission interconnections. The specific type, nature, and extent of earth resource impacts under the No Action Alternative, such as erosion and risk of earthquakes and volcanic eruption, would depend on the site-specific location of the energy plant and its associated facilities.

#### 3.2 Air Quality

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Construction Impacts			
Equipment and vehicle exhaust emissions	See DEIS Table 3.2-2 for list of construction equipment.	See DEIS Table 3.2-2 for list of construction equipment.	See DEIS Table 3.2-2 for list of construction equipment.
Odors	Similar to Most Likely Scenario	Limited and negligible. Construction operations would not emit significant amounts of odorous substances.	Similar to Most Likely Scenario
Impacts during construction of substations and transmission facilities	Similar to most likely Scenario	Temporary, localized impacts caused by fugitive dust during construction. Construction operations would seldom occur for a long duration at any given location, so it is not expected that emissions would cause ambient concentrations to exceed the allowable ambient standards.	Similar to most likely Scenario

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Fugitive dust emissions during construction of turbine generator strings	No significant impact, fugitive dust generated by 289 total acres disturbed	No significant impact, fugitive dust generated by 356 total acres disturbed. The turbines would be far from the facility boundary, so it is unlikely the emissions would cause ambient concentrations to approach the allowable ambient standards.	No significant impact, fugitive dust generated by 401 total acres disturbed
Operation and Maintenance	Impacts		
Fugitive dust and exhaust emissions	Similar to Most Likely Scenario.	Negligible impact caused by fugitive dust and tailpipe emissions from commute vehicles and onsite operational vehicles.	Similar to Most Likely Scenario.
Odors	None	None	None
Regulated air pollutants	Same as most likely scenario.	No impact.	Same as most likely scenario.
Greenhouse gas emissions	Same as most likely scenario.	No impact; avoidance of greenhouse gas emissions from fossil fueled sources of power generation that would have otherwise been built or operated to produce an equivalent amount of energy	Same as most likely scenario.
Decommissioning Impacts			
Equipment and vehicle exhaust emissions; fugitive dust.	Same as most likely scenario	Similar to those generated during construction. Impacts would likely be less since access roads may be left in place.	Same as most likely scenario

#### 3.2 Air Quality: Mitigation Measures

- All vehicles used during construction will comply with applicable federal and state air quality regulations for tailpipe emissions.
- Operational measures such as limiting engine idling time and shutting down equipment when not in use will be implemented.
- Active dust suppression will be implemented on unpaved construction access roads, parking areas and staging areas, possibly using water-based dust suppression materials in compliance with state and local regulations.
- Housekeeping measures around batch plant and rock crushing facilities to prevent buildup of fine materials.
- Traffic speeds on unpaved access roads will be kept to 25 mph to minimize generation of dust.
- Carpooling among construction workers will be encouraged to minimize construction-related traffic and associated emissions.
- Disturbed areas will be replanted or graveled to reduce wind-blown dust.
- Erosion control measures will be implemented to limit deposition of silt to roadways.
- The air quality permit for the temporary rock crusher and the temporary concrete batch plant will require the use of emission control devices to reduce dust generated by these processes. Water sprays will be used on the rock crusher and the concrete batch plant dry loading operations, and a fabric filter will be used for the Portland cement silo.
- If, during periods of high winds, the dust suppression equipment on the rock crushing or batch plants are rendered ineffective, the machinery would be halted to prevent excessive fugitive dust plumes.
- No air quality mitigation is proposed for project operations as there would be no air or odor emissions generated by stationary sources. Dust abatement measures
  implemented during operation would be continued as appropriate.

#### 3.2 Air Quality: No Action Alternative

The No Action Alternative assumes that future development at the site would comply with existing zoning requirements for the project area, which is zoned Commercial Agriculture and Forest and Range. According to the County's zoning code, the Commercial Agriculture zone is dominated by farming, ranching, and rural lifestyles; permitted uses include residential, greenhouses and agricultural practices. The specific type, nature, and extent of future developments at the project site are unknown, and would depend primarily on county growth trends.

If the proposed project were not built, additional renewable and non-renewable energy facilities may have to be constructed. Construction related emission would be commensurate with the land area being disturbed by such projects. If the proposed project were not built, a base-load natural gas-fired turbine facility generating 67 aMW might replace the power that would have been produced by the proposed project. The estimated annual emissions from a hypothetical 67 aMW natural gas-fired power plant would be as follows: 22 tons of nitrogen dioxide, 20 tons of CO, and 220,000 tons of carbon dioxide (greenhouse gas emissions).

Impacts related to decommission of such facilities would depend on the structures to be removed, and the land area being disturbed by decommissioning of such projects.

#### 3.3 Water Resources

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Construction Impacts			
Drainages	None	None	None
Surface runoff from ground disturbance and exposed soils	289 acres	356 acres	401 acres
Water consumption	10,500,000 gallons	10,700,000 gallons	10,800,000 gallons
Encountering groundwater during turbine foundation construction	Excavation depth of 22 ft. (for spread footing foundations) to 35 ft. (for mono-pier foundations) (104 turbines)	Excavation depth of 18 ft. (for spread footing foundations) to 35 ft. (for mono-pier foundations) (136 turbines)	Excavation depth of 14 ft. (for spread footing foundations) to 35 ft. (for mono-pier foundations) (158 turbines)
Operation and Maintenance Impacts			
Drainages	None	None	None
Erosion potential/area of permanent ground disturbance	165 acres	165 acres	165 acres
Water consumption	<1,000 gallons daily at O&M facility	<1,000 gallons daily at O&M facility	<1,000 gallons daily at O&M facility
Decommissioning Impacts			
	Similar to construction	Similar to construction (e.g. soil disturbance, stormwater).	Similar to construction
		Surface water runoff potential would be greatest during the dismantling of the project, when soil is disturbed by	
		Vehicular activity and removal of facilities. Dismantling the project would require water for dust control. Sediment and erosion control practices would minimize or eliminate potential impacts on surface waters and groundwater.	

#### 3.3 Water Resources: Mitigation Measures

- The proposed design of the project incorporates numerous features to avoid and/or minimize impacts on water resources and includes minimizing new road construction by improving and using existing roads and trails; not developing wells on site, using only off-site sources of water for construction and operation; and locating roads, underground cables, turbine foundations, transmission poles and other associated infrastructure outside any surface water or other sensitive resources, avoiding drainage crossings to the maximum extent feasible; complying with federal, state, and local ordinances; and implementing a formal SWPPP and BMPs during construction.
- The detailed SWPPP as required by the NPDES Industrial Stormwater General Permit, will be developed and implemented to minimize the potential for discharge of pollutants from the site to surface waters during construction and operation and maintenance activities. See Section 3.1 Earth Resources for more details on the proposed SWPPP and its implementation.
- During decommissioning, mitigation of potential impacts would follow the same procedures in use during construction (i.e., BMPs, SWPPP).
- Roads, underground cables, turbine foundations, transmission poles and other associated infrastructure will not be located within any riparian areas or streams and will not involve the use of any heavy equipment in stream beds or riparian areas. BMPs will be implemented to retain sediment from disturbed areas and minimize areas of disturbance.

#### 3.3 Water Resources: No Action Alternative

Under the No Action Alternative, the project would not be constructed or operated. However, development by others, and of a different nature, including residential development, could occur at the project site in accordance with Kittias County's existing Comprehensive Plan and zoning regulations. Depending on the location, type, and extent of future developments at the project site, impacts on water resources could be similar to or even greater than the proposed action.

If the proposed project were not constructed, the region's base load power needs could be delivered through development of other generation facilities, most likely a gas-fired combustion turbine. Gas-fired combustion turbine projects could expose more soil to potential erosion because of the possible need to establish a gas pipeline to the facility and electrical transmission interconnections. Also, substantial amounts of water, estimated at 200 acre-feet (65 million gallons) per year, would be needed for cooling water during plant operation. Operation of a water-cooled combustion turbine facility would also result in discharge of large volumes of wastewater.

Development of other wind energy projects would result in impacts similar to those of the Proposed Action.

<b>5.4</b> vegetation And veetand	3.4	Vegetation	And	Wetlands
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Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Construction Impacts			
Temporary vegetation removal and habitat loss	289.5 acres disturbed area	356.0 acres disturbed area	401.4 acres disturbed area
Permanent vegetation removal and habitat loss	164.7 acres disturbed area	164.7 acres disturbed area	164.6 acres disturbed area
Permanent impacts on lithosols	61 acres disturbed	61 acres disturbed	61 acres disturbed
Impacts on wetlands	None	None	None

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Impacts on federal or state listed endangered, threatened, proposed for listing, or species of concern plant species	None	None	None
Impacts on state "Review" plant species	Same as most likely scenario.	Removal of individuals where located within project facility footprint and temporary construction perimeters	Same as most likely scenario.
Operation and Maintenance Impacts			
Wind turbine shading vegetation	Negligible	Negligible	Negligible
Dust generation	Negligible	Negligible	Negligible
Potential project area colonization by invasive species	289.5 acres disturbed area	356.0 acres disturbed area	401.4 acres disturbed area
Impacts on wetlands	None	None	None
Impacts on federal or state listed endangered, threatened, proposed for listing, or species of concern plant species	None	None	None
Impacts on state "Review" plant species	Negligible	Negligible	Negligible
Decommissioning Impacts			
Vegetation impacts	Similar to most likely scenario	Dismantling impacts would be similar to but likely less than impacts described for construction, if access roads remain in place. Vehicles would generate dust and potentially introduce or spread weedy or noxious plant species. Vegetation surrounding project facilities to be removed would likely be affected to the same extent as identified for construction. Reclamation procedures would be based on currently used techniques and would include regrading, adding topsoil, and revegetating disturbed areas with native plant species.	Similar to most likely scenario

#### 3.4 Vegetation And Wetlands

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Wetlands	None	None (Wetlands, at the local level, are designated as "critical areas" regulated under the local jurisdiction of Kittitas County (County Code Title 17A).	None

#### 3.4 Vegetation and Wetlands: Mitigation Measures

- The Applicant has proposed a comprehensive mitigation package for potential impacts to vegetation resources at the project site in accordance with WDFW guidelines for siting Wind Energy facilities in Eastern Washington. Thorough surveys, inventories, and analysis were conducted to identify vegetation resources at the site. Mitigation consists of project design features, construction techniques, and BMPs to avoid and minimize impacts; post-construction restoration of temporarily disturbed areas; and operational BMPs to minimize impacts.
- Site restoration for all disturbed areas include site preparation, reseeding with appropriate vegetation, noxious weed control, and the fencing of on-site springs to protect them
  from degradation by livestock.

#### Shrub-Steppe Habitat

- The Applicant proposes to mitigate for all temporary and permanent impacts to vegetation, specifically the protection and enhancement of over 600 acres of on-site shrubsteppe and riparian habitat in Section 27. This mitigation parcel would be fenced to allow game species to cross while preventing degradation by livestock.
- To the greatest extent possible, construction activities outside permanently disturbed areas would be conducted during the months of May through October when soil
  moisture is low. Working during winter months would be minimized to avoid or minimize impacts to vegetation and soils subject to thawing conditions. However,
  trenching of underground electrical collection cables may be performed outside this time window, as the soil cover in those areas would be disturbed regardless of the season
  and will need to be restored and reseeded.
- The Applicant will develop a restoration plan and conduct habitat reseeding programs when optimal germination and establishment conditions are present, as determined in consultation with a TAC (see Section 3.5 Wildlife) and WDFW, and not necessarily immediately following ground disturbance activities. Temporarily disturbed areas will be covered in accordance with erosion control measures set forth in this Final Environmental Impact Statement (EIS) (see Section 3.3, Water Resources), at such time site conditions are deemed favorable. In cooperation with WDFW and the TAC, the Applicant will evaluate the success of restoration efforts using an agreed-upon reference site that would provide insights to future restoration efforts at other projects, and will ensure effective erosion and weed control. The Applicant is not required to provide additional mitigation should restored habitat at the project site differ in quality from the reference standard.

#### Wetlands (and Streams, and Riparian Areas)

 Roads, underground cables, turbine foundations, transmission poles and other associated infrastructure will not be located within any riparian areas or streams and will not involve the use of any heavy equipment in stream beds or riparian areas. BMPs will be implemented to retain sediment from disturbed areas and minimize areas of disturbance.

#### **Noxious Weed Control**

- The contractor will clean construction vehicles prior to bringing them in to the project area from outside areas.
- Disturbed areas will be reseeded as quickly as possible with native species.
- Seed mixes will be selected in consultation with WDFW and Kittitas County Weed Control Board.
- If hay is used for sediment control or other purposes, hay bales will be certified weed free.
- Access to the site will be controlled which may result in a lower level of disturbance and fewer opportunities for noxious weeds to be introduced and/or spread.

#### Energy Facility Site Evaluation Council Table 1-2 Continued

Noxious weeds that may establish themselves as a result of the project will be actively controlled in consultation with the Kittitas County Weed Control Board.

#### **Special-Status Plants**

Access to the site will be controlled during both construction and operations to minimize potential impacts to hedgehog cactus, a Washington State Review List species. If collection becomes a problem at the project sitedespite controlled access, the Applicant will post a sign at the visitor's kiosk indicating that collection of any plants in the project area is prohibited.

#### 3.4 Vegetation And Wetlands: No Action Alternative

Under the No Action Alternative, the project would not be constructed or operated. However, development of a different nature could occur under Kititas County's existing Comprehensive Plan and zoning regulations for the project area. Depending on the location, type, and magnitude of future developments at the project site, impacts on vegetation, wetlands, or to threatened or endangered plant species could be similar to or even greater than the proposed action.

Other power generation facilities could be constructed and operated in the region to meet the long-term need for power Constructing a base load gas-fired turbine generator, developing and extracting natural gas, and constructing natural gas pipelines to provide fuel to the generating facility could create impacts on vegetation, wetlands, and threatened and endangered plant species. Construction of renewable energy facilities would also result in impacts to vegetation, wetlands, and threatened plant species. The significance of such impacts would depend on the site-specific location and design of the facility.

It is likely that cattle grazing would continue to be the primary agricultural activity in the vicinity of Whiskey Dick Mountain. Vegetation communities would continue to mature, however, wherever cattle grazing disturbed shrub-steppe and sensitive plant assemblages associated with lithosols and sensitive springs, wetlands, and riparian habitats, these plant communities would be vulnerable to nonnative and noxious weed establishment.

#### 3.5 Wildlife

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Construction Impacts			
Temporary habitat loss	289 acres	356 acres	401 acres
Permanent habitat loss	164.69 acres	164.74 acres	164.63 acres
Impacts to bald eagle, golden eagle, and small mammals.	Same as most likely scenario.	Temporary disturbance	Same as most likely scenario.
Disturbance to big game	Same as most likely scenario.	Possible avoidance behavior.	Same as most likely scenario.
Impacts to peregrine falcon, burrowing owl, and amphibians	None	None	None
Operation and Maintenance Impacts			
Avian mortality: raptors and passerines.	Less than most likely scenario.	Raptors, 1–10/year Passerines, 50–300/year	More than most likely scenario.
Avian mortality: bald eagle, peregrine falcon and waterfowl	Same as most likely scenario.	Low probability of mortality.	Same as most likely scenario.
Mortality: bats, small mammals, sage sparrow, and sage thrasher.	Same as most likely scenario.	Potential for mortality, number unknown.	Same as most likely scenario.
#### 3.5 Wildlife

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Disturbance: Avian species.	Same as most likely scenario.	Potential for disturbance.	Same as most likely scenario.
Disturbance: big game.	Same as most likely scenario.	Potential avoidance behavior.	Same as most likely scenario.
Impacts to amphibians and burrowing owls.	None.	None.	None.
Decommissioning Impacts			
	Similar to most likely scenario	Decommissioning impacts would be less than those for construction as no access roads would be built and less heavy equipment use and ground disturbance would occur. The period of disturbance for dismantling would also be shorter than for construction. Vehicles would travel on established roadways, which would not impact habitat for special status species.	Similar to most likely scenario
		Dismantling the project would eliminate avian and bat mortality caused by the presence of wind turbines. Wildlife habitat would have the potential to return to preproject conditions over time, and disturbed areas would be reseeded with appropriate seed mixes to accelerate revegetation of these areas.	

#### 3.5 Wildlife: Mitigation Measures

- The Applicant has proposed a comprehensive mitigation package for potential impacts to animals and habitat for this project. It consists of thorough study and analysis to avoid impacts; project design features to minimize impacts; construction techniques and BMPs to minimize impacts; post-construction restoration of temporarily disturbed areas; operational BMPs to minimize impacts; monitoring and adaptive management to minimize impacts during operations; and protection and enhancement of on-site habitat; specifically providing protection for the life of the project for over 600 acres of shrub-steppe and riparian habitat in Section 27 and the fencing of springs in other areas of project to protect the springs from degradation by livestock.
- Project design includes avoidance of construction in sensitive areas such as streams, riparian zones, wetlands, and forested areas; avoidance of locating wind turbines in prominent saddles along the main Whiskey Dick Ridge; minimization of new road construction by improving and using existing roads and trails instead of constructing new roads; choice of underground (vs. overhead) electrical collection lines wherever feasible to minimize perching locations and electrocution hazards to birds; choice of turbines with low RPM and use of tubular towers to minimize risk of bird collision with turbine blades and towers; use of unguyed permanent meteorological towers to minimize potential for avian collisions with guy wires; equipping all overhead power lines with raptor perch guards to minimize risks to raptors; and spacing of all overhead power line conductors to minimize potential for raptor electrocution.

# Energy Facility Site Evaluation Council Table 1-2 Continued

- Construction techniques include use of BMPs to minimize construction-related surface water runoff and soil erosion (these are described in detail in Section 3.3.2.1, "Water Impacts of the Proposed Action Construction Surface Water Runoff/Absorption"); use of certified "weed free" strawbales during construction to avoid introduction of noxious or invasive weeds; flagging of any sensitive habitat areas (e.g., springs, raptor nests, wetlands) near proposed areas of construction activity and designation of such areas as "off limits" to all construction personnel; development and implementation of a fire control plan, in coordination with local fire districts, to minimize risk of accidental fire during construction and respond effectively to any fire that does occur; establishment and enforcement of reasonable driving speed limits (max 25 mph) during construction to minimize potential for road kills; proper storage and management of all wastes generated during construction; require construction personnel to avoid driving over or otherwise disturbing areas outside the designated construction areas; limiting construction activities during winter months to minimize impacts on wintering big game; avoiding construction activities outside of permanently disturbed area except for during the months of May through October when soil moisture is low; designation of an environmental monitor during construction to monitor construction activities and ensure compliance with mitigation measures; compliance with specific measures contained within the Settlement Agreement between the WDFW and the Applicant; post-construction restoration, and to consider historic sage grouse presence during strategic planning for rock source locations and concrete batch plant location.
- Operational BMPs would be similar to those implemented during construction and include a fire control plan, speed limit enforcement, storm water runoff and soil erosion; a noxious weed control program, in coordination with the Kittitas County Noxious Weed Control Board, identification and removal of all carcasses of livestock, big game, etc. from within the project that may attract foraging bald eagles or other raptors; control public access to the site to minimize disturbance impacts on wildlife, especially in the winter months; develop a hunting plan in coordination with the WDFW to allow limited and controlled hunting on the site and allow WDFW access to the site to manage big game herds and minimize potential big game damage to nearby agricultural lands; limit routine maintenance of the substation areas within 0.25 mile of an active lek, should one be located in the project area, to occur between the hours of 9:00 a.m. and sunset.
- The Applicant proposes to develop a post-construction monitoring plan for the project to quantify impacts on avian species and to assess the adequacy of mitigation measures implemented. The Applicant plans to convene a Technical Advisory Committee to evaluate the mitigation and monitoring program and determine the need for further studies or mitigation measures. The Applicant further agrees to develop and implement a post-construction Rangeland Management and Grazing Plan, in coordination with the Technical Advisory Committee (TAC), for the entire project area..

#### 3.5 Wildlife: No Action Alternative

Under the No Action Alternative, the project would not be constructed or operated. However, development of a different nature could occur under Kittias County's existing Comprehensive Plan and zoning regulations for the project area. Depending on the location, type, and magnitude of future developments at the project site, impacts on wildlife, or to threatened or endangered animal species could be similar to or even greater than the proposed action.

Other power generation facilities could be constructed and operated in the region to meet the long-term need for power. Constructing a base load gas-fired turbine generator, developing and extracting natural gas, and constructing natural gas pipelines to provide fuel to the generating facility could create impacts on wildlife, and threatened and endangered species. Construction of renewable energy facilities would also result in impacts to wildlife. The significance of such impacts would depend on the site-specific location and design of the facility.

3.6 Fisheries				
Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW	
Construction Impacts				
Fish and fish habitat, stream and riparian areas	None	None	None	

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Impacts on federal or state listed endangered, threatened, proposed for listing, or species of concern plant species	None	None	None
Water quality and quantity	See Water Resources	See Water Resources	See Water Resources
Operation and Maintenance Impacts			
Fish and fish habitat, stream and riparian areas	None	None	None
Impacts on federal or state listed endangered, threatened, proposed for listing, or species of concern plant species	None	None	None
Water quality and quantity	See Water Resources	See Water Resources	See Water Resources
Decommissioning Impacts			
Fish habitat, stream and riparian areas	None	No impacts from decommissioning are anticipated due to the absence of potential fish habitat in the proposed project area.	None
Impacts on federal or state listed endangered, threatened, proposed for listing, or species of concern plant species	None	None	None
Water quality and quantity	See Water Resources	See Water Resources	See Water Resources
		Dismantling the project would reduce the quantity of impervious surfaces in the project area.	

#### 3.6 Fisheries: Mitigation Measures

Project design incorporates numerous features to avoid and/or minimize impacts on fisheries by avoiding impacts to streams and riparian areas. Measures include
minimizing new road construction and roads, underground cables, turbine foundations, transmission poles, and other associated infrastructure will not be located within any
riparian areas or streams or other sensitive resources.

# Energy Facility Site Evaluation Council Table 1-2 Continued

- Most mitigation measures outlined in Section 3.3 Water Resources and 3.5 Wildlife Section also apply to fisheries. A formal SWPPP would be implemented and BMPs would be initiated to retain sediment from disturbed areas and minimize areas of disturbance. Proposed construction activities for the transmission feeder lines would not involve the use of any heavy equipment in streambeds or riparian areas.
- Although no fisheries issues were identified in the project area, the Applicant proposes using construction techniques and BMPs to minimize potential impacts. These include using BMPs to minimize construction-related surface water runoff and soil erosion, BMPs to retain sediment from disturbed areas and minimize areas of disturbance, flagging sensitive habitat areas (e.g., wetlands, seeps, and drainages) near proposed areas of construction activity and designating such areas as "off limits" to all construction personnel, properly storing and managing all wastes generated during construction, requiring construction personnel to avoid driving over or otherwise disturbing areas outside the designated construction areas designating an environmental monitor during construction to monitor construction activities and ensuring compliance with mitigation measures.
- To minimize sediment delivery to streams, all temporarily disturbed areas would be reseeded with an appropriate mix of native plant species as soon as possible after construction to accelerate the revegetation of these areas. The Applicant would consult with WDFW regarding the appropriate seed mixes for the project area.
- Roads, underground cables, turbine foundations, transmission poles and other associated infrastructure will not be located within any riparian areas or streams and will not involve the use of any heavy equipment in stream beds or riparian areas. BMPs will be implemented to retain sediment from disturbed areas and minimize areas of disturbance.

#### 3.6 Fisheries: No Action Alternative

Under the No Action Alternative, the project would not be constructed or operated. However, development of a different nature could occur under Kittitas County's existing Comprehensive Plan and zoning regulations for the project area. Depending on the location, type, and magnitude of future developments at the project site, impacts on fish and fish habitat, threatened or endangered fish species could be similar to or even greater than the proposed action.

Other power generation facilities could be constructed and operated in the region to meet the long-term need for power. Constructing a base load gas-fired turbine generator, developing and extracting natural gas, and constructing natural gas pipelines to provide fuel to the generating facility could create impacts on fish and fish habitat, and threatened and endangered fish species. Construction of renewable energy facilities could also result in impacts on fish and fish habitat, and threatened and endangered fish species. The significance of such impacts would depend on the site-specific location and design of the facility.

en Energy mina ratarar Resources			
Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Construction Impacts			
Electricity Consumption	0 (Electricity provided by portable generators)	0 (Electricity provided by portable generators)	0 (Electricity provided by portable generators)
Diesel Consumption	150,000 gal	150,000 gal	150,000 gal
Gasoline Consumption	30,000 gal	30,000 gal	30,000 gal
Sand Use	37,200 cu yd	38,700 cu yd	39,000 cu yd
Gravel Use (aggregate)	244,300 cu yd	246,600 cu yd	246,900 cu yd
Water Consumption	10,500,000 gal	10,700,000 gal	10,800,000 gal
Cement Use–Tower Foundations	31,000 cu yd	30,000 cu yd	36,000 cu yd

#### 3.7 Energy And Natural Resources

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#### 3.7 Energy And Natural Resources

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Steel Consumption–Turbine Towers	15,000 tons	12,000 tons	14,000 tons
Steel Consumption–Tower Foundations	2,100 tons	2,000 tons	2,500 tons
Operation and Maintenance Impacts			
Electricity Consumption	< 1% of total project output will be pulled from grid.	< 1% of total project output will be pulled from grid.	< 1% of total project output will be pulled from grid.
Fuel Consumption	11,500 gal	11,500 gal	11,500 gal
Water Consumption	<1,000 gal daily at O&M facility	<1,000 gal daily at O&M facility	<1,000 gal daily at O&M facility
Wind Turbine Generator Fluid Quantities: Glycol-water mix Hydraulic fluid	55 gal (5,720 gal total) 85 gal (5,893 gal total) 110 gal (11,440 gal total)	40 gal (5,440 gal total) 65 gal (5,893 gal total) 90 gal (12,240 gal total)	30 gal (4,470 gal total) 45 gal (4,470 gal total) 70 gal (11,060 gal total)
Lubricating oil			
Substation Transformer Mineral Oil	500 gal per transformer (68,000 gal total)	500 gal per transformer (68,000 gal total)	500 gal per transformer (68,000 gal total)
Pad-Mounted Transformer Mineral Oil	12,000 gal per transformer, up to 24,000 gallons	12,000 gal per transformer, up to 24,000 gallons	12,000 gal per transformer, up to 24,000 gallons
Decommissioning Impacts			
	Similar to most likely scenario	Impacts on energy consumption during project dismantling would be similar to construction. Water would be required only as a dust control measure. No steel, cement, gravel, or sand would be required. Energy consumption, mainly gasoline, diesel fuel, and electricity, would be required to operate equipment. Economically recoverable materials such as steel towers would be salvaged. Dismantling would also eliminate the need for maintenance requirements (i.e., fuel, O&M facility water, gear oil, hydraulic fluid, glycol-water mix coolant).	Similar to most likely scenario

- As the project would have a positive impact overall on the use of non-renewable resources, no mitigation is necessary or proposed.
- During construction, conservation measures will include recycling of construction wastes where possible and encouraging carpooling among construction workers to reduce emissions and traffic.

Several conservation measures will be undertaken during operations:

- Water usage at the site will be closely monitored during operations due to the limited capacity of the on-site water storage tank.
- The O&M facility will utilize station power for electricity needs.
- Water usage at the site will be closely monitored during operations due to the limited capacity of the on-site water storage tank.
- Carpooling among operations workers will be encouraged.
- High-efficiency electrical fixtures and appliances in the O&M facility and substation control house will be used.
- Low-water-use flush toilets will be used in the O&M facilities
- Recycling of waste office paper and aluminum will be encouraged.

3.7 Energy And Natural Resources: No Action Alternative

Under the No Action Alternative, the project would not be constructed or operated, and the environmental impacts described in this section would not occur. The No Action Alternative assumes that future development would comply with existing zoning requirements for the project area, which is zoned Commercial Agriculture and Forest and Range. According to the County's zoning code, the Commercial Agriculture zone is dominated by farming, ranching, and rural lifestyles, and permitted uses include residential, greenhouses, and agricultural practices. Permitted uses in the Forest and Range zone include logging, mining, quarrying, and agricultural practices, as well as residential uses. However, if the proposed project is not constructed, it is likely that the region's need for power would be addressed by user-end energy efficiency and conservation measures, by existing power generation sources, or by the development of new renewable and non-renewable generation sources. Baseload demand would likely be filled through expansion of existing, or development of new, thermal generation such as gas-fired combustion turbine technology. Such development could occur at conducive locations throughout the state of Washington, and impacts on energy and natural resources could be similar to or even greater than the proposed action depending on the location, type, and magnitude of development at the project site. The significance of such impacts would depend on the site-specific location and project design.

A baseload natural gas-fired combustion turbine would have to generate 67 average-MW of energy to replace an equivalent amount of power generated by the project (204-MW at 33% net capacity). (An average-MW or "aMW" is the average amount of energy supplied over a specified period of time, in contrast to "MW," which indicates the maximum or peak output [capacity] that can be supplied for a short period.) See Section 2.7, "No Action Alternative."

3.8 Noise			
Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Construction Impacts			
Noise generated by construction equipment.	Same as most likely scenario.	No impact. Nearest home is 1.75 miles away from the closest WTG.	Same as most likely scenario.
Blasting noise/conflicts with nearby residential/land use.	Same as most likely scenario.	Blasting would be done only during daytime, and the nearest home is more than 2.5 miles away from the closest rock quarry where the majority of blasting activities would occur.	Same as most likely scenario.

3.8 Noise

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Noise generated by construction traffic in town of Kittitas.	Same as most likely scenario.	Unlikely to cause any adverse impact. Commute vehicles and up to 49 heavy trucks per hour would cause traffic noise levels to exceed FHWA impact thresholds only at homes within 60 feet of the street centerline.	Same as most likely scenario.
Operation and Maintenance Impacts			
Noise generated by wind turbines.	Same as most likely scenario.	No impact. Operational noise levels would be less than background at the nearest homes.	Same as most likely scenario.
Noise generated by high-voltage transmission lines.	Same as most likely scenario.	No impact. Noise levels would be less than Washington state limits at all points outside the transmission line right-of-way.	Same as most likely scenario.
Noise generated by traffic.	Same as most likely scenario.	No impact. Commute traffic would consist of only 36 trips a day, or 18 trips during the peak hour.	Same as most likely scenario.
Vibration effects.	Same as most likely scenario.	No impact. Nearest home is 1.75 miles from the closest WTG.	Same as most likely scenario.
Decommissioning Impacts			
Construction trucks along streets in town of Kittitas.	Same as most likely scenario.	Decommissioning activities would result in less noise than for construction due to little or no blasting and heavy equipment would be used for a shorter period.	Same as most likely scenario.
		Traffic noise caused by heavy haul trucks traveling through the town of Vantage might occasionally exceed FHWA's traffic noise impact criterion at the homes along the streets.	

#### 3.8 Noise: Mitigation Measures

- Although no specific receivers are identified as being impacted by construction noise at the remote project site, the following contractor practices are recommended to minimize the effects of construction noise in the project area:
- Implement work-hour controls so that noisy activities occur between 7 a.m. and 10 p.m., which would reduce the impact during sensitive nighttime hours
- Do not allow heavy-duty haul trucks to travel through the town of Kittitas during evening or nighttime hours.
- Do not allow haul trucks to park and idle within 100 feet of a residential dwelling. Conduct blasting only during daylight hours.
- Maintain equipment in good working order and use adequate mufflers and engine enclosures to reduce equipment noise during operation.
- Coordinate construction vehicle travel to reduce the number of passes by sensitive receivers.

#### 3.8 Noise: No Action Alternative

The No Action Alternative assumes that future development at the site would comply with existing zoning requirements for the project area, which is zoned Commercial Agriculture and Forest and Range. According to the County's zoning code, the Commercial Agriculture zone is dominated by farming, ranching, and rural lifestyles, and permitted uses include residential, green houses, and agricultural practices. Permitted uses in the Forest and Range zone include logging, mining, quarrying, and agricultural practices, as well as residential uses. Agricultural activity and low-density housing would generate no significant noise impacts at residences. Any proposed mining or quarrying activity would be subject to noise restrictions under Chapter 173-60 WAC, Maximum Environmental Noise Levels.

If the project is not constructed, the region's need for power would be addressed by developing other generation sources. The construction and operation of a base load gas-fired combustion turbine would create more noise than the proposed wind generation project. The noise impacts of a gas turbine generator would depend on its proximity to homes. Development of renewable energy facilities could result in similar noise levels of the WHWPP, the impacts depending on the proximity to homes.

Noise from the decommissioning of other energy facilities would depend on the extent of the facilities being removed.

3.9 Land Use				
Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW	
Construction Impacts				
Project Temporary Disturbance Area	289.5 acres	356.0 acres	401.4 acres	
Agriculture Crops Removed from Cultivation	None	None	None	
Livestock Grazing	Same as most likely scenario.	Reduction in available land for livestock grazing. Domestic animals temporarily removed from construction sites for one grazing season	Same as most likely scenario.	
Operation and Maintenance Impacts				
Project Permanent Disturbance Area	164.7 acres	164.7 acres	164.6 acres	

#### 3.9 Land Use

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Agricultural Crops Removed from Cultivation	None	None	None
Decommissioning Impacts			
Temporary land disturbance	Similar to construction; no permanent land use impacts	Similar to construction; no permanent land use impacts Upon decommissioning, acreage taken out of open space and rangeland use could be returned to these prior uses. Livestock grazing, if occurring, would be abated during dismantling activities. Landowners may use and maintain some of the access roads installed by the project.	Similar to construction; no permanent land use impacts

#### 3.9 Land Use: Mitigation Measures

- During project construction, it would be necessary to remove cattle from areas where blasting or heavy equipment operations are taking place. The Applicant would make
  arrangements with property owners and livestock owners to keep livestock out of these areas during those periods.
- After construction is completed, disturbed areas would be returned as closely as possible to their original state, excluding service and access roads, which would remain in
  place for the life of the facility. The Applicant would allow controlled hunting to avoid creating a sanctuary for elk and deer that may cause an increase in agricultural
  damage to neighboring landowners.

#### 3.9 Land Use: No Action Alternative

Under the No Action Alternative, the project would not be constructed and existing land uses in the project area would continue without the influence of the proposed project. The specific type, nature, and extent of future developments at the project site are unknown, and would depend primarily on county growth trends. The Kittitas County Comprehensive Plan and Zoning Code would govern development at the project site.

Under the No Action Alternative, the region's power needs could be addressed through development of other energy facilities. Such development could occur at conducive locations throughout the state of Washington. Impacts to agriculture would depend on the specific location of the projects.

8			
Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Construction Impacts			
Rotor Diameter	295 ft.	231 ft.	197 ft.
Number of Turbines	104	136	158

#### 3.10 Visual Resources/Light And Glare

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Total Height	410 ft.	378 ft.	361 ft.
Construction Activity Overall	Same as most likely scenario	Moderate	Same as most likely scenario
Construction Equipment	Same as most likely scenario	Highly visible from nearby areas	Same as most likely scenario
Laydown Areas	Same as most likely scenario	Temporarily stored turbine components, equipment, and vehicles would be visible	Same as most likely scenario
Localized dust clouds (soil disturbance)	Same as most likely scenario	Periodic, small, localized clouds of dust would be visible during grading activities	Same as most likely scenario
Operation and Maintenance Impacts			
View 1 – Vantage Highway Corridor South of Project Site	Same as most likely scenario	Moderate	Same as most likely scenario
View 2 – Valley Lands at Eastern Edge of Kittitas Valley	Same as most likely scenario	Moderate	Same as most likely scenario
View 3 – Lands to the West, North, and East of Project Site	Same as most likely scenario	Moderate	Same as most likely scenario
View 4 – Kittitas and Surrounding Valley Areas	Same as most likely scenario	Low	Same as most likely scenario
View 5 – Lands East of the Columbia River	Same as most likely scenario	Low	Same as most likely scenario
View 6 – I-90 in the Vicinity of the PSE Interconnect	Same as most likely scenario	Low	Same as most likely scenario
Decommissioning Impacts			
		If the project were repowered, visual impacts would likely be similar to those of the proposed facility. If dismantled, site disturbance would be visible on close examination for several years. The visual impacts of aboveground elements not removed would remain. Construction activities during the decommissioning process would be visibly	

restored to pre-project conditions.

#### 3.10 Visual Resources/Light And Glare: Mitigation Measures

- Active dust suppression will be implemented to minimize the creation of dust clouds during the construction period.
- Areas disturbed during the construction process will be reseeded to facilitate their return to natural-appearing conditions when construction is complete.
- The wind turbine towers, nacelles, and rotors used will be uniform and will conform to the highest standards of industrial design to present a trim, uncluttered, aesthetically attractive appearance.
- The turbines will have neutral gray finish to minimize contrast with the sky backdrop.
- A low-reflectivity finish will be used for all surfaces of the turbines to minimize the reflections that can call attention to structures in a landscape setting.
- The rotors will be turning approximately 80–85% of the time as a result of local wind conditions and the equipment used. This will minimize the appearance of the turbines being non-operational.
- The small cabinets containing pad-mounted equipment that will be located at the base of each turbine will have an earth-tone finish to help them blend into the surrounding ground plane.
- The only exterior lighting on the turbines will be the aviation warning lighting required by the FAA. This lighting will be kept to the minimum required intensity to meet FAA standards. It is anticipated that the FAA will soon be issuing new standards for marking of wind turbines that will entail lighting fewer turbines in a large wind farm than is now required, as well as synchronizing all the lights. These potential regulatory changes are being closely monitored and if, as is likely, they are made before project construction begins, the aviation safety marking lighting will be designed to meet these revised standards.
- Most of the project's electrical collection system will be located underground, eliminating potential visual impacts.
- Where feasible, existing road alignments will be used to provide access to the turbines, minimizing the amount of additional surface disturbance required. Where possible, access road widths will be restricted to 20 feet (approximately half of all access road miles.) The access roads will have a gravel surface and will have grades of no more than 15%, minimizing erosion and its visual effects.
- The O&M facility building will have a low-reflectivity earth-tone finish to maximize its visual integration into the surrounding landscape.
- The parking areas at the O&M facility will be covered with gravel, rather than asphalt, to minimize contrast with the site's soil colors.
- Outdoor night lighting at the O&M facility and the substation(s) will be kept to the minimum required for safety and security, sensors and switches will be used to keep lighting turned off when not required, and all lights will be hooded and directed to minimize backscatter and offsite light trespass.
- All equipment at the substation(s) will have a low-reflectivity neutral gray finish to minimize visual sensitivity.
- All insulators in the substations and takeoff towers will be non-reflective and non-refractive.
- The control buildings located at each substation will have a low-reflectivity earth-tone finish.
- The chain-link fences surrounding the substations will have a dulled, darkened finish to reduce their contrast with the surroundings.

Under the No Action Alternative, the project would not be constructed or operated, and the visual and aesthetic impacts described for the Proposed Action would not occur. The No Action Alternative assumes that future development would comply with existing zoning requirements for the project area.

In the short-term, the visual character of foreground, midground, and distant views would remain similar to the existing conditions. The existing views are primarily of open, nonforested hillside rangelands. It is likely these conditions would persist into the long-term unless the present zoning is changed allowing for a different land use, or the land is purchased and converted to a different use (i.e., mining, or different agricultural use) permitted under the County's zoning code.

If the proposed project is not constructed, it is likely that the region's need for power would be addressed by user-end energy efficiency and conservation measures, by existing power generation sources, or by the development of new renewable and non-renewable generation sources. Visual and aesthetic impacts would depend on the type of facility being constructed.

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Construction Impacts			
Increased influx of temporary and permanent workers in the area.	Same as most likely scenario.	Construction total of 250 employees; maximum 160 employees during peak construction month. Operational workforce of 14 to 18 personnel	Same as most likely scenario.
Increased demand for temporary and permanent housing.	Same as most likely scenario.	Demand for a maximum of 160 units during peak employment for construction phase.	Same as most likely scenario.
Operation and Maintenance Impacts			
Increased employment and spending/income	Same as most likely scenario.	Total 250 employees; maximum 160 employees during peak construction month. Operational workforce of 14 to 18 personnel; \$4.8 million in total income and 71 jobs for construction; \$1.4 million and up to 30 jobs for operations; \$376,000 income to landowners.	Same as most likely scenario.
Decommissioning Impacts			
	Similar to most likely scenario	Decommissioning activities would result in beneficial but temporary construction employment similar to that projected for facility construction. If subsequent economic uses of the project site were not developed, facility closure would represent a minor long- term loss of employment and associated economic activity for the local and regional economy, a loss of tax base, and property tax revenues.	Similar to most likely scenario

#### 3.11 Population, Housing, And Economics

#### 3.11 Population, Housing, And Economics: Mitigation Measures

There is an adequate supply of temporary housing available to accommodate non-local workers; therefore, no mitigation measures are proposed. The overall socioeconomic impact of the project for the County would be increased property tax base and employment opportunities; therefore, no mitigation measures are planned for population, housing, and economics.

#### 3.11 Population, Housing, And Economics: No Action Alternative

Under the No Action Alternative, the project would not be constructed or operated, and socioeconomic impacts described for the Proposed Action would not occur. The No Action Alternative assumes that future development would comply with existing zoning requirements for the project area, which is zoned Commercial Agriculture and Forest and Range.

Pending the proposal of other significant or influential development within the area, population growth and business development and the associated revenues to the County would likely continue on the same trend that currently exists.

If the project were not constructed, the region's power needs could be delivered through development of other generation facilities. The socioeconomic impacts of other facilities would largely depend on the revenue generated, and the temporary and permanent direct and indirect employment generated.

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Construction Impacts			
Increased demand for police protection services (e.g., traffic violations, accidents)	Same as most likely scenario	Construction total of 253 employees; maximum 160 employees during peak construction month.	Same as most likely scenario.
Increased fire risk/demand for fire protection services	289 acres disturbed during construction. 164.7 acres of permanently disturbed acres with 104 WTG	356 total acres disturbed during construction. 164.7 permanently disturbed acres with 136 WTG	401 total acres disturbed during construction. 164.4 acres permanently disturbed acres with 158 WTG.
Increased demand for emergency medical services	Same as most likely scenario	Total of 253 construction employees with a maximum 160 employees during peak construction month.	Same as most likely scenario.
Increased demand for school services	Same as most likely scenario.	Total 253 employees; maximum 160 employees during peak construction month.	Same as most likely scenario.
Increased demand for recreational resources by construction employees	Same as most likely scenario.	160 employees during peak construction month.	Same as most likely scenario.

#### 3.12 Public Services and Utilities/Recreation

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Conflicts between onsite and offsite recreation and construction	289 acres of construction disturbance; no recreational access to site during construction.	356 construction acres of disturbance, no recreational access to site during construction.	401 acres of construction disturbance, no recreational access to site during construction.
Increased demand for solid waste disposal services	Same as most likely scenario	Construction volume of CDL wastes <100 tons.	Same as most likely scenario.
Increased demand for sewage treatment	Same as most likely scenario	Sanitary waste discharged to portable toilets; 253 total construction employees.	Same as most likely scenario
Increased demand for water	10.5 million gallons used for dust suppression	10.7 million gallons used for dust suppression	10.8 million gallons used for dust suppression
Operation and Maintenance Impacts			
Increased demand for police protection services (e.g., traffic violations, accidents)	Same as most likely scenario	Operational workforce of 14-18 personnel	Same as most likely scenario.
Increased fire risk/demand for fire protection services	Same as most likely scenario	Same acreage as construction but lower risk from fewer personnel present on site.	Same as most likely scenario
Increased demand for emergency medical services	Same as most likely scenario	Operational workforce of 14-18 personnel	Same as most likely scenario.
Increased demand for school services	Same as most likely scenario.	Operational workforce of 14-18 personnel.	Same as most likely scenario.
Conflicts between onsite and offsite recreation and operations	Same as most likely scenario.	Some public access allowed onsite	Same as most likely scenario.
Increased demand for recreational resources by operation employees	Same as most likely scenario.	14-18 O&M personnel.	Same as most likely scenario.
Increased demand for water	<1,000 gallons per day used for operations.	<1,000 gallons per day used for operations.	<1,000 gallons per day used for operations.
Increased demand for sewage treatment	Same as most likely scenario	Wastewater from operational workforce of 14- 18 people discharged to onsite septic tanks	Same as most likely scenario.
Increased demand for solid waste disposal services	Same as most likely scenario	Operational wastes of 1-2 dumpsters per week.	Same as most likely scenario.
Conflicts between onsite and offsite recreation and operations	164.7 acres of permanent disturbance; controlled access to site for recreation.	164.7 acres of permanent disturbance, controlled access to site for recreation.	164.6 acres of permanent disturbance, controlled access to site for recreation.

3.12 Public Services and Utilities/Recreation			
Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Decommissioning Impacts			
	Similar to construction	Similar to construction	Similar to construction
		Respective public and private landowners wi	11

determine public access in the event of project termination, abandonment, or cessation of operation at the appropriate time.

#### 3.12 Public Serv

#### 3.12 Public Services and Utilities/Recreation: Mitigation Measures

Potential impacts to public services and utilities will be mitigated by tax revenues generated by the project. Fiscal impacts of the project are addressed in Section 3.11, "Population, Housing and Economics."

Because construction activities at the project are not expected to result in significant impacts to medical services, schools, public utilities, communications, water supplies, sewage/solid waste disposal, or stormwater systems, no mitigation measures will be necessary for those services or utilities.

The following mitigation measures will be implemented to reduce impacts to those public services potentially affected by construction of the project:

The Applicant will provide all police, fire, and emergency medical personnel with emergency response details for the project.

#### Law Enforcement

The Applicant will consult with the County regarding the impact on county law enforcement staffing. If additional staffing is required, the Applicant shall pay the additional costs for law enforcement associated with construction impacts and activities to be provided by the County Sheriff's office or a private onsite security, as deemed necessary.

#### **Fire Protection**

- Since the DEIS was issued, the Applicant has secured a signed agreement with Fire District #2 (dated September 10, 2004) for fire protection services. A fire protection services agreement shall be maintained for the life of the Project, or until the Project site is annexed into a Fire District or other municipal entity which provides fire protection services.
- The Applicant will provide provisions for special training of fire district personnel for fires related to wind turbines; detailed maps to fire districts that show all access roads to the project; use of spark arresters on all power equipment (e.g., cutting torches and cutting tools), when necessary due to extreme fire danger conditions; carrying fire extinguishers in all maintenance vehicles; supplying water for fire fighting at locations up and beyond the contracted fire districts to keep the fire in a manageable size incident; implementing an FAA-style lighting plan to prevent aircraft mishaps to limit fire response.

#### **Emergency Medical Services**

- The Applicant will make arrangements with the Kittitas Valley Community Hospital for helicopter transportation service in the event that any operations personnel are seriously injured and require evacuation from a remote location within the project area. Currently, the Applicant does not plan to have signed agreements with the hospital and/or EMS as these services are provided on a fee-for-service basis.
- Measures include training for operations personnel and EMS personnel in the use of a rescue basket that will be kept at the operations and maintenance facility for the purpose of removing injured employees from the WTGs; providing keys to a master lock system to fire districts that will enable emergency personnel to unlock gates that would otherwise limit access to the project; informing workers at the project of emergency contact phone numbers and training them in emergency response procedures.

#### **Communication Systems**

- The Applicant has completed and submitted to EFSEC a thorough communications impact study and has documented microwave and fresnel zones over the Project area based on the FCC's database. See Section 3.12.2.1 of the Draft EIS and Exhibit 24A of the Application for Site Certification. The analysis concludes that there would be no impact to existing communications pathways, including those used by cellular telephone providers.
- An environmental clean-up company will be under contract to provide services to protect the environment up to and beyond small incidents, including planning, implementing, and storing of all material considered to be harmful.
- During operation of the project, impacts to local services and utilities are expected to be insignificant. However, emergency preparedness planning will be implemented as
  mentioned above, to reduce potential impacts in the event of an emergency
- The Applicant will work with Kittitas County Fire Marshal and Fire District #2 for all aspects of operations

3.12 Public Services and Utilities/Recreation: No Action Alternative

Under the No Action Alternative, the project would not be constructed or operated, and the impacts to public services and utilities and recreation described for the Proposed Action would not occur. The No Action Alternative assumes that future development would comply with existing zoning requirements for the project area, which is zoned Commercial Agriculture and Forest and Range.

If the project were not constructed, the region's power needs could be delivered through development of other generation facilities. The impacts to public services of other facilities would largely depend on the type and location of the facilities.

#### 3.13 Cultural Resources

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW	
Construction Impacts				
Construction impacts.	Same as Most Likely Scenario	No existing sites identified within areas of temporary and/or permanent ground disturbance; direct impacts minimal or non- existent.	Same as Most Likely Scenario	
Operation and Maintenance Impacts				
Operation	Same as Most Likely Scenario	Operation will not involve new ground disturbance.	Same as Most Likely Scenario	
Decommissioning Impacts				
Decommissioning	Same as Most Likely Scenario	Decommissioning would occur only within areas that have been previously disturbed through construction of the project; direct impacts minimal or non-existent.	Same as Most Likely Scenario	

#### 3.13 Cultural Resources: Mitigation Measures

As recommended by the Assistant Archaeologist at Washington State Office of Archaeology and Historic Preservation (OAHP), 100-foot design and construction buffers will be maintained around the archaeological and historical sites identified during this current cultural resource survey, even though they do not meet the standard qualifications for NRHP. OAHP requested that the project archaeologist flag off or otherwise delineate the archaeological sites with a 100-foot buffer. Ground disturbing actions within a specified radius of any archaeological sites, either recorded during the initial survey or previously documented, will be monitored by a professional archaeologist to prevent damage or destruction to both known and unanticipated archaeological resources.

If any archaeological materials, including but not limited to human remains, are observed, excavation in that area will cease, and OAHP, EFSEC, the affected tribes and the Applicant will be notified. At that time, appropriate treatment and mitigation measures will be developed and implemented. If the project cannot be moved or re-routed to avoid resources, the resources will be tested for eligibility for listing in the NRHP. Any excavation or disturbance to the archaeological sites will require an excavation permit from OAHP per RCW 27.53.060. The archaeologist will remove any flagging tape or pin flags at the end of the construction-monitoring phase of the project.

If a tribe requests to have one of its representatives present during earth-disturbing construction activities, the Applicant will comply with their wishes. In all cases, the project shall note all concerns raised through tribe requests.

#### 3.13 Cultural Resources: No Action Alternative

Under the No Action Alternative, the project would not be constructed or operated, and the environmental impacts described in this section would not occur. The No Action Alternative assumes that future development would comply with existing zoning requirements for the project area, which is zoned Commercial Agriculture and Forest and Range.

If the project were not constructed, the region's power needs could be delivered through development of other generation facilities. Impacts to cultural resources would depend on the land area impacted, and density of cultural resources on the facility sites.

#### 3.14 Traffic And Transportation

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Construction Impacts			
Construction trips	728 daily trips 458 daily trips <sup>1</sup>	812 daily trips 498 daily trips <sup>1</sup>	770 daily trips 478 daily trips <sup>1</sup>
Parking requirements	Same as Most Likely Scenario	Approx. 2 acres	Same as Most Likely Scenario
Hazardous materials transport	Same as Most Likely Scenario	Diesel fuel and gasoline required for mobile construction equipment	Same as Most Likely Scenario
Roadway limitations	Less than Most Likely Scneario: 14% fewer trucks	Large number of trucks and trucks exceeding legal weight limits may cause pavement deterioration.	Less than Most Likely Scenario: 7% fewer trucks
Roadway hazards	Less than Most Likely Scenario: 14% fewer trucks	Increased risk of accidents.	Less than Most Likely Scenario: 7% fewer trucks

<sup>1</sup> Daily trips with rock quarry onsite.

3.14	Traffic	And	Transportation
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Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Aviation hazards	Same as Most Likely Scenario	No adverse effect	Same as Most Likely Scenario
Operation and Maintenance Impacts			
Operational trips	Same as Most Likely Scenario	36 daily trips	Same as Most Likely Scenario
Parking requirements	Same as Most Likely Scenario	Approx. 30 spaces	Same as Most Likely Scenario
Hazardous materials transport	Same as Most Likely Scenario	No adverse effect	Same as Most Likely Scenario
Road limitations	Same as Most Likely Scenario	No adverse effect	Same as Most Likely Scenario
Road navigation hazards	Same as Most Likely Scenario	No adverse effect	Same as Most Likely Scenario
Aviation hazards	Same as Most Likely Scenario	Since the Draft EIS was issued, the FAA has issued Determinations of No Hazard (DNH) for 127 wind turbine generators proposed for the project. (see Figure 1-4 in this FEIS for a revised project layout).	Same as Most Likely Scenario
Road maintenance	Same as Most Likely Scenario	32 miles (165 acres) of private roadways. There are no public access requirements.	Same as Most Likely Scenario
Tourism-induced traffic	Unknown	Unknown	Unknown
Decommissioning Impacts			
	Slightly less than Most Likely Scenario as there are fewer wind turbines	Similar to those described for construction. However, assuming that roadways would remain in place, the resulting workforce and corresponding vehicle trips would be smaller	Slightly more than Most Likely Scenario as there are more wind turbines

#### 3.14 Traffic And Transportation: Mitigation Measures

The Applicant will prepare a Traffic Management Plan (to be submitted to EFSEC and Kittitas County prior to construction for review), with the construction contractor outlining steps for minimizing construction traffic impacts;

- The Applicant will provide notice to adjacent landowners when construction takes place to help minimize access disruptions;
- The Applicant will provide proper road signage and warnings of "Equipment on Road," "Truck Access," or "Road Crossings" along Vantage Highway;
- When slow or oversized wide loads are being hauled, appropriate vehicle and roadside signing and warning devices will be deployed per the Traffic Management Plan. Pilot cars will be used as the WSDOT dictates, depending on load size and weight;
- The Applicant will construct necessary site access roads and an entrance driveway that will be able to service truck movements of legal weight and provide adequate sight distance;
- The Applicant will encourage carpooling for the construction workforce to reduce traffic volume;
- In consultation with Kittitas County, the Applicant will provide detour plans and warning signs in advance of any traffic disturbances;
- The Applicant will employ flaggers as necessary to direct traffic when large equipment is exiting or entering public roads to minimize risk of accidents;
- Where construction may occur near the roadway, one travel lane will be maintained at all times.
- The Applicant will videotape the portion of Transporter Route 1, from the southern City of Kittitas City Limits to the project site access and Transporter Route 2 from Vantage to the project site access to document pavement conditions before and after construction and if project construction results in pavement degradation, will restore the pavement to equal or better condition than they were prior to construction.
- The Applicant will construct a commercial driveway access meeting the WSDOT Design Manual Standards Chapter 920.
- The Applicant will monitor traffic volumes using the driveway and if they exceed 1,500 vehicles per day will modify the driveway and intersection with Vantage Highway to
  meet the WSDOT Design Manual Chapter 910 requirements for intersections.
- The Applicant will provide financial assurance for decommissioning of the turbine access roadways.
- The Applicant will follow FAA guidelines for a wind turbine lighting and warning system.

Operation and maintenance of the project would not significantly affect traffic. The Applicant will follow FAA guidelines for a wind turbine lighting and warning system.

#### 3.14 Traffic And Transportation: No Action Alternative

Under the No Action Alternative, the WHWPP would not be constructed or operated. The No Action Alternative assumes that future development would comply with existing zoning requirements for the project area, which is zoned Commercial Agriculture and Forest and Range. According to the county's zoning code, the Commercial Agriculture zone is dominated by farming, ranching, and rural lifestyles, and permitted uses include residential, green houses, and agricultural practices. Permitted uses in the Forest and Range zone include logging, mining, quarrying, and agricultural practices, as well as residential uses.

Based on the continued use of the site without change, average daily trips from the site would be one or fewer.

If the proposed project were not built, additional renewable and non-renewable energy facilities may have to be constructed to meet regional power needs. Impacts to traffic and transportation would depend on the specific location of such projects and current transportation services available in the vicinity of the sites

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW	
Construction Impacts				
Fire or Explosion <sup>1</sup>	Less than Most Likely Scenario	Primary Concern – Fire Protection and Prevention Plan to address.	Greater than Most Likely Scenario	
Release of Hazardous <sup>1</sup> Materials	Less than Most Likely Scenario	Fuel, mineral oil, and lubricating oil spills possible. SPCC Plan to address.	Greater than Most Likely Scenario	
Terrorism/Sabotage/ Vandalism	Same as Most Likely Scenario	Site access controlled. Security Plan to provide specifics.	Same as Most Likely Scenario	
Operation and Maintenance Impacts				
Fire or Explosion <sup>2</sup>	Less than Most Likely Scenario	Primary Concern – Fire Protection and Prevention Plan to address.	Greater than Most Likely Scenario	
Release of Hazardous <sup>1</sup> Materials	Less than Most Likely Scenario	Lubricating oil, ethylene glycol/water mix, hydraulic fluids, and mineral oil spills possible. SPCC Plan to address.	Greater than Most Likely Scenario	
Gearbox – Lubricating Oil	110 gallons per turbine	90 gallons per turbine	70 gallons per turbine	
	11,440 gallons total	12,240 gallons total	11,060 gallons total	
Cooling System – Ethylene	55 gallons per turbine	40 gallons per turbine	30 gallons per turbine	
Glycol/ Water Mix	5,720 gallons total	5,440 gallons total	4,470 gallons total	
Hydraulic System – Hydraulic	85 gallons per turbine	65 gallons per turbine	45 gallons per turbine	
Fluid	8,840 gallons total	8,840 gallons total	7,110 gallons total	
Substation Transformer – Mineral Oil	Same as Most Likely Scenario	12,000 gallons per transformer up to 24,000 gallons	Same as Most Likely Scenario	
Pad-Mounted Transformer – Mineral Oil	500 gallons per transformer	500 gallons per transformer	500 gallons per transformer	
	52,000 gallons total	68,000 gallons total	79,000 gallons total	
Maximum Tower Collapse Hazard Zone Distance/Risk	410 feet/Same as Most Likely Scenario	344 feet/Low	295 feet/ Same as Most Likely Scenario	
Estimated Maximum Blade Throw Distance/Risk	410 feet/ Same as Most Likely Scenario	344 feet/Low	295 feet/ Same as Most Likely Scenario	

<sup>2</sup> Risk primarily a function of the number of towers

#### 3.15 Health And Safety

Proposed Action	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Estimated Maximum Ice/Blade Fragment Throw Distance/Risk	328 feet/Same as Most Likely Scenario	328 feet/Low	328 feet/Same as Most Likely Scenario
Shadow-Flicker	None– Closest residence is too far removed to experience shadow flicker effects.	None – Closest residence is too far removed to experience shadow flicker effects.	None– Closest residence is too far removed to experience shadow flicker effects.
Terrorism/Sabotage/ Vandalism	Same as Most Likely Scenario	Site access controlled. Motion sensors and security lighting to be installed. Security Plan to provide specifics.	Same as Most Likely Scenario
Electromagnetic Field	Same as Most Likely Scenario	Minimal field strengths at existing nearby residences.	Same as Most Likely Scenario
Electrical Shock	Same as Most Likely Scenario	Minimal hazard. Applicant committed to grounding metal objects along transmission line routes.	Same as Most Likely Scenario
Decommissioning Impacts			
Fire or Explosion	Similar to construction	Similar to construction	Similar to construction
Release of Hazardous Materials	Similar to construction	Similar to construction	Similar to construction
Terrorism, Sabotage, Vandalism	Similar to construction	Similar to construction	Similar to construction

#### 3.15 Health And Safety: Mitigation Measures

- The Applicant and its subcontractors would comply with all applicable local, state, and federal safety, health, and environmental laws, ordinances, regulations, and standards.
- The wind turbines for the proposed project would meet international engineering design and manufacturing safety standards including the International Electrotechnical Commission standard 61400-1: Wind Turbine Generator Systems–Part I: Safety Requirements.
- A minimum safety zone set back of 541 feet shall be maintained between Project wind turbines and residences located outside the Project boundaries illustrated in Exhibit B (Kittitas County 2005). In the event that Applicant wishes to install wind turbines closer than 541 feet to the Project boundary, the Applicant shall obtain an easement or covenant that restricts the construction of any new residences within 541 feet of any Turbine as measured from the nearest Turbine tower center point to any such new residence.
- Fire and Explosion
- All onsite service vehicles will be fitted with fire extinguishers. Fire station boxes with shovels, water tank sprayers, etc., will be installed at multiple locations on site along roadways during summer fire season. Based on the Applicant's agreement with Fire District No. 2, a number of dedicated water trucks will be stationed at various locations on the project site during construction during the fire season. The number and locations of these dedicated water trucks will be set forth in a detailed Fire Protection and Prevention Plan prepared in consultation with the fire district and submitted to EFSEC prior to construction.

#### Energy Facility Site Evaluation Council Table 1-2 Continued

- No gas-powered vehicles will be allowed outside of graveled areas. Mainly diesel vehicles (i.e., without catalytic converters) will be used on site. Any vehicles used off road
  on site will be high-clearance vehicles.
- Only state-licensed explosive specialist contractors are allowed to perform this work. Explosives require special detonation equipment with safety lockouts. Vegetation will
  be cleared from the general footprint area surrounding the excavation zone to be blasted. Standby water spray trucks and fire suppression equipment will be present during
  blasting activities.
- All equipment will be designed to meet NEC and NFPA standards. All area surrounding substation, fused switch risers on overhead pole line, junction boxes and pad switches will be graveled with no vegetation. A fire suppressing, rock-filled oil containment trough will be created around the substation transformer.
- Specially engineered lightning protection and grounding systems will be used at wind turbines and at substation. Footprint areas around turbines and substation will be graveled with no vegetation.
- Generators will not be allowed to operate on open grass areas. All portable generators will be fitted with spark arrestors on exhaust system.
- Fire suppression equipment will be present at location of welder/torch activity. Immediate surrounding area will be wetted with water sprayer.

#### **Release of Hazardous Materials**

• A Phase I Environmental Site Assessment for the project site did not reveal the presence or potential presence of any environmental contamination. If contaminated soils are found the Applicant would coordinate with Ecology for corrective measures

#### **Emergency Medical Response**

 Mitigation measures outlined in 3.12 Public Services would apply here. Emergency plans would be prepared in cooperation with the appropriate local authority and employees and emergency response personnel would be trained accordance with these plans.

#### **Aircraft Impact**

• The project facilities would be marked and lighted in accordance with FAA regulations to minimize the potential for a low-flying aircraft to collide with a structure.

#### Transmission Line Audible Noise and Electromagnetic Interference

The conductors for the proposed transmission line would be designed in accordance with National Electric Code standards and good utility practice to control corona effects.

#### **Emergency Plans**

Emergency plans would be prepared by the Applicant to protect public health and safety, and the environment on and off the site in the case of a major natural disaster or industrial accident relating to or affecting the proposed project. The Applicant would be responsible for implementing the plans in coordination with the local emergency response support organizations. The plans would address medical emergencies; construction emergencies; project evacuation; fire protection and prevention; floods; extreme weather abnormalities; earthquakes; volcanic eruption; facility blackout; spill prevention, control, and countermeasures; blade or tower failure; aircraft impact; terrorism, sabotage, or vandalism; and bomb threat.

#### 3.15 Health and Safety: No Action Alternative

Under the No Action Alternative, the proposed project would not be constructed. The risk of fire due to lightning strikes or human activity in the general area would still exist.

If the proposed project were not built, additional renewable and non-renewable energy facilities may have to be constructed to meet regional power needs. Health and Safety impacts would depend on the type and location of facility that is constructed.

Alternative	Impacts
3.1 Earth Resources	
Proposed Action	Impacts on topography, geologic units, and soils from project construction would result from clearing, excavation and filling associated with constructing roads, establishing temporary crane pads and constructing the base for each turbine, and installation of underground and overhead electrical lines. Total site disturbance would range from 289 acres to 401 acres. Erosion would result from site disturbance and cut and fill activities. Construction (cut and fill) of access roads in some areas could occur on or under relatively steep slopes, therefore, some sliding of soil and alluvial materials could be expected during construction
	No significant impacts on soils or topography are anticipated during project operation and maintenance
	Most of the project facilities would not be located on unstable slopes or landslide-prone terrain. The turbines would be located on the tops of ridges, on relatively flat areas, and not on steep slopes. Therefore, sliding of near-surface soils and rock is unlikely in these areas.
	Development would have no influence on the level of seismic or volcanic hazard in the project area. A large earthquake in the project area could impact wind power operations, disrupt the regional electrical distribution system, damage wind power equipment, or cause collapse of the turbine towers. Project design and implementation of emergency plans would minimize these potential impacts and protect the public health and safety and environment in the project vicinity.
	Decommissioning would consist of removing above-ground equipment such as wind turbines, meteorological towers, and their associated foundations to a depth of 3 feet below the ground surface. These activities would slightly alter topography and potentially cause minor erosion.
Kittitas Valley	Project construction activities would result in soil impacts. The total amount of ground disturbance during construction would range from 231 acres to 371 acres. Total site disturbance and cut-and-fill activities in steep slope areas could result in significant erosion and some sliding of soil and alluvial materials. Soils and surface topography would not be altered after construction of the project is complete. Landscaping, grass, and other vegetative cover would prevent significant soil erosion during operation and maintenance of the project. A detailed Stormwater Pollution Prevention Plan and site-specific BMPs would minimize the potential for pollutant discharge and erosion from the project site during construction and operations. Imported fill materials would be required primarily for construction of access roads and turbine foundations. Between 232.5 and 259.9 cubic yards of fill would be required depending on the project scenario selected. Fill would be transported to the site from local gravel sources.
	Development would have no influence on the level of seismic or volcanic hazard in the project area. A large earthquake in the project area could impact wind power operations, disrupt the regional electrical distribution system, damage wind power equipment, or cause collapse of the turbine towers. Project design and implementation of emergency plans would minimize these potential impacts and protect the public health and safety and environment in the project vicinity.
	Decommissioning activities would slightly alter topography and potentially cause minor erosion.
Desert Claim	Short-term impacts to soils during project construction and decommissioning include clearing and grading, excavation, and fill for 27 miles of access roads, underground cable trenching, and turbine pads on approximately 340 acres. Erosion could potentially result in increased sedimentation to surface water features, gully erosion, slope instability, and slope failures such as earth slumps, debris flows/slumps, and rock falls. Three turbine locations are near areas of high landslide hazard, and would require site-specific geotechnical studies and measures if not moved. The increased risk of erosion and landslides would be addressed by BMPs such as sediment and erosion control measures, stabilization measures for potential landslides, setbacks, micro-siting, and additional geological studies. During project operation, the risk of erosion would be similar to existing conditions. However, impervious surfaces associated with the O&M building, substation, project access roads, and footings of turbines/transformers could increase runoff and pose a risk, especially on steep

### Table 1-3. Comparison of Potential Impacts of Proposed Action and Off-Site Alternatives

Alternative	Impacts
	slopes. Potential soil loss and landslide impacts can be mitigated to acceptable levels with proper implementation of BMPs and erosion control measures. Plans for siting and design of project facilities will consider existing seismic risks present in the area.
	It is likely that fill requirements would be similar to those for the WHWPP. Fill may be imported from off-site sources, if insufficient native materials are available.
	Development would have no influence on the level of seismic or volcanic hazard in the project area. A large earthquake in the project area could impact wind power operations, disrupt the regional electrical distribution system, damage wind power equipment, or cause collapse of the turbine towers. A volcanic eruption could potentially contribute hazards from volcanic ash. Project design and implementation of emergency plans would minimize these potential impacts and protect the public health and safety and environment in the project vicinity.
	Decommissioning activities would slightly alter topography and potentially cause minor erosion.
Springwood Ranch	Project construction activities would result in soil impacts. Based on an estimate of 40 to 45 turbines, the total amount of ground disturbance during construction is estimated to be approximately 125 acres of total impact, of which 30 acres would be permanently impacted. Short-term erosion impacts would likely occur from clearing and grading activities during construction. During project operation, the risk of erosion would be similar to existing conditions on the site. Approximately 10 to 15 turbines could be located near areas of either high or moderate landslide potential. Setback and/or engineered protective measures would need to be required for these areas. Given the use of standard erosion control and stormwater management BMPs, erosion impacts would be localized, temporary, and insignificant.
	Given the smaller number of turbines than proposed for the WHWPP, and the smaller project area, it is probable the amount of new access roads to be developed would also be smaller than for the WHWPP. The resulting amount of required fill would therefore probably be approximately half that required for the WHWPP. It is unknown if this amount of fill would be available on-site, or if would have to be imported from elsewhere in the County.
	Development would have no influence on the level of seismic or volcanic hazard in the project area. A large earthquake in the project area could impact wind power operations, disrupt the regional electrical distribution system, damage wind power equipment, or cause collapse of the turbine towers. A volcanic eruption would contribute hazards from volcanic ash. Project design and implementation of emergency plans would minimize these potential impacts and protect the public health and safety and environment in the project vicinity.
	Impacts of decommissioning would slightly alter topography and potentially cause minor erosion.
Swauk Valley Ranch	Project construction activities would result in soil impacts. Based on an estimated number of 42 turbines, the total amount of ground disturbance during construction is estimated to be approximately 97 acres of total impact, of which 53 acres would be permanently impacted. Total site disturbance and cut-and-fill activities in steep slope areas could result in significant erosion and some sliding of soil and alluvial materials. Soils and surface topography would not be altered after construction of the project is complete. Landscaping, grass, and other vegetative cover would prevent significant soil erosion during operation and maintenance of the project. A detailed SWPPP and site-specific BMPs would minimize the potential for pollutant discharge and erosion from the project site during construction and operations.
	The total amount of fill that might be required for a project located on the Swauk Valley Ranch is estimated to be approximately 115,000 cubic yards.
	Development would have no influence on the level of seismic or volcanic hazard in the project area. A large earthquake in the project area could impact wind power operations, disrupt the regional electrical distribution system, damage wind power equipment, or cause collapse of the turbine towers. A volcanic eruption would contribute hazards from volcanic ash. Project design and implementation of emergency plans would minimize these potential impacts and protect the public health and safety and environment in the project vicinity.
	Impacts of decommissioning would slightly alter topography and potentially cause minor erosion.

Alternative	Impacts
3.2 Air Quality	
Proposed Action	Gasoline and diesel powered trucks, construction equipment, and processing equipment would generate carbon monoxide (CO), hydrocarbons, nitrogen oxides (NOx), and particulate matter in exhaust emissions. Construction would also create fugitive dust emissions from traffic and wind-blown dust from ground disturbances.
	Odor emissions from the project are limited to odors associated with exhaust from diesel equipment and vehicles. Given the strong prevailing winds at the project site and the fact that the nearest houses are located several miles from the project site, no odor impacts are anticipated.
	Operation of the project would produce no air emissions as no fuel would be burned to produce energy. It is anticipated that only a few trucks are required to travel along site roads for operation and maintenance activities. Therefore, operation of the project would not have any negative impact on air quality.
	Operation of the project would generate minor amounts of fugitive dust. Project-related traffic on gravel access roads would generate small amounts of additional fugitive dust. Operational traffic is expected to consist mainly of commute vehicles and pickup trucks used for inspection and maintenance. The gravel roads serving the site would be maintained in good condition, thereby minimizing dust emissions.
	Operation of the project would create no odors as no combustion is involved and no odor-producing materials are used in project operations.
	Decommissioning operations would generate fugitive dust and tailpipe emissions similar to those generated during construction.
Kittitas Valley	Impacts of the Kittitas Valley alternative would be similar to those described for the WHWPP due to the similarities in construction, operations, and maintenance activities. Construction would result in air pollution impacts generated by emissions from vehicle and equipment exhaust and fugitive dust particles from travel on paved and unpaved surfaces. Vehicle and equipment emissions would be temporary and limited to the immediate area surrounding the construction site. The magnitude of dust impacts would depend on the number of vehicles operated during construction and the distance over which transportation occurs. Dust emissions would also be associated with land clearing, ground excavation, and cut-and-fill operations. Project construction would produce limited odors from diesel equipment and vehicle exhaust; however, these impacts would occur over a short duration and would not result in adverse effects to regional air quality. With application of the standard control measures typically used in large construction projects, air quality impacts during construction would be insignificant.
	Operation of the Kittitas Valley alternative would not result in significant air quality impacts, as it does not involve the combustion of fossil fuels to generate electricity. Project operations and maintenance activities would produce limited air pollutants related to vehicle emissions and fugitive dust. However, these impacts would be minimized through implementation of standard control measures and would not cause adverse effects to regional air quality.
Desert Claim	Similar to Proposed Action
	A potential additional mitigation measure could include the application of dust palliatives, such as calcium chloride, to road surfaces to reduce the amount of dust created by vehicle traffic on unpaved roads. Use of dust palliatives might obviate the need for repeated watering of project access roads. Conversely, some resource agencies have expressed concern over possible ecological impacts from dust-palliative compounds transported in stormwater runoff; this issue would need to be addressed before use of dust palliatives could be recommended.
Springwood Ranch	Similar to Proposed Action
Swauk Valley Ranch	Similar to Proposed Action
3.3 Water Resources	
Proposed Action	Precipitation during construction could result in sediment-laden surface runoff from disturbed areas that could adversely affect nearby surface waters. Encountering significant amounts of groundwater during construction and blasting activities is not expected. The overall impact is

Alternative	Impacts
	expected to be temporary and unlikely to affect wells in the project area.
	Construction of the project would require water use for road construction, wetting of concrete, dust control, and other activities. The amount of water use is not expected to be significant because of the temporary nature of the impact and the availability of adequate water supply. An estimated 10.5 million to 10.8 million gallons of water would be used for various purposes during project construction.
	No significant erosion or sedimentation impacts on surface waters are expected as a result of operation and maintenance of the project.
	Water needs would be limited to bathroom and kitchen use, and general maintenance purposes and is expected to consume less than 1,000 gallons/day.
	Potential impacts on water resources from decommissioning the proposed project would be similar to project construction.
Kittitas Valley	Impacts during construction could include sediment-laden surface runoff from ground disturbance and exposed soils. If not properly mitigated, runoff from disturbed areas could adversely affect nearby surface waters. Impacts to existing groundwater wells due to blasting for construction of turbine foundations is expected to be unlikely, because of the significant difference between the depth of existing water wells (57 to more than 720 feet, with most around 150 feet), and the comparatively much shallower turbine foundation depth.
	Construction of the project would require delivery of water to the site. Estimated water use for construction related needs is 1million gallons, with up to 6.4 million gallons required for dust suppression on access roads and roadways. Construction water would be imported from certificated off-site sources. Construction activities would not result in any adverse impacts on local groundwater. The overall impact on groundwater in the project area is expected to be temporary and unlikely to affect water wells.
	Project O&M would result in no significant erosion or sedimentation impacts on local surface waters. Operation of the project would require a domestic well to serve the limited needs (less than 1000 gallons per day) of the O&M facility. No significant impacts on groundwater supplies are expected because of facility operations.
	Because of the far removed location of the Kittitas Valley Site from floodplains, no impacts to flood plains from construction or operation are anticipated.
	Impacts on water resources from decommissioning of the project would be similar to those described for construction. Appropriate construction BMPs followed during decommissioning activities would further minimize impacts.
Desert Claim	Turbine construction would affect 16 stream segments and temporarily disturb 3,700 linear feet of streams and a total of 3.0 acres of stream and riparian area. Project facilities would permanently occupy approximately 1,200 linear feet of streams, mostly at road crossings, and less than 1 acre of riparian area. The proponent intends to conduct further micro-siting analyses of proposed turbine and road locations to avoid or minimize impacts to surface water bodies. The project would not require surface water withdrawals or diversions during construction or operation; impacts on surface water quantity and quality are expected to be minor and temporary. BMPs will be used during construction to address water quality impacts. The volume of water required during construction for dust suppression and construction operations was not quantified. Mitigation measures to minimize potential adverse impacts of vibration on groundwater flow to wells or to operation of water wells due to blasting include verification of well locations and compliance with existing regulations for blasting design and allowable explosive weights.
	Impervious surfaces associate with the project are limited and are not expected to impact groundwater recharge. Impacts to existing groundwater wells due to blasting activities for turbine foundation construction are not expected.
	Water supply for operation and maintenance (mainly at the project's O&M facility) would likely be provided through development of a domestic well on participating landowner's property with withdrawals less than 5000 gallons per day. Septic waste form the O&M facility would be routed to an on-site septic system constructed according to state and local government requirements.
	Impacts on surface water and ground water during operation of the facility would therefore be minimal. Localized impacts to ground water

Alternative	Impacts
	quality from product spills would be minimized through required use of a spill prevention, containment and control plan.
	Impacts on water resources from decommissioning of the project would be similar to those described for construction. Appropriate construction BMPs followed during decommissioning activities would minimize impacts.
Springwood Ranch	Impacts during construction could include sediment-laden surface runoff from ground disturbance and exposed soils. If not properly mitigated, runoff from disturbed areas could adversely affect nearby surface waters. In particular, six to eight of the presumed turbine locations (and their associated access roads) would be within approximately one-quarter mile of the Yakima River, near slopes marked with high erosion and landslide potential. Additional site-specific mitigation measures would be warranted in this location of the project site. Site construction would have minimal impacts on groundwater. Runoff from disturbed areas would be infiltrated on site, resulting in a minor temporary increase in groundwater recharge.
	No analysis has been performed to determine the source or volume of water required during construction activities.
	Operation of a wind energy project would have minimal influence on existing surface water runoff patterns for Springwood Ranch and so would not result in significant impacts on surface water resources. Operation of the project would likely have minimal long-term impacts on groundwater. Impervious surfaces associated with turbines, roads, and buildings would result in a minor increase in surface runoff volume, some of which could translate into a minor increase in groundwater recharge. Water demands for project operation would likely be filled through construction of a domestic well.
	Impacts on water resources from decommissioning of the project would be similar to those described for construction. Appropriate construction BMPs followed during decommissioning activities would minimize impacts.
Swauk Valley Ranch	Impacts during construction could include sediment-laden surface runoff from ground disturbance and exposed soils. If not properly mitigated, runoff from disturbed areas could adversely affect nearby surface waters. Construction of the project would require delivery of water to the site for road construction, concrete preparation, dust control, and other activities. Construction activities would not result in any adverse impacts on local groundwater. The amount of water required would depend on the number of turbines and other facilities constructed, and the total length of access roads. Given that the hypothetical Swauk valley ranch project is smaller than the Wild Horse Project, the construction water needs would likely be less than those for the Wild Horse Project. The overall impact on groundwater in the project area is expected to be temporary and unlikely to affect water wells.
	Project O&M would result in no significant erosion or sedimentation impacts on local surface waters. Operation of the project would require a domestic well to serve the limited needs of the O&M facility. No significant impacts on groundwater supplies are expected because of facility operations.
	Impacts on water resources from decommissioning of the project would be similar to those described for construction. Appropriate construction BMPs followed during decommissioning activities would minimize impacts.
3.4 Vegetation And Wetlands	
Proposed Action	
	Under the different design scenarios, the length or width of project components, including roads, substations, O&M facilities, rock quarries, underground or overhead lines, permanent met towers, batch plant, or rock crusher would have the same footprints. These components remain unchanged under all scenarios and would have similar impacts under all scenarios.
	Total temporary upland vegetation disturbance would range from 289.5 acres for the 104-Turbine/3 MW scenario to 401.4 acres for the 158- Turbine/1 MW scenario. Total permanent vegetation impacts would be very similar (165 acres), with 0.12-acre difference between scenarios. The majority of impacts would occur within shrub-steppe vegetation, with herbaceous, herbaceous rock outcrop, rock outcrop, and pasture vegetation types also impacted.

Alternative	Impacts
	Impacts associated with project operations would include shading from the turbine towers, increased dust generated by travel on graveled roadways, potential changes in fire frequency patterns, and potential introduction of invasive weed species.
	No wetlands would be impacted as a result of the Proposed Action. All areas disturbed by the project are potential habitat for noxious and invasive plant species, particularly for those species previously observed or known to occur in the project area.
	Because of the absence of known populations within the project area, no construction-related impacts are anticipated to any federally or state- listed endangered, threatened, proposed, or candidate plant species. Limited impacts are anticipated, however, to one species on the Washington State Review list, hedgehog cactus. Direct impacts to this species may occur where it is located in the project footprints and indirect impacts from habitat degradation are also possible. It's estimated that less than 10% of individuals in the project area would be impacted
Kittitas Valley	Construction impacts to vegetation communities would be similar to those described for the Wild Horse site, except a greater diversity of habitats would be affected. There would be a permanent loss of approximately 93 to 118 acres of vegetation and temporary impacts to 311 to 371 acres. Grassland, shrub-steppe, sagebrush, deciduous shrub, riparian vegetation, and conifer forest communities would be cleared for project operations. Loss of 36–150 acres of sensitive lithosol habitat would occur. Disturbed areas would be replanted and restored after completion of construction activities, however, use of heavy equipment during the construction phase could cause soil compaction that may affect long-term plant survival and growth. Other potential impacts on vegetation include dust effects and increased potential for wildfires.
	Up to 185 square feet of one wetland would be affected by filling or grading activities during construction. The potential impacts to vegetation from the introduction, colonization, and spread of noxious weed species and the corresponding control measures would be similar to those described for the Wild Horse site.
	Impacts associated with project operations would be similar to those described for the Wild Horse site, and would include shading from the turbine towers, increased dust generated by travel on graveled roadways, potential changes in fire frequency patterns, and potential introduction of invasive weed species. No impacts on wetlands would occur during project operations if proper drainage, erosion-control plans, and stormwater management practices are implemented.
	There would be no direct impacts on endangered plant species during the construction or operation and maintenance phases of the project.
Desert Claim	Approximately 88 acres of existing shrub-steppe, grassland, riparian shrub, riparian forest, and wet meadow vegetation would be permanently removed with over 90% of the impact occurring in shrub-steppe and grassland. Approximately 5 acres of land currently used for agricultural purposes would also be permanently converted to land occupied by the project facility. In addition, 342 acres of vegetation would be temporarily disturbed. Mitigation measures similar to those proposed for the Wild Horse site would be implemented, including construction timing, a detailed reclamation and site restoration plan in consultation with a TAC with standards based on undisturbed reference areas, and temporary erosion control measures employed during reseeding efforts.
	Approximately 3.2 acres of wetland area would be permanently displaced by project facilities, with an additional 17 acres temporarily disturbed by construction. The proponent intends to conduct further micro-siting analyses of proposed turbine and road locations to avoid or minimize impacts to surface water bodies. Wetland impacts would be subject to compensatory mitigation. No impacts to special-status plant species are anticipated. Similar to the Wild Horse site, all areas disturbed by project construction would be vulnerable to invasion by nonnative or noxious weed species. Control measures similar to those described for Wild Horse would be implemented.
Springwood Ranch	Impacts to vegetation communities would be similar to, but less than, those described for the Wild Horse site and the other alternatives. It is estimated that approximately 30 acres of existing vegetation would be permanently displaced with an additional 110 acres temporarily disturbed for construction. Grasslands (generally used for grazing now) and shrublands would be the vegetation communities most affected by the project. Portions of woodland in the northwest corner of the site could possibly be affected. No other plant communities would be

Alternative	Impacts
	temporarily or permanently disturbed.
	Construction of access roads and collection cable routes through or near wetland areas would potentially affect wetlands. Five wetlands lie in the northern and western portions of the site and would be subject to temporary disturbance by construction activity or displacement by permanent project facilities. Potential wetland impacts may be avoided or minimized through Micro-siting. The total area of potential wetland impacts has not been determined.
	Based on current available information, no impact on federal or state threatened, endangered, or sensitive plant species would be expected to occur as a result of the project. All areas disturbed by the project are potential habitat for noxious and invasive species. Control measures would be implemented to prevent significant impacts.
	Impacts from operation and maintenance activities would be similar to those described for the Wild Horse site.
Swauk Valley Ranch	Construction impacts would be similar to, but less than, those described for the Wild Horse and Kittitas Valley sites. Approximately 97 acres would be temporarily disturbed. Habitats that would be most affected by the project include grassland, shrub-steppe, and low sagebrush communities. Sensitive lithosol habitat would be potentially impacted in areas where shrub-steppe is disturbed. As with the project proposed at the Wild Horse site, these areas would be replanted and restored after completion of construction activities. Success of restoration efforts would depend on factors such as extent of soil compaction, extent of lithosols impacted, potential changes in fire frequency patterns, and the introduction of invasive plant species.
	It is not known if there would be impacts to wetlands from construction. Micro-siting could reduce wetland impacts by placing project facilities outside wetland buffers. The project could potentially affect 17 acres of a thyme buckwheat/Sandberg's bluegrass plant community located adjacent to the south site boundary. As currently proposed, five wind turbines would be located within the designated sensitive area.
	Impacts from operations and maintenance activities would be similar to those described for the Wild Horse site. No impacts on wetlands are anticipated during project operations if proper management practices are implemented.

Alternative	Impacts
3.5 Wildlife	
Proposed Action	Potential construction-related impacts include clearing and removal of vegetation, modification or loss of habitat, and construction noise. Habitat for upland game birds, passerines, hawks, small mammals, deer, elk, and reptiles would be impacted. Depending upon the scenario constructed, there would be 289 acres to 401 acres of temporary impacts to wildlife habitat and approximately 165 acres of permanent impact to wildlife habitat
	Construction impacts to reptiles and amphibians on site would be loss of habitat and direct mortality of some individuals occurring in construction zones. Operation impacts would be limited. Temporary loss of big game habitat from project construction is considered a minor impact due to vegetation reclamation and the vast expanse of suitable habitat for mule deer in the region. Once construction is complete, it is expected that deer would become habitated to wind turbines and again occupy areas on-site. Elk could shift their path to the north without migratory hindrance due to the large size of the corridor.
	Potential mortality from construction equipment on site is expected to be quite low and similar to other recent wind projects. Operation and maintenance impacts on wildlife species may include disturbance and fatalities associated with vehicle traffic, avoidance of turbines, and collisions with turbines and meteorological towers. It is expected that passerines, including western meadowlark, vesper sparrow and horned lark, may experience between 50 and 300 fatalities per year. Raptors such as American kestrels and red-tailed hawks are estimated to have an average of 3 to 6 fatalities per year. It is likely that some bat fatalities would occur from collision with wind turbines. No disturbance or displacement impacts to raptor nests are anticipated, since no active raptor nests were identified within ½ mile (0.80km) of the proposed facilities.
	A low risk potential exists for bald eagle fatalities during project operation. No impacts to federally-listed endangered, or threatened species are anticipated.
	Development of roads and project facilities may lead to fragmentation of habitat for big game populations. Impacts on mammals from project operations are expected to be very low and not significant. Some mortality of migratory bats, in particular hoary and silver-haired bats, is anticipated during operation.
	Some white-tailed and black-tailed jackrabbits and Merriam's shrew could be killed by vehicular traffic.
Kittitas Valley	Potential construction-related impacts include clearing and removal of vegetation, modification or loss of habitat, and construction noise. Habitat for upland game birds, passerines, hawks, small mammals, deer, elk, and reptiles would be impacted. Depending upon the scenario constructed, there would be 231 acres to 370 acres of temporary impacts to wildlife habitat and 93 to 118 acres of permanent impact to wildlife habitat under this alternative.
	Ground-dwelling mammals would be temporarily displaced by construction activities and would lose the use of permanently disturbed areas. Elk and mule deer would likely avoid the project area during periods of construction activity. Reptile species (striped whipsnake and sharptail snake) may be affected by loss of habitat and direct mortality in construction zones.
	During project construction, the possibility of mortality effects to bald eagles is considered negligible and very unlikely to occur.
	Operation and maintenance impacts on wildlife species may include disturbance and fatalities associated with vehicle traffic, avoidance of turbines, and collisions with turbines and meteorological towers. It is expected that passerines may experience between 50 and 300 fatalities per year. Raptors are estimated to have an average of 3 to 6 fatalities per year. It is likely that some bat fatalities would occur from collision with wind turbines. Bald eagle use of this site is higher than that observed at the WHWPP site, however the potential for bald eagle mortality is considered low because of use patterns within the site and a lack of habitat features in the immediate vicinity of the proposed turbines. Individuals of some species such as white-tailed and black-tailed jackrabbits and Merriam's shrew could be killed by vehicular traffic.
	Development of roads and project facilities may lead to fragmentation of habitat for big game populations.

Alternative	Impacts
Desert Claim	Construction related impacts to wildlife habitat would be similar to those described for both the WHWPP and the Kittitas Valley alternative with, an estimated 342 acres of temporary impacts and 88 acres of permanent impacts to vegetation on the site. Construction activities could temporarily displace species from the project area due to noise and activity, and ground-dwelling species would be permanently displaced from areas of permanent impact. Construction activities could cause mule deer to avoid the project area however adequate habitat in the surrounding area would compensate for this. Elk may respond to project construction by shifting their migratory path to the north; the corridor is likely large enough to accommodate this adjustment without hindering their migration. During project construction, the possibility of mortality effects to bald eagles is considered negligible and very unlikely to occur.
	Operation and maintenance impacts would also be similar as those described for both the WHWPP and the Kittitas Valley alternative. Potential passerine mortality for this alternative has been estimated at approximately 140 to 220 birds per year and raptor fatalities have been estimated at approximately 3 to 4 per year. The potential for bald eagle mortality is low based on limited use of the site. Migratory bats are likely at some risk of collision with wind turbines, primarily during the fall season. Estimated mortality range is similar to, or lower than that for birds; non-migratory and migratory resident bat populations are not expected to be negatively impacted by wind turbines.
	Project operations may reduce use of the area by wintering mule deer, although it is expected that mule deer would become habituated to the turbines and reoccupy the site. Elk may also become habituated or may continue to use areas further to the north during migration.
	Individuals of some species may be killed by vehicular traffic.
Springwood Ranch	Wind plant construction could possibly affect birds through loss of habitat, disturbance and displacement effects due to human presence, noise, and potential fatalities from construction equipment. Disturbance effects would be expected to occur only if the construction activity took place near an active nest or a foraging area. If this was the case, breeding might be affected and foraging opportunities altered during the duration of construction.
	Under this alternative it is estimated that there would be approximately 110 acres of temporary impact to vegetation and 28 to 30 acres of permanent impact to vegetation, therefore this alternative would have less impact to wildlife habitat than the WHWPP, and both the Kittitas Valley and the Desert Claim alternatives.
	Potential avian mortality has not been calculated for this alternative, and would be dependent upon the number of turbines built and the use of the area by avian species. Given the location of this site lower in the valley and closer to sources of water, fatality rates may not be comparable to either the WHWPP or the Kittitas Valley alternative, however baseline studies would be needed to determine this.
	Given the assumed higher incidence of bald eagle use of this site due to proximity to the Yakima River and known winter use sites, the potential for bald eagle mortality under this alternative would be greater than described for the WHWPP.
	Operation and maintenance activities could lead to avoidance of the area by mule deer, however it is possible that they would become habituated to the turbines and continue to utilize the area. Development would have little direct impact on elk, as there is little use of the site by elk and the riparian areas along the Yakima River and Taneum Creek would be protected by existing regulations. Deer impacts would likely include disturbance and displacement impacts from construction activity.
	Mortality of individuals associated with vehicular traffic may also occur.
Swauk Valley Ranch	Developing a wind plant on the Swauk Valley Ranch property would result in impacts on wildlife and habitat similar to those described for the Springwood Ranch Valley site. Given the close proximity of these sites and similarities in wildlife habitat between them, and assuming a project of similar magnitude was constructed, impacts would be expected to be similar. Since site-specific information for the Swauk Valley Ranch site is not available, however, potential impacts cannot be quantified.

### Energy Facility Site Evaluation Council Table 1-3 Continued

Alternative	Impacts
3.6 Fisheries	
Proposed Action	No streams or riparian areas would be impacted from construction disturbances related to wind turbines and roads. All project facilities would be located a considerable distance from streams and riparian areas.
	Precipitation during construction could result in sediment-laden surface runoff from disturbed areas that could adversely affect nearby surface waters.
	The quantity and quality of stormwater runoff could be affected by operation of the proposed project because of the increase in impervious surfaces, which could result in impacts on fisheries habitats downstream of the project area, if not mitigated.
	Impacts on fish and fish habitat from decommissioning the proposed project would be similar to project construction. Dismantling the project would reduce the quantity of impervious surfaces in the project area. No impacts from decommissioning are anticipated due to the absence of potential fish habitat in the proposed project area.
Kittitas Valley	As described for the WHWPP, potential impacts to fish would be limited to downstream impacts because there are no fish-bearing waters in the project area. Potential construction-related impacts to stream channels, water quality, and water quantity are expected to be short-term and negligible with proper management, including implementation of BMPs and other mitigation measures to control sedimentation and prevent water quality impacts that could potentially affect fish. Access roads associated with the project would cross and permanently disturb between 196 and 714 square feet in three stream channels, however all in stream work would be performed in accordance with a Hydraulic Project Approval (HPA) obtained for the project which would define requirements for erosion and sediment control and identify suitable work windows to minimize potential impacts. Adverse affects to downstream habitat, including the Yakima River are not expected to occur as a result of this alternative.
	Operation of the project would have no adverse impacts on fish and fish habitat in the Yakima River downstream of the project site assuming proper drainage, erosion control, and stormwater management practices are implemented.
Desert Claim	None of the streams in the Desert Claim project area are known to contain fish, although juvenile steelhead could possibly be diverted to some project-area waters. The federally threatened summer steelhead is located in lower Reecer Creek and in the Yakima River downstream from Reecer Creek, and juvenile steelhead could potentially be present in some project-area waters. However, potential impacts to fish are expected to be limited to downstream impacts, similar to both the WHWPP and the Kittitas Valley alternative. This alternative may have a slightly higher potential for impacts, however, due to the presence of Type 3 waters n the site, although these waters are not known to contain fish. As described for the WHWPP and the Kittitas Valley alternatives, BMPs and other mitigation measures to control sedimentation during both project construction and operations are expected to prevent water quality impacts that could potentially affect fish downstream of the project area. Fueling of all construction equipment would be kept a minimum of 100 feet from drainages and riparian areas to protect water quality. Over-sized culverts could be used at crossings to allow for streambed development and minimize impacts to stream habitat.
Springwood Ranch	The Springwood Ranch alternative could have adverse affects on important fish habitat and on Endangered, Threatened, Sensitive and Priority Species in both the Yakima River and Taneum Creek. Construction-related impacts, primarily delivery of sediment to streams, would most likely exist even though required shoreline setbacks would avoid construction disturbance close to the streams. Some of the turbine locations near the top of steep slopes above the Yakima River or Taneum Creek have been identified as high erosion and/or landslide hazard areas, posing a risk of sedimentation. These physical conditions represent localized concerns for potential impacts to fish and fish habitat from construction disturbance, and might warrant site-specific mitigation measures in addition to the standard BMPs.
Swauk Valley Ranch	Since the Swauk Valley alternative lies in close proximity to Springwood Ranch and adjacent to the Yakima River, potential impacts of this alternative are likely to be similar to those described for the Springwood Ranch alternative.

Alternative	Impacts
3.7 Energy And Natural Reso	ources
Proposed Action	Energy consumption during project construction or decommissioning would not require large volumes of fuel or electricity and would not significantly affect locally available energy resources. Project construction would require an estimated 150,000 gallons of diesel and 30,000 gallons of gasoline.
	Use of sand, gravel, steel, water and concrete would not have a significant effect on their supply in the area. Water would be acquired from a local supply with an estimated 10.5 million to 10.8 million gallons used during construction. Steel turbines would be constructed off site and trucked into the area, as would steel for turbine foundation reinforcements, and an estimated 12,000-14,000 tons of steel would be used in turbine construction and an additional 2,100-2,500 tons used for foundation reinforcement. Concrete, gravel, and sand and would be acquired locally with an estimated 30,000-36,000 cubic yards of concrete required; 244,300-246,900 cubic yards of gravel required; and 37,200-39,000 cubic yards of sand required.
	Project operation would have minimal demand for energy and natural resources. Operation and maintenance of the project would consume nonrenewable natural resources including fuel, electricity, water, lubricating oils, greases, and hydraulic fluids. The proposed action would use an estimated 11500 gallons of petroleum products per year. The project is expected to produce 67 aMW of electricity annually and it would be delivered to regional electric suppliers.
	The project would have little or no impact on the supply and price of electricity available to local consumers.
Kittitas Valley	Resources used in the construction of this alternative would be the same or similar to those used for the WHWPP since both are wind power plant construction projects. Project construction would use materials that require energy for their production. Energy (gasoline, diesel fuel, and electricity) would also be required to transport these materials to the project site and to operate construction equipment, with an estimated 25,000 gallons of diesel and gasoline consumed. Portable generators would produce the electricity required for construction activities. Other nonrenewable resources used in construction would include water, steel, concrete, and gravel (aggregate). During construction, an estimated 7 million gallons to 9 million gallons of water would be used; an estimated 11,000 to 13,000 tons of steel would be required to construct the turbines and towers with an additional 1,600 to 2,400 tons used for tower foundation reinforcement; 25,000 to 35,000 cubic yards of concrete would be consumed to build roads, crane pads, and turbine foundations; and 145,535 to 186,325 cubic yards of gravel (aggregate) would be required to construct roads, turbine and crane pads, and other project facilities. This is less than the estimated amounts of these materials that would be used under the proposed action
	Operation and maintenance of the project would consume nonrenewable natural resources including fuel, electricity, water, lubricating oils, greases, and hydraulic fluids and with the exception of petroleum products, the amounts of these resources used would be similar to the WHWPP. The Kittias Valley alternative would use an estimated 8,500 gallons of petroleum products per year, which is less than the amount estimated for the WHWPP. The project would use the kinetic energy in wind and transform it by the wind turbine generators into electricity. The project would generate 60 aMW of electricity annually and would increase the availability of renewable energy in the Pacific Northwest. Electricity for project operations would mostly be generated by the project itself. During periods when the wind turbines are not generating electricity, power would be purchased from the regional utility.
Desert Claim	Specific data for energy and natural resource use is not available for this alternative, however the types of resources used (e.g. sand, gravel, steel, water and concrete) would be similar to those used in the WHWPP and the Kittitas Valley alternative, since all are wind power plant construction projects. Based on this alternative having a maximum of 120 turbines, it is estimated that materials used would be in the mid-range of values described for the WHWPP, which would have 104, 136, or 158 turbines, depending upon the scenario selected. Operation and maintenance impacts on energy and natural resources would also be expected to be within the range described for the WHWPP. The project would generate 59 aMW of electricity annually and would increase the availability of renewable energy in the Pacific Northwest.
Springwood Ranch	Specific data for energy and natural resource use is not available for this alternative; however, the types of resources used would be similar to

Alternative	Impacts
	those used in the WHWPP and the Kittitas Valley alternative, since all are wind power plant construction projects. Based on construction of 40 to 45 turbines under this alternative, use of natural resources for construction, operations, and maintenance is expected to be less than the WHWPP, and the Kittitas Valley and Desert Claim alternatives. The project would generate 20 to 25 aMW of electricity annually and would increase the availability of renewable energy in the Pacific Northwest.
Swauk Valley Ranch	Specific data for energy and natural resource use is not available for this alternative, however the types of resources used would be similar to those used in the WHWPP and the Kittitas Valley alternative, since all are wind power plant construction projects. Based on estimated construction of 42 turbines under this alternative, use of natural resources for construction, operations, and maintenance is expected to be less than the WHWPP, Kittitas Valley, and Desert Claim alternatives and similar to the Springwood Ranch alternative. The project would generate 21 aMW of electricity annually and would increase the availability of renewable energy in the Pacific Northwest.
3.8 Noise	
Proposed Action	No noise impacts are expected from the construction of the project. The nearest residence is over 2 miles away from the project site and over 3 miles from the closest rock quarry.
	Noise generated by construction traffic is unlikely to cause any adverse impact. Commute vehicles and up to 49 heavy trucks per hour would cause traffic noise levels to exceed FHWA impact thresholds only at homes within 60 feet of the street centerline.
	No noise impacts are expected from the operation and maintenance of the project. Noise from wind turbines, transmission lines, traffic, and vibration effects are expected to be less than background at the nearest resident.
	Noise impacts are unlikely to cause any adverse impact.
Kittitas Valley	Noise generated by construction equipment is expected to vary, depending on the construction phase, but would not be expected to substantially impair nearby residential land uses. Temporary blasting noise impacts would be associated with construction of the wind turbines. Construction vehicles traveling on local roadways and other nearby roads would temporarily increase noise levels.
	Modeling of a major wind power generation facility at this site anticipates noise levels ranging from 35 to 49 dBA. The results indicate that noise levels would be below the most restrictive nighttime regulation of 50 dBA. Therefore, no significant noise impacts to Class A properties are anticipated during the daytime or nighttime operations of the proposed project. Noise levels at the property lines of Class C parcels within the project area range from a minimum of 35 dBA to a maximum of 55 dBA. Because the predicted noise level is below the threshold established for Class C properties, no significant noise impacts are anticipated. (EFSEC, 2004). Noise levels during project operations could exceed regulatory limits at several homes nearest the WTG strings. Changes in background noise levels at numerous other homes could be perceived as adverse depending on the magnitude of that change and the nature of the receptor. Minor increases in traffic along U.S. 97 and project access roads during project operations would not be expected to generate substantial adverse noise effects. The project would not result in any significant impacts from groundborne vibration.
Desert Claim	Noise-sensitive areas in the project vicinity include Class A and Class C environmental designation for noise abatement (EDNA). Twenty-nine noise receivers within 3/4 mile of the proposed turbine strings were modeled in the Desert Claim EIS. The predominant sources of existing noise on and near the project site include agricultural activities, traffic on local roadways, and occasional overhead aircraft (including helicopters). At some locations, wind at higher speeds is also a major source of noise. During construction, there would be temporary increases in sound levels near active areas of construction and along roadways used for construction vehicles, depending on the type of equipment being used and the amount of time it is in use.
	Modeled wind turbine noise levels for the Desert Claim alternative exceed the 50 dBA nighttime noise limit at two receiver locations. Predicted operational noise levels at all receptor locations at wind speeds of 4 m/s and 8 m/s would meet applicable noise limits. Highest sound level increase at any receptor would be 7 dBA, with 1 to 4 dBA for 26 of 34 receptors. Based on noise level and/or increase over ambient levels, project noise impacts would be rated either low or medium, and would not be significant. Based on wind patterns, turbines would

Alternative	Impacts
	produce audible noise about 22 percent of the time. Low-frequency noise impacts are not anticipated due to "upwind" design and streamlined turbine design. Tonal noise from turbine operation is possible, but the potential for significant impacts is low. The proponent would obtain and enforce a warranty from the selected turbine manufacturer that the maximum continuous sound power level produced by each turbine under all wind conditions would not exceed 104 dBA measured at the hub height. Mitigation measures include implementing a noise-monitoring program and establishing a process for responding to, evaluating and resolving noise complaints that might arise during project operation.
Springwood Ranch	Several residences are within approximately 500 feet of one or two turbine locations in the northwestern corner of the Springwood Ranch layout. Construction impacts at the closest homes would include temporary increases in sound levels near active areas of construction and along roadways. The closest residences could be subject to operational noise in excess of the 50-dBA limit, and/or noise level increases of about 10 dBA. It is possible that the proposed project might result in significant noise impacts to these residences unless the turbines in question were relocated or eliminated.
Swauk Valley Ranch	Noise generated by construction equipment is expected to vary, depending on the construction phase, but would not be expected to substantially impair nearby residential land uses. Temporary blasting noise impacts would be associated with construction of the wind turbines. Construction vehicles traveling on local roadways and other nearby roads would temporarily increase noise levels.
	Noise levels during project operations could exceed regulatory thresholds. Changes in background noise levels could be perceived as adverse depending on the magnitude of that change and the nature of the receptor. Minor increases in traffic along U.S. 97 and project access roads during project operations would not be expected to generate substantial adverse noise effects. The project would not result in any significant impacts from groundborne vibration.
3.9 Land Use	
Proposed Action	Potential direct impacts of the proposed WHWPP would include conversion of rangeland to utility-related uses and the temporary removal of livestock from the project site during construction activities. The permanent footprint of the project will remove approximately 165 acres from open space and grazing uses for the life of the project (at least 20 years). Construction would necessitate temporary displacement of cattle from 290 acres to 401 acres of grazing land, which may or may not be available following construction. At a maximum, the removal of approximately 8,600 acres of land from the approximately 445,000 acres of pasture or unimproved grazing land in Kittitas County would represent a reduction of 1.9%.
	No permanent land use impacts are expected to result from decommissioning.
Kittitas Valley	Potential direct impacts of the proposed Kittitas County Wild Power Project (KVWPP) would include conversion of rural lands to utility- related uses and potential displacement of livestock.
	Project construction would temporarily alter 231 to 371 acres of land, temporarily interfering with existing rangeland uses and grazing operations. Cattle or other livestock would need to be removed from the most intensive construction areas.
	Construction activities could affect the use and enjoyment of recreational activities such as hunting and hiking in the project area.
	During operation, existing rangeland and grazing uses could resume throughout most of the project area.
Desert Claim	During construction of the wind turbines and associated facilities, land uses within the project area would continue, although some land would be temporarily disturbed (341 acres). During operations, 90 acres, or 1.5% of the project area, would be used for wind farm facilities and infrastructure (i.e., the permanent project footprint).
	Existing residential uses would not be directly displaced, but would be located proximate to wind turbines and other facilities. The presence of these project facilities is not expected to significantly impact the ability to carry out existing activities. However, wind turbines would be significantly greater in scale than nearby rural residential uses, and some degree of incompatibility or conflict would exist. Wind farm operations are not expected to be more intensive than other resource activities in terms of noise and associated land use impacts, and wind

Alternative	Impacts	
	energy production is seen as generally compatible with rural resource uses and with ongoing agricultural operations.	
	Similar to the Proposed Action, the Desert Claim alternative is not expected to attract supporting land uses, generate secondary or spin-off development, significantly increase traffic, or increase demand for commercial or industrial uses nearby. The alternative is not expected to attract significant numbers of non-resident workers and or result in significant demand on housing.	
	Overall, direct impacts to recreational resources and opportunities would be very low or negligible. Most current recreation activity within the project area, which consists of (at most) limited informal use, would be able to resume at current levels during operation and maintenance. During operation, hunting would not be permitted to avoid possible damage to turbines or other project facilities. Because project area lands are not managed for recreation, loss of this limited opportunity would not be a significant recreation impact.	
	No DNR, State Parks, WDFW, United State Forest Service (USFS), Bureau of Land Management (BLM), or private recreational facilities would experience direct impacts from the project. Indirect impacts would be limited to minor audible and visual intrusion into nearby recreational areas and congestion along roads. Neither would disrupt recreational opportunities on nearby federal, state, and private lands and facilities.	
Springwood Ranch	Approximately 30 acres of grasslands would be converted to wind energy facility use, with existing grazing activity being temporarily displaced or disturbed. Wind turbines would be greater in scale than nearby rural residential uses, but are not more intensive than other resource activities in terms of noise and land use impacts. The overall direct effect of the project on land use patterns is not likely to be significant because wind production is generally seen as compatible with rural resource uses. In addition, the project would not attract supporting land uses, generate more development, significantly increase traffic, or increase demand for commercial, industrial, or housing services nearby.	
Swauk Valley Ranch	Potential direct impacts include conversion an estimated 165 acres of rural lands to utility-related uses. This permanent conversion of rangeland uses to wind energy production would result in an unavoidable impact. Construction activities could temporarily interfere with existing rangeland uses and grazing operations. Cattle or other livestock would need to be removed from the most intensive construction areas. Construction activities could affect the use and enjoyment of recreational activities such as hunting and hiking in the project area. Some wind turbines may be visible from I-90 and portions of the John Wayne Trail.	
Alternative	Impacts	
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3.10 Visual Resources/Light And Glare		
Proposed Action	Construction activities and large equipment (e.g. earth moving equipment, trucks, cranes, and other heavy equipment) would be highly visible in views toward the project site from nearby areas. At times, small, localized clouds of dust created by road building and other grading activities may be visible at the site. Areas of newly exposed soil and fresh gravel would also be visible.	
	Construction activities would be moderately to highly visible from nearby segments of Vantage Highway. However, these impacts would be temporary due to the short-term nature of construction.	
	The landscape units with the greatest number of viewers with middleground views of the project site, (i.e., the areas to the south and west), are areas in which construction activities would not be visible because they would be hidden behind the ridgeline formed by Whiskey Dick Mountain. From vantages with background views of the site, the visual effects would be relatively minor and would have little or no impact on the quality of views.	
	Due to FAA requirements, nine turbine locations originally proposed along the ridgeline of Whiskey Dick Mountain have been removed (i.e. A1, A2, A3, B1, B2, B3, D1, D2, D3) from the project layout. As a result, it is anticipated that visual impacts related to WTG sitings would be reduced below those analyzed in the Draft EIS for the WHWPP. See revised Figures 1-2, 3.10-3b, 3.10-5b, and new Figure 3.14-2 in this FEIS. In addition, the relocated PSE substation at Stevens Road is expected to be less visible in its new location.	
	The project would be marked according to guidelines established by the FAA's aircraft safety lighting requirements, which call for lights that flash white during the day and red at night. See new Figure 3.10-10 for the proposed lighting plan for the WHWPP. These lights are designed to concentrate the beam in the horizontal plane, thus minimizing light diffusion down toward the ground and up toward the sky. Based on experience at the operating Stateline and Nine Canyon wind power projects in Washington, it appears that the white flashing lights would be visible during daylight hours and likely to create a low level of visual impact. The flashing red lights associated with the project would introduce a new element into the project area's nighttime environment. These lights would be limited in number, red, and directional with little potential to create skyglow <sup>3</sup> or backscatter. The flashing red lights associated with the WHWPP would be most noticeable in areas within roughly 1 mile of the project. No residences or public residences are within this area. <sup>4</sup>	
	At the O&M facility and substation(s), outdoor night lighting will be required for safety and security. The project's O&M facility and substation(s) will create sources of light in areas where there are currently no nighttime sources of light. Mitigation measures will be implemented to restrict the substation and O&M facility lighting to the minimum required and to attenuate its effects.	
	The project is not expected to result in any shadow flicker effects on any sensitive receptors, such as residences, because the distance of more than 9,000 feet to the nearest residence is well beyond the distance at which shadow flicker can cause impacts.	
Kittitas Valley	During construction, large earthmoving equipment, trucks, cranes, and other heavy equipment would be highly visible from nearby areas. The visual changes associated with construction activities would have a moderate to high visual impact. Areas disturbed during construction would be restored on project completion. Some construction activities may occur during evening or nighttime hours, and lighting may be needed.	
	The project has the potential to create high levels of visual impact at several locations. Overall, visual impacts form this alternative would be greater than for the WHWPP due to proximity to a greater number of residences and views from a greater number of high use roads and scenic areas.	

<sup>&</sup>lt;sup>3</sup> Skyglow is a brightening of the night skies caused by light that is projected upward and then reflected back toward the ground by the atmosphere.

<sup>&</sup>lt;sup>4</sup> Backscatter is related to skyglow; the term refers to the reflection of light back toward the ground by moisture or dust in the atmosphere.

Alternative	Impacts		
	Turbines would be visible from US 97 and on the ridgetops throughout the project vicinity.		
	Impacts form light ad glare would be similar under this alternative as described for the WHWPP but would be expected to be greater due to the proximity of the Kittitas Valley alternative to high use roads and a larger number of residences than the WHWPP.		
	During project construction, double shifts may be necessary, which would in turn necessitate night lighting of the construction site, which would be visible from roads and residences. This would be temporary and short term impacts.		
	Impacts form operations and maintenance would occur primarily in association with lighting required by the FAA.		
	Night lighting of project facilities would increase nighttime illumination in the vicinity, potentially impacting views from roads and residences.		
	The potential for impacts from glare would depend largely on materials used; however, glare would be minimized by using a low-reflectivity finish on all turbines.		
Desert Claim	Visual changes associated with construction and operation of the Desert Claim Wind Power Project would have temporary but moderate visual impacts on nearby residences and roads. During construction (approximately 9 months), equipment, clouds of dust, and exposed soils would create temporary visual impacts.		
	Under this alternative, visual impacts would be greatest for the Northwest Valley Floor unit, with high level impacts from 4 viewpoints, moderate level impacts from 6 viewpoints (1 to 4 miles from the project), and low level impacts from the remaining viewpoint. Of the remaining units, this alternative would have moderate level impacts to one of three viewpoints in the greater Ellensburg unit and to the Hayward Hill and Table Mountain slope units. The remaining viewpoints would all experience low-level impacts.		
	Visual impacts from this alternative are likely to be less that the WHWPP and the Kittitas Valley alternatives due to it not being visible from the Gorge Amphitheater as compared to the WHWPP, and greater distance from major transportation routes such as I-90 and US-97 and fewer residences in close proximity than the Kittitas Valley alternative.		
	Impacts from light and glare under the Desert Claim alternative would be similar to those described for the WHWPP but greater due to closer proximity to residences. The Applicant has developed a proposed lighting plan whereby 48 of the total 120 turbines, or 40 percent, would be equipped with a dual lighting system. This lighting system includes low-intensity flashing red lights (L-864) for nighttime use and medium-intensity flashing white lights (L-865) for daytime and twilight use.		
	Night lighting of project facilities would also contribute to increased night lighting in the project area.		
	Blade glare or glint may also occur occasionally, and this can be seen over distances of 6 to 9 miles.		
	Mitigation measures include relocating turbines into distinct visual units or groupings and relocating selected turbines to better follow and reinforce the natural topography, most applicable for turbines proposed near ridgetops.		
Springwood Ranch	Visual impacts associated with construction would have a temporary but moderate visual impact on views from nearby residences and roads in the Thorp Prairie area. The construction-related visual impact from more distant viewpoints would be low.		
	The Springwood Ranch project would have significant visual impacts during operation. This alternative would be highly visible from I-90, with turbines located in middle-ground views and breaking the skyline, with similar impacts to views from SR 10 and the Thorp Highway. Overall, development of a wind farm on Springwood Ranch would significantly change the aesthetic character of the local landscape, especially as viewed from I-90, and high level impacts would be expected.		
	The required aviation marking lights would result in significant additional impacts on nearby residents and passing motorists.		
	Security lighting at the O&M facility and the project substation would have minimal impact on the nighttime visual environment if it were tied to motion sensors. Blade glint or glare from sunlight reflecting off moving blades could possibly be an annoyance to eastbound drivers on I-90 late in the day.		

Alternative	Impacts
Swauk Valley Ranch	Impacts to visual resources under this alternative would be similar to those described for the Springwood Ranch alternative, with both construction activity and operating turbines visible from I-90, SR10, and from nearby residences. Although information from individual viewpoints is not available for this alternative, it is expected that high level impacts would result from construction of this alternative due to its location.
	Impacts from light and glare would also be similar to those described for the Springwood Ranch alternative.
3.11 Population, Housing, And E	Conomics
Proposed Action	The project would employ an estimated 250 workers during construction and 14 to 18 during operations. There would not be a noticeable impact on the population in Ellensburg or Kittitas County.
	No houses would be moved or destroyed; therefore, there would be no direct impacts on housing.
	Temporary housing would be needed for non-local workers during construction of the project. Based on supply and vacancy rates, impacts are not expected to be significant.
	Spending on labor and materials would result In an additional 71 full and part-time jobs during construction. Total labor income during construction we be approximately \$4.8 million.
	Economic impacts during operations would include about \$1.4 million in labor income.
	It is expected that the project would result in both increased revenues for state schools and local public services in the area, as well as reduced property tax levy rates for local taxpayers.
	Decommissioning impacts include a long-term loss of employment and associated economic activity for the local and regional economy, and a loss of tax base.
Kittitas Valley	The project would create approximately 253 new temporary jobs during construction, with a short-term peak estimated at 160 construction workers. Operation of the proposed project is expected to require up to 20 full-time employees. One half of the permanent employees are expected to be resident workers from the County, resulting in long-term benefits to overall County employment.
	Temporary housing would be needed for non-local workers during construction of the project. Based on supply and vacancy rates, impacts are not expected to be significant.
	Total income (direct, indirect, and induced) generated during the construction phase of the project is estimated to be more than \$5.7 million (in 2002 dollars) in the County, a temporary but beneficial effect to the County economy. The project would generate an increase of \$1,249,600 in annual property tax revenue to the County, in addition to other fiscal benefits, such as increased sales and use taxes, license and permit fees, and charges for services.
	The local affects of wind power project development on property values at the Kittitas Valley Alternative would be as described for the proposed Wild Horse project.
	Decommissioning impacts would be similar to those described above for the Proposed Action.
Desert Claim	In general, most of the potential population, housing, and economic impacts for the Desert Claim Alternative would be similar to, but less than, those described for the Proposed Action above. Because the workforce required for construction (150 workers) and operation (10 workers) of the project would be relatively small (in the context of total county-wide economic activity), the project is not expected to significantly impact population, housing, or employment throughout the County.
	Total labor income during construction is estimated to be over \$3.8 million. Together, potential corporate profits, property rents, and net interest are estimated at over \$1.5 million. This alternative is expected to indirectly generate minor amounts of sales tax revenue.
	Impacts on economics within the County during operation of the Desert Claim Alternative are estimated at \$0.9 million in labor income and \$2

Alternative	Impacts
	million in other value added annually. Potential property tax revenues from the Desert Claim Alternative are estimated at a maximum of nearly \$1.1 million for the first year of operation. Current research has generally found that wind farms have either no effect on tourism or a positive effect.
	Decommissioning impacts would be similar to, but less than, those described above for the Proposed Action.
Springwood Ranch	Impacts from construction of the Springwood Ranch Alternative on population, housing, and economics would be similar to, but less than, the Proposed Action described above. The project would employ an estimated 150 workers during the construction phase. Non-local workers would most likely seek temporary housing during construction, and impacts are not expected to be significant. Spending on labor and materials would indirectly result in additional jobs, and total labor income would increase during the construction phase.
	Operation of the proposed project is expected to require 10 full-time employees. Economic impacts during operations would include an estimated \$315,000 in labor income and \$700,000 in other value added per year.
	Decommissioning impacts would be similar to, but less than, those described for the Proposed Action above because this alternative would be a smaller project overall.
Swauk Valley Ranch	The temporary population impacts from worker relocation and in-migration needed to meet project labor demands of the Swauk Valley Ranch Alternative would be similar to the Springwood Ranch Alternative and relatively minor. Construction jobs created by the project would result in short-term benefits to overall County and regional employment. Operation of the proposed project is expected to require between 12 and 20 full-time employees, resulting in long-term benefits to overall County employment.
	Decommissioning impacts would be similar to, but less than, those described for the Proposed Action above because this alternative would be a smaller project overall.

Alternative	Impacts	
3.12 Public Services And Uti	lities/Recreation	
Proposed Action	Construction activities would not directly affect any existing recreation facilities, as there are no such facilities in or adjacent to the project area. Recreational visitors using the nearby WDFW wildlife areas or the Ginkgo Petrified Forest State Park facilities might notice construction activities on the site or project-related construction traffic and might be subject to occasional traffic delays or detours. Existing recreational use of the project area is limited to hunting with the specific permission of the current landowner, and would presumably be displaced to the extent that the construction period coincided with hunting seasons. Some hunting activity could be allowed during the operating period. If hunting were displaced, it would constitute a minor loss of recreational opportunity.	
	Construction activities could result in increased calls for fire and emergency medical services. Potential needs for fire service during construction and operation would likely result in the execution of a service contract with a rural fire district (either Fire District 2, based in Ellensburg, or Fire District 4 in Vantage).	
	During operations, impacts to fire and emergency medical services would not be significant. Current Fire District No. 2 resources would be sufficient to provide fire suppression services to the project area, although staff are not trained for high-angle rescues.	
	Project-related demands for police would be minimal and no significant adverse impacts on existing services would be expected.	
	No significant impacts on local schools are anticipated during construction or operation.	
	No significant impacts would occur to water supply, stormwater, or sewer facilities.	
	No significant impacts are anticipated on solid waste, energy, or communication facilities.	
Kittitas Valley	Potential direct impacts of the proposed KVWPP would include potential conflicts between the project and onsite and offsite recreation activities, and increased demand for park and recreational resources.	
	Project construction could temporarily increase the risk of fire at the project site and in the broader project area. Fire risks during construction would be similar to those described for the Proposed Action, although fire hazards could be slightly more at the Kittitas Valley Alternative due to poor access along a portion of Hayward Hill Road that could hinder responders. Construction activities could result in additional calls for law enforcement agencies for traffic and accident related events, theft, or vandalism.	
	Impacts to schools are not anticipated during the construction phase under this alternative. Demand for EMS could increase slightly due to construction related accidents that could occur at the project site or vicinity. Demand on water would increase, with an approximately 2 to 5 million gallons consumed for dust suppression and other construction purposes. The Ryegrass Landfill and Greater Wenatchee Regional Landfill would be impacted slightly by the increased amount of solid waste generated at the Kittitas Valley Alternative site.	
	Impacts on local schools, EMS, water supply, wastewater disposal, and communications are expected to be minimal during the operation phase of the project since sufficient capacity exists in the area to meet the demands.	
Desert Claim	Impacts to recreational resources and opportunities would be very low or negligible, generally limited to some temporary audible and visual intrusion and congestion along roadways.	
	Calls for fire response to the project area could increase during construction and would be similar to those described for the Proposed Action and Kittitas Valley Alternative. Project construction could contribute to an increased risk of accidental fire. The Desert Claim Alternative is not expected to have more than a slight potential increase in the demand for law enforcement over existing conditions. Impacts on local schools would be the same as that described for the Proposed Action. Impacts to public water supply, stormwater, and sewer services are not anticipated since these services are not available on-site. It is also anticipated that the local landfills would be able to accommodate the level of solid waste and debris generated by the project. Recreational users of the Iron Horse State Park/John Wayne Trail and the Yakima River would experience noise, views of construction equipment and activities, and possibly blowing dust during the construction period. During operation, impacts to fire and emergency medical services would occur to a lesser extent than those described for the construction	

Alternative	ets			
	period. The project area lands are not managed for recreation, and incidental use within the project area would be able to resume at curre levels during operation and maintenance. Some hunting activity could potentially be allowed during the operating period. During operat users of the recreational resources noted above would be exposed to views of wind turbines and other project facilities at some specific locations.			
Springwood Ranch	Impacts of the Springwood Ranch Alternative on public services, utilities, and recreation would be similar to those described for the Proposed Action. Potential needs for fire service during construction and operation would likely be addressed by a service contract with Fire District 1, based in Thorp.			
	It is anticipated that project-related demands for police, education, solid waste disposal, and communications services would be limited or minimal on existing service systems. Needs for water supply, stormwater management, and sewer service would be addressed internally through project construction and operation plans and would have minimal impacts on existing delivery systems for those utility services.			
Swauk Valley Ranch	Demands on public services, utilities, and recreational facilities would be similar to, but likely less than, those described for the Proposed Action and the other alternatives due to its smaller size. Construction activities could potentially result in additional calls for fire response and law enforcement. As with any construction site, the demand for EMS could increase due to the potential for construction related accidents.			
	Project-related demands on schools, water supply, sewer and solid waste disposal, recreational parks, and communication services would also be less than those described for the Proposed Action.			
3.13 Cultural Resources				
Proposed Action	Direct construction impacts on cultural resources would likely be minimal or nonexistent. No project facilities coincide with the locations of inventoried cultural sites.			
	Mitigation measures would ensure that potential impact on cultural resources in the project area during construction activities would be minimized. If a tribe requested to have one of their representatives present during earth-disturbing construction activities, the Applicant would comply with their wishes.			
	No direct impacts on any known cultural resources would occur during normal operation and maintenance of the project. There would be no increase in the potential for disturbance and/or removal of artifacts from cultural resource sites			
	Impacts associated with the decommissioning of the WHWPP would be similar to those described above for construction impacts. Potential impacts to archaeological or historic sites would be mitigated as described for construction activities.			
Kittitas Valley	Ground-disturbing activity during construction could potentially affect the two prehistoric archaeological sites within the project area. These archaeological sites should be avoided during construction to prevent any damage to either of them. Mitigation measures would ensure that potential impact on cultural resources in the project area during construction activities would be minimized, and that appropriate state and Tribal agencies would be contacted if any sites were uncovered during construction, and the sites and artifacts adequately protected. No direct impacts to any known cultural resources would occur during normal operation and maintenance of the project.			
	Tribal consultation is ongoing to determine whether significant resources, such as areas important in Yakama or Colville history or cultural and religious practices, would be indirectly affected by the project. Tribal Nations would be contacted prior to all ground-disturbing activities and invited to have representatives present during these activities.			
	No direct impacts on any known cultural resources would occur during normal operation and maintenance of the project. There would be no increase in the potential for disturbance and/or removal of artifacts from cultural resource sites			
	Decommissioning the project at the end of its useful life also poses the potential for further impacts if decommissioning activities stray beyond the perimeters of the pre-existing disturbance zones used during construction.			

Alternative	native Impacts			
Desert Claim	Potential direct impacts to documented cultural resources have been identified based on the proposed layout of project facilities relative to the locations of the known resources. Any cultural resources within or very close to the area of temporary construction disturbance around the various project facilities would presumably be subject to direct impacts. Project construction would potentially demolish or alter the setting and character of existing historic resources. Construction impacts would include out-of-character visual elements, change in use, structural vibration, and dust. A map analysis (which is not documented in the EIS because the locations of the cultural sites are confidential and not appropriate for disclosure) indicates that five identified cultural resource sites would experience unavoidable adverse impacts associated with turbine, access road and power collection system construction if the project facilities were sited according to the modified design. Three of these five sites are historic sites with either standing structures or structural remains. The two remaining sites are prehistoric sites. One of these sites is a large prehistoric lithic procurement site located at the northwest periphery of the project. Destruction of or damage to these resources would represent a significant adverse impact.			
	Measures such as clearly marking areas that need to be avoided to protect sensitive resources and ensuring that project personnel observe those markings and their associated restrictions could minimize the potential for indirect impacts such as increased opportunities for removal of artifacts.			
	The proposed project is not expected to cause access-related indirect impacts to cultural resources because the degree of public accessibility to cultural resources within the project area would be less with the project than it is at present. Project operation would also change the historic character of the surrounding area. Existing cultural sites in the general vicinity of the project would be subject to possible changes to their visual setting. This would primarily be limited to historic sites, and would depend on the visibility of project facilities from those sites. Development of the project would not affect access to or the ability to use Traditional Cultural Properties (TCPs) in the vicinity. TCPs in the general area might be subject to indirect effects through visibility of project facilities.			
	The prospects for avoiding cultural sites would be addressed in the final micro-siting of wind turbines and other project facilities, which would occur during final design and prior to construction.			
	No additional mitigation would be necessary if all identified cultural resource sites were avoided in the final layout and construction of project facilities. If final placement of the project elements resulted in unavoidable adverse impacts to a significant resource, then mitigation would be required to retrieve the scientific and historical information that makes the site significant. Appropriate mitigation measures should be tailored to the specific circumstances of the resource and developed in consultation with the Washington State Historic Preservation Officer. If the affected resource is prehistoric, then the SHPO would require consultation with all affected Native American tribes of the Mid-Columbia River Basin. As a mitigation measure, an historic narrative with photos could be written to document changes within the landscape should some historic structures be affected.			
	No direct impacts on any known cultural resources would occur during normal operation and maintenance of the project. There would be no increase in the potential for disturbance and/or removal of artifacts from cultural resource sites			
	Decommissioning the project at the end of its useful life also poses the potential for further impacts if decommissioning activities strayed beyond the perimeters of the pre-existing disturbance zones used during construction.			
Springwood Ranch	Construction activities could destroy artifacts or structures or disturb relationships among artifacts and their context; however, it is not known how many of the seven identified resources would be subject to direct impacts from project construction. Because one of the cultural resources is a prehistoric trail that reportedly crossed through the middle of the property, it is possible the trail route would intersect multiple elements of a wind energy project on this site. The two prehistoric resources and the historic resources associated with railroad and irrigation activities are likely to be located near the Yakima River and would not likely be subject to direct impacts. Indirect impacts to cultural resources would primarily involve changes to the visual context of the resources and to a number of the 30 cultural resources that have been identified in the area surrounding the Springwood Ranch. In this hypothetical scenario, any affected Tribal Nation would be notified prior to ground disturbing activities, and would be invited to have representatives present during such activities.			

Alternative	Impacts	
	No direct impacts on any known cultural resources would occur during normal operation and maintenance of the project. There would be no increase in the potential for disturbance and/or removal of artifacts from cultural resource sites	
	Decommissioning the project at the end of its useful life also poses the potential for further impacts if decommissioning activities stray beyond the perimeters of the pre-existing disturbance zones used during construction.	
Swauk Valley Ranch	No recorded archaeological sites are located within the boundaries of the Swauk Valley Ranch site; however, eleven recorded sites are known to exist within a 1-mile radius of the site. Ground-disturbing activity during construction could potentially uncover prehistoric archaeological sites. Mitigation measures would ensure that potential impacts on cultural resources in the project area during construction activities would be minimized. No direct impacts to any known cultural resources would occur during normal operation and maintenance of the project. In this hypothetical scenario, any affected Tribal Nation would be notified prior to ground disturbing activities, and would be invited to have representatives present during such activities.	
	No direct impacts on any known cultural resources would occur during normal operation and maintenance of the project. There would be no increase in the potential for disturbance and/or removal of artifacts from cultural resource sites	
	Decommissioning the project at the end of its useful life also poses the potential for further impacts if decommissioning activities stray beyond the perimeters of the pre-existing disturbance zones used during construction.	
3.14 Traffic And Transportation		
Proposed Action	The project construction period requiring the transportation of major equipment and constituting the highest amount of construction traffic would span approximately 6 months. Vantage Highway would be the primary roadway to and from the project site. Potential short-term impacts resulting from the construction of access roads include potential delays or detours necessitated by construction activities on or adjacent to county roads. Transporter Route 1 would experience an additional 171 peak-hour trips during the peak of construction (107 worker trips, 49 heavy-duty delivery trips, and 15 light-duty delivery trucks). Transporter Route 2 would experience very little additional construction traffic at only 7 peak-hour trips. The Level of Service (LOS) during the PM peak hour with construction worker traffic and delivery traffic causes some reduction in the LOS level.	
	Construction activities could require temporary road modifications to accommodate trucks transporting tower components; could cause damage to road surfaces from transport of components or construction materials; and could lead to interruptions to general traffic flow resulting from detours or delays. An approved Transportation Management Plan would include measures to minimize impacts of construction-related traffic.	
	Project operation would generate a negligible volume of traffic that would not affect existing levels of service on public roads. The level of future tourist activity and traffic cannot be specifically predicted, but could be safely accommodated with signage, off-road parking and viewing opportunities, and vehicle maneuvering space. The project applicant would be responsible for maintenance of turbine access roads, access ways, and other roads built to construct and operate the project.	
	Because the project would be further from I-90 it is anticipated that relatively few travelers would leave the freeway to take a close look at the facility.	
Kittitas Valley	Valley Project construction would take approximately 1 year. Construction traffic would utilize primarily US 97, I-90, and the Kittitas County network. The total number of vehicles during the construction peak would be 180 (160 vehicles for worker traffic and 20 vehicles for I duty delivery). Construction traffic would result in an increase in total PM peak volumes on all road segments. Under the Kittitas Vall alternative the LOS for I-90 and US 97 south of Bettas Road would not change but it would go from C to D for US 97 north of I-90 and to B for both Bettas and Hayward Roads during construction. Construction traffic impacts would be mitigated with appropriate traffic- procedures approved by WSDOT. Construction-related parking would be located at the O&M facility and along the site access roads. temporary project access points from U.S. 97 would be established. An approved Transportation Management Plan would include mea minimize impacts of construction-related traffic.	

Alternative	Impacts
	Wind turbine components would need to be transported along state highways from a larger metropolitan area such as Seattle. Trucks delivering construction equipment and materials to the project site would exceed the WSDOT legal load limit, requiring special permits to be issued for vehicles exceeding the state's maximum size, weight, and load limits. Proper road signs and traffic management procedures would be utilized to prevent traffic disruptions from construction activities and slow or oversized, wide truckloads.
	Increases in traffic could result in an increase in the accident rate on roads in the project area. This would be minimized through implementation of an approved Transportation Management Plan.
	Project operations and maintenance could generate up to 20 workers commuting to and from the O&M facility on paved state and county roads during a 24-hour period. This is not expected to affect LOS on roads in the project area such that LOS would be different than if the project wasn't built. Employees would park at the O&M facility parking lot, with no more than 25 vehicles parked at the facility at any one time. The proposed O&M facility parking lot may not be sufficient to accommodate future parking needs of both project employees and potential visiting tourists. The project applicant would be responsible for maintenance of turbine access roads, access ways, and other roads built to construct and operate the project. There would be no public access to project facilities on privately owned land during construction, operations, and maintenance.
Desert Claim	Potential construction impacts include additional traffic generated by construction workers, delivery of construction materials, and transport of wind turbine components that would be assembled on-site. Potential short-term impacts resulting from the construction of access roads would be potential delays or detours necessitated by construction activities on or adjacent to county roads. Under this alternative, construction traffic is expected to result in an increase in PM peak traffic of 80 trips, which would not alter the level of service on roads in the project area. Construction related parking would be located on the project site.
	Construction activities could also require temporary modifications to intersections of county roads to accommodate trucks transporting tower components, and damage to road surfaces may result from transport of components or construction materials. Construction traffic impacts, including the potential for an increase in the number of accidents on roads in the project area, would be mitigated though the development and approval of a construction Traffic Management Plan that would address transportation and access concerns during the construction period.
	The traffic directly associated with project operations and maintenance would not impact existing levels of service on public roads in the project vicinity. Additional trips generated by service and supply deliveries would be occasional and negligible in volume. A tourist kiosk could potentially affect traffic levels as a result of tourism if located along SR97 or Smithson.
	As a result of a modified project configuration, ten of the proposed turbine locations within the Desert Claim project area would conflict with the protected airspace associated with the existing visual-flight-rules (VFR) traffic pattern, although the conflict involves operation by a category of aircraft that use Bowers Field on a very rare basis. The airspace conflict could be resolved, and the potential operations impact could be avoided, by further modifying the project plan to remove or relocate turbines and/or to install even smaller turbines (modified proposal is 340 feet in height) in selected locations or changing the airport operating procedures to employ a right-hand VFR traffic pattern for two of the four runways at Bowers Field. The project would include dual lighting systems on 48 turbines to comply with FAA standards for marking and lighting tall structures.
Springwood Ranch	Due to the very low existing traffic volumes, the traffic generated by construction would not affect level of service on local roads in the project area and there would be few opportunities for slow-moving trucks delivering turbine components to delay local traffic. Potential impacts of construction include degradation of the road surface caused by trucks delivering tower components. In addition, the delivery of turbine components might be difficult due to the physical constrictions of the Elk Heights interchange and the adjacent intersection of Elk Heights Road and Thorp Prairie Road. The Thorp Prairie Road has numerous horizontal and vertical curves that might be problematic for transporters with low clearances. Increases in traffic could result in an increase in accidents in the project area. These issues would be addressed in a Transportation Management Plan prepared for the project.
	Trips generated by on-site workers present during operation would not affect the existing level of service at local intersections. The wind

Alternative Impacts				
	towers would be closer to I-90 compared to the WHWPP, Kittitas Valley, and Desert claim alternatives, and it is anticipated that some travelers on I-90 would leave the freeway to take a closer look at the facility. In order to avoid tourists making U-turns on county roads with narrow or no shoulders, it would be necessary to construct a turnaround and small off-road parking area at a suitable viewpoint on Thorp Prairie Road where interpretive information could be included.			
	A detailed evaluation of potential airspace conflicts has not been completed. However, based on the locations, it does not appear that a wind energy project at the Springwood Ranch site would interfere with air traffic or airspace at either Bowers Field or the Cle Elum Municipal Airport.			
Swauk Valley Ranch	Construction traffic impacts would be similar to those described for the Springwood Ranch alternative. Most construction traffic would travel to the site using I-90, SR 10, and the Kittitas County road network. Construction-related parking would be located at an appropriate, designated area or along site access roads. Temporary access points from State or County roads may need to be established. A Transportation Management Plan will be prepared to minimize impacts of construction-related traffic.			
	Wind turbine components would need to be transported along state highways from a larger metropolitan area such as Seattle. Trucks delivering construction equipment and materials to the project site would exceed the WSDOT legal load limit, requiring special permits to be issued for vehicles exceeding the state's maximum size, weight, and load limits. Proper road signs and traffic management procedures would be utilized to prevent traffic disruptions from construction activities and slow or oversized, wide truckloads.			
	Trips generated by on-site workers present during operation would not affect the existing level of service at local intersections. The wind towers would be closer to I-90 compared to the WHWPP, Kittitas Valley, and Desert claim alternatives, and it is anticipated that some travelers on I-90 would leave the freeway to take a closer look at the facility. A site-specific plan to accommodate this activity would need to be developed as part of the Transportation Management Plan for this alternative.			
3.15 Health And Safety				
Proposed Action	Fire is the primary health and safety risk at the site, especially during the hot, dry summer season. Fires could be started by lightning strike or by human activities.			
	Unintentional or accidental fire or explosion risks during project operations and maintenance include human activities such as cigarette smoking, use of vehicles off established roadways, and mechanical malfunction inside the wind turbine generators and at other project facilities.			
	Potential sources of hazardous materials include fuel and oils from construction equipment and mineral oil used to fill substation transformers during project operations. Periodic changing of lubricating oils and hydraulic fluids used in the individual wind turbine generators would result in the generation of small quantities of hazardous waste.			
	Potential safety risks during project operations include ice falling off of rotating turbine blades, blade throw (blade fragments thrown from a rotating turbine), and potential collapse of turbine towers.			
	Shadow-flicker caused by wind turbines (alternating changes in light intensity when the moving turbine blades cast shadows on the ground and objects) is not expected to result in health effects since the closest resident is located 1.75 miles from the nearest turbine in residential areas.			
	Health and safety decommissioning impacts for all off-site alternatives would be similar to construction impacts.			
Kittitas Valley	The types of health and safety impacts possible would be the same for all action alternatives.			
	The project proponent would develop and implement a fire protection and prevention plan for both construction and operation activities, in coordination with the Kittitas County Fire Marshal and other appropriate agencies.			
	Hazardous materials spills would be addressed in accordance with a project Spill Prevention Control and Countermeasure (SPCC) Plan. Shadow flicker impacts were evaluated for 17 residences in vicinity of the project. Although three residences would be exposed to lengthier			

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	shadow flicker effects, it was determined that the exposure would not result in health effects for the residents.			
	Health and safety decommissioning impacts for all off-site alternatives would be similar to construction impacts.			
Desert Claim	The types of health and safety impacts possible would be the same for all action alternatives.			
	The proponent would implement recommendations received from the Kittitas County Fire Marshal to mitigate fire hazards in the project area.			
	Hazardous materials spills would be addressed in accordance with a project SPCC Plan.			
	Shadow-flicker caused by wind turbines is not expected to result in health effects in residential areas. Of 65 receptors, 38 would experience varying degrees of exposure to shadow flicker. Maximum duration of exposure in any given day is estimated to be from 6 minutes up to 2 hours. Micro siting some turbines was determined as a possible mitigation measure to reduce exposure of some receptors. In response to comments on the Desert Claim DEIS and with guidance from Kittitas County, the proposal was modified to include 487-foot setbacks from turbines to minimize potential impacts from tower collapse, blade throw, and ice throw. The proponent would implement recommendations received from the Kittitas County Fire Marshal to mitigate fire hazards in the project area. In addition, the proponent would conduct studies to determine microwave interference prior to siting turbines, monitor television reception interference, and investigate claims of diminished signal quality.			
	Health and safety decommissioning impacts for all off-site alternatives would be similar to construction impacts.			
Springwood Ranch	The types of health and safety impacts possible would be the same for all action alternatives.			
	Because the Springwood Ranch alternative is an overall smaller proposal, with less turbines, and less miles of access roads, it may present a lower fire and explosion risk during both construction and operation. Hazardous materials spills would be addressed in accordance with a project SPCC Plan.			
	Detailed analyses of potential shadow flicker impacts were not performed for the hypothetical layout for the Springwood Ranch alternative. It is expected that, based on the hypothetical layout, some residences on the eastern edge of Sunlight Waters would be exposed to shadow-flicker (based on a 2,000-foot distance threshold).			
	Health and safety decommissioning impacts for all off-site alternatives would be similar to construction impacts.			
Swauk Valley Ranch	The types of health and safety impacts possible would be the same for all action alternatives.			
	Because the Swauk Valley Ranch alternative is an overall smaller proposal, with less turbines, and less miles of access roads, it may present a lower fire and explosion risk during both construction and operation. Hazardous materials spills would be addressed in accordance with a project SPCC Plan.			
	Detailed analyses of potential shadow flicker impacts were not performed for the hypothetical layout for the Swauk Valley Ranch alternative. It is expected that, based on the hypothetical layout some residences concentrated along the Yakima River and to the south of the proposed site could be exposed to shadow-flicker (based on a 2,000-foot distance threshold).			
	Health and safety decommissioning impacts for all off-site alternatives would be similar to construction impacts.			

# 1.7 <u>Cumulative Impacts</u>

Although the environmental impacts of proposed power projects are typically evaluated on an individual basis, the recent number of wind power generation applications in Kittitas County has prompted EFSEC to consider potential cumulative impacts. Furthermore, SEPA requires consideration of cumulative impacts. The Wild Horse, Kittitas Valley, and Desert Claim wind power projects are three similar but independent developments being proposed in Kittitas County that are being permitted through separate review processes— Wild Horse and Kittitas Valley through EFSEC and Desert Claim through Kittitas County. The Kittitas Valley and Desert Claim projects are relatively close to each other (within 1.6 miles at the closest point), while the Wild Horse Project is 14 miles from the Desert Claim project and 21 miles from the Kittitas Valley project. A brief description of the Desert Claim and Kittitas Valley projects is provided in the DEIS Section 3.16, "Cumulative Impacts." Potential cumulative impacts associated with the Wild Horse, Kittitas Valley, and Desert Claim wind power projects are also addressed in DEIS Section 3.16 for each resource topic, and are summarized below. Potential impacts associated with population growth within Kittitas County are also considered.

Since issuance of the DEIS, the Kittitas County commissioners acted on April 5, 2005 to deny the Desert Claim application submitted to the County [reference: Notice of Decision – Final Resolution, Findings of Fact and Conclusion of Law – Desert Claim Wind Power Project].

## 1.7.1 Earth Resources

Significant cumulative impacts on soil, topography, and geology resulting from construction of the three proposed wind power projects and future population growth in Kittitas County are not anticipated. Impacts on earth resources from development of the three wind power projects would generally be confined to localized, temporary erosion impacts from ground disturbance during construction. The intensity of impacts on near-surface soils would be within the construction footprint for the respective project and would not be overlapping in geographic extent.

Cut and fill would be required to construct access roads, tower foundations, transformer pads, and other project facilities. Each project will require large amounts of gravel for road and foundation construction; however, because the Wild Horse Project will utilize on-site rock pits to supply gravel, the cumulative impact on local resources will be reduced.

Similarly, development associated with population growth within the County would result in localized impacts from ground disturbance and cuts and fills for infrastructure, support services, and housing assuming construction follows prescribed engineering standards and requirements. Future agricultural activities are not anticipated to appreciably affect earth resources.

# 1.7.2 Air Quality

Development of wind power sites would result in production of vehicle exhaust and fugitive dust emissions, temporarily from construction activities and through long-term operational activities. However, these impacts would occur in areas of existing agricultural use, which are common sources of exhaust and dust emissions.

While gravel for construction of the WHWPP would be obtained on-site, gravel needed for construction of the Kittitas Valley and Desert Claim projects would be transported from offsite sources. This activity could result in a temporary increase in localized cumulative air quality impacts on travel routes shared by the two projects. This potential impact would be greatest if construction activities for the Kittitas Valley and Desert Claim projects overlapped and occurred during periods of peak winds.

The air emissions from contemporaneous construction of multiple wind projects would be additive in terms of their contribution to total regional pollutant loads. However, it is not anticipated that the incremental impact of the aggregated air emissions from construction of multiple wind power projects would be sufficient for regional air pollutant concentrations to temporarily exceed the applicable air quality standards.

Development associated with population growth in the County would result in an incremental increase in exhaust and dust emission from construction and operation of infrastructure and housing and resultant increases in vehicular traffic. It is not anticipated that the incremental impact would be sufficient for regional air pollutant concentrations to exceed applicable air quality standards.

## 1.7.3 Water Resources

Cumulative effects to surface water resources could result from increases in the amount of impervious surfaces that in turn could alter the amount and quality of drainage to area creeks and other water features. However, because the three projects are sufficiently distant from each other and are located in different tributary watersheds, there would not be combined effects from multiple projects on the same stream or aquifer. The localized effects of each project would occur within the drainages of minor tributaries to the Yakima River and the Columbia River and at a distance of at least several miles upstream from either river. Specific cumulative impacts on groundwater resources from the three wind power project sites are hydrologically linked. Because the three project sites are sufficiently distant from each other and are located in different tributary watersheds, there would not be a combined effect from multiple projects on the same aquifer. Therefore, significant cumulative effects on water resources within the Upper Yakima River basin or the northeastern portion of the Kittitas Valley are not expected.

Development associated with projected population growth in the County would result in an incremental increase in water demand within urban and rural areas. The projected operational water demand for the three wind projects would have a negligible effect on water quantity conditions for surface water and ground water resources since the projects would have minimal demands for water consumption.

# 1.7.4 Vegetation and Wetlands

Implementation of all three proposed wind power projects would result in the loss of vegetation through clearing and ground disturbance, including the potential loss of lithosols, a unique habitat often associated with the shrub-steppe region. The combined figures for the three projects amount to approximately 371 total acres of existing vegetation lost, including approximately 170 acres of shrub-steppe and approximately 100 acres of lithosol habitat. This constitutes an approximately 2% loss of vegetation at each project site (out of the 17,000 collective acres for the three wind power project sites), which would not be considered an adverse cumulative effect. The precise regional extent of lithosol habitat is not quantitatively known. Therefore, it is difficult to assess the specific magnitude of cumulative lithosol impacts at the three wind power project sites within the context of the surrounding region.

No federally listed rare plants were identified at either the Kittitas Valley or Wild Horse project sites. One Washington State listed species, hedgehog cactus, was found extensively in lithosolic habitats at the Wild Horse Project site, but less than 10% of the individuals identified during a rare plant survey are considered at risk from direct impact from the Wild Horse Project.

No rare plants protected by either the federal or state governments were found in searches of the areas of likely disturbance in the Desert Claim project area (Kittitas County 2003a). The minimal potential impacts of the proposed wind projects on rare plants would not represent a significant cumulative impact on any species.

Cumulative impacts of the three proposed power projects on wetlands could result from directly filling or grading of wetland systems, as well as from indirect effects caused by stormwater runoff, increased pollutant loading, and water quality degradation. This in turn could result in loss of wetland diversity and reduced wetland functions and values. The Kittitas Valley project would disturb between approximately 135 and 185 square feet of one small potential wetland system at the project site. Construction activities would temporarily disturb approximately 17 acres of wetland area at the Desert Claim site, while the permanent project footprint would overlap with an area estimated at 3 acres.

No wetlands were identified within a 164-foot buffer around the planned locations for Wild Horse Project facilities; therefore, no impacts on wetlands are anticipated for that project. No streams, springs, or riparian areas would be impacted by construction disturbances related to wind turbines and roads. No project access roads would cross any streams or riparian areas.

The collective effects of these projects would be minor as a result of wetland avoidance and/or required mitigation for wetlands that could not be avoided, and are not expected to extend to downstream surface waters or wetlands. Therefore, there would not be a potential for significant cumulative effects on wetland resources.

Development associated with population growth (6,976 additional people by 2020) would result in an incremental reduction in native plant communities and cultivated lands in the County. In addition, an unknown level of conversion of native plant communities to cultivated agriculture is likely to occur in the Kittitas Valley and in the vicinity of the Wild Horse project site. The proposed projects and future residential development within the County will create the potential for the introduction of or the spread of noxious weeds into cultivated and native plant communities.

## 1.7.5 Wildlife

Some temporary displacement of wintering mule deer and elk is anticipated from winter construction activities in the three wind projects. If tolerance thresholds during wind power project maintenance activities are exceeded, some animals are likely to be displaced and use areas away from the wind project development areas. However, cumulative impacts on wintering mule deer and elk for all projects are expected to be low.

The estimated combined raptor mortality rate for the three wind power projects would be approximately 14 raptor fatalities per year with 361 combined turbines, and 15 raptor fatalities per year with 391 combined turbines. Given the distances between the Wild Horse, Kittitas Valley, and Desert Claim projects, and the typical home ranges of the raptors at risk for collision at the three projects, the same individual breeding raptors that use the Kittitas Valley and Desert Claim project areas are not expected to use the Wild Horse Project area.

The cumulative impacts on bald eagle winter habitat from all projects would be small. During project operation, bald eagles that occupy the area near the Yakima River would be at some risk for collision with turbines. Assuming risk of collision is proportional to use, one bald eagle fatality between the Kittitas Valley and Desert Claim projects might occur every two to three years. There was no observed use at the Wild Horse Project area.

It is expected that passerines would make up the largest proportion of bird fatalities for the three projects combined. Based on the mortality estimates from other wind projects studied, combined passerine mortality for the three projects would range from 430 to 740 fatalities per year. This level of mortality is not expected to have any population-level consequences for individual species.

Using mortality estimates from other operating wind projects (one to two bat fatalities per turbine per year), total annual bat mortality for all three wind power projects in Kittitas County is expected to range from 361 to

782 bat fatalities. However, the significance of bat mortality from the three projects is hard to predict because there is very little information available regarding the size of bat populations. Studies suggest, however, that resident bats do not appear to be significantly affected by wind turbines (Johnson et al. 2003; Gruver 2002) because nearly all observations of fatalities were during the fall migration period.

Population growth within Kittitas County would also result in an incremental decrease in wildlife habitat in the County, primarily within rural and designated municipal Urban Growth Areas.

## 1.7.6 Fisheries

None of the affected streams in the project area are known to contain fish communities. Development of the Desert Claim project would result in minor disturbance or displacement impacts on streams and riparian zones in the project area. Site-specific BMPS would be utilized on all sites to avoid potential downstream impacts. The effects of the three projects would be minimal in three localized areas of Kittitas County and would not extend to downstream waters; therefore there would not be a potential for significant cumulative effects on fishery resources.

Development associated with population growth may result in an incremental impact to fish habitat in the County. Development scheduled to occur within rural and designated municipal Urban Growth Areas would result in increased impervious surface area and resultant modification to stream flows. Development affecting stream resources will be subject to critical areas regulations.

## 1.7.7 Energy and Natural Resources

When combined with other planned wind projects in the region, construction activity associated with the Wild Horse Project would contribute to local energy demands. The combined demands of the three projects for fuel and construction materials would cumulatively contribute to the local and regional demand for, and irreversible expenditures of, nonrenewable resources on a temporary basis.

The three proposed wind power projects would provide a combined nameplate capacity of approximately 565 MW of electricity (under the most likely scenario for development of the Kittitas Valley and Wild Horse projects). Assuming long-term operation of the three projects at a typical wind power project capacity factor of 33%, combined they would produce approximately 186 (average) MW of electricity on a long-term basis. That collective energy output would represent a substantial increase in the amount of electricity currently produced within Kittitas County. Operation of the three projects would also cumulatively add to the capacity, production, and availability of renewable energy sources in Washington State and the greater Pacific Northwest although it would represent a relatively small addition to the total regional electricity supply.

Development associated with population growth within the County would result in demand for energy and natural resources for the construction of infrastructure, support services, and housing. These impacts would include the use of petroleum products, wood, steel, and sand and gravel.

## 1.7.8 Noise

Construction noise generated by the three wind power projects would be temporary in nature and would primarily be from operation of construction equipment and vehicles. The magnitude of this temporary cumulative impact would depend upon the timing of construction activities, but any adverse effects would be limited to the area immediately surrounding each construction site.

The Kittitas Valley and Desert Claim projects are a sufficient distance apart that residents near either of the projects would likely only hear the noise from one of the project sites. Noise modeling results for both

projects indicate that receptors located between the two projects would be unlikely to experience noticeable increases in noise levels as a combined effect of project operations. Given the distances that separate the Wild Horse Project from the Desert Claim and Kittitas Valley sites, Wild Horse Project operations would not contribute to cumulative noise impacts in the region.

Development associated with population growth within the County would be expected to result in localized and incremental increases in the sources of noise and background noise levels. Short-term increases in noise levels would occur with construction of infrastructure, and housing. Longer term noise increases would occur as development occurs in urbanizing areas. These noise increases would be confined to specific locations.

## 1.7.9 Land Use

The three wind power projects would be located on approximately 17,966 acres used primarily for agricultural activities (grazing and rangeland), representing approximately 4% of the Ag-20 and Forest and Range zoned land in the County. Existing uses and activities would not be displaced by proposed wind power facilities, but would collectively result in the long-term conversion of approximately 330 acres of agricultural land as a result of construction of the wind power facilities.

Individually or collectively, the proposed projects would not likely attract supporting uses or generate spin-off development and the relatively low number of full-time employees (30 to 42) would not create cumulative demand for services or create pressure to change or convert existing land uses. Residential development in the vicinity of the Wild Horse site is less likely to occur than at Kittitas Valley and Desert Claim sites because of the relatively remote location.

## 1.7.10 Visual Resources

The cumulative effect of the Wild Horse project would occur in the context of landscape modifications associated with past, current, and future land uses in the project vicinity. The local landscape at the Wild Horse site has some evidence of change resulting from agricultural practices, but less than do the Kittitas Valley and Desert Claim sites which include more intensive agricultural practices, infrastructure facilities, and rural residential development.

Because the Wild Horse project would be located so far from the other two projects and in an entirely different portion of the landscape it would have limited potential to be seen in the same view as the other two projects, however there may be some viewpoints in or near Kittitas Valley from which all three projects would be visible.

In addressing the potential cumulative visual impacts of multiple wind power projects, it is most important to consider the Desert Claim and Kittitas Valley projects together because of their proximity. Should both the Kittitas Valley and Desert Claim projects be built, the visual consequences would include approximately 240 wind turbines (120 for each project) on the valley floor and adjacent slopes in the north-central portion of the Kittitas Valley. There are a number of locations where the Desert Claim project could be seen in the foreground to middle ground and the Kittitas Valley project could be seen in the middle ground to background.

The overall effect of multiple wind energy projects on the regional landscape and the experience of viewers when considered over time and at multiple locations is also a consideration. For example, drivers traveling west through Kittitas County on I-90 would likely notice the Wild Horse project from both east of the Columbia River and again in the eastern end of the Kittitas Valley and could subsequently view a more extensive area of wind turbines to the north and west of Ellensburg (the Desert Claim and Kittitas Valley projects). Travelers would be likely to recall having seen a collection of wind turbines a few

minutes before seeing more wind turbines. This progressive realization could leave the impression with some viewers that wind turbines are plentiful in Kittitas Valley. This type of impression would also occur for residents of and frequent visitors to the local area.

Development associated with population growth within the County would result in both localized and landscape-scale changes in visual resources. These changes will occur from the changes in land use with the construction of infrastructure, support services, and housing to support the population increases.

## **1.7.11** Population, Housing, and Economics

The proposed projects could contribute to increases in temporary and permanent job opportunities and populations in the region. The majority of cumulative population and housing impacts would be temporary and would occur during construction. Assuming that all three projects are constructed simultaneously, temporary population increases resulting from construction work forces could result in cumulative effects to the local housing supply. However, given the rental housing supply and the vacancy rate, it appears that the study area has an adequate supply of temporary housing to accommodate the potential cumulative increase in construction workers from outside the area.

Projected population growth in the county (6,976 additional people by 2020) would increase the demand for housing, infrastructure, and support services. The estimated number of fulltime workers for the three projects (30 to 42) would represent less than 1% of the anticipated population growth in the county.

The three wind power projects would increase retail sales and overall economic activity in the area, as well as employment opportunities for residents of Kittitas County. The three projects would also increase the amount of annual property tax revenue to the affected taxing districts in Kittitas County,

## 1.7.12 Public Services/Utilities and Recreation

Concurrent development of the three projects could create additional demand for law enforcement, fire protection, and emergency medical service response during both construction and operations and maintenance phases. The level of impact would depend on the timing of concurrent construction activities as well as the availability of emergency response resources at the time of an incident.

Increased permanent worker populations required to operate the three proposed wind farms could contribute to increased cumulative demands for school services in central and eastern Kittitas County. However, local residents would likely fill a portion of the operations jobs and it is unlikely that all of the in-migrants would locate in the same school district. Therefore, no significant cumulative adverse impacts on schools are anticipated from project operation.

The proposed wind energy projects would result in the maintenance of existing recreational activities with the project areas. Some access interruptions or temporary congestion might occur during project construction, particularly in the Desert Claim and Kittitas Valley project areas. The impacts of these three projects, in association with general population growth in the county, would not result in significant cumulative impacts to recreation.

Cumulative impacts on utility service providers would consist primarily of cumulative increases in the demand for solid waste disposal services. However, this increased demand is not anticipated to be significant with respect to either collection capability or the capacity of the County's construction and demolition waste disposal site. No long-term cumulative impacts on regional water and wastewater treatment plants are anticipated because water and wastewater demands would be limited to temporary needs generated during construction activities and those from operations and maintenance staff.

No significant cumulative impacts on electricity or telecommunications are anticipated. Based on the distances between residences and the respective project facilities, there does not appear to be a potential for cumulatively significant interference impacts on radio and television reception in the areas near the proposed wind power projects.

Temporary population increases associated with construction workers from all three projects could cumulatively increase demand for and use of local and regional recreation resources during overlapping construction periods, but those are not expected to be significant.

## 1.7.13 Cultural Resources

Constructing the three proposed wind power projects would result in ground disturbance that could potentially impact identified and unidentified prehistoric and/or historic sites, as well as cause impacts on traditional cultural properties (TCP). Cultural resource surveys have been conducted at each of the project sites. Direct and indirect impacts to cultural resource within these sites would occur within the context of comparable impacts from past and ongoing land uses in the vicinity. Agricultural activities, irrigation development, construction of roads and power transmission lines, and rural residential development have no doubt disturbed or destroyed cultural resources that existed in the vicinity of these projects, and have altered the historic setting for the resources that remain.

Tribal representatives of the Yakama Nation have expressed concern about the cumulative effect from wind power projects. Efforts to bring together wind farm applicants, government agencies, and tribal representatives to discuss these and other issues of concern were not successful within the timeframe of EFSEC's review of the WHWPP. Currently, archaeological monitoring along the Schultz-Wautoma transmission line project has identified sensitive cultural resources within that project's area of potential effect. Potential impacts to these resources would fall under the responsibility of the Bonneville Power Administration (BPA) and would be addressed through its NEPA process.

A Traditional Cultural Property (TCP) Study was conducted by the Confederated Tribes of the Colville Reservation (CCT), under contract with the Applicant. The Confederated Tribes of the Colville Reservation requested that the proprietary results not be disclosed. In the report, tribal members identified traditional places and resources within the project area. The Applicant has been notified of the CCT's concerns, and the concerns are being addressed between Zilkha and the CCT.

While potential impacts from these and other projects in the county could result in a net cumulative loss of cultural resource values in the region, mitigation programs in each individual project would help to limit project-specific impacts, thereby reducing overall cumulative impacts on cultural resources.

## 1.7.14 Transportation

If construction occurs simultaneously for the Kittitas Valley and Wild Horse projects, the segment of I-90 immediately west of Exit 106 (to US 97) may temporarily carry construction traffic for both projects. The combined construction traffic volumes of both the Kittitas Valley and Wild Horse projects during the PM peak would cause this segment of I-90 to operate at LOS B. This is acceptable by county and State standards, and it is anticipated that the LOS would return to its original condition (LOS A) once the projects are completed.

With the addition of the Desert Claim project, the total peak-hour trips if all three proposed projects were under construction simultaneously would result in an operating condition that is still within the numerical range for LOS B. Therefore, the additive effect of the potential Desert Claim construction traffic would not result in a significant cumulative impact on the operating condition for I-90 during the construction period. However, if turbine components or offsite gravel materials were delivered to multiple projects at

the same time, there could be increased delays or additional detours within the area near the Desert Claim and Kittitas Valley projects.

Development of multiple wind farms in the Kittitas Valley area would likely result in a larger total number of tourists visiting wind project facilities, relative to the level of activity with a single project. However, the tourist traffic would likely be localized to the individual areas around the projects and would not likely be additive or cumulative.

Aircraft operations in the Kittitas Valley are centered at Bowers Field. Given its location, the proposed Desert Claim project would represent a cumulative addition to natural and constructed features within the Bowers Field airspace. Ten of the proposed turbines would intrude into the protected airspace for Bowers Field. The Kittitas Valley and Wild Horse projects would not present potential conflicts with air traffic operations at Bowers Field or other facilities and there would be no cumulative significant impacts to air transportation resulting from development of those projects.

## 1.7.15 Health and Safety

The potential for exposure to fuel and non-fuel hazardous substances would increase, particularly during the construction period if construction periods were to overlap. However, the effects would be localized in the area of the spill.

The greatest fire risk for each project would occur during the construction period, because of the level of activity and the numbers of workers and equipment active at that time. The greatest cumulative fire risk would occur if and when construction schedules for two, or all three, of the projects overlapped. With implementation of strict fire protection and prevention measures, the cumulative risk of potential fires associated with construction of the three proposed wind turbine projects should be minimized.

Certain fire risks specific to wind energy projects would also exist during the operating period for each project. However, specific measures to counteract or manage these risks would be implemented during project operation. For example, the project facilities would be continually monitored, the project areas would be regularly patrolled, and access to the project areas would be limited. Therefore, the concurrent operation of the three proposed wind power projects would not likely pose a cumulatively significant increased fire risk.

Site-specific health and safety concerns associated with wind energy production include the potential for ice to be thrown from rotating blades, blades to disengage and be thrown from the tower, and tower collapse during extreme weather conditions. These potential health and safety impacts from the three projects would be localized and would not be expected to be cumulatively significant.

Potential shadow flicker impacts from the three proposed wind power projects would be limited to the immediate vicinity (approximately 2,000 feet) of the wind turbines within each respective project area. Some residences that are close to turbine locations for the Desert Claim or Kittitas Valley projects would be subject to shadow flicker for varying numbers of hours per year. These impacts would be limited to a number of discrete locations that are well separated from each other, and would not constitute a cumulative impact from these two proposed projects.

The electric and magnetic fields associated with the three proposed wind power projects would be less than those produced by electrical facilities already present in the vicinity of the respective project areas, and would diminish to background levels at distances within which public exposure could occur. Therefore, there would not be cumulative exposure impacts from development of multiple wind energy projects.

# 1.8 Issues to Be Resolved

All issues associated with this proposal have been clearly identified and assessed, or would be addressed in some clearly defined action plan in the future (e.g. TAC monitoring plan). Issues raised by Kittias County have been resolved in the Development Agreement between the Applicant and the County (Appendix A). Concerns raised by WDFW have been addressed in the Settlement Agreement between the Applicant and the agency (Appendix B).

## **1.8.1 Compliance with Local Land Use Plans and Zoning Ordinances**

At the time the Draft EIS was issued in August 2004, the proposed project was not in compliance with local land use plans and zoning ordinances. EFSEC directed the Applicant to make all reasonable efforts to resolve the noncompliance. The Applicant made application for change in, or permission under, Kittitas County land use plans and zoning ordinances. On March 4, 2005, Kittitas County approved the WHWPP designation as sub-area for their comprehensive plan, enacted a wind farm resource overlay zone for the project, approved a Development Agreement with the Applicant, and issued a development permit authorizing the project to proceed; all contingent upon the approval of an EFSEC site certification approved by the Governor. Kittitas County then provided a certificate of land-use consistency to EFSEC, allowing EFSEC to make a determination that the Project was consistent with local land-use plans and zoning ordinances.

# 1.9 Significant Unavoidable Adverse Impacts

The Applicant has mitigated several potentially significant adverse impacts associated with the proposed action during the preliminary design phase of the proposed WHWPP. However, even with implementation of mitigation measures proposed by the Applicant, in conjunction with additional mitigation included in this EIS, the following have been identified as potential significant unavoidable adverse impacts of the proposed action:

## 1.9.1 Wildlife

It is currently not clear what indirect impacts the project may have on big game winter range and big game movements. It is anticipated that the mitigation (exclusion of livestock from springs) and elimination of grazing on the mitigation parcel will improve big game habitat. Controlled access and controlled hunting on the site will allow WDFW to properly manage the herds, which should eliminate the potential for creating a refuge for big game and minimize stress to big game in the winter. The level and effect of disturbance impacts on big game from maintenance operations is not known, and may or may not be significant.

## 1.9.2 Noise

Haul truck traffic during construction would cause temporary, high noise levels at homes within 60 feet of the roads being used to access the site during facility construction. However, there are few, if any, homes that close to the proposed construction haul routes. Therefore, any adverse impacts would be temporary and would be restricted to a small number of residences.

# Chapter 2 PROPOSED ACTION AND ALTERNATIVES

# 2.1 Introduction

Chapter 2 of the Draft Environmental Impact Statement (DEIS) described the proposed Wild Horse Wind Power Project (WHWPP), and included information regarding the project site and location, facilities, construction activities and costs, operation and maintenance activities, mitigation inherent in project design, and decommissioning. Also described were the no action alternative, alternatives considered but eliminated, off-site alternatives, alternative transmission interconnection, benefits or disadvantages for reserving project approval for a later date, regulations and permits, coordination and consultation with the public and other organizations, and potential future activities.

Revisions to sub-sections within Chapter 2 of the DEIS, presented below, are based on additional and updated information or corrections provided by the Applicant or the Washington Energy Facility Site Evaluation Council (EFSEC) adjudicative hearings, in addition to information provided by the agencies, in the Development Agreement between the Applicant and Kittitas County (Appendix A), and in the Settlement Agreement between the Applicant and the Washington State Department of Fish and Wildlife (WDFW) (Appendix B). Revisions to the off-site alternatives analysis for the Desert Claim Wind Power Project (DCWPP) have been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for the project. Tables included in this chapter reflect only those items with revisions. Table entries in the DEIS that were not changed are not repeated here.

## 2.1.1 Applicant

#### Applicant Wind Power Projects

#### Kittitas Valley Wind Power Project (181.5 to 246 MW)

Zilkha Renewable Energy is proposing to construct a 181.5 to 246 MW wind project located on open ridgetops between Ellensburg and Cle Elum, about 12 miles northwest of the City of Ellensburg in Kittitas County, Washington. A DEIS was prepared on the project in December 2003. A Draft Supplemental EIS was issued in August 2004. The project could be on line one year following approval by the governor of the state of Washington. Energy would be sold to Puget Sound Energy (PSE), the Bonneville Power Administration (BPA), or another utility. However, the power would be transmitted through either BPA and/or PSE transmission systems.

# 2.2 Description of Proposed Action

The following description of the proposed action is presented, in large part, from the final "Application for Site Certification, Wild Horse Wind Power Project" prepared and submitted on March 9, 2004 to

EFSEC by Wind Ridge Power Partners, LLC. Information regarding project alternatives was derived from the December 2003 "Kittitas Valley Wind Power Project Draft Environmental Impact Statement" prepared by EFSEC, and December 2003 "Desert Claim Wind Power Project" prepared by Kittitas County. Revisions to the proposed action presented in this Chapter have been provided by the Applicant. Revisions to the alternatives analysis have been updated from information provided in the Final Environmental Impact Statement prepared for the DCWPP (Kittitas County 2004).

## 2.2.1 **Project Overview**

Due to Federal Aviation Administration (FAA) restrictions, nine turbine locations (A1, A2, A3, B1, B2, B3, D1, D2, D3 have been removed from the original proposal evaluated in the DEIS. As such, a revised site layout illustrating these key elements is contained in Figure 1-4 of this FEIS. Maps showing the project location are presented in Section 2.2.2, "Project Site and Location" and in Figure 1-1. Although turbine *locations* have been removed, the Applicant would attempt to re-allocate the nine turbines along string corridors identified in the application, and therefore the total number of turbines would not change. Project construction could begin in the summer of 2005 immediately after obtaining approval from the Governor, and it is anticipated that the Project would take about 1 year to construct. The expected service life of the project is 20 years. Refer to Section 2.2.6, "Decommissioning" for details addressing upgrade of equipment with more efficient turbines after the first 20-year period.

#### Impact Analysis and Design Scenarios

The Applicant has fully analyzed the entire range of potential impacts and described all potential environmental effects from the full range of sizes and types of wind turbines associated with the three scenarios evaluated in this EIS. The impacts of the design scenarios are presented in Chapter 3 of this EIS. The potential impacts to earth, air, water, wildlife, socioeconomics, public health and safety, and other elements of the environment have been examined for the full range of sizes and numbers of wind turbines. In consultation with WDFW and other local agencies, and in response to comments received on the DEIS, additional mitigation measures have been identified and are proposed in the appropriate resource sections of Chapter 3 of this FEIS.

## 2.2.3 Project Facilities

#### Interconnection Facilities and Substations

The project substation and transmission facilities would consist of one or two step-up substations (indicated as the BPA and PSE step-up substations on the site layout in Figure 1-2), the PSE substations, and one to two feeder lines running from the step-up substation(s) to the interconnection substation(s). The step-up substations are located on the project site whereas the interconnection substations are located close to the proposed interconnection to the existing BPA and PSE power lines. The proposed location for the PSE interconnection substation has been revised since the DEIS was issued and would be located just to the east of Stevens Road, north of where PSE's IP Line crosses I-90. Access to the PSE point of interconnection (POI) would also serve as the PSE point of delivery (POD). If interconnection to the BPA transmission system was selected by the Applicant, BPA would construct, own and operate an interconnection station. The BPA interconnection substation would be located at BPA's existing Schultz substation, located approximately 14 miles northwest of the project site. The locations of the on-site step-up substations, the feeder lines and the interconnection substations are indicated in Figures 1-1, 1-2, and 1-4 (revised) of this FEIS. The Applicant would own, operate and maintain both the BPA and PSE feeder lines.

#### Project Feeder Line to PSE

For interconnection with PSE, the project feeder line would run south from the on-site PSE step-up substation to the PSE interconnect substation and would run over private land for a total of approximately 8 miles. The POI with PSE's IP Line would also be designated as the PSE POD for the project. One road crossing would be required over Vantage Highway as indicated in Figure 1-4 of this FEIS, "Revised Project Site Map."

#### **Meteorological Stations**

The project design would include five permanent meteorological (met) towers fitted with multiple sensors to track and monitor wind speed and direction and temperatures. The permanent towers would be free-standing (unguyed), would be as tall as the hub height (HH) of the wind turbine generators (WTGs) which is 46–80 meters (151–262 ft.), and would be connected to the plant's central Supervisory Control and Data Acquisition (SCADA) system (Figure 2-4).

#### Access Roads and Construction Trails

Access to the project site would be achieved via an existing private graveled access road that branches from Vantage Highway at a location approximately 11 miles east of the City of Kittitas. This road is commonly known as Beacon Ridge Road. This road is a private road and the Applicant, through an adaptive management approach, will allow controlled access to and through the project site. Access at the project site is discussed in greater detail in updated Section 3.5, Wildlife, of this FEIS. Access is also addressed in several responses to comments submitted on the DEIS (see Chapter 4 of this FEIS for comments and responses). The project site is currently crisscrossed with an extensive network of existing roads and, wherever practical, existing roads would be utilized to minimize new ground disturbance. Up to 15 miles of existing roads would need to be improved and up to 17 miles of new roads would be constructed. The access roads and roads between turbine strings would generally consist of 20-foot wide compacted gravel surface and a 2-foot wide shoulder on either side to blend with the surrounding contours and allow for proper drainage. The roads between contiguous turbines in a string would be 34 feet wide to accommodate larger crane equipment to move between the individual turbine sites safely. In areas of steeper grades, a cut and fill design would be implemented to keep grades below 15% to facilitate access and help prevent erosion. Other graveled areas are parking areas near the project operations and maintenance facility and at a visitor's kiosk near the site entrance on Vantage Highway, as well as 3 equipment lay-down areas adjacent to the site roads. Revised Figure 1-4 in this FEIS, "Revised Project Site Layout" illustrates the location of the project facilities.

#### **Project Setbacks**

Setbacks associated with wind projects are based on safety and avoidance of nuisance concerns, industry standards, and on the Applicant's experience in operating wind power projects. Currently the nearest residence to the proposed project lies approximately 1 <sup>3</sup>/<sub>4</sub> miles to the south. However, a safety setback distance of 541 feet has been specified in the Development Agreement between the Applicant and Kittitas County (Kittitas County 2005). As noted in Section 5.17, Turbine Setbacks from Residences, a minimum safety zone setback of 541 feet will be maintained between Project wind turbines and residences located outside the Project boundaries. Should the Applicant wish to install wind turbines closer than 541 feet to the Project boundary, the Applicant would need to obtain an easement or covenant that restricts the construction of any new residences within 541 feet of any turbine as measured from the nearest turbine tower center point to any such new residence. The remoteness of the site would avoid potential nuisance impacts such as noise and shadow-flicker.

The specified setback distance of 541 feet exceeds the setback considerations for tip height that relate to the size of the actual turbines to be installed. (Tip height refers to the total distance from the base of the turbine to the tip of the blade at its highest point). Tip height setbacks are primarily safety-related (e.g., if an entire tower and turbine were to collapse from a massive earthquake either combined with or independent from hurricane force wind, they would not fall on a public road or a neighbor's property). All public roads and adjoining properties are located beyond the proposed turbine tip height.

#### <u>Lighting</u>

The Applicant would also comply with FAA's aircraft safety lighting requirements for structures greater than 200 feet tall, which could include turbines and met towers. Requirements include marking these structures with lights that flash white during the day and red at night. See Figure 3.10-11 in this FEIS for the proposed lighting plan for the Wild Horse Wind Power Project (WHWPP).

#### 2.2.4 Construction Activities

#### **Construction Schedule, Activities, and Milestones**

The construction schedules are based on obtaining Governor approval by the summer of 2005.

#### **Project Schedule with Different Turbine Sizes**

The construction schedule would not be significantly affected by the selection of different WTG sizes or manufacturers. The installation of larger or smaller numbers of WTGs would impact the construction schedule as shown in Table 2-4 of the DEIS. Construction activities would occur within the work windows defined in the Development Agreement between the Applicant and Kittitas County, as well as those defined in the settlement agreement between WDFW and the Applicant. The actual schedule for construction may be adjusted to allow for plan review and approval activities by EFSEC.

				Approx. On- Site Staff/Crew
Task/Milestone		Start	Finish	for Task
1	Governor Approval	6/15/05	6/15/05	
2	Engineering/Design/Specifications/Surveys	6/15/05	8/2/05	18
3	Order/Fabricate Wind Turbines	6/15/05	12/13/05	0
4	Order/Fabricate Substation Transformer	6/15/05	12/6/05	0
5	Road Construction	8/3/05	11/8/05	30
6	Foundations Construction	8/24/05	1/10/06	60
7	Electrical Collection System Construction	9/21/05	2/7/06	40
8	Substation Construction	8/3/05	12/20/05	20
9	Wind Turbine Assembly and Erection	12/14/05	5/16/06	40
10	Plant Energization	1/25/06	5/16/06	30
11	WTG Commissioning	1/25/06	5/16/06	15
12	Commercial Online Date	5/16/06	5/16/06	
Total 253				253

#### Table 2-3. Proposed Project Construction Schedule Summary

## 2.2.6 Decommissioning

The design life of major project equipment such as the turbines, transformers, substations, and supporting plant infrastructure would be at least 20 years. The trend in the wind energy industry has been to repower older wind projects by upgrading older equipment with more efficient turbines. It is likely that after mechanical wear takes its toll, the project could be upgraded with more efficient equipment and could have a useful life longer than 20 years. Such upgrades may require additional EFSEC review and approval in advance of the repowering being performed.

Prior to construction of the project the Applicant will provide to the County and to EFSEC, a Project decommissioning and site restoration plan as required by Washington Administrative Code (WAC) 463-42-655. The Plan would be prepared in sufficient detail to identify, evaluate, and resolve all major environmental and public health and safety issues reasonably anticipated by the Applicant. If the project were terminated, the Applicant would request the necessary authorizations from EFSEC and landowners with which leases have been established to decommission the facilities. Decommissioning the project would involve removal of the Turbines; removal of foundations to a depth of 3 feet below grade; regrading the areas around the Project Facilities; removal of project access roads and overhead cables (except for any roads and/or power cables that the Project Areas landowners wish to retain): and final reseeding of disturbed lands. A detailed engineering estimate of the amount of funds needed for the Decommissioning would also be provided and reevaluated every 15 years.

The Applicant would provide financial security for the performance of its decommissioning obligations through a Performance Bond. The Performance Bond would be in an amount equal to the amount provided in the engineering estimate for Decommissioning. More information associated with the Decommission of the proposed project can be found in the Development Agreement between Kittitas County and the Applicant (Appendix A of this FEIS).

# 2.4 Mitigation Measures Inherent in Project Design

Facility design would include mitigation measures as well as compliance with applicable codes and standards and implementing best management practices for erosion and sedimentation control. These mitigation measures were presented for each resource topic throughout Chapter 3 of the Draft EIS. These measures were also summarized in Table 1-2 of the DEIS. In addition to those mitigation measures inherent to the project design, additional mitigation measures identified through the impact analysis presented in the DEIS, the Development Agreement with Kittitas County (Appendix A), and the Settlement Agreement with WDFW (Appendix B) have been included in this FEIS in the respective resource sections and summarized in the Summary Table 1-2 of this FEIS,

# 2.5 <u>Alternatives Considered but Eliminated from Detailed</u> <u>Study</u>

## 2.5.2 Consideration of Alternative Project Layouts

The proposed layout was defined during the project development phase based on the results of Applicantcommissioned surveys and studies including cultural resource surveys, telecommunications obstruction analysis, plant and wildlife studies, and visual impact assessments, and considerations of terrain, technology and existing infrastructure on site (e.g., roads.).

As a result of this process, the project infrastructure was sited to avoid all documented locations of wetlands, streams, cultural resources and other sensitive areas within the project area. Since the DEIS was issued, the FAA issued Determinations of Non Hazard (DNH) for 127 proposed turbine locations. Nine turbine locations proposed along the ridgelines of Whiskey Dick Mountain exceeded the FAA Average Mean Sea Level (AMSL) zone over the project area (see Figure 3.14-2). As such, proposed turbine locations A1, A2, A3, B1, B2, B3, D1, D2, and D3 have been removed from the proposal. Although turbine *locations* have been removed, the Applicant would attempt to re-allocate the nine turbines along string corridors identified in the application, and therefore the total number of turbines would not change. Mitigation is identified in this EIS to further reduce and avoid potential impacts.

# 2.6 Off-Site Alternatives

To comply with the requirements of EFSEC Energy Facility Siting Rules Title 463 WAC and Chapter 80.50 Revised Code of Washington (RCW), EFSEC requested an investigation into potential off-site alternatives within Kittitas County (Figure 2-6). As an update to this FEIS, the off-site alternatives analysis has been revised, where applicable, for the Desert Claim project, based on the August 2004 FEIS for that project (Kittitas County 2004).

## 2.6.2 Alternative Sites Selected for EIS Analysis

#### **Desert Claim**

The DCWPP is a proposed wind power project under review by Kittitas County. An application was submitted in January 2003 to Kittitas County Community Development Services by Desert Claim Wind Power LLC for permits to construct and operate the wind facility. An FEIS was issued for the Desert Claim project in August 2004. The FEIS evaluated a modified proposal, reducing the potential for conflict with the visual flight rules (VFR) traffic pattern associated with Bowers Field, along with the potential for phasing construction of the project. The modifications to the project resulted in shifting of

the proposed locations for the wind turbines, access roads, power collection cables and other project facilities. EFSEC is aware that the Kittitas County commissioners acted on April 5, 2005 to deny the DCWPP application submitted to the County.

#### Location and Site Characteristics

Approximately 53% of the site consists of shrub-steppe and 30% as grasslands. Remnant native shrubsteppe and grassland vegetation remain around the outer edges of the valley. The existing vegetative cover in most of the valley is dominated by agricultural cultivation and landscape plantings. Habitats range from poor to moderate quality for wildlife. Five perennial and 14 intermittent streams occur within the Desert Claim project area (Kittitas County 2003b).

There are no publicly owned lands in the project area. The project area is in a rural, relatively lightly populated section of Kittitas County and is characterized primarily by cultivated feed crop production or pasture. There are extensive areas of rangeland used for grazing. Rural residential development occurs in a number of locations, including dwellings on farm or ranch properties, scattered residences on large lots, and a few small clusters of homes. Thirty-two residences (including 1 abandoned trailer) are located either within the project area or within 1,000 feet of the project boundary. Approximately 8 residences are located within the boundary of the project area. (Kittitas County 2004).

#### Wind Power Facilities

The proposed DCWPP project would occupy approximately 82 acres of land and support up to 120 turbines (Table 2-8 and Figure 2-9). The specific facilities for the project include:

- A maximum of 120 wind turbines, each with a capacity of 1.5 MW and a total project generation capacity of 180 MW;
- Free-standing tubular-steel towers up to 213 feet high and supporting three-bladed rotors (Total maximum height including blades of 340 feet);
- Approximately 27.5 miles of roads;
- Approximately 31 lineal miles of underground 34.5-kV electrical power lines;
- One substation, (or possibly two) occupying 1 to 2 acres, with step-up transformers;
- Up to several miles of overhead 115- or 230-kV transmission line from the substation to the regional transmission system;
- One 5,000-square-foot operations and maintenance facility with parking, and
- As many as five met towers up to 212 feet in height.

Construction of the project would require 9 months and 120 to 150 workers. DCWPP would operate and maintain the wind facility during an assumed 30 years useful life. Operation and maintenance would include round-the-clock monitoring of output and performance and patrolling the project area to ensure security.

## 2.9 <u>Benefits or Disadvantages of Reserving Project</u> <u>Approval for Later Date</u>

Several regional utilities have identified a need for renewable wind-generated energy to diversify their resource portfolios. Failure to approve the project at this time potentially could make it more difficult for

these utilities to meet their stated goals of cost effective portfolio diversification at a minimum cost to their customers.

# 2.10 Applicable Federal, State and Local Requirements

Table 2-10. Pertinent Federal, State, and Local Codes, Ordinances, Statutes, Rules, Regulations, and Permits

Permit or Requirement	Agency/Code, Ordinance, Statute, Rule, Regulation or Permit
Noise Control	Washington Department of Ecology (Ecology)
	Noise Control, Chapter 70.107 RCW; Chapter 173-58 WAC, Sound Level Measurement Procedures; and Chapter 173-60 WAC, Maximum Environmental Noise Levels.
	Kittitas County Code 9.45, Noise

# 2.11 <u>Coordination and Consultation with Agencies and Indian</u> <u>Tribes</u>

The Applicant has consulted with local, state, and federal agencies and tribal representatives throughout the development of the proposed WHWPP. EFSEC has also conducted public informational meetings, EIS scoping meetings, and a public hearing on the DEIS.

#### 2.11.1 Local Agency Contacts

#### County Planning Staff

Both the Applicant and EFSEC have coordinated with Kittitas County throughout the Application and EIS development phases of the project. The Applicant submitted land use application materials (the rezone, conditional use permits, and development agreement request) for the proposed project to Kittitas County Community Development Services (CDS) department for administrative review on June 4, 2004. On June 17, 2004, Clay White of CDS sent a letter requesting that the Applicant submitted a request for a map in order for the application to be complete. On June 25, 2004 the Applicant submitted a request for a Comprehensive Plan change (sub-area plan). The County reviewed the submitted materials and requested additional information (complete 300' adjoiners list). The Applicant submitted a complete application and requested copies on July 23, 2004. Kittitas County CDS issued a notice of application on July 28, 2004, with an August 30, 2004 comment deadline. On March 4, 2005, Kittitas County approved the WHWPP designation as subarea for their comprehensive plan, enacted a wind farm resource overlay zone for the project, approved a Development Agreement with the Applicant, and issued a development permit authorizing the project to proceed; all contingent upon the approval of an EFSEC site certification approved by the Governor of the State.

#### **County Public Works Department**

Representatives of the Applicant met with County Public Works Director Paul Bennett on October 14, 2003 to discuss the location of the project and any potential concerns in terms of potential impacts on County facilities such as roads. Mr. Bennett requested assurance that the Applicant would agree to mitigate for any impacts that might occur to County roads (primarily Vantage Highway) from construction traffic and requested confirmation that the project would not interfere with any existing or proposed approaches or protected airspace for the Ellensburg Airport (Bowers Field). Mr. Bennett conducted a detailed review of the potential issues associated with the project through the DEIS and the

Land Use Permit Application filed with the County. Concerns of the Department have been addressed in the Development Agreement between the Applicant and Kittitas County (Kittitas County 2005).

#### **Fire District**

The project area is not within any existing fire district. Vantage and KFD #2 are the two closest fire districts, but KFD #2 has considerably more equipment and staffing than Vantage. The Applicant executed a fire services contract with Fire District #2 for the Project on September 10, 2004.

#### 2.11.2 State Agency Contacts

#### <u>WDFW</u>

Jones & Stokes and the Applicant's wildlife and plant consultant contacted WDFW regarding the potential occurrence of state-listed threatened or endangered species within the project area. This consultation is described in Section 3.4, "Vegetation and Wetlands," and Section 3.5, "Wildlife." Representatives of the Applicant and their wildlife and biological consultants have met with staff of the WDFW (Lee Stream and Ed Bracken), and WDFW staff contracting with EFSEC (Ted Clausing and Brent Renfrow) to discuss the proposed project beginning on May 29, 2003. Copies of the study protocols and draft findings were provided to WDFW. The Applicant organized a site tour for a group of WDFW regional staff and managers from the Ellensburg and Yakima offices on September 25, 2003. During this site visit, WDFW representatives had the opportunity to visit any areas of the proposed project and the proposed transmission feeder lines they wished to visit and to discuss the findings of the wildlife and plant studies conducted at the site with the principal researchers. In further consultation with WDFW, additional mitigation measures have been identified. These additional mitigation measures are included in the settlement agreement (February 2005) between the Applicant and WDFW and have been incorporated into this FEIS. In addition, and above and beyond mitigation measures inherent to the project's design or identified by WDFW or any other agency for the proposed WHWPP, the Applicant has voluntarily committed to placing the entire project area into a conservation easement.

#### <u>OAHP</u>

Representatives of the Applicant and the Applicant's cultural resources consultant, Lithic Analysts, met with Russell Holter and Stephanie Kramer, Washington State Office of Archaeology and Historic Preservation (OAHP), and Irina Makarow, EFSEC, on June 15, 2004 to discuss the cultural resources issues associated with the proposed project. After reviewing the information submitted by the Applicant and the history and status of tribal consultations by the Applicant and EFSEC, OAHP staff requested that the Applicant's cultural resources consultant submit a letter to OAHP addressing whether the proposed WHWPP area constitutes a cultural landscape as defined by the National Register of Historic Places (NRHP). The Applicant conducted a Cultural Landscape Investigation (Trautman 2005), and determined that no historical properties were located within 2/3 mile of the area of visual dominance for the WHWPP, and that the area does not constitute a cultural or historic landscape as defined by the NRHP.

At the June 15, 2004 meeting, the Applicant also informed OAHP of the fact that the Applicant was in the process of entering into a contract with the Confederated Tribes of the Colville Reservation (CCT) to conduct an analysis of potential traditional cultural properties (TCPs) at the project site. Results of the CCT's analysis of the TCPs are related below.

### 2.11.4 Tribal Contacts

#### Yakama Nation

Lithic Analysts, the Applicant's cultural resources consultant, sent a letter on March 5, 2003, to Mr. Johnson Meninick, Cultural Resources Director of the Yakama Nation, notifying the Yakama Nation of the location of the proposed project and the planned cultural resource surveys to be conducted at the project site. The Applicant followed up with a subsequent letter on June 30, 2003 to Mr. Meninick initiating formal consultation with the Yakama Nation and inviting the tribe to offer comments on the project's potential effects and to assist in identifying any previously unrecorded cultural resources which that might be located in the project area. On August 19, 2003, the Applicant forwarded Mr. Meninick a copy of the draft Cultural Resources Assessment and Archaeological Survey for the proposed project site, prepared by Lithic Analysts. Copies of this correspondence are included in Appendix A [DEIS]. Lithic Analysts also contacted Mr. David Powell, Yakama Nation ceded lands archaeologist, regarding the cultural resources surveys to be conducted at the project site and offered to allow Mr. Powell and/or other tribal representatives to participate in the field surveys. However, Mr. Powell declined because of scheduling conflicts. No written response was received from the Yakama Nation regarding any of these communications.

#### **Confederated Tribes of the Colville Reservation**

Lithic Analysts, the Applicant's cultural resources consultant, sent a letter on March 5, 2003, to Adelin Fredin, Tribal Historic Preservation Officer of the CCT, notifying the CCT of the location of the proposed project and the planned cultural resource surveys to be conducted at the project site. The Applicant followed up with a subsequent letter on June 30, 2003 to Ms. Camille Pleasants, Interim Tribal Historical Cultural Preservation Officer of the CCT, initiating formal consultation with the CCT and inviting the tribe to offer comments on the project's potential effects and to assist in identifying any previously unrecorded cultural resources which might be located in the project area. On August 13, 2003, Lithic Analysts contacted Guy Moura (CCT) by phone to advise that a copy of the draft Cultural Resources Assessment and Archaeological Survey was completed and that a copy of the draft Cultural Resources assessment and Archaeological Survey for the proposed project site, prepared by Lithic Analysts.

On September 19, 2003, Ms. Pleasants sent a comment letter to the Applicant in response to the draft cultural resources assessment and surveys conducted at the Site. On October 17, 2003, the Applicant sent a letter to Ms. Pleasants in response to her comment letter. On December 16, 2003, the Applicant forwarded Ms. Pleasants an updated draft Cultural Resources Assessment and Archaeological Survey. On January 5, 2004, Ms. Pleasants sent a comment letter to the Applicant in response to the December 16 letter and draft Cultural Resources Assessment and Archaeological Survey.

Lithic Analysts contacted Donald Shannon, CCT Traditional Cultural Property Project Supervisor, by phone on January 13, 2004. On January 14, 2004, Ms. Pleasants sent a comment letter to the Applicant in response to the phone call of January 13. On January 19, 2004, the Applicant arranged a meeting to be held on February 19, 2004 with the CCT, the Applicant, Lithic Analysts and EFSEC. Donald Shannon called the Applicant on January 23, 2004, to express concerns that cultural resource site-specific information should be removed from EFSEC web site.

A February 19, 2004 meeting was held and attended by the Applicant, and representatives of EFSEC and CCT. The Applicant responded to CCT's concerns by entering into a contract to conduct a TCP study and to provide to EFSEC upon its completion.

A TCP Study was conducted by CCT. The results are confidential and proprietary to the CCT. In the report, tribal members identified traditional places and resources within the project area. Concerns have been forwarded and are being addressed between Zilkha and the CCT.

The report provides an overview and documentation of TCP, resulting in an inventory for Zilkha Renewable Energy's WHWPP. The CCT History/Archaeology Program was contracted to conduct research to assist Zilkha to be in compliance with Federal and State cultural resource laws, specifically in obtaining its EFSEC permit. To this end, History/Archaeology Program staff conducted overview, including review of contractor reports, site forms and maps from OAHP, ethnographic literature related to the project area, and performed in-field documentation resulting in inventory. Tribal members with personal and family history in the general area were interviewed for input regarding TCPs that may be impacted by the undertaking. Their responses demonstrate archaeological features considered TCPs exist in and adjacent to the proposed WHWPP area. Their input enhances the understanding of the extent of the traditional territories of the Wenatchi people, the significance of traditional resources, and the relevance and importance of current property studies.

#### Wanapum Tribe

Lithic Analysts, the Applicant's cultural resources consultant, sent a letter on March 5, 2003, to Lenora Seelatsee of the Wanapum Tribe, notifying the tribe of the location of the proposed project and the planned cultural resource surveys to be conducted at the project site. To date, the Wanapum have neither replied to the letter nor expressed any concern with the project. The Applicant indicated that a copy of the cultural resources survey report will be forwarded to them. The August 2004 DEIS was distributed to Lenora Seelatsee. Comment was not received on the DEIS.

#### Spokane Tribe

On March 30, 2004, EFSEC notified Honorable Warren Syler of the Spokane Tribe regarding submittal of the WHWPP Application for Site Certification. On June 8, 2004, The Spokane tribe notified EFSEC that it would allow earth-disturbing activities on the project site, provided that if any artifacts are found, the Tribe will be contacted immediately and all work cease on the site. The August 2004 DEIS was distributed to Randy Abrahamson, Tribal Historic Preservation Officer, and to the Honorable Warren Seyler, Spokane Tribal Business Council – Chair. Comment was not received on the DEIS.

# 2.12 Potential for Future Activities

No expansions or additional activities are currently planned for this site. However, expansion of the project would require simply extending roads and collector cable to serve additional turbines. If market, technology or other conditions evolve in a manner that encourages expansion, there is potential for adding additional wind turbines within or adjacent to the existing project boundary in the future, subject to landowner consent and regulatory approval. The environmental impacts of any future expansion of the WHWPP would be evaluated by EFSEC under a separate environmental review process pursuant to the requirements of the State Environmental Policy Act (SEPA).

Chapter 3 Revisions to the Draft EIS

# Section 3.1 EARTH

Revisions to sub-sections within Section 3.1 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant or Washington Energy Facility Site Evaluation Council (EFSEC). The off-site alternatives analysis for the Desert Claim project has been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Mitigation Measures reflect those contained in the DEIS and in the Development Agreement between the Applicant and Kittitas County (Appendix A).

# 3.1.3 Impacts of Alternatives

### 3.1.3.1 Impacts of Off-Site Alternatives

#### **Desert Claim Alternative**

Short-term impacts to soils during project construction and decommissioning include clearing and grading, excavation, and fill for access roads, underground cable trenching, and turbine pads on approximately 340 acres. Erosion could potentially result in increased sedimentation to surface water features, gully erosion, slope instability, and slope failures such as earth slumps, debris flows/slumps, and rock falls. Three turbine locations are near areas area of high landslide hazard, and would require site-specific geotechnical studies and measures if not moved. The increased risk of erosion and landslides would be addressed by the following measures:

- BMPs such as sediment and erosion control measures,
- Stabilization measures for potential landslides;
- Setbacks,
- Micro-siting, and
- Additional geological studies.

[...]

The proponent for the Desert Claim Project proposes that the amount of fill that would need to be imported be estimated after the type of selection of foundation is chosen for each turbine. Based on the fact that the Desert Claim Project proposes a similar number of turbines as the Wild Horse Wind Power Project (WHWPP), and an estimated requirement for 27 miles of access roads, it is likely that fill

requirements would be similar to those for the WHWPP. Fill may be imported from off-site sources, if insufficient native materials are available.

# 3.1.4 <u>Mitigation Measures</u>

## 3.1.4.1 Erosion Control during Project Construction

The following Mitigation Measures are proposed by the Applicant.

Before construction begins, a detailed Stormwater Pollution Prevention Plan (SWPPP) would be developed by the Applicant and approved by EFSEC for the project to reduce the potential for erosion and pollutant discharge from the site during construction and operation activities. The SWPPP would be designed to meet the requirements of the Washington State Department of Ecology (Ecology) General Permit to Discharge Storm Water through its stormwater pollution control program (Chapter 173-230 WAC) associated with construction activities and an Ecology General sand and gravel permit. Requirements of a National Pollution Discharge Elimination System (NPDES) Stormwater Construction Permit would also be followed.

The SWPPP would include both structural and non-structural Best Management Practices (BMPs). Examples of structural BMPs include installation of silt fences and other physical controls to divert flows from exposed soils or otherwise limit runoff and pollutants from exposed portions of the site. Examples of nonstructural BMPs include materials handling protocols, disposal requirements, and spill prevention methods.

The SWPPP would be prepared along with a detailed project grading plan by the Engineering, Procurement, and Construction (EPC) contractor when design-phase topographic surveying and mapping are completed for the site. The EPC would implement the construction BMPs, with enforcement by the project's environmental monitor, who would be responsible for implementing the SWPPP.

Site-specific Best Management Practices (BMPs) would be identified on the construction plans for site slopes, construction activities, weather conditions, and vegetative buffers. The sequence and methods of construction activities would be controlled to limit erosion. Also, the majority of areas that would be disturbed by the project are sloped at 20% or less (Wind Ridge Power Partners LLC 2004). Clearing, excavation, and grading would be limited to the smallest areas necessary to construct the project. Surface protection measures such as erosion control blankets or straw mulching may also be required during construction or before restoration if the potential for erosion is high in a particular portion of the site.

All construction practices would emphasize erosion control through such measures as:

- Using straw mulch and vegetating disturbed surfaces,
- Retaining original vegetation wherever possible,
- Directing surface water runoff away from denuded areas, keeping runoff velocities low by minimizing slope steepness and length, and
- Providing and maintaining stabilized construction entrances.

Work on the access roads would include grading and resurfacing (with additional gravel) existing roads and constructing new roads. The site would generally have gravel roadways with a low-profile design,

- Maintaining vegetative buffer strips between the affected areas and any nearby receiving waterways;
- Installing sediment fence/straw bale barriers on disturbed slopes and other locations shown in the SWPPP;
- Using straw mulch at locations adjacent to an affected road;
- Providing temporary sediment traps and synthetic mats downstream of seasonal stream crossings;
- Installing silt fences on steep, exposed slopes; and
- Planting affected areas with designated seed mixes.

At each turbine location, a crane pad area of approximately 3,000 square feet would be graded and covered with crushed rock. During construction, silt fences, hay bales, or matting would be placed on the down-slope side of the crane pad. Wind turbine equipment such as blades, tower sections, and nacelles would be transported and off-loaded at each turbine location near the foundation and crane pad. After construction, disturbed areas at and around all crane pad staging areas would be reseeded as necessary to restore the area as closely as possible to its original condition.

Design specifications and further details for excavation, blasting, and other activities associated with the removal and preparation of quarry materials for project construction will be included in the project plans and specifications. This information and a reclamation plan for the rock quarries will be provided to EFSEC for review and approval prior to start of construction.

## 3.1.4.2 Erosion Control during Project Operation

The project operations group would be responsible for monitoring the SWPPP measures that are implemented during construction to ensure that they continue to function properly. Final designs for the permanent BMPs would be incorporated into the final construction plans and specifications prepared by the engineering team's civil design engineer. The EPC contractor's civil design engineer and the project's engineering team will prepare an operations manual for permanent BMPs. The permanent stormwater BMPs would include erosion and sedimentation control through site landscaping, grass, and other vegetative cover. The final designs for these permanent BMPs would conform to either 1) the Washington State Department of Ecology Western Washington Stormwater Management Manual, with adjustment for conditions in eastern Washington, or 2) a similar Stormwater Management Manual that is expected to be published by Ecology in the summer of 2004.

Operational BMPs will be adopted, as part of the SWPPP, to prevent stormwater pollution by implementing good housekeeping, preventative, and corrective maintenance procedures; steps for spill prevention and emergency cleanup; employee training programs; and inspection and record-keeping practices as necessary. Examples of good operational housekeeping practices identified by the Applicant that would be used by the project include the following:

- Prompt cleanup and removal of spillage,
- Regular pickup and disposal of garbage,
- Regular sweeping of floors,
- HAZMAT data sheet cataloguing and recording, and
- Proper storage of containers.

The project operators would periodically review the SWPPP against actual practice. The plant operators would determine if the controls identified in the plan are adequate and if employees are following them.

## 3.1.4.3 Earthquakes

The Applicant proposes to design and construct project facilities in accordance with engineering standards in effect at the time of construction, which would be either the Uniform Building code (UBC) or the International Building Code (IBC) requirements. The wind turbines would be equipped with vibration sensors that would automatically shut down the turbine in the event of a severe earthquake (Wind Ridge Power Partners LLC 2004, Section 3.1).

Additional mitigation measures that would minimize risks from earthquakes would also be implemented and are discussed below.

Prior to final project design, a detailed geotechnical evaluation and field survey would be completed so that no turbine locations or other project elements lie immediately above a high-risk fault. Geotechnical explorations would be conducted at each location where a deep foundation is required (i.e., at each turbine and meteorological tower location) and at the substations and Operations and Maintenance (O&M) facility.

In addition, current engineering standards applicable in Kittitas County (the 1997 UBC) would be used in design of the project facilities, to assure that the facility performance is acceptable during a design earthquake. Given the relatively low level of earthquake risk for the site, application of the UBC in project design would provide adequate protection for the project facilities and for human safety (Wind Ridge Power Partners LLC 2004, Section 3.1).

The Applicant would prepare on-site emergency plans to protect the public health and safety and environment on and off the project site in case of a major natural disaster such as an earthquake. The Applicant proposes that detailed emergency plans developed prior to project construction and operation contain the following measures to mitigate for potential hazards during an earthquake (Wind Ridge Power Partners LLC 2004):

- Personnel would seek safety at the nearest protected location.
- Personnel would take cover to avoid falling debris.
- Personnel would check the immediate area to identify injuries and equipment failures and report to the site construction manager, O&M manager, or designee.
- Personnel would be instructed to report to a protected area, as necessary, or would continue monitoring the operating equipment.
- A determination would be made about missing personnel, and a search and rescue effort would be initiated if safe and appropriate.
- If the conditions warranted, the Kittitas County Emergency Communications Center and Bonneville Power Administration (BPA) or Puget Sound Energy (PSE) (the electric transmission line operator) would be notified.

- Off-duty personnel would report to the site, if they are able, as designated in the emergency plan.
- If the structures are intact and other plant safety issues are under control, the O&M manager would approve re-entry of personnel to any turbines for search and rescue efforts.

### 3.1.4.4 Volcanic Eruptions

In the event of damage or potential impact from a volcanic eruption, the project facilities would be shut down until safe operating conditions return. If an eruption occurred during construction, a temporary shutdown would most likely be required to protect equipment and human health (Wind Ridge Power Partners LLC 2004).

To help protect against the impacts of dust and ash all key outdoor project facilities would be coated with corrosion-resistant materials. The turbine rotor blades and other fiberglass shrouds, such as those on the nacelles for example, are resistant to wind-blown dust and precipitation. The turbine towers would have venting and filtering in the doors to prevent wind blown dust from reaching the internal electrical equipment and machinery.

The Applicant would prepare on-site emergency plans to protect the human health and safety and the environment on and off the project site in case of a major natural disaster such as a volcanic eruption. The Applicant proposes the following actions be taken to reduce potential impacts from a volcanic eruption (Wind Ridge Power Partners LLC 2004).

- Close all O&M facility vents to prevent ash from entering buildings.
- Cover data processing equipment and computers not required for safe project operation or shutdown, and shut down other electronic equipment sensitive to dust (ash).
- If the dust load is heavy, shut down the project facilities.
- If the conditions warrant, notify the Kittitas County Emergency Communications Center and BPA or PSE (the electric transmission line operator).
- Determine whether employees should be sent home immediately before roads become unsafe or if personnel must be sheltered on-site.
- Initiate ash cleaning operations by personnel wearing protective equipment.
- Coordinate all ash disposal activities with local Kittitas County officials.

### 3.1.4.5 Landslides

The Applicant proposes to locate project facilities in areas with relatively low-gradient topography with a thin cover of soil that overlies basalt bedrock. No project facilities would be constructed on unstable slopes or landslide-susceptible terrain. A sufficient setback distance would be provided between the landslide identified in the southern portion of the project site and the nearest project facilities.

In addition, the following mitigation measure would be implemented. Prior to project construction, additional geotechnical explorations, including drilling and ground-penetrating radar (GPR) surveys, would be completed as necessary to delineate the limits of the landslide area to verify that the turbines are not placed in potentially unstable terrain and to provide final recommendations for safe setback distances from known or suspected slide areas.

### 3.1.4.6 Unique Features

In the unlikely event that unique physical or unique geological features such as petrified gingko deposits were discovered at the site during construction, the Applicant has stated that construction personnel would stop work at that location and notify the project manager. The project manager would immediately contact appropriate personnel at EFSEC and the Washington State Historic Preservation Office to coordinate an appropriate response.

### 3.1.4.7 Contaminated Soils

The Applicant commissioned KTA of Seattle, Washington, to conduct a Phase I Environmental Site Assessment of the site to be developed. The Phase I Environmental Site Assessment was performed in accordance with the scope and limitations of American Society of Testing and Materials Practice E 1527. The results of the Phase I Environmental Site Assessment indicated no evidence of environmental contamination within the project site. Based on these findings, the potential for encountering environmental contamination during project construction or operation is low. In the unlikely event that contaminated soils are encountered, the Applicant has stated that they will notify EFSEC and appropriate personnel with the Ecology) (Wind Ridge Power Partners LLC 2004). Contaminated soils would be handled and disposed of according to state and local requirements.

## 3.1.4.8 Decommissioning Plans

Prior to commencement of construction the Applicant would obtain EFSEC approval, and in consultation with Kittitas County, establish a detailed Initial Site Restoration Plan pursuant to WAC 463-42-655. The plan shall be developed with the active participation of the County, in consultation and coordination with EFSEC, and shall be submitted to the County for its review and approval, provided however, such approval shall not be unreasonably withheld.

If the project were to terminate operations, the Applicant would obtain the necessary authorization from the appropriate regulatory agencies to decommission the facilities. A Final Site Restoration Plan would be developed and submitted to EFSEC for review and approval.

All foundations for above-grade facilities would be removed to a depth of 3 feet below grade and unsalvageable material would be sent to authorized sites for disposal. The soil surface would be restored

as close as reasonable possible to its original condition. The projects substation(s) is generally valuable and, as is often the case on older power projects, the substation would revert to the ownership of the utility (PSE and/or BPA). If the overhead transmission feeder lines could not be used by the utility, all structures (including the portion of pole foundations within 3 feet below the ground surface), conductors and cables would be removed.

# Section 3.2 AIR QUALITY

Revisions to sub-sections within Section 3.2 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant. The off-site alternatives analysis for the Desert Claim project has been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Table3.2-1 included in this Section reflects only those items with revisions. Table entries in the DEIS that were not changed are not repeated here. Mitigation measures reflect those presented in the DEIS and the Development Agreement between the Applicant and Kittitas County (Appendix A).

# 3.2.2 Impacts of Proposed Action

Source	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1 MW
Construction Impacts			
Fugitive dust emissions during construction of turbine generator strings	No significant impact, fugitive dust generated by 289 total acres disturbed	No significant impact, fugitive dust generated by 356 total acres disturbed. The turbines would be far from the facility boundary, so it is not expected that the emissions would exceed ambient concentrations to approach the allowable ambient standards.	No significant impact, fugitive dust generated by 401 total acres disturbed
Odors	Similar to Most Likely Scenario	Limited and negligible. Construction operations would not emit significant amounts of odorous substances.	Similar to Most Likely Scenario
Impacts during construction of substations and transmission facilities	Similar to Most Likely Scenario	Temporary, localized impacts caused by fugitive dust during construction. Construction operations would seldom occur for a long duration at any given location, so it is unlikely emissions would cause ambient concentrations to approach the allowable ambient standards.	Similar to Most Likely Scenario

#### Table 3.2-1. Summary of Potential Air Quality Impacts

Source: Wind Ridge Power Partners LLC 2004

# 3.2.3 Impacts of Alternatives

### 3.2.3.1 Impacts of Off-Site Alternatives

### **Desert Claim Alternative**

Impacts of the Desert Claim alternative would be similar to those described for the Wild Horse Wind Power Project (WHWPP) and the Kittitas Valley alternative due to the similarities in construction, operations, and maintenance activities associated with the proposed projects.

Air quality impacts resulting from the modified project configuration evaluated in the Desert Claim FEIS would be essentially the same as for the proposed action evaluated in the Desert Claim DEIS. Construction, operation, and decommissioning impacts would be the same in type, intensity and duration as described in the DEIS. As compared to the project layout evaluated in the DEIS, the modified project configuration analyzed in the FEIS would result in very subtle shifts in the location or extent of potential air quality effects, with somewhat less project activity in the southeast corner of the project area and somewhat more activity in the northwestern portion of the project area.

A potential additional mitigation measure could include the application of dust palliatives, such as calcium chloride, to road surfaces to reduce the amount of dust created by vehicle traffic on unpaved roads. Use of dust palliatives might obviate the need for repeated watering of project access roads. Conversely, some resource agencies have expressed concern over possible ecological impacts from dust-palliative compounds transported in stormwater runoff; this issue would need to be addressed before use of dust palliatives could be recommended.

# 3.2.4 Mitigation Measures

The Applicant proposes the following mitigation measures for construction-related air emissions and dust:

- All vehicles used during construction will comply with applicable federal and state air quality regulations for tailpipe emissions;
- Operational measures such as limiting engine idling time and shutting down equipment when not in use will be implemented;
- Active dust suppression will be implemented on unpaved construction access roads, parking areas and staging areas, possibly using water-based dust suppression materials in compliance with state and local regulations;
- Housekeeping measures around batch plant and rock crushing facilities to prevent buildup of fine materials;
- Traffic speeds on unpaved access roads will be kept to 25 mph to minimize generation of dust;
- Carpooling among construction workers will be encouraged to minimize construction-related traffic and associated emissions;
- Disturbed areas will be replanted or graveled to reduce wind-blown dust; and

Erosion control measures will be implemented to limit deposition of silt to roadways.

In addition to these mitigation measures, the following will be implemented:

- The air quality permit for the temporary rock crusher and the temporary concrete batch plant will require the use of emission control devices to reduce dust generated by these processes. Water sprays will be used on the rock crusher and the concrete batch plant dry loading operations, and a fabric filter will be used for the Portland cement silo.
- If, during periods of high winds, the dust suppression equipment on the rock crushing or batch plants is rendered ineffective, the machinery would be halted to prevent excessive fugitive dust plumes.

No air quality mitigation is proposed for project operations as there would be no air or odor emissions generated by stationary sources. Dust abatement measures implemented during operation would be continued as appropriate.

# Section 3.3 WATER RESOURCES

Revisions to sub-sections within Section 3.3 of the Draft Environmental Impact Statement (DEIS), presented below, are provided for clarification in response to comments submitted on the DEIS. The offsite alternatives analysis for the Desert Claim project has been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Table 3.3-3 included in this Section reflects only those items with revisions. Table entries in the DEIS that were not changed are not repeated here. Mitigation measures reflect those presented in the DEIS, the Development Agreement between the Applicant and Kittias County (Appendix A), and the Settlement Agreement between the Applicant and the Washington State Department of Fish and Wildlife (WDFW) (Appendix B).

# 3.3.2 Impacts of Proposed Action

No surface waters would be directly impacted by the proposed action, but precipitation during construction could result in sediment-laden surface runoff because of ground disturbance and exposed soils. If not properly mitigated, development under any of the three project scenarios could adversely affect nearby surface waters. This impact would be greatest under the 158-turbine/1-MW scenario, which would result in the largest amount of ground disturbance during construction (401 acres), see Table 3.3-1. However, all design scenarios will adhere to the surface water setbacks, best management practices (BMPs) will be employed on site, and compliance with applicable permits regarding runoff and sediment control will be maintained in all design scenarios. No project access roads cross any stream or riparian areas. Thus, it is anticipated that these measures and the facility design will minimize potential impacts that may result from construction of the project.

TADIE J.J-J. JUTITIAI V ULE UCHTIAI WALEL NEJUNES UJE ANU EULETIIALITIDALI.	Table 3.3-3.	Summarv	of Potential Water	Resources	Use and	Potential	Impacts
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Project Component	104 Turbines/3 MW	136 Turbines/1.5 MW	158 Turbines/1 MW			
Construction Impacts						
Drainages	None	None	None			
Operations and Maintenance Impacts						
Drainages	None	None	None			

Source: Wind Ridge Power Partners LLC 2004

### **3.3.2.1 Construction Impacts**

### Surface Water, Runoff, and Erosion

Wetlands in the form of seeps, ponds, and springs are described above, within the project area; however, all project facilities would be located a considerable distance from them. The proposed action would not directly impact any wetland or surface water. Project facilities would be located outside the designated buffers of any wetlands or creeks, as required by Section 17A.04.020 "Buffer width requirements" of the Kittitas County Code. The closest project facility is a turbine access road with an underground collector cable, a low intensity use, which would be located approximately 200 feet away from a small, unnamed spring just east of turbine C-5. The maximum setback that would be required by Washington Department of Ecology (Ecology) guidelines and Washington Energy Facility Site Evaluation Council's (EFSEC) proposed rules for combustion turbine standards would be 50 feet. The construction methods and control measures discussed below in Construction General Stormwater Pollution Prevention Measures would serve to minimize impacts and protect all wetlands and riparian corridors. No project facilities, transmission feeder line poles, rock quarry/concrete batch site, or trails would be built in or near any streambed, riparian corridor, or wetlands.

## 3.3.3 Impacts of Alternatives

### 3.3.3.1 Impacts of Off-Site Alternatives

#### **Desert Claim Alternative**

Turbine construction would affect 16 stream segments and temporarily disturb 3,700 linear feet of streams and a total of 3.0 acres of stream and riparian area. Project facilities would permanently occupy approximately 1,200 linear feet of streams, mostly at road crossings, and less than 1 acre of riparian area. The proponent intends to conduct further micro-siting analyses of proposed turbine and road locations to avoid or minimize impacts to surface water bodies.

The project would not require surface water withdrawals or diversions during construction or operation; impacts on surface water quantity and quality are expected to be minor and temporary. BMPs will be used during construction to address water quality impacts. The volume of water required during construction for dust suppression and construction operations was not quantified. Mitigation measures to minimize potential adverse impacts of vibration on groundwater flow to wells or to operation of water wells due to blasting include verification of well locations and compliance with existing regulations for blasting design and allowable explosive weights.

[...]

Impacts on surface water and ground water during operation of the facility would therefore be minimal. Localized impacts to ground water quality from product spills would be minimized through required use of a spill prevention, containment and control plan.

## 3.3.4 Mitigation Measures

Mitigation measures proposed by the Applicant are described in the following sections. Additional mitigation was identified in the settlement agreement between WDFW and the Applicant. As such, roads, underground cables, turbine foundations, transmission poles and other associated infrastructure will not be located within any riparian areas or streams and will not involve the use of any heavy equipment in stream beds or riparian areas. BMPs will be implemented to retain sediment from disturbed areas and minimize areas of disturbance.

The proposed design of the project incorporates numerous features to avoid and/or minimize impacts on water resources. The project layout (Figure 1-2) has been designed to avoid any impacts on surface waters and groundwater. Features of the project that are designed to avoid or minimize impacts include:

- minimizing new road construction by improving and using existing roads and trails instead of constructing new roads;
- not developing wells on site, and using only off-site sources of water for construction and operation; and
- Iccating roads, underground cables, turbine foundations, transmission poles and other associated infrastructure outside any surface water or other sensitive resources.

Other mitigation measures include avoiding drainage crossings to the maximum extent feasible; complying with federal, state, and local ordinances; and implementing a formal Stormwater Pollution and Prevention Plan (SWPPP) and BMPs during construction.

### 3.3.4.1 Construction General Stormwater Pollution Prevention Measures

#### **Stormwater Pollution Prevention Plan**

A detailed Construction SWPPP will be developed for the project to help minimize the potential for discharge of pollutants from the site during construction activities. The SWPPP will be designed to meet the requirements of the Ecology General Permit to Discharge Stormwater through its stormwater pollution control program (Chapter 173-220 WAC) associated with construction activities. A SWPPP meeting the conditions of the Stormwater General Permit for Construction Activities will be prepared and submitted to EFSEC along with a Notice of Intent (NOI) for construction activities prior to the start of project construction. Similar to the Constuction SWPPP, an Industrial SWPPP meeting the conditions of the Stormwater General Permit for Industrial Activities will be prepared along with an NOI for industrial activities prior to the start of project operation. The project National Pollutant Discharge Elimination System (NPDES) permit application is included in Appendix A [DEIS]. The project will meet the control requirements of the NPDES permit by complying with permit guidelines and statutory requirements.

Ecology's *Stormwater Management Manual for Western Washington* would be used for developing the SWPPP and BMPs, with modifications applicable to Eastern Washington conditions, as Ecology's *Stormwater Management Manual for Eastern Washington* has not been finalized or adopted.

The SWPPP will include both structural and nonstructural BMPs. Examples of structural BMPs could include the installation of silt curtains and/or other physical controls to divert flows from exposed soils or

otherwise limit runoff and pollutants from exposed areas of the site. Examples of nonstructural BMPs include management practices such as implementation of appropriate materials handling, disposal requirements, and spill prevention methods.

The SWPPP will be prepared along with a detailed project grading plan designed by the Engineering, Procurement, and Construction (EPC) Contractor when design-level topographic surveying and mapping are prepared for the project site. The final configuration of proposed improvements will be overlaid onto the detailed topographic maps, and the project civil design engineer will establish the locations and types of construction BMPs to be required of the EPC Contractor. These details will be included on an overall map of the project site and submitted to EFSEC prior to construction.

A narrative section of the SWPPP will describe the intended installation sequence and function of the selected BMPs, and present the sizing calculations. The plan will also identify the selected minimum standards to which each of the BMPs is to be constructed or installed. When prepared at this level of detail, the document would meet the requirements of the Stormwater Construction Activity NPDES permit system, and would accurately describe to the EPC Contractor and the project site construction management team the improvements and actions required during construction. When complete and submitted to EFSEC, the SWPPP will then be included in the construction bid and contract documents. The EPC Contractor will implement the construction BMPs, with enforcement supervised by the project's environmental monitor, who would be responsible for implementing the SWPPP.

#### **General Stormwater Pollution Control Measures**

Site-specific BMPs will be identified on the construction plans for the site slopes, construction activities, weather conditions, and vegetative buffers. The sequence and methods of construction activities will be controlled to limit erosion. Clearing, excavation, and grading will be limited to the minimum areas necessary for construction of the project. Surface protection measures, such as erosion control blankets or straw matting, also may be required prior to final disturbance and restoration if potential for erosion is high.

All construction practices will emphasize erosion control over sediment control through such nonquantitative activities as:

- straw mulching and vegetating disturbed surfaces,
- retaining original vegetation wherever possible,
- directing surface runoff away from denuded areas,
- keeping runoff velocities low through minimization of slope steepness and length, and
- providing and maintaining stabilized construction entrances.

A more detailed description of the materials, methods, and approaches used as part of the BMPs for effective stormwater pollution prevention and erosion control are as follows:

Rain Level Monitoring—The environmental monitor will be responsible for checking and recording precipitation levels at the project site using a rain gage. This benchmark will be used to determine the performance of the SWPPP measures that have been implemented during construction. After construction, the Operations and Maintenance (O&M) group will also continue to monitor rainfall amounts and monitor the in-place erosion control systems while re-seeded areas become more

established. Modifications will be performed where needed by the O&M group after project construction is completed.

- Mulching—Loose straw will be spread and punched into the ground in all areas where vegetation has been cleared.
- Temporary Straw Bale and Silt Fence Sediment Barriers—Temporary straw bale barriers and sediment fences will be inspected by the Contractor immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs, relocations, or additions will be made promptly. No more than 1 foot of sediment will be allowed to accumulate behind straw bales or silt fence sediment barriers. Sediment will be removed and re-graded into slopes. New lines of barriers installed uphill of sediment-laden barriers will be considered based on the rate at which the 1 foot of sediment accumulates.

Silt fences and straw bale sediment barriers will be maintained throughout the construction period and beyond, until disturbed surfaces have been stabilized with vegetation. Silt fence construction specifications, including fabric type, support spacing, and total length will be determined by actual construction conditions during final design of the facilities.

- Check Structures and Sediment Traps—Check structures, such as rock dams, hay bale check dams, dikes and swales will be used, where appropriate, to reduce runoff velocity as well as to direct surface runoff around and away from cut-and-fill slopes. Swales and dikes may also be used to direct surface water toward sediment traps.
- Matting and Erosion Control Blankets—Depending on weather conditions during the construction period, straw or jute matting or other suitable erosion control blankets will be used on the pad slopes and the drainage channel slopes if direct rainfall on the slopes would result in erosion prior to stabilization (see Figure 3.3-2).
- Control of Excavation Dewatering—Although no dewatering is anticipated, excavation work requiring dewatering discharge will be directed to the surrounding upland areas, away from sensitive resources (e.g., wetlands, drainages, and seeps). Dewatering water will be pumped through a hose that will be moved as the water is pumped out to distribute the groundwater over a large surface area to allow it to evaporate and/ or infiltrate and avoid causing increased erosion or stormwater pollution. There will be no direct discharge to surface waters or riparian areas from dewatering activities.

No project facility would be located closer than approximately 200 feet from a riparian area, although the maximum setback that would be required by Ecology guidelines would be only 50 feet.

Stormwater Pollutants (Waste, Debris, Chemicals)—In addition to erosion and sedimentation control on the project site, it is important to reduce potential for chemical pollution of surface waters and groundwaters during construction. Source control is the most effective method of preventing chemical water pollution. All potential pollutants, including waste materials and demolition debris, that occur on site during construction will be handled and disposed of in a manner that does not cause contamination of stormwater.

The only potential water pollutants that would be transported and used in significant quantities during construction are diesel fuels and gasoline, which will be transported and stored in accordance with state and federal regulations by appropriately licensed and trained petroleum transport professionals. Other potential water pollutants include lubricating and mineral oils, chemical cleaners, and herbicides in small quantites below state and federal regulatory thresholds. Handling of these materials will be conducted in a manner that is protective of the environment and in accordance with

applicable federal and state requirements and with the BMPs and the Spill Prevention, Containment, and Control Plan described in Section 3.15.2, "Health and Safety—Impacts of the Proposed Action."

In the unlikely event of a fuel, oil, or chemical spill, project personnel will activate the Spill Prevention, Containment, and Control Plan described in Section 3.15.2, "Health and Safety—Impacts of Proposed Action."

- Environmental Monitor—The proposed environmental monitor will be responsible for locating any necessary clean fill disposal sites for excess excavation spoils. To control the release of sediment from the disposal sites, silt fencing with a straw bale barrier will be installed on the downslope side of all disposal areas if additional sediment or erosion control measures are determined to be necessary. The site environmental monitor will be responsible for planning, implementing, and maintaining BMPs for:
  - neat and orderly storage of any construction chemicals and spent containers in lined, bermed areas;
  - materials handling and spill prevention procedures; and
  - regular disposal of construction garbage and debris using on-site dumpsters.
- Revegetation—All areas that are affected by the construction outside of the graveled areas and rock quarries will be seeded when there is adequate soil moisture. They will be re-seeded if healthy cover vegetation does not grow. The sediment fence and check dams will remain in place until the affected areas are well vegetated and the risk of erosion has been eliminated. The project operations group will remove the sediment fence at this time.
- In addition the following specific facility control measures and BMPs for effective stormwater pollution prevention and erosion control measures will be implemented as part of the SWPPP:
- Foundation Construction Stormwater Pollution Control Measures—Foundation construction would require significant excavation at each wind turbine location as described in Section 3.1.2, "Earth—Impacts of the Proposed Action." Excavation materials will be stored adjacent to the foundation holes as the forms, rebar and bolts are assembled and as the concrete cures after it is cast in place. Sediment fences, hay bales or matting will be installed on steeper down slopes near the storage piles as necessary. Once the concrete cures, excavated materials would be used for backfilling. In affected areas adjacent to pads, mulch will be spread and the area will be re-seeded. Cobbles and rocks too large for backfilling will be crushed for gravel and used in rock check dams or to support other on-site erosion control measures.
- Access Roads Stormwater Pollution Control Measures—Work on the access roads would include grading and re-graveling existing roads and constructing new roads. The site would have gravel roadways that generally would be a low-profile design, allowing water to flow over them in most areas. Erosion control measures to be installed during the work on the access roads include:
  - maintaining vegetative buffer strips between the affected areas and any nearby waterways;
  - installing sediment fence/straw bale barriers on disturbed slopes and other locations shown on the SWPPP;
  - using straw mulching at locations adjacent to the road that have been affected;
  - providing temporary sediment traps and sediment type mats downstream of seasonal stream crossings;

- installing silt fencing on steeper exposed slopes; and
- planting designated seed mixes at impacted areas.
- Turbines—At each turbine location, a crane pad area of approximately 4,000 square feet would be graded in place and covered with road rock. During construction, silt fences, hay bales, or matting will be placed on the down slope side of the crane pad areas. Wind turbine equipment such as the blades, tower sections, and nacelles would be transported and off-loaded at each turbine location near the foundation and crane pad. After construction, disturbed areas around all crane pad staging areas will be re-seeded with an appropriate seed mix.
- Underground Cable Trenching Stormwater Pollution Control Measures—Underground electrical and communications cables would be placed in 3- to 5-foot-wide trenches along the length of each wind turbine string corridor. In some cases, trenches would run from the end of one turbine string to the end of an adjacent turbine string to link turbines via the underground network. Trenches would be excavated from 1.5 to 4 feet deep, depending on the underlying soil/rock conditions. Excavated materials would be piled alongside the cable trenches for backfilling after cable installation. The excavated materials typically would remain in an exposed state for approximately 2 weeks. Sediment fences, hay bales, or matting will be installed on steeper downslopes near the storage piles. After backfilling is completed, excess excavated soils will be spread around the surrounding area and contoured to the natural grade. Cobbles and rocks too large for backfilling will be crushed for gravel and used in rock check dams or to support other on-site erosion control measures. Finally, the area will be re-seeded with an appropriate seed mix.
- Overhead Collector Line Construction Stormwater Pollution Control Measures—Construction of the overhead pole lines would require excavation for setting the poles. Excavated materials would be piled alongside the excavations for backfilling after pole installation. Pole excavations are typically in an exposed state for approximately 1 week. Sediment fences, hay bales, or matting will be installed on any steep downslopes near the storage piles. After backfilling, excess excavated soils will be spread around the surrounding area and contoured to the natural grade. Cobbles and rocks too large for backfilling will be crushed for gravel and used in rock check dams or to support other onsite erosion control measures. Finally, the area will be re-seeded with an appropriate seed mix.
- Substation Construction Stormwater Pollution Control Measures—The substation is generally flat, and the base area would be graded and covered with a sub-base rock and a graveled surface on top. Foundation and underground trenching excavation spoils would be handled in the same manner as described in the above sections regarding foundations and underground cable trenches. Disturbed areas surrounding the substation perimeter will be contoured to the natural grade, covered in straw mulch, protected for erosion control, and re-seeded as appropriate to the adjacent slopes. The main substation transformers, which are filled with mineral oil, are equipped with an oil level meter and float switch. Oil containment catch trenches would surround the outer foundation perimeters of transformers, as described in more detail in Section 2.2.3, "Project Facilities."
- Final Road Grading and Site Clean Up Stormwater Pollution Control Measures—The project would use dumpsters or drop boxes from a local waste management company to collect recyclable materials and dispose of waste materials that cannot be reused. A final site cleanup will be made before turning the project over to the O&M group. In accordance with the Erosion and Sediment Control Plan for access road improvement and construction, County roads will be restored to at least their preproject condition and to the satisfaction of the County Public Works Department.
- Cement Batch Plant Stormwater Pollution Control Measures—The cement batch plant would be located on site at a central location within a flat area approximately 500 feet square, surrounded by a 1-foot-high earth berm to contain spilled water runoff (see Proposed Layout of Most Likely Scenario)

(136 Turbines/1.5 MW) in Figure 1-2).

The batch plant would use outdoor stockpiles of sand and aggregate. These stockpiles would be located to minimize exposure to wind. Sediment fences, hay bales, or matting will be installed near the storage areas as necessary. Cement would be discharged via screw conveyor directly into an elevated storage silo without outdoor storage. Construction managers will exercise good housekeeping practices and conduct regular cleanings of the plant, storage, and stockpile areas to minimize buildup of fine materials.

Following completion of construction activities the Applicant's contractor will rehabilitate the sites by dragging the top of both of the 500–square foot crushing and batch plant areas with a blade machine and re-seeding the area with a designated seed mixture.

Rock Quarry Stormwater Pollution Control Measures—A total of three temporary on-site rock quarries are planned for the project (see Proposed Layout of Most Likely Scenario (136 Turbines/1.5 MW) in Figure 1-2). Each rock quarry would have a disturbance footprint of approximately 5 acres, and the depth would be approximately 10–20 feet, depending on the type of rock encountered at each location. Sediment fences, hay bales, or matting will be installed near the quarries to control stormwater run on and runoff, as necessary.

A rock crusher would be located at one of the three on-site quarry pits for the duration of the construction period. The crusher would be located in an area approximately 500 feet square, surrounded by a 1-inch high earth berm to contain spill water runoff. This area will be sprayed by a water truck several times each day for dust suppression. The crusher will contain several dust-suppression features, including screens and water spray. Effective dust-control measures will be operating at all emission points during operation, including start-up and shut-down periods. During periods of sustained high winds, contractors will shut down operation of the rock crusher if reduced visibility poses a safety hazard.

It is not anticipated that surface runoff control facilities beyond the control measures described above would be required. Project engineers will determine specific siting of the control measures after final design has been completed. The Applicant will provide design assumptions, including storm events and plans, when they have been completed.

### 3.3.4.2 Operational General Stormwater Pollution Prevention Measures

As described above, the Applicant will prepare and define a SWPPP as part of the final design. The project operations group will be responsible for monitoring the SWPPP measures that were implemented during construction to ensure they continue to function properly. Final designs for the permanent BMPs will be incorporated into the final construction plans and specifications prepared by the civil design engineer. An operations manual for the permanent BMPs will be prepared by the EPC Contractor civil design engineer and the project's enginering team.

Operational BMPs will be adopted, as part of the SWPPP, to implement good housekeeping, preventive and corrective maintenance procedures, steps for spill prevention and emergency cleanup, employee training programs, and inspection and recordkeeping practices, as necessary, to prevent stormwater and groundwater pollution. Examples of good operational housekeeping practices, which will be employed by the project, include the following:

- prompt cleanup and removal of spillage;
- regular pickup and disposal of garbage;
- regular sweeping of floors;
- HAZMAT data sheet cataloging and recording; and
- proper storage of containers.

No project facility would be located closer than approximately 200 feet from a riparian area, although the maximum setback that would be required by Ecology guidelines. The County does not require a setback.

The project operations group will periodically review the SWPPP against actual practice. The plant operators will ascertain that the controls identified in the plan are adequate and that employees are following them.

#### **Transformer Oil Containment**

The oil containment system for the substations would consist of a perimeter containment system, large enough to contain the full volume of transformer mineral oil with a margin of safety, surrounding the main substation transformers. The trough would be poured as part of the transformer concrete foundation or would consist of a heavy oil-resistant membrane that is buried around the perimeter of the transformer foundation.

The trough and/or membrane would drain into a common collection sump area that would be equipped with a sump pump designed to pump rainwater out of the trough to the surrounding area away from nearby surface waters or sensitive areas (e.g., wetlands, springs, seeps). In order to prevent the sump from pumping oil out to the surrounding area, it will be fitted with a sensor that would shut off the sump if oil is detected. A failsafe system with redundancy is built into the sump controls—the transformers are also equipped with oil-level sensors. If the oil level inside a transformer drops as a result of a leak in the transformer tank, it would also shut off the sump pump system to prevent it from pumping oil, and an alarm would be activated at the substation and in the main project control (SCADA) system. The trough would be large enough to contain the full volume of oil plus 10% reserve volume.

Discharges from the containment system would be directed to upland areas and away from nearby surface waters or sensitive areas (e.g., wetlands, springs, seeps). Discharge from the containment system will be in compliance with laws governing the discharge of oil as specified in the Code of Federal Regulations (CFR) under 40 CFR Part 110.3:

§ 110.3 Discharge of oil in such quantities as "may be harmful" pursuant to section 311(b)(4) of the Act. [See below Note]

For purposes of section 311(b)(4) of the Act, discharges of oil in such quantities that the Administrator has determined may be harmful to the public health or welfare or the environment of the United States include discharges of oil that:

(a) Violate applicable water quality standards; or

(b) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines. [61 FR 7421, Feb. 28, 1996]

Note: Act means the Federal Water Pollution Control Act, as amended 33 U.S.C. 1251 et seq., also known as the Clean Water Act.

Water in the containment system that shows obvious indicators of potentially violating appreciable water quality standards, i.e., the water exhibits an oily sheen as specified under 40 CFR Part 110(b), will be removed from the containment system and disposed of in accordance with applicable federal, state and local laws.

# Section 3.4 VEGETATION AND WETLANDS

Information contained in this section has been revised since the issuance of the Draft Environmental Impact Statement (DEIS) in response to 1) comments submitted on the Draft, 2) information, corrections, or updates provided by the Applicant, 3) the settlement agreement between the Washington State Department of Fish and Wildlife (WDFW) and the Applicant (Appendix B), and 4) the Development Agreement between Kittitas County (County) and the Applicant (Appendix A). The revisions to the information contained in the DEIS are presented below.

## 3.4.1 Affected Environment

The above descriptions of generalized vegetation zones and associations are based on climax communities, which typically develop over time. Within most of the shrub-steppe region, including the project area, many of the plant communities have been modified as a result of numerous disturbance factors. Livestock grazing, introduction of nonnative and invasive plant species, and ground disturbance from recreational activities have resulted in a shift in plant community composition in the project area from the climax communities described above. Notable in the project area is a lower percentage of native grass species and grass cover in general compared to climax communities, attributable to livestock grazing (Stream pers. comm.). Although the project area contains some weedy and nonnative plant species, native species overwhelmingly dominate the project area.

The proposed project site is contiguous with undeveloped lands and wildlife areas. As such, the project area is part of a larger expanse of shrub-steppe habitat. Adjacent lands include those managed by WDFW, Washington State Department of Natural Resources (DNR), and the U.S. Bureau of Land Management (BLM). The Quilomene Wildlife Area is situated to the north of the proposed project site. A portion of the project area is located within the Whiskey Dick Wildlife Area, which extends to the east (see Section 3.5, Wildlife).

## 3.4.1.1 Existing Vegetation Communities

### **Riparian Communities**

Table 3.4-1 describes the general cover types and vegetation conditions found along the proposed turbine strings. A habitat quality assessment was conducted at each turbine string. Ratings of habitat quality are qualitative, based on direct visual observations of patterns of plant community composition, the amount of nonnative plant species, and overall vegetative structure. Assessments of habitat quality were made using the Natural Resource Conservation Service (NRCS) "Range Condition Classes," as recommended by WDFW, which classify range condition as "excellent," "good," "fair," or "poor," based on a

comparison of the existing community composition to the climax community composition. Based on NRCS guidelines (USDA SCS 1973), rangeland with 75 to 100% species composition of its climax vegetation is in "excellent" condition. Rangeland with 50 to 75% species composition of its climax vegetation is in "good" condition. Rangeland with 25 to 50% species composition of its climax vegetation is in "fair" condition, and less than 25% species composition is in "poor" condition. WDFW reviewed and approved this study methodology and determined the studies conducted for the Wild Horse Wind Power Project (WHWPP) are appropriate and consistent with WDFW's Wind Power Guidelines.

### 3.4.1.2 Wetlands

Several springs are scattered throughout the project area, but none are in close proximity to any project facility. Whiskey Dick Creek, an intermittent stream, flows through the project area, but not in close proximity to any proposed project facility. The proposed Bonneville Power Administration (BPA) feeder line crosses Parke Creek, an intermittent stream, west of the main project area. The crossing location was investigated and no wetlands appear to be associated with Parke Creek at this location. The area supports a woody riparian zone with trees such as alder (*Alnus incana*) and aspen (*Populus tremuloides*) in the overstory and mixed shrubs (e.g., snowberry [*Symphoricarpos* sp.], golden current [*Ribes aureum*], willow [*Salix* sp.]) and forbs in the understory. Although riparian vegetation was present, the vegetation did not meet any of the indicators for a wetland. No hydrology indicators were observed as well. Parke Creek is somewhat channelized at this location and there was no evidence of periodic flooding or a high water table. The location is within a pasture and is heavily grazed by livestock.

No project access roads cross any wetlands, streams, or riparian areas (see Section 3.3, Water Resources), including the project access road located outside the project boundary through Sections 9 and 4.

## 3.4.2 Impacts of Proposed Action

### 3.4.2.1 Construction Impacts

#### Wetlands

No wetlands occur in or near areas where project facilities are proposed or construction activities would occur, including the project access road located outside the project boundary and through Sections 9 and 4, under any of the three scenarios. Therefore, no construction impacts on wetlands are anticipated. In addition, no construction would take place within 200 feet of the stream bank at the proposed crossing of Parke Creek.

### 3.4.2.2 Operation and Maintenance Impacts

Invasive plant species could also be introduced during project operation and maintenance activities. New access roads could provide a route for migration of nonnative and invasive plant species into areas of newly disturbed soils or into previously weed-free areas of sparse vegetation. The potential for this impact would be greatest under the 158-turbine/1-MW scenario since approximately 401 acres would be disturbed and vulnerable to weed introduction and establishment if revegetation efforts failed. See

Section 3.4.4.3, Mitigation Measures, for noxious weed control and mitigation for disturbed sites, as well as revegetation that would be implemented in consultation with WDFW.

# 3.4.3 Impacts of Alternatives

### 3.4.3.1 Impacts of Off-Site Alternatives

### **Desert Claim Alternative**

Approximately 88 acres of existing vegetation would be permanently removed for project facilities at the Desert Claim site. Permanent loss of vegetation would occur in shrub-steppe, grassland, riparian shrub, riparian forest, and wet meadow habitats. The majority of construction impact, over 90%, would occur in shrub-steppe and grassland. Approximately 5 acres of land currently used for agricultural purposes would also be permanently converted to land occupied by the project facility. In addition, 342 acres of vegetation would be temporarily disturbed. Mitigation measures similar to those proposed for the Wild Horse site would be implemented, including construction timing, a detailed reclamation and site restoration plan in consultation with a Technical Advisory Commeitte (TAC) with standards based on undisturbed reference areas, and temporary erosion control measures employed during reseeding efforts.

Approximately 3.2 acres of wetland area would be permanently displaced by project facilities, with an additional 17 acres temporarily disturbed by construction. The proponent intends to conduct further micro-siting analyses of proposed turbine and road locations to avoid or minimize impacts to surface water bodies. Wetland impacts would be subject to compensatory mitigation.

## 3.4.4 Mitigation Measures

Shrub steppe is considered a priority habitat by WDFW. As such, the Applicant has proposed to mitigate all permanent and temporary impacts on vegetation caused by the proposed project in accordance with the guidelines outlined in the WDFW Wind Power Guidelines (WDFW, August 2003) for siting and mitigating wind power projects east of the Cascades. A mitigation parcel has been identified within the 8,600-acre project area. The mitigation parcel is located in T18N, R21E, Section 27 and is approximately 600 acres in size. A portion of this section (String L follows a ridgeline that dissects Section 27 from north to south) would be excluded from mitigation and developed as part of the project. The WDFW has indicated that the Applicant's proposed mitigation is responsive to discussions with WDFW (WDFW 2004; see Appendix A [DEIS]). The 600-acre mitigation parcel would meet or exceed the required habitat replacement ratios under the WDFW Wind Power Guidelines for any of the three scenarios proposed. The Applicant has agreed to fence this parcel to exclude livestock grazing, if grazing practices continue on adjacent properties at the time the project area to eliminate livestock degradation. Fencing used for the mitigation parcel and the springs will be designed to keep livestock out but allow game species to cross. The Applicant intends to coordinate with WDFW regarding fence specifications.

As noted above, WDFW has prepared a set of guidelines for wind power projects east of the Cascades to provide guidance for siting and mitigation. These guidelines were followed during selection of Section 27 as a mitigation site for the project. Section 27 provides opportunity for "like-kind" replacement habitat of equal or higher habitat value than the impacted area and it occurs in the same geographical

region as the impacted habitat. Furthermore, the Applicant has an option to purchase the property if the project goes forward, and the Applicant will provide legal protection and protection from degradation for the life of the project. Consistent with WDFW's guidelines, permanent impacts on habitat would be replaced at a ratio equal to or greater than 1:1 for grassland and 2:1 for shrub-steppe.

Use of Section 27 as a mitigation parcel would result in protection of an approximately 1-mile segment of Whiskey Dick Creek near its headwaters. Protection of waterways and their adjacent riparian habitat provide additional benefits beyond replacement of like-kind habitat at agreed upon ratios. Protection of this segment of Whiskey Dick Creek provides benefits for water quality, wildlife, and species diversity. In addition, Section 27 is adjacent to state-owned lands. The DNR administers Section 34 to the south and WDFW administers Section 26 to the east. Use of Section 27 for mitigation will provide continuity of habitat with these adjacent state-owned sections. Finally, a variety of habitat types that occur in the general project area are found in Section 27, so a diversity of habitat types would be preserved. These include shrub-steppe (moderate and dense), herbaceous, herbaceous/rock outcrop, and woody riparian.

In addition to the above-mentioned mitigation parcel, additional mitigation measures contained in the WDFW guidelines would be implemented. These guidelines include implementing a WDFW approved restoration plan for the impacted areas that will include:

- Site preparation,
- Reseeding with appropriate vegetation,
- Noxious weed control, and
- Protection from degradation
- Best management practices (BMPs) will be implemented during construction, as discussed in Sections 3.1 Earth and 3.3 Water, to control erosion and surface water runoff, and as presented below for noxious weed control.
- In further consultation with WDFW, and since the DEIS was issued in August 2004, the Applicant has agreed to construction timing to protect vegetation and soils and to establish a reference site for restoration efforts. To the greatest extent possible, construction activities outside permanently disturbed areas would be conducted during the months of May through October when soil moisture is low. Working during winter months would be minimized to avoid or minimize impacts to vegetation and soils subject to thawing conditions. However, trenching of underground electrical collection cables may be performed outside this time window, as the soil cover in those areas would be disturbed regardless of the season and will need to be restored and reseeded.
- The Applicant will develop a restoration plan and conduct habitat reseeding programs when optimal germination and establishment conditions are present, as determined in consultation with a TAC (see Section 3.5 Wildlife) and WDFW, and not necessarily immediately following ground disturbance activities. Temporarily disturbed areas will be covered in accordance with erosion control measures set forth in this Final EIS (see Section 3.3, Water Resources), at such time site conditions are deemed favorable. In cooperation with WDFW and the TAC, the Applicant will evaluate the success of restoration efforts using an agreed-upon reference site that would provide insights to future restoration efforts at other projects, and will ensure effective erosion and weed control. The Applicant is not required to provide additional mitigation should restored habitat at the project site differ in quality from the reference standard.

### 3.4.4.1 Wetlands

There are a few Class 3 wetlands in the form of seeps and springs within the project area; however, all project facilities will be located a considerable distance from them to prevent any impacts to these wetlands. Roads, underground cables, turbine foundations, transmission poles and other associated infrastructure will not be located within any riparian areas or streams and will not involve the use of any heavy equipment in stream beds or riparian areas. BMPs will be implemented to retain sediment from disturbed areas and minimize areas of disturbance.

### 3.4.4.2 Special-Status Plants

The only special-status plant species that may be impacted by the project is hedgehog cactus, a Washington State Review List species. Access to the site will be controlled during both construction and operations, which should provide greater protection than is currently afforded to this species. As collection of this species for gardens has been cited as a reason for its decline, if such collection becomes a problem at the project site, the Applicant will post a sign at the visitor's kiosk indicating that collection of any plants in the project area is prohibited.

### 3.4.4.3 Noxious Weeds

To avoid, minimize, or reduce the impacts of noxious weeds, the Applicant proposes the following mitigation measures:

- The contractor will clean construction vehicles prior to bringing them in to the project area from outside areas.
- Disturbed areas will be reseeded as quickly as possible with native species.
- Seed mixes will be selected in consultation with WDFW and Kittitas County Weed Control Board.
- If hay is used for sediment control or other purposes, hay bales will be certified weed free.
- Access to the site will be controlled which may result in a lower level of disturbance and fewer opportunities for noxious weeds to be introduced and/or spread.
- Noxious weeds that may establish themselves as a result of the project will be actively controlled in consultation with the Kittitas County Weed Control Board.

# Section 3.5 WILDLIFE

Information contained in this section has been revised since the issuance of the Draft Environmental Impact Statement (DEIS) based on the following: 1) requests for additional information by commenters on the DEIS; 2) additional information from the Washington State Department of Fish and Wildlife (WDFW) regarding sage grouse occurrence in the project area; 3) information contained within the Applicant's pre-filed testimony before the State of Washington Energy Facility Site Evaluation Council; 4) the settlement agreement between the WDFW and the Applicant (Appendix B); and 5) and the Development Agreement between Kittitas County and the Applicant (Appendix A). The revisions to the information contained in the DEIS are presented below. In addition, only those portions of the DEIS tables (rows or subsection) that incurred changes to information are contained in the tables presented in this section. Table entries that did not require revision are not repeated here.

# 3.5.1 Affected Environment

One seasonal pond occurs on the project site. This pond is thought to generally be dry by late May, although this may vary between years. There is evidence of use this pond by both livestock and wildlife.

The Wild Horse Wind Power Project (WHWPP) site is located to the west of the Whisky Dick Wildlife Area and to the South of the Quilomene wildlife area, and is part of a large and contiguous patch of shrub-steppe habitat, a habitat type that is considered a priority habitat by the WDFW and which supports a diverse number species. Shrub-steppe habitat within the project area is described in detail in Section 3.4, Vegetation and Wetlands.

Based on the habitat types available, the project site would be expected to provide habitat primarily for species associated with shrub-steppe habitat, with some riparian and forest dependent species also potentially occurring. To establish baseline information about wildlife use of the project site against which to evaluate impacts, the Applicant's consultant conducted a variety of wildlife surveys, including surveys for avian use, raptor nests, sage grouse, and big game. Avian use surveys included fixed-point surveys conducted over a one-year period and incidental/in-transit observations in which birds observed while traveling between fixed-points were recorded. The locations of the fixed-point survey stations are shown on Figure 3.5-1. A raptor nest survey was conducted in which the project site and lands within a 2-mile buffer were searched from a helicopter and all observations of raptor, raven, and American crow nests were recorded. Both aerial and ground surveys were conducted for sage grouse, with ground surveys focused on areas of known historical occurrence and other areas of similar habitat. Sage grouse survey protocols were developed in consultation with WDFW, and are consistent with WDFW's Wind Power Guidelines. Big game surveys were conducted simultaneously with the fixed-point, in-transit, and aerial raptor nest and sage grouse surveys. All fieldwork completed by the Applicant's consultant was conducted on the project site between May 10, 2002 and May 22, 2003.

WDFW Priority Habitats and Species (PHS) data for the project site was also reviewed for documented species occurrences and priority habitat identification. Priority habitats within and adjacent to the project area are shown in Figure 3.5-2.

### 3.5.1.1 Species Occurrence

### <u>Birds</u>

Spatial patterns of raptor use were observed. The ridge along Whiskey Dick Creek near station G is effectively perpendicular to prevailing winds. There appears to be a pattern of raptor flight paths parallel to the western side of the ridge, which is consistent with behavior observed in similar situations. The one bald eagle observed was flying along the Whiskey Dick drainage. There appears to be little pattern in the flight paths near station C at the highest point of the project sometimes follow the main Whiskey Dick Mountain ridgeline and other times cross the ridgeline. The main ridgeline in this case is not perpendicular to the prevailing wind direction, likely affecting patterns of use in this area. The turbine arrangement near station C with gaps along the ridgeline may pose less collision risk for raptors compared to a long string of turbines along this ridgeline with no gaps based on these patterns of use, do not contain turbine locations. American kestrel observations did not show distinctive patterns in use of topography, but did appear more abundant near Station E, the one station where no turbines are proposed.

The WHWPP site is located within an area identified by the Audubon Society as an important bird area (IBA), known as the Quilomene-Colockum Wildlife Area IBA. This area was identified as an important area for shrub-steppe dependent species and conservation issues identified for the area include invasion by non-native plants and disturbance to nest sites from recreational use (Cullinen 2001).

### Unique Species

#### **Threatened and Endangered Species**

The species list provided to the Applicant's consultant by the U.S. Fish and Wildlife Service (USFWS) indicated the following threatened, endangered or candidate wildlife species as potentially occurring on the project site: bald eagle, gray wolf, Canada lynx, northern spotted owl, western sage grouse, and western yellow billed cuckoo. Based on the habitat attributes present on the project site and the habitats with which these species are associated, only bald eagle and western sage grouse have the potential to occur within the project site. Since this list was issued, the USFWS has published a finding that, as of January 2005, listing of the sage grouse under the Endangered Species Act (ESA) is not warranted (FR 70 2244-2282). Sage grouse are listed as threatened by the State of Washington.

This letter also indicated the potential presence of critical habitat for the northern spotted owl on the project site. The Endangered Species Act defines critical habitat for threatened or endangered species as specific area(s) within the geographical range of a species where physical or biological features are found that are essential to the conservation of the species and which may require special management consideration or protection. Critical habitat is a specific geographic area designated by the USFWS for a particular species.

Wildlife

### **Other Special Status Species**

Table 3.5-3.	Special Status Species Documented as Occurring or Likely to Occur in Project
Vicinity	

Group/Sp	pecies	Statu	us <sup>a</sup>	Notes		
Grouse						
sage grouse ST ( <i>Centrocercus urophasianus</i> ) FC			The project area occurs within a mapped area of historic high use. One documented lek is present approximately 2.75 miles (4.43 km) from the proposed Puget Sound Energy (PSE) transmission feeder line route. No sage grouse or leks were observed during fixed-point or lek surveys within the project area, although pellets were found incidentally on the south side of Whiskey Dick Mountain in the fall. Although potentially used historically, the project area is not currently known to be occupied by sage grouse leks, and no to very low impacts on the species are anticipated. The project is located within the Colockum Management Unit in the Washington Recovery Plan for sage grouse (Stinson et al 2004). This management unit is most important for potential connectivity between the breeding population on the Yakima Training Center and the populations in Douglas County.			
sharp-tailed grouse ST ( <i>Tympanuchus phasianellus</i> )			The WDFW has one record of a sharp-tailed grouse sighting from 1981 approximately 4–6 miles (6–10 km) from the project area and a transmission feeder line. No sharp-tailed grouse were observed during surveys. It is unlikely that the species occupies the project area and no impacts are expected.			
FE	Federal Endangered		FT	Federal Threatened	FC	Federal Candidate
FSC	Federal Species of Concern		SE	State Endangered	ST	State Threatened
SC	State Candidate		SS	State Sensitive		

Only one bald eagle was observed during surveys within the project area. The bald eagle was observed during the winter, and no bald eagle nests were observed during raptor nest surveys.

The project area also lies within the Washington State sage grouse recovery area (Stinson et al 2004) and the project area has been used historically by sage grouse (WDFW, PHS Data). Currently, two populations of sage grouse remain in Washington; one within the Yakima Training Center (YTC) in Yakima and Kittitas counties south of the project area, and one within Douglas and Grant counties to the northeast of the project area. The sage grouse population in 1997 was estimated at approximately 1000 birds, with 600 located in Douglas County and 400 birds in the YTC (Hays et al. 1998).

The project area is located on the western edge of the Colockum sage grouse management unit, as defined in the Washington Greater Sage-Grouse Recovery Plan (Stinson et al. 2004). The Colockum management unit is approximately 128,000 acres in size and primarily provides a possible corridor between the sage grouse population within the YTC to the south of the project and the populations to the north and west of the project in the Moses Coulee and Mansfield Plateau Management Units. The recovery plan identifies the Colockum Management Unit as having significant potential as a corridor that may link the current Douglas-Grant and YTC populations. Approximately 90% of this management unit is steppe habitat (Table 8 in Stinson et al. 2003). Limiting factors of the Colockum Management Unit for resident sage grouse include a lack of high quality winter and breeding habitat and rugged terrain, much of which is unsuitable for sage grouse.

Historically sage grouse have occurred in the project area and surrounding lands (WDFW, PHS data), with most sightings reported in fall and winter and a few reported in spring and summer. The PHS database identifies portions of the project area near Government Springs as a concentration area, based on

past observations of sage grouse in the area. Several records occurred between 1980 and 1994, including a sighting of a brood with an unknown number of young in the Whiskey Dick area in 1994, suggesting that nesting may have occurred near the project at that time (WDFW PHS). No sage grouse or leks were observed during targeted surveys in March and April 2003 within and surrounding the project area. surveys between May 10, 2002 and May 22, 2003. No sage grouse observations (leks or flushed birds) were observed during any of the sage grouse surveys or during other activities. Survey protocols for this species were developed in consultation with the WDFW and the surveys are consistent with the WDFW Guidelines for Baseline Studies for Wind Projects (WDFW 2003). These surveys included two helicopter surveys (March 20 and April 14, 2003) and three ground surveys (March 13, March 22, and April 2, 2003). The ground surveys focused on areas of historic observations around the Pines area and other relatively flat areas most conducive to lekking. Approximately 95 linear miles were flown for each aerial sage grouse survey. The helicopter was kept at an elevation of approximately 250 feet above the ground. No sage grouse leks were observed during these surveys. Surveys for all avian species were also conducted between May 10, 2002 and May 22, 2003, with no sage grouse observed. Two sage grouse pellet groups were observed on the south side of Whiskey Dick Mountain during the fall of 2002.

The nearest historic lek, which was recorded by the WDFW in 1983, is more than a mile southeast of the project area and has not been active in recent years. The next nearest known lek is approximately 5 miles south of the project area, and 2.75 miles south of the proposed PSE transmission line location, and has not been documented as being active since 1987 (BPA 2003).

In March 2003, 25 female sage grouse were translocated from Nevada to the YTC with the objective of enhancing the genetic diversity of the local population. Two of the 25 females moved north and spent some time on and near the project site prior to dying. Neither of these females is known to have nested, and it is unknown whether these two females were bred in Nevada prior to being translocated. One of the females was observed approximately one to two miles east of the WHWPP site and the other spent most of its time within or north of the project area. Of the 25 translocated females, 9 attempted to nest, 4 successfully nested, and one successfully fledged chicks.

Sage grouse have been translocated in at least seven states and one Canadian province, with limited success (Reese and Connelly 1997). Between 1933 and 1997 over 7,000 sage grouse were translocated in at least 56 attempts to augment or reestablish populations. Only a few attempts appeared successful, and in those few cases populations remain small. The researchers concluded that translocations should be viewed as experimental and not as a viable strategy to restore extirpated populations (Reese and Connelly 1997).

It would appear there is currently much less likelihood of consistent use of the project area for nesting, based on no documented birds observed in the project vicinity during the breeding season in the past 10 years, the current nesting habitat quality, and other factors (Stinson et al. 2003). Important components to nest sites and nest success include a large grass and sagebrush canopy cover (Sveum 1995). The grass cover component would appear to be lacking within the project area, due to current grazing practices.

## 3.5.2 Impacts of Proposed Action

Other impacts include direct loss of habitat due to the project facilities, and indirect impacts such as disturbance and displacement from the wind turbines, habitat fragmentation, roads, and human activities. Both construction (e.g., blasting) and operations impacts are discussed. Potential impacts are discussed for bats, big game, other mammals, reptiles and amphibians, and birds. Discussion of potential impacts on unique species including state and federal listed species is also included. Impacts to shrub-steppe habitat are described in Section 3.4, Vegetation and Wetlands.

In order to reduce potential risk to wildlife species in the project area, the results of surveys conducted for the WHWPP were considered when designing where turbines would be placed under the proposed action, with wildlife use aiding in micro-siting decisions. The proposed turbine layout would avoid prominent saddles and potential crossing routes along the ridge associated with Whisky Dick Mountain to avoid potential areas birds may use to cross the ridge.

Turbines would also not be placed adjacent to springs. Under the proposed turbine layout, locations would be at least 492 feet from the nearest identified spring (Wild Horse, Skookumchuck Heights, Dorse, Reynolds, Thorn, Government, Pine, Seabrock, unnamed) and the majority would be more than 984 feet from identified springs. These water sources may be important for bird and big game species, but have historically been impacted and degraded by livestock use. Mitigation for the proposed project includes the exclusion of livestock from the springs, which should increase habitat quality in these areas. Fencing will be designed so that big game and other wildlife will still be able to access water sources, as described in Section 3.5.4, Mitigation Measures.

Turbines would also be located on the ridges, away from the riparian areas of the drainages where bird species diversity would likely be higher. Turbines would be located at least 459 feet from the Pines, the only area of large trees within the project area. Placing turbines away from riparian areas and large trees is expected to reduce the risk of mortality for birds in the project area.

Several turbine strings in the northwest portion of the project area along the existing north-south road were considered by the Applicant prior to submitting an Application to EFSEC. The collision risks associated with these turbines are likely similar to most of the turbines within the project area; however, they were located in areas that have had historic sage grouse use. This entire string was not included in the Application currently under review, increasing the lands within the project area that are absent of wind turbines and creating additional potential movement corridors for grouse and other wildlife.

Information about bird fatalities at other wind projects suggests that a wide variety of species and groups are susceptible to collision with turbines. Some evidence also suggests that peak mortality may occur during migration periods although some mortality has been documented throughout all seasons (see Erickson et al. 2000, Young et al. 2003, Johnson et al. 2002, Erickson et al. 2003a, and Erickson et al. 2003b).

Potential impacts on birds using the study area include fatalities from collision with wind turbines and meteorological towers, particularly if guy wires are used, or from construction equipment, loss of habitat, disturbance to foraging and breeding behavior, collision with overhead power lines, and electrocution. Project-related human activity could alter bird behavior and cause displacement during the construction phase of the project, and the postconstruction density of turbines and facilities on the developed portion of the site may alter avian use. To reduce the risk of collision with meteorological tower guy wires, all permanent meteorological towers within the WHWPP would be unguyed, as described in Section 3.5.4, Mitigation Measures.

### **3.5.2.1 Construction Impacts**

### Big Game

During the construction period, it is expected that elk and mule deer will be temporarily displaced from the site due to the influx of humans and heavy construction equipment and associated disturbance (e.g., noise, blasting). All heavy construction, including road and foundation construction and blasting, will

occur between April 15 and November 15, outside the critical winter periods. Construction activities in the winter will include only survey and design activities, which may have some minor displacement impacts on big game and elk. These activities in the winter would likely have a very minor reduction in the quantity and quality of big game winter range. The Quilomene elk winter range is approximately 83,000 acres in size and the Quilomene deer winter range is approximately 40,000 acres in size. The project area is located south east of the Quilomene elk migratory corridor. During winter construction activities, elk moving to winter range east of the project may avoid areas of human disturbances locally within the project, but overall increases in distances needed to travel would be insignificant. Following completion of the project, the disturbance levels from construction equipment and humans will diminish dramatically and the primary disturbances will be associated with operations and maintenance personnel, occasionally vehicular traffic, and the presence of the turbines and other facilities.

As described in Section 3.5.4, the Applicant has committed to the protection and enhancement of on-site habitat to mitigate for permanent and temporary impacts to habitat caused by the Project, in accordance with the ratios outlined in the WDFW Wind power Guidelines (WDFW 2003); specifically providing protection for the life of the project for over 600 acres of shrub-steppe and riparian habitat in Section 27, T18N, R21E in Kittias County

Use of Section 27 as a mitigation parcel would result in protection of an approximately 1-mile segment of Whiskey Dick Creek near its headwaters. Protection of waterways and the adjacent riparian habitat provide additional benefits beyond the replacement of in-kind habitat at agreed upon ratios. Protection of this segment of Whiskey Dick Creek provides benefits for water quality, wildlife, and species diversity. In addition, Section 27 is adjacent to state-owned lands. The Washington State Department of Natural Resources (DNR) administers Section 34 to the south and WDFW administers Section 26 to the east. Use of Section 27 for mitigation will provide continuity of habitat with these adjacent state-owned sections. Finally, a variety of habitat types that occur in the general project area are found in Section 27, so a diversity of habitat types would be preserved. These include shrub-steppe (moderate and dense), herbaceous, herbaceous/rock outcrop, and woody riparian.

Since the construction effort would be similar for all scenarios, impacts on big game would be expected to be similar for all scenarios.

#### Unique Species

#### **Other Special Status Species**

#### Sage Grouse

There is very limited information on the potential disturbance and displacement impacts of wind projects on sage grouse. Presence of young broods at the Foote Creek Rim wind project in Wyoming suggest nesting has likely occurred somewhere near a wind project, although the exact nesting location relative to wind turbines is not known (D. Young, WEST, Inc., pers. comm.). Studies of prairie chickens suggest they avoid suitable habitat within 0.5 mile of residences, well-traveled roads, and compressor stations, and did not nest in suitable habitat near a coal-fired generation station (Robel 2002). Sage grouse nested farther from leks in areas classified as disturbed compared to less disturbed areas in Wyoming (Lyon 2000).

The U.S. Fish and Wildlife Service has recommended "... avoiding placing wind turbines within 5 miles of known leks in known prairie grouse habitat" in their *Interim Guidelines to Avoid and Minimize Wildlife* 

*Impacts from Wind Turbines* (USFWS 2003). A clarification memo on this guidance was issued in July 2004 (Manville 2004), in which existing information regarding impacts form wind turbines, other overhead structures, and human disturbance on prairie grouse. Much of the information was identified as being anecdotal and the memo reiterated that the wind siting guidelines are both draft and voluntary, and that they are not meant to restrict the installation of wind turbines or wind power project facilities.

The project area is located on the western edge of the Colockum Sage Grouse Management Unit (Stinson et al. 2004). In Washington, Greater sage grouse are found in two remnant populations that are separated by about 30 miles (Schroeder et al. 2000). Approximately 600 to 700 individuals primarily occupy Douglas County, and 300 to 400 occupy Yakima and Kittitas Counties and are primarily located on the YTC (Hays et al. 1998). The WDFW has identified the corridor of shrub steppe habitat within the Colockum, Quilomene, and Whiskey Dick Wildlife areas, located to the east of the project site, as potential connective habitat between these two populations (Stinson et al. 2004). At this time there is no documented exchange between the two populations. Limitations in movements already exists due to the presence of the Columbia River and the topography of the area (Stinson et al. 2003). It would appear the project would not significantly impact connectivity between Douglas County populations and the Yakima and Kittitas County populations, given that relatively large blocks of intact shrub-steppe habitat still do exist, and would continue to exist after the project was constructed, with WDFW and DNR lands to the east of the project site and private lands to the east and west of the project site. The Quilomene Wildlife Area (17,803 acres), the Whiskey Dick Wildlife Area (28,549 acres), and the private lands between them have vegetation similar to the project area, but lower in elevation. At the present time, the project would not appear to significantly impact movement between the two populations; however, future changes in land use on the private lands surrounding the project site could affect sage grouse movement. Within the project area, an approximate 600 acre mitigation site would be established in which livestock grazing would be precluded, and the Applicant has voluntarily agreed to place the entire project area in a conservation easement (Appendix C), thus allowing for natural habitat improvement in areas not disturbed by the WHWPP that may benefit sage grouse moving through the area. In addition, while turbine strings are linear features, they are highly permeable to wildlife movement because of the separation between turbines.

Approximately 100 acres of shrub-steppe habitat will be permanently impacted by the footprint of the project out of more than 8,600 acres of shrub-steppe habitat within the project area. The 8,600 acres is approximately 7% of the 128,000 acre Colockum Management Unit. The loss of 100 acres of this unit represents a loss of less than 0.08%. Impacts are expected to be similar under all scenarios.

There have been no studies that have shown that sage grouse avoid wind turbines and the WHWPP has been designed to be permeable to wildlife movement. The turbines would be approximately 492 feet apart and turbine rows at least 2,625 feet apart. The 165 acres of permanent impact is approximately 0.13% of the total area of the Colockum Sage Grouse Management Unit. Several turbine rows which were originally considered to be located along Beacon Ridge Road to the west of the Pines area, Government Springs, and Seabrock Springs, have been eliminated, leaving a distance of approximately 3,937 feet between the nearest wind turbine and the western project boundary. This layout modification provides additional potential movement corridors for sage grouse and other wildlife within the project boundary.

### **3.5.2.2 Operations and Maintenance Impacts**

### <u>Birds</u>

#### **Operations-Related Mortality**

According to the most recent State of the Birds Report issued by the Audubon Society (2004), which reports population trends for birds associated with grasslands, shrublands, woodlands, water/wetlands, and urban habitats, there are significant numbers of birds with declining populations in all habitat types, with the highest proportion being in the grassland and shrubland types. According to the report, 70% of grassland species, including western meadowlarks, show significant population declines (Audubon Society 2004).

Due to the relatively recent commercial introduction of wind turbines with rotor diameters greater than 230 feet (70 meters), there is very little information comparing avian and bat fatality rates of 295-foot (90-meter) rotor diameter (RD) turbines to 197-foot (60-meter) RD turbines. New generation wind projects where standardized mortality studies have been conducted in the West and Midwest include turbines ranging from 98 to 230 feet (30 to 70 meter) RD (Erickson et al. 2001, Erickson et al. 2003a, Erickson et al. 2003b, Johnson et al. 2003a). Some characteristics of the larger turbines may lead to fewer raptor, resident passerine, and other diurnal bird, fatalities because of the lower revolutions per minute (RPMs) of the turbine blades and the higher tip clearance (above the ground). The tip clearance for the 295-foot (90-meter) RD turbine on a 262-foot (80-meter) tower is 115 feet (35 meters), while the tip clearance for the 197-foot (60-meter) RD turbine on a 197-foot (60-meter) tower is 98 feet (30 meters). Most of the daytime passerine flight heights observed at this and other projects are below 115 feet (35 meters) (Johnson et al. 2000a, Johnson et al. 2000b, Erickson et al. 2003c, and Young et al. 2003a).

#### Raptors

As described above, bigger turbines having a lower RPM and higher ground clearance may result in lower raptor mortality rates. Therefore, raptor mortality rates may potentially be highest under the 158-turbine/1-MW scenario and lowest under the 104-turbine/3-MW scenario, with the 136-turbine/1.5-MW scenario somewhere between.

In order to minimize raptor mortality, no turbines would be placed within prominent saddles along Whiskey Dick Ridge, where raptors were observed crossing or would be expected to cross the ridge. Also, 9 proposed turbine locations have been eliminated along the peak of Whiskey Dick Ridge due to Federal Aviation Administration (FAA) concerns. Raptor use near these previously proposed turbine locations was high relative to most other locations where measurements were recorded. Several turbines were initially proposed in the northwest portion of the project area along the existing north-south road located to the west of the Pines area. The collision risk associated with these turbines was likely similar to most of the turbines in the project area; however, some were located near a point count station that showed relatively high raptor use.

#### Other Avian Groups/Species

Some upland game bird mortality has been documented at wind projects (Erickson et al. 2001, Erickson et al. 2003). Based on habitat and use, there is potential for mortality of some upland game birds such as chukars and gray partridge. Game bird mortality would be expected to be less with larger turbines having

higher tip clearance, therefore lowest under the 104-turbine/3-MW scenario and highest for the scenario with the smaller turbines (158-turbine/1 MW), with the 136-turbine/1.5-MW scenario in between. Other avian groups (e.g., doves, shorebirds) occur in relatively low numbers within the study area and mortality would be expected to be very low and similar for all scenarios.

Most of the information regarding the impact of overhead lines and fences on sage grouse is unpublished and anecdotal (Manville 2004). Structures such as power lines and fences may pose hazards to sage grouse from collision as well as provide additional perch sites and potential nest sites for raptors that prey on sage grouse. Braun et al. (2002) has recommended that overhead power lines be placed at least 0.5 mile from any sage grouse breeding and nesting grounds. However, two leks have continued to exist within 1 mile of a new overhead transmission line constructed for the Foote Creek Rim Wind project and the number of birds using the leks has been stable or increasing since the installation of this transmission line in 1997 (Johnson et al 2000). The WHWPP has been designed incorporating measures to discourage perching, nesting, and foraging by raptors and unguyed meteorological towers will be used to minimize the risk to sage grouse from predators and from collision.

#### **Operations-Related Disturbance**

Based on the available information, it is probable that some disturbance or displacement effects may occur to the grassland/shrub-steppe avian species occupying the study area. The extent of these effects and their significance is unknown and hard to predict but could range from none to several hundred feet.

As mentioned in Section 3.5.2.1, the WHWPP site is located within an important bird area, as identified by the Audubon Society, in which invasion by non-native plant species and disturbance to nesting birds from recreational activities have been identified as primary issues of concern (Cullinen 2001). Section 3.5.3 describes measures that will be taken to reduce the potential for habitat impacts from non-native plant species. The Applicant will also limit recreational use of the site, as described in Section 3.5.4.4, which will reduce the amount of potential impacts from recreation during the nesting season. Disturbance impacts from construction, operations, and maintenance of the WHWPP are still likely, however, as described above.

Project components will not directly impact the springs in the project area, with the nearest facility located no closer than 738 feet from the nearest spring. These water sources may be important for birds in the project area, but they have been impacted and degraded by livestock use. Proposed mitigation to exclude livestock from the springs, as described in Section 3.5.4, is expected to greatly increase the habitat quality of these springs. In addition, turbines would be located on the ridges and away from riparian areas, which likely contain a greater diversity of bird species. Turbines would also be located at least 459 feet from the Pines. Higher mortality of songbirds and other species associated with riparian corridors might be expected if turbines were sited closer to these features. Exclusion of livestock from the approximately 600-acre mitigation parcel proposed for the WHWPP and placement of the entire project area in a conservation easement would also likely result in increase in habitat quality in the project area.

#### Big Game

There is little information regarding the specific effects of wind projects on big game. The results of a recent study by Walter et al (2004) on interactions of elk with operating wind farms were inconclusive regarding displacement or avoidance behavior by elk; however, no evidence that operating wind turbines have a significant impact on elk use of the surrounding area was found. At the Foote Creek Rim wind

project in Wyoming, pronghorn observed during raptor use surveys were recorded year round (Johnson et al. 2000b). The mean number of pronghorn observed at the six survey points was 1.07 prior to construction of the wind plant and 1.59 and 1.14/survey the two years immediately following construction, indicating no reduction in use of the immediate area. Mule deer and elk also occurred at Foote Creek Rim, but their numbers were so low that meaningful data on wind plant avoidance could not be collected.

Due to the lack of knowledge regarding the potential impacts of energy development on big game, it is difficult to predict with certainty the effects of the project on mule deer and elk. Van Dyke and Klein (1996) showed that wintering elk shifted use of core areas out of view of human-related activities associated with an oil well and access road. Most turbines and roads in the project area will be located on ridges and will be visible over a fairly large area. While human-related activity at wind turbines during regular maintenance will be relatively infrequent, it is not known if human activity associated with regular maintenance activity will exceed tolerance thresholds for wintering elk. If tolerance thresholds during regular maintenance activities were exceeded, elk would likely permanently utilize areas away from the wind development. The project area proposed for development has historically received regular use throughout the year by hunters and other recreationalists including motorcycle and ATV riders, campers, birders, and hikers. Access during construction and operation of the project will be controlled by the Applicant, and disturbance during operation to big game may be minimized and actually less than that which occurred predevelopment. Specifically, the Applicant would implement an adaptive management approach to allow access to and through the Project Area and recreational use of the site. In general, the Applicant would permit controlled access to and through the site, as long as it does not interfere with, or introduce adverse impacts on, project operations or personnel, as follows:

- Property owners who wish to access their property from project access roads would be allowed to do so as necessary under a formal access license and a key to a gated entrance.
- Officials of the DNR and WDFW would be allowed access to the site by key.
- Other would be allowed to access the project site on a case-by-case basis.
- Active recreational activities such as camping and off-road vehicle use would not be allowed in order to avoid and minimize potential impacts to habitat and wildlife from such activities.

WDFW has also expressed concern regarding the potential for wind projects to increase elk and mule deer damage claims on private agricultural lands near wind projects. Elk and mule deer, if displaced from the project area, may increase their utilization of agricultural lands in the vicinity of the project area. If elk and mule deer are not displaced from the project, then WDFW is concerned that the project may create a "sanctuary" if hunting is not allowed in the project area, therefore limiting WDFW's ability to manage the herds. The Applicant has agreed to work with the WDFW to establish a hunting plan for the project site, as described in Section 3.5.4, Mitigation Measures.

With this management, the likelihood of the project becoming an elk sanctuary is remote.

The project area is located southeast of the Quilomene elk migratory corridor. Elk moving to winter range east of the project may avoid areas close to the project and travel farther to the north. Given that the project is located to the southeast of this movement corridor, the increase in distances needed to travel would not appear to be very large.

Project components will not directly impact the springs in the project area, with the nearest facility located no closer than 738 feet from the nearest spring. These water sources may be important for big game in the project area, but they have been impacted and degraded by livestock use. Proposed

mitigation to exclude livestock from the springs while still providing wildlife access, as described in Section 3.5.4, is expected to greatly increase the habitat quality of these springs. In addition, turbines would be located on the ridges and away from riparian areas, which are likely important habitat areas for big game, this reducing potential disturbance in these areas.

Since the project footprint would be similar under all scenarios, operational impacts would be expected to be similar under all scenarios.

#### Unique Species

#### **Other Special Status Species**

#### Sage Sparrow and Sage Thrasher

Most sagebrush and other shrub habitats within the project area occur on the sides of ridges and in drainages, while most turbines will be located on ridge tops lacking dense shrub habitats. Observations of breeding individuals indicate that the species generally flies below the Rotor Swept Area, therefore reducing the potential for collision related mortality. The potential exists for the migrating individuals to collide with turbines. It is likely that the presence of turbines, roads and associated facilities will result in local displacement of breeding sage sparrows and sage thrashers from shrub habitats near project facilities. However, based on research in Minnesota, displacement effects will likely be limited to areas within 328 feet of turbines and associated facilities (Johnson et al. 2000a). As previously described, larger turbines with lower RPMs and higher tip clearance may result in lower mortality for diurnal birds, therefore the potential for mortality for these species may be lowest for the 104-turbine/3-MW scenario, highest for the 158-turbine/1-MW scenario, and intermediate for the 136-turbine/1.5-MW scenario.

#### Sage Grouse

Proposed mitigation measures include elimination of livestock grazing within parts of the project area (Section 27), which likely would improve residual grass cover and potential nesting, brood-rearing, and wintering habitat for sage grouse. It is not known what impact the project will have on seasonal movements and movements, if they exist, between the two existing populations. Relatively large blocks of shrub-steppe habitats still exist within WDFW and DNR lands to the east of the project site that may serve to connect the two populations. The Quilomene Wildlife Area (17,803 acres) and the Whiskey Dick Wildlife Area (28,549 acres) and the private lands between them have vegetation similar to the project area, but lower in elevation. Controlled access to the project area during operations will limit human activity, and in fact, may reduce human disturbance levels compared to current levels. Impacts are expected to be similar under all scenarios.

There is little documentation of how disturbance from human activity and tall structures might impact sage grouse use of an area, including breeding use. One study has suggested avoidance of suitable habitat for sage grouse lekking along the Interstate 80 corridor in Wyoming, Utah, Idaho, and Nevada (Connelly et al. 2004). Based on analysis of historic data, lek distribution and activity along Interstate 80 was affected; however, the cause of the effect, whether direct or indirect, is not understood. While this study shows an effect to sage grouse from human disturbance, the level of human activity associated with an Interstate is not comparable to the level of activity that would occur at the WHWPP; therefore the results of the study may not be applicable to the WHWPP. One other published report suggests differences in nesting characteristics of sage grouse in disturbed and undisturbed areas, with sage grouse nesting farther
away from leks in areas classified as disturbed from natural gas development, compared to less disturbed areas (Lyon and Anderson 2003).

There is limited information, and no controlled studies, on the potential disturbance and displacement impacts of wind projects on sage grouse. There is no empirical data from wind farms to test the hypothesis that sage grouse avoid wind turbines. The presence of young broods near the Foote Creek Rim Wind project in Wyoming suggests that nesting has likely occurred somewhere near that wind project. Although pre- and post-construction studies did not identify any leks within 2 miles of the Foote Creek Rim Wind Project (Johnson et al 2000), the presence of a female with a brood near the wind project suggest that were either undocumented leks closer to Foote Creek Rim, or this female nested more than 2 miles form its lek.

Impacts of the WHWPP on future breeding and nesting in the project area are uncertain, but based on available evidence impacts are expected to be relatively low. There are no documented active leks within 5 miles of the project area at this time, although historic information suggests nesting may have occurred in the past.

## 3.5.3 Impacts of Alternatives

### 3.5.3.1 Impacts of Off-Site Alternatives

#### Desert Claim

Construction related impacts to wildlife habitat would be similar to those described for both the WHWPP and the Kittitas Valley alternative with, an estimated 342 acres of temporary impacts and 88 acres of permanent impacts to vegetation on the site. Construction activities could temporarily displace species from the project area due to noise and activity, and ground-dwelling species would be permanently displaced from those areas of permanent impact. Construction activities could cause mule deer to avoid the project area however adequate habitat in the surrounding area would compensate for this. Elk may respond to project construction by shifting their migratory path to the north; the corridor is likely large enough to accommodate this adjustment without hindering their migration. During project construction, the possibility of mortality effects to bald eagles is considered negligible and very unlikely to occur.

Operation and maintenance impacts would also be similar as those described for both the WHWPP and the Kittitas Valley alternative. Potential passerine mortality for this alternative has been estimated at approximately 140 to 220 birds per year and raptor fatalities have been estimated at approximately 3 to 4 per year. The potential for bald eagle mortality is low based on limited use of the site. Migratory bats are likely at some risk of collision with wind turbines, primarily during the fall season. Estimated mortality range is similar to, or lower than that for birds; non-migratory and migratory resident bat populations are not expected to be negatively impacted by wind turbines.

Project operations may reduce use of the area by wintering mule deer, although it is expected that mule deer would become habituated to the turbines and reoccupy the site. Elk may also become habituated or may continue to use areas further to the north during migration.

Individuals of some species may be killed by vehicular traffic, as described for both the WHWPP and the Kittitas Valley alternative.

### 3.5.4 Mitigation Measures

The potential direct wildlife impacts from the project can be grouped into two main categories, loss of habitat from construction and operation of the project, and potential mortality to individual birds or other animals from construction and operation of the project. The loss of habitat associated with the project can be further broken down into "temporary" and "permanent" habitat impacts. "Temporary" impacts are those arising from ground disturbance necessary for the construction of project infrastructure but that will be not be permanently occupied once construction is complete. Examples include trenches for underground electrical collector cables and construction staging areas. These areas will be disturbed during the construction period but will be reseeded and restored after construction is finished. The vast majority (approximately 75%) of the total area impacted by construction of the project would be temporarily disturbed (i.e., for less than one year.) The remainder (approximately 25%) will continue to be occupied by the project, such as string roads, turbine foundation pads, project substation, and the Operations and Maintenance (O&M) facility. These are considered "permanent" impacts for the purpose of this analysis. Potential indirect impacts on plants and animals are more diffuse and could be caused by habitat fragmentation, wildlife disturbance or avoidance of the project site, and introduction of noxious weeds and/or wildfire.

The Applicant has proposed a comprehensive mitigation package for plants and animals for this project. It consists of several categories of actions that include the following list, and described in greater detail in the following sections:

- Thorough study and analysis to avoid impacts;
- Project design features to minimize impacts;
- Construction techniques and Best Management Practices (BMPs) to minimize impacts;
- Post-construction restoration of temporarily disturbed areas;
- Operational BMPs to minimize impacts;
- Monitoring and adaptive management to minimize impacts during operations;
- Protection and enhancement of on-site habitat to mitigate for all permanent and temporary impacts to habitat caused by the Project, in accordance with the ratios outlined in the WDFW Wind power Guidelines (WDFW 2003); specifically providing protection for the life of the project for over 600 acres of shrub-steppe and riparian habitat in Section 27, T18N, R21E in Kittias County.
- Fencing of springs in other areas of project to protect the springs from degradation by livestock.

Since the Applicant has an option to purchase the property if the Project goes forward, the Applicant can provide legal protection and protection from degradation for the mitigation parcel for the life of the Project. Improved management of habitat throughout the mitigation parcel offers an opportunity for long-term protection of habitat for many shrub-steppe species. The Applicant has agreed to fence this parcel to exclude livestock grazing, if grazing practices continue on adjacent properties at the time the project goes into operation.

Use of Section 27 as a mitigation parcel would result in protection of an approximately 1-mile segment of Whiskey Dick Creek near its headwaters. Protection of waterways and the adjacent riparian habitat provide additional benefits beyond the replacement of in-kind habitat at agreed upon ratios. Protection of this segment of Whiskey Dick Creek provides benefits for water quality, wildlife, and species diversity. In addition, Section 27 is adjacent to state-owned lands. The DNR administers Section 34 to the south

and WDFW administers Section 26 to the east. Use of Section 27 for mitigation will provide continuity of habitat with these adjacent state-owned sections. Finally, a variety of habitat types that occur in the general project area are found in Section 27, so a diversity of habitat types would be preserved. These include shrub-steppe (moderate and dense), herbaceous, herbaceous/rock outcrop, and woody riparian.

### 3.5.4.1 Study and Analysis

Studies have been conducted on the project site by qualified wildlife biologists and data gathered was used in the project design to avoid impacts on sensitive populations. These studies, results of which are included as appendices to the Application for Site Certification (ASC), include the following:

- Rare plant surveys;
- Habitat mapping;
- Avian use point count surveys;
- Aerial raptor nest surveys;
- Sage grouse surveys
- Big game surveys;
- Non-avian wildlife surveys;

The results and recommendations of these studies have been incorporated into the proposed design, construction, operation and mitigation for the project.

### 3.5.4.2 Project Design

The proposed design of the project incorporates numerous features to avoid and/or minimize impacts on plants and wildlife that resulted from the wildlife surveys and analysis conducted for the project and from experience at other wind power projects, and recommendations from consultants performing studies at the site. Features of the project that are designed to avoid or minimize impacts on wildlife include the following:

- Avoidance of construction in sensitive areas such as streams, riparian zones, wetlands, and forested areas;
- Avoidance of locating wind turbines in prominent saddles along the main Whiskey Dick Ridge;
- Minimization of new road construction by improving and using existing roads and trails instead of constructing new roads;
- Choice of underground (vs. overhead) electrical collection lines wherever feasible to minimize perching locations and electrocution hazards to birds;
- Choice of turbines with low RPM and use of tubular towers to minimize risk of bird collision with turbine blades and towers;
- Use of unguyed permanent meteorological towers to minimize potential for avian collisions with guy wires;

- Equipping all overhead power lines with raptor perch guards to minimize risks to raptors; and
- Spacing of all overhead power line conductors to minimize potential for raptor electrocution.
- The historic presence of sage grouse would be considered during strategic planning for rock source locations and concrete batch plant location in order to reduce the likelihood of long term conflicts with any breeding nesting, and rearing of broods by grouse that may occur on the site.

#### **Construction Techniques**

Construction of the project has the potential to impact both habitat and wildlife in a variety of ways. The Applicant proposes the use of construction techniques and BMPs to minimize these potential impacts. These include the following:

- Use of BMPs to minimize construction-related surface water runoff and soil erosion (these are described in detail in Section 3.3.2.1, "Water Impacts of the Proposed Action Construction Surface Water Runoff/Absorption");
- Use of certified "weed free" straw bales during construction to avoid introduction of noxious or invasive weeds;
- Flagging of any sensitive habitat areas (e.g., springs, raptor nests, wetlands) near proposed areas of construction activity and designation of such areas as "off limits" to all construction personnel;
- Development and implementation of a fire control plan, in coordination with local fire districts, to minimize risk of accidental fire during construction and respond effectively to any fire that does occur;
- Establishment and enforcement of reasonable driving speed limits (max 25 mph) during construction to minimize potential for road kills;
- Proper storage and management of all wastes generated during construction;
- Require construction personnel to avoid driving over or otherwise disturbing areas outside the designated construction areas;
- Limiting construction activities during winter months to minimize impacts on wintering big game;
- Avoid, to the greatest extent possible, construction activities outside of permanently disturbed areas except for during the months of May through October when soil moisture is low. Trenching of underground electric collection cables may be performed outside this time window, as the soil cover in those areas will be disturbed regardless of the season and will need to be restored and reseeded.
- Designation of an environmental monitor during construction to monitor construction activities and ensure compliance with mitigation measures.

Environmental compliance during construction would be accomplished through the measures described below, as presented in the Settlement Agreement between the WDFW and the Applicant (Appendix B).

An Environmental Compliance Program by the Applicant will ensure that construction activities meet the conditions, limits and specifications set in environmental standards established in the Settlement Agreement between the WDFW and the Applicant;

Copies of all applicable construction permits will be kept on site. The lead Project construction personnel and construction project Managers will be required to read, follow, and be responsible for all required compliance activities. A project Environmental Monitor will be responsible for ensuring that all construction permit requirements are adhered to, and that any deficiencies are promptly corrected.

The Environmental Monitor will ultimately report to the Project Manager and will provide weekly reports on environmental problems reported or discovered as well as corrective actions taken to resolve these problems. The Environmental Compliance Program will cover avoidance of sensitive areas during construction, waste handling and storage, stormwater management, spill prevention and control and other components required by state and county regulation. Upon identification of an environmental noncompliance issue, the Environmental Monitor will work with the responsible subcontractor or direct hire workers to correct the violation; if not corrected in a reasonable period of time a "stop work" order can be issued for that portion of the work not in compliance with the Project environmental requirements.

The Applicant proposes the use of construction techniques and BMPs to minimize potential impacts to habitat and wildlife. These include the following:

- Use of BMPs to minimize construction-related surface water runoff and soil erosion
- Use of certified "weed free" straw bales during construction to avoid introduction of noxious or invasive weeds;
- Flagging of any sensitive habitat areas (e.g. springs, raptor nests, wetlands, etc.) near proposed areas of construction activity and designation of such areas as "off limits" to all construction personnel;
- Proper storage and management of all wastes generated during construction;
- Require construction personnel to avoid driving over or otherwise disturbing areas outside the designated construction areas.
- The Applicant has entered into an agreement with Kittitas County Rural Fire District #2 to provide fire protection services during the construction and operation of the Project;

#### **Postconstruction Restoration**

All temporarily disturbed areas which have been cleared of vegetation will be reseeded with an appropriate mix of native plant species as soon as possible after construction is completed to accelerate the revegetation of these areas and to the prevent spread of noxious weeds. The Applicant will consult with WDFW regarding the appropriate seed mixes for the project area.

The Applicant will develop a restoration plan and conduct habitat reseeding programs when optimal germination and establishment conditions are present, as determined in consultation with the Technical Advisory Committee (TAC) and WDFW, and not necessarily immediately following the disruption. The Applicant will cover temporarily disturbed areas in accordance with erosion control measures set forth in this FEIS at such time as site conditions are deemed favorable.

The Applicant agrees to work with WDFW and the TAC to evaluate the success of restoration efforts using an agreed upon reference site in order to gain insights which might inform future restoration efforts at other projects. The Applicant shall ensure effective erosion and weed control and commits to a good-faith effort to restore habitat, but does not agree to additional mitigation measures beyond what has been proposed should restored habitat differ in quality from the reference standard.

### 3.5.4.3 Operational BMPs

During project operations, appropriate operational BMPs will be implemented to minimize impacts on plants and animals. These include the following:

- Implementation of a fire control plan, in coordination with local fire districts, to avoid accidental wildfires and respond effectively to any fire that might occur;
- The Applicant has entered into an agreement with Kittitas County Rural Fire District #2 to provide fire protection services during the operation of the Project;
- Establishment and enforcement of reasonable driving speed limits (max 25 mph) during operations to minimize potential for road kills;
- Operational BMPs to minimize storm water runoff and soil erosion;
- Implementation of an effective noxious weed control program, in coordination with the Kittitas County Noxious Weed Control Board, to control the spread and prevent the introduction of noxious weeds;
- Identification and removal of all carcasses of livestock, big game, etc. from within the project that may attract foraging bald eagles or other raptors;
- Control public access to the site to minimize disturbance impacts on wildlife, especially in the winter months;
- Allow limited and controlled hunting on the site and allow WDFW access to the site to manage big game herds and minimize potential big game damage to nearby agricultural lands. In order to minimize impacts on recreation and potential impacts on neighboring property owners from big game damage resulting from the proposed project, the Applicant will prepare a hunting plan for the Project area in consultation with WDFW and the TAC. At a minimum, the hunting plan will include the following:
  - In order to minimize potential conflicts and risks to both workers and hunters, no hunting will be allowed on the property during construction;
  - After construction is completed, controlled hunting will be allowed. Possible measures to control hunting may include, without limitation: access control, limiting hunting to those individuals who have completed the WDFW Advanced Hunter Education program, and/or hunting by permit;
  - To promote the safety of big game animals, Zilkha agrees that any permanent fencing located within the Project site boundary will not exceed 42 inches in height to prevent the top wire from being broken when big game animals jump over the fence. The top wire will be at least 10 inches above the next wire. The bottom wire will be at least 16 inches above the ground to allow fawns and small animals to crawl under the fence.
  - Posted and enforced driving speed limits of 25 miles per hour within the project area to minimize potential collisions with wildlife during both construction and operation.
- The Applicant will take measures to inform the hunting public or the changes in hunting practices on the site. Said measures may include a combination of advertisement in hunting periodicals and WDFW, signage and outreach through sporting organizations.

To minimize potential impacts to sage grouse, the following measures will be implemented:

During the lekking season, no routine maintenance of the substation area of facilities within ¼ mile of an active lek will occur between the hours of sunset and 9:00 a.m., and recreational use would be restricted to the extent feasible.

### 3.5.4.4 Monitoring and Adaptive Management

The Applicant plans to convene a TAC, as required by the WDFW Wind Power Guidelines, to evaluate the mitigation and monitoring program and determine the need for further studies or mitigation measures. The role of the TAC will be to review results of monitoring studies to evaluate impacts on wildlife and habitat, and address issues that arise regarding wildlife impacts during operation of the project. The post-construction monitoring plan will be developed in coordination with the TAC. The monitoring plan will include the following components:

- The Applicant has proposed two years of monitoring studies to evaluate impacts to avian species, with incidental monitoring during the life of the project. This study will include at a minimum, standardized casualty searches on a 28-day interval throughout the year combined with searcher efficiency trials and carcass removal trials to estimate the direct impacts to avian species from the project. The post-construction monitoring plan for the project will follow a detailed written protocol, which will document the monitoring measures being conducted. The TAC shall reconvene if unanticipated circumstances arise during incidental monitoring.
- The Applicant agrees that a wildlife casualty reporting and handling system be implemented by wind project personnel (O&M staff) for the life of the project following a detailed written protocol developed for the project and similar to other wind projects in the region.
- TAC members shall be approved by EFSEC. Members proposed by Zilkha include representatives from WDFW, USFWS, Kittias County government, project landowners, the Applicant and the community. The community representative will not be anyone party to a turbine lease agreement, or any other contractual obligation with Zilkha, and shall be a person mutually agreeable to the other participants on the TAC.
- The protocol for the fatality monitoring study will be similar to protocols used at the Vansycle Wind Plant in northeastern Oregon (Erickson et al. 2000) and the Stateline Wind Plant in Washington and Oregon (FPL et al. 2001).

The Applicant has also agreed to develop and implement a post-construction Rangeland Management and Grazing Plan, in coordination with the TAC, for the entire project area. This is intended to improve residual grass cover and potential nesting, brood-rearing, and habitat for sage grouse, other shrub-steppe nesting species, and big game in the project area. The plan would include provisions for the restoration of shrub-steppe lands, native seeding prescriptions, and management of livestock grazing on shrub steppe rangelands. The implementation of a Rangeland Management Plan would improve the quality of overall habitat throughout the project area.

Livestock grazing near the springs within the project area will be eliminated. If fences are needed to protect these springs, they will be constructed using fence designs conducive to passage by wildlife, as described above.

## Section 3.6 FISHERIES

Revisions to sub-sections within Section 3.6 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant. The off-site alternatives analysis for the Desert Claim project has been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Mitigation measures reflect those presented in the DEIS and the Development Agreement between the Applicant and Kittitas County (County) (Appendix A) and the Settlement Agreement with the Washington State Department of Fish and Wildlife (WDFW) (Appendix B).

## 3.6.3 Impacts of Alternatives

### 3.6.3.1 Impacts of Off-Site Alternatives

#### **Desert Claim Alternative**

None of the streams in the Desert Claim project area are known to contain fish, although juvenile steelhead could possibly be diverted to some project-area waters. The federally threatened summer steelhead is located in lower Reecer Creek and in the Yakima River downstream from Reecer Creek, and juvenile steelhead could potentially be present in some project-area waters. However, potential impacts to fish are expected to be limited to downstream impacts, similar to both the Wild Horse Wind Power Project (WHWPP) and the Kittitas Valley alternative. This alternative may have a slightly higher potential for impacts, however, due to the presence of Type 3 waters on the site, although these waters are not known to contain fish. As described for the WHWPP and the Kittitas Valley alternatives, Best Management Practices (BMPs) and other mitigation measures to control sedimentation during both project construction and operations are expected to prevent water quality impacts that could potentially affect fish downstream of the project area. Fueling of all construction equipment would be kept a minimum of 100 feet from drainages and riparian areas to protect water quality. Over-sized culverts could be used at crossings to allow for streambed development and minimize impacts to stream habitat.

### 3.6.4 Mitigation Measures

The proposed design of the project incorporates numerous features to avoid and/or minimize impacts on fisheries. The project layout (Figure 1-2) has been designed to avoid any impacts to streams and riparian areas. Features of the project that are designed to avoid or minimize impacts include:

- Minimizing new road construction by improving and using existing roads and trails instead of constructing new roads.
- Roads, underground cables, turbine foundations, transmission poles, and other associated infrastructure will not be located within any riparian areas or streams or other sensitive resources.

Many of the wildlife measures outlined in Section 3.5.4, "Wildlife—Mitigation Measures" and surface water measures outlined in Section 3.3.4, "Water Resources – Mitigation Measures" also apply here. A formal Stormwater Pollution and Prevention Plan (SWPPP) would be implemented and BMPs would be initiated to retain sediment from disturbed areas and minimize areas of disturbance. In addition, the proposed construction activities for the transmission feeder lines would not involve the use of any heavy equipment in streambeds or riparian areas.

### 3.6.4.1 Construction Techniques and BMPs to Minimize Impacts

Constructing the project has the potential to impact fisheries in a variety of ways. Roads, underground cables, turbine foundations, transmission poles and other associated infrastructure will not be located within any riparian areas or streams and will not involve the use of any heavy equipment in stream beds or riparian areas. Even though no fisheries issues were identified in the project area, the Applicant proposes using construction techniques and BMPs to minimize these potential impacts. These include the following:

- Using BMPs to minimize construction-related surface water runoff and soil erosion.
- BMPs will be implemented to retain sediment from disturbed areas and minimize areas of disturbance.
- Flagging sensitive habitat areas (e.g., wetlands, seeps, and drainages) near proposed areas of construction activity and designating such areas as "off limits" to all construction personnel.
- Properly storing and managing all wastes generated during construction.
- Requiring construction personnel to avoid driving over or otherwise disturbing areas outside the designated construction areas.
- Designating an environmental monitor during construction to monitor construction activities and ensuring compliance with mitigation measures.

# 3.6.4.2 Post-Construction Restoration of Temporarily Disturbed Areas

The following measures would be taken to restore temporarily disturbed areas after construction:

- All temporarily disturbed areas would be reseeded with an appropriate mix of native plant species as soon as possible after construction is completed to accelerate the revegetation of these areas and to prevent the spread of noxious weeds.
- The Applicant would consult with WDFW regarding the appropriate seed mixes for the project area.

## Section 3.7 ENERGY AND NATURAL RESOURCES

Revisions to sub-sections within Section 3.7 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant or Washington Energy Facility Site Evaluation Council (EFSEC). The off-site alternatives analysis for the Desert Claim project has been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Mitigation measures reflect those presented in the DEIS and the Development Agreement between the Applicant and Kittitas County (Appendix A).

## 3.7.1 Affected Environment

### 3.7.1.3 Renewable Resources

Markets for renewable ("green") energy are growing in the Pacific Northwest because of recent legislation and a variety of financial and market conditions. Revised Code of Washington (RCW) 19.29A, Implementation of Retail Option to Purchase Qualified Alternative Power (signed into law in 2001) directed 16 Washington electric utilities to offer a voluntary "qualified alternative energy product," or green energy, starting in January 2002. The law defined "alternative energy resource" as electricity fueled by wind, solar energy, geothermal energy, landfill gas, wave or tidal action, or gas produced during the treatment of wastewater, qualified hydropower, or biomass. State staff surveyed Washington utilities and determined that local and regional markets for green power have been increasing (CTED and WUTC 2002). Wind power is cost-competitive with other resources and customers are demanding more renewable energy sources. In particular, there has been a proliferation of requests from Pacific Northwest electric utilities to purchase wind power. Utilities are pursuing wind power in order to diversify their resource portfolios and are planning for future costs of environmental regulations such as carbon taxes. Several electric utilities have recently issued Requests for Proposals (RFPs) to acquire wind power, including Puget Sound Energy (PSE), Avista Corporation, PacifiCorp, and Portland General Electric.

In September 2004, PSE announced their intent to purchase the Wild Horse Wind Power Project (WHWPP). As stated in that announcement (Seattle Times 2004) PSE estimates that by 2008, it will need power sources that can generate 350 megawatts more power to serve its growing number of users. PSE has indicated that adding this and other wind power projects (PSE 2005) to the utility's portfolio of electric resources will help provide more control over PSE's power supply and minimize the risk to their customers from a volatile short-term energy market.

## 3.7.3 Impacts of Alternatives

### 3.7.3.1 Impacts of Off-Site Alternatives

#### **Desert Claim Alternative**

Specific data for energy and natural resource use is not available for this alternative, however the types of resources used (e.g. sand, gravel, steel, water and concrete) would be similar to those used in the WHWPP and the Kittitas Valley alternative, since all are wind power plant construction projects. Based on this alternative having a maximum of 120 turbines, it is estimated that materials used would be in the mid-range of values described for the WHWPP, which would have 104, 136, or 158 turbines, depending upon the scenario selected. Operation and maintenance impacts on energy and natural resources would also be expected to be within the range described for the WHWPP. The project would generate 59 Average Megawatt (aMW) of electricity annually and would increase the availability of renewable energy in the Pacific Northwest.

### 3.7.4 Mitigation Measures

### 3.7.4.1 Conservation and Renewable Resources Measures

During construction, conservation measures will include recycling of construction wastes where possible and encouraging carpooling among construction workers to reduce emissions and traffic.

The Applicant proposes several conservation measures that will be undertaken during operations:

- The Operations and Maintenance (O&M) facility will utilize station power for electricity needs.
- Water usage at the site will be closely monitored during operations due to the limited capacity of the on-site water storage tank.
- Carpooling among operations workers will be encouraged.
- High-efficiency electrical fixtures and appliances in the O&M facility and substation control house will be used.
- Low-water-use flush toilets will be used in the O&M facilities
- Recycling of waste office paper and aluminum will be encouraged.

## Section 3.8 NOISE

Revisions to sub-sections within Section 3.8 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant. The off-site alternatives analysis for the Desert Claim project has been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Tables included in this Section reflect only those items with revisions. Table entries in the DEIS that were not changed are not repeated here. Mitigation measures reflect those presented in the DEIS and the Development Agreement between the Applicant and Kittitas County (Appendix A).

## 3.8.1 Affected Environment

### 3.8.1.2 Noise Standards and Environmental Impact Thresholds

#### Environmental Impact Thresholds for Noise Increases Above Background

The wind energy industry recognizes that the noise generated by Wind Turbine Generators (WTG) (consisting of the "swishing sound" of the blades and mechanical noise from the electrical generators inside the nacelle) can cause a significant impact if the WTGs are installed near homes in areas with low background noise. The British Wind Energy Association recommends that the noise levels resulting from new wind generation facilities should be kept within 5 dBA of the average evening and nighttime background levels at homes (British Wind Energy Association 2003). That recommended restriction of 5 dBA above background has been used as the environmental impact significance criterion for this noise analysis. It should be noted that the British recommendation also specifies that wind turbine generator noise at receiving property should be maintained at a fixed low level of 30-40 dBA when the background noise level is known to be extremely low (below 30 dBA).

#### Traffic Noise Impact Criterion

Traffic noise caused by haul trucks and commute vehicles traveling at low speed through the town of Kittitas were estimated using the Federal Highway Administration (FHWA) TNM Lookup model. The estimated peak-hour traffic noise levels were compared to FHWA's Noise Abatement Criteria (FHWA 1995). In accordance with noise assessment guidelines published by the Washington State Department of Transportation (WSDOT) a traffic noise impact for this FEIS is defined as a peak-hour traffic level exceeding 66 dBA at any residence. The 66 dBA impact criterion is generally used to assess noise impacts caused by permanent roadway projects for purposes of evaluating the cost-effectiveness of noise walls. Note that neither FHWA nor WSDOT have any authority for this project, and the proposed wind

turbine project is not subject to those agencies' traffic noise regulations. However, those agencies' 66 dBA traffic noise impact criterion has been used for this FEIS as a relevant indicator of potential noise impacts due to temporary construction traffic noise.

#### 3.8.1.5 Desert Claim Alternative

Noise-sensitive areas in the project vicinity include Class A and Class C environmental designation for noise abatement (EDNA). Twenty-nine noise receivers within 3/4 mile of the proposed turbine strings were modeled in the Desert Claim Environmental Impact Statement (EIS). The predominant sources of existing noise on and near the project site include agricultural activities, traffic on local roadways, and occasional overhead aircraft (including helicopters). At some locations, wind at higher speeds is also a major source of noise.

### 3.8.2 Impacts of Proposed Action

	104 Turbines /3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines /1.0 MW
Construction Impacts			
Noise generated by construction equipment.	Same as Most Likely Scenario.	No impact. Nearest home is more than 1.75 miles away from the closest WTG.	Same as Most Likely Scenario.
Blasting noise/conflicts with nearby residential/land use.	Same as Most Likely Scenario.	No impact. Blasting would be done only during daytime, and the nearest home is more than 2.5 miles away from the closest rock quarry, where most of the blasting would occur.	Same as Most Likely Scenario.
Noise generated by construction traffic in town of Kittitas.	Same as Most Likely Scenario.	Unlikely to cause any adverse impact. Commute vehicles and up to 49 heavy trucks per hour would cause traffic noise levels to exceed FHWA <sup>1</sup> impact thresholds only at homes within 60 feet of the street centerline.	Same as Most Likely Scenario.
Operations and Maintenance Impacts			
Vibration effects.	Same as Most Likely Scenario.	No impact. Nearest home is 1.75 miles from the nearest WTG.	Same as Most Likely Scenario.

Table 3.8-4.	Summary of Potential	Noise Impacts
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1FHWA criteria are for determining if noise walls should be built. FHWA would not require noise walls in this case because the impact would be temporary.

### **3.8.2.1 Construction Impacts**

#### Installation of WTGs and Support Facilities at Remote Project Site

Deals Hour Troffic Noise Levels During Construction

#### **Construction Traffic Noise**

Tabla 2.0 /

Table 3.8-6. Peak-Hour Traffic Noise Levels Di	uning construction	
Distance from Street Centerline (feet)	Peak-Hour Traffic Noise Level (dBA): 49 trucks/hour and 170 commute cars/hour	
60 feet	66 dBA	
100 feet	64 dBA	
150 feet	62 dBA	

For the estimated peak-hour traffic volumes, the noise levels would exceed FHWA's noise impact criterion (66 dBA) only at homes within 60 feet of the street centerline. However, there are few, if any, homes that close to the road. Thus, it is concluded there is little potential for construction vehicles to adversely impact homes in the town of Kittitas.

## 3.8.3 Impacts of Alternatives

### 3.8.3.1 Impacts of Off-Site Alternatives

#### Kittitas Valley Alternative

Modeling of a major wind power generation facility at this site anticipates noise levels ranging from 35 to 49 dBA. The results indicate that noise levels would be below the most restrictive nighttime regulation of 50 dBA. Therefore, no significant noise impacts to Class A properties are anticipated during the daytime or nighttime operations of the proposed project. Noise levels at the property lines of Class C parcels within the project area range from a minimum of 35 dBA to a maximum of 55 dBA. Because the predicted noise level is below the threshold established for Class C properties, no significant noise impacts are anticipated (EFSEC, 2004). Noise levels during project operations could exceed regulatory limits at several homes nearest the WTG strings. Changes in background noise levels at numerous other homes could be perceived as adverse depending on the magnitude of that change and the nature of the receptor. Minor increases in traffic along US 97 and project access roads during project operations would not be expected to generate substantial adverse noise effects. The project would not result in any significant impacts from groundborne vibration.

#### **Desert Claim Alternative**

During construction, there would be temporary increases in sound levels near active areas of construction and along roadways used for construction vehicles, depending on the type of equipment being used and the amount of time it is in use. Modeled wind turbine noise levels for the Desert Claim alternative exceed the 50 dBA nighttime noise limit at two receiver locations. Predicted operational noise levels at all receptor locations at wind speeds of 4 m/s and 8 m/s would meet applicable noise limits. Highest sound level increase at any receptor would be 7 dBA, with 1 to 4 dBA for 26 of 34 receptors. Based on Noise level and/or increase over ambient levels, project noise impacts would be rated either low or medium, and would not be significant. Based on wind patterns, turbines would produce audible noise about 22 percent of the time. Low-frequency noise impacts are not anticipated due to "upwind" design and streamlined turbine design. Tonal noise from turbine operation is possible, but the potential for significant impacts is low. The proponent would obtain and enforce a warranty from the selected turbine manufacturer that the maximum continuous sound power level produced by each turbine under all wind conditions would not exceed 104 dBA measured at the hub height. Mitigation measures include implementing a noise-monitoring program and establishing a process for responding to, evaluating and resolving noise complaints that might arise during project operation.

## 3.8.4 Mitigation Measures

Although no specific receivers are identified as being impacted by construction noise at the remote project site, and the Applicant has not proposed any mitigation measures associated with noise impacts, the following contractor practices are recommended to minimize the effects of construction noise in the project area:

- Implement work-hour controls so that noisy activities occur between 7 a.m. and 10 p.m., which would reduce the impact during sensitive nighttime hours.
- Do not allow heavy-duty haul trucks to travel through the town of Kittitas during evening or nighttime hours.
- Do not allow haul trucks to park and idle within 100 feet of a residential dwelling.
- Conduct blasting only during daylight hours.
- Maintain equipment in good working order and use adequate mufflers and engine enclosures to reduce equipment noise during operation.
- Coordinate construction vehicle travel to reduce the number of passes by sensitive receivers.

## 3.8.5 Significant Unavoidable Adverse Impacts

Haul truck traffic during construction would cause temporary, high noise levels at homes within 60 feet of the roads being used to access the site during facility construction. However, there are few, if any, homes that close to the proposed construction haul routes. Therefore, any adverse impacts would be temporary and would be restricted to a small number of homes.

## Section 3.9 LAND USE

Revisions to sub-sections within Section 3.9 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant. The off-site alternatives analysis for the Desert Claim project has been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Table 3.9-2 included in this Section reflects only those items with revisions. Table entries in the DEIS that were not changed are not repeated here. Mitigation measures reflect those presented in the DEIS and the Development Agreement between the Applicant and Kittitas County (Appendix A).

## 3.9.1 Affected Environment

### 3.9.1.2 Existing Zoning

The Commercial Agriculture zone covers areas where farming and ranching are the priority. The intent of this zoning classification is to preserve fertile farmland from encroachment by nonagricultural land uses and protect the rights and traditions of those engaged in agriculture. Permitted uses include one- or two-family dwellings, general agricultural uses, and public buildings such as community clubhouses, schools, utility buildings, and substations.

Kittitas County (Chapter 17.61 Utilities) classifies this proposed project as a "Major alternative energy facility" which may be authorized in the Forest and Range Zone as well as in the Commercial Agriculture Zone pursuant to the provisions of the Wind Farm Resource Overlay Zone (KCC 17.61A). The intent of the Wind Farm Resource Overlay Zone is to establish a process for recognition and designation of properties located in areas of the County that are identified as suitable for the location of wind farms and to protect the health, welfare, safety, and quality of life of the general public and ensure compatible land uses in the vicinity of the areas affected by a wind farm.

Table 3.9-2 summarizes local land use plans, ordinances and policies that would typically apply to a wind project proposed in Kittitas County.

Chapter 463-28 WAC requires Washington Energy Facility Site Evaluation Council (EFSEC) to determine whether the proposed project is consistent and in compliance with local land use plans or zoning ordinances. On April 22, 2004, EFSEC held a land use hearing, pursuant to Chapter RCW 80.50.090 and WAC Chapter 463-26, for the purpose of determining if the proposed project is consistent with Kittitas County or regional land use plans and zoning ordinances. At that hearing, EFSEC determined that: (1) in accordance with WAC 463-26-110, the proposed Wild Horse project was not consistent with nor was it in compliance with Kittitas County land use plans or zoning ordinances, and (2) the Applicant should make all reasonable efforts to resolve the noncompliance (EFSEC 2003). On March

4, 2005, Kittitas County approved the Wild Horse Wind Power Project (WHWPP) designation as subarea for its comprehensive plan, enacted a wind farm resource overlay zone for the project, approved a Development Agreement with the Applicant, and issued a development permit authorizing the project to proceed; all contingent upon the approval of an EFSEC site certification approved by the Governor of the State. Upon presentation of a certificate of land use consistency by the County on March 7, 2005, EFSEC found the WHWPP to be consistent with local land use plans and zoning ordinances.

## 3.9.2 Impacts of the Proposed Action

### 3.9.2.4 Plans, Policies and Regulations

Below is a list of plans, policies and regulations that are pertinent to the proposed project. See Table 3.9-2 for a description of each regulation and its relationship to the proposed project.

Plan, Policy, or Regulation	Description	Relationship to Proposed Project	
Kittitas County Comprehensive Plan	Land use in Kittitas County is guided by the Kittitas County Comprehensive Plan (Kittitas County 2003), which implements the planning requirements and goals of the 1990 Washington State GMA. The Comprehensive Plan is implemented through the adoption of ordinances and codes designed to achieve the objectives and policies outlined in the Plan. Only one policy, GPO 6.34, specifically mentions wind power projects. Only the policies listed below were determined to be potentially relevant to the proposed project. The policy number is provided, followed by the policy itself in quotation marks. The analysis of the project's consistency is indented below the policy statement. "GPO 2.114B. Economically productive farming should be promoted and protected. Commercial agricultural lands includes those lands that have the high probability of an adequate and dependable water supply, are economically productive, and meet the definition of "Prime Farmland" as defined under 7CFR Chapter VI Part 657.5"	Relationship to Proposed Project The proposed project will be developed on nonirrigated land, mostly used for grazing. This land does not meet the definition of Prime Farmland. Removal of minor amounts of rangeland will not affect the productivity of grazing operations. Therefore, the project will be consistent with this land use policy.	
	<b>"GPO 6.34.</b> Wind Farms may only be located in areas designated as Wind Farm Resource overlay districts in the Comprehensive Plan. Such Wind Farm Resource overlay districts need not be designated as Major Industrial Developments under Chapter 2.5 of the Comprehensive Plan."	On March 4, 2005, Kittitas County approved the WHWPP designation as subarea for its comprehensive plan, enacted a wind farm resource overlay zone for the project, approved a Development Agreement with the Applicant, and issued a development permit authorizing the project to proceed; all contingent upon the approval of an EFSEC site certification approved by the Governor of the State.	

#### Table 3.9-2. Summary of Plans, Policies, and Regulations and their Relationship to the Proposed Project

Plan, Policy, or Regulation	Description	Relationship to Proposed Project
	The Kittitas County Zoning Code regulates the use and development of property within the unincorporated areas of the county. The WHWPP site contains two zoning designations— Forest and Range and Commercial Agriculture.	Neither the Commercial Agriculture zone nor the Forest and Range zone allows for wind power projects either as a permitted or conditional use. As an explanatory note, Chapter 17.61 of the Kittias County Zoning Code states that Utilities shall be a permitted use in all zoning districts and this project may be authorized pursuant to the provisions of the Wind Farm Resource Overlay Zone – Chapter 17.61A. Specifically a wind farm may be authorized by the county through the approval of a wind farm resource development permit in conjunction with the approval of the County Commissioners of a development agreement. The development agreement will set forth the development standards applicable to the development of a specific wind farm. In addition, the Applicant must get approval of a site-specific amendment of the comprehensive plan land use designation map and a site specific rezone of the county zoning map to show the site has a wind farm resource overlay district designation. Kittitas County would review these applications concurrently and the Kittitas County Board of County Commissioners will approve them if they determine (1) the proposal is essential or desirable to the public convenience; (2) the proposal is not detrimental or injurious to the public health, peace, or safety or to the character of the surrounding neighborhood; and (3) the proposed use at the proposed location(s) will not be unreasonably detrimental to the economic welfare of the County and it will not create excessive public cost for facilities and service (KCC 17.61A). As noted immediately above for GPO 6.34, the County process for a Wind Farm Resource zone overlay district for the proposed project site was completed on March 4, 2005.

## 3.9.3 Impacts of the Alternatives

### 3.9.3.1 Impacts of Off-Site Alternatives

#### **Desert Claim Alternative**

During construction of the wind turbines and associated facilities, land uses within the project area would continue, although some land would be temporarily disturbed (341 acres). During operations, 90 acres, or 1.5%, of the project area would be used for wind farm facilities and infrastructure (i.e., the permanent project footprint).

Existing residential uses would not be directly displaced, but would be located proximate to wind turbines and other facilities. The presence of these project facilities is not expected to significantly impact the ability to carry out existing activities. However, wind turbines would be significantly greater in scale than nearby rural residential uses, and some degree of incompatibility or conflict would exist. Wind farm operations are not expected to be more intensive than other resource activities in terms of noise and associated land use impacts, and wind energy production is seen as generally compatible with rural resource uses and with ongoing agricultural operations.

Similar to the Proposed Action, the Desert Claim alternative is not expected to attract supporting land uses, generate secondary or spin-off development, significantly increase traffic, or increase demand for commercial or industrial uses nearby. The alternative is not expected to attract significant numbers of non-resident workers and or result in significant demand on housing.

Overall, direct impacts to recreational resources and opportunities would be very low or negligible. Most current recreation activity within the project area, which consists of (at most) limited informal use, would be able to resume at current levels during operation and maintenance. During operation, hunting would not be permitted to avoid possible damage to turbines or other project facilities. Because project area lands are not managed for recreation, loss of this limited opportunity would not be a significant recreation impact.

No Washington State Department of Natural Resources (DNR), State Parks, Washington State Department of Fish and Wildlife (WDFW), United State Forest Service (USFS), Bureau of Land Management (BLM), or private recreational facilities would experience direct impacts from the project. Indirect impacts would be limited to minor audible and visual intrusion into nearby recreational areas and congestion along roads. Neither would disrupt recreational opportunities on nearby federal, state, and private lands and facilities.

### 3.9.4 Mitigation Measures

- During project construction, it would be necessary to remove cattle from areas where blasting or heavy equipment operations are taking place. The Applicant would make arrangements with property owners and livestock owners to keep livestock out of these areas during those periods.
- After construction is completed, disturbed areas would be returned as closely as possible to their original state, excluding service and access roads, which would remain in place for the life of the facility.

■ The Applicant would allow controlled hunting to avoid creating a sanctuary for elk and deer that may cause an increase in agricultural damage to neighboring landowners.

Land Use

## Section 3.10 VISUAL RESOURCES/LIGHT AND GLARE

Revisions to sub-sections within Section 3.10 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant, and in the Development Agreement between the Applicant and Kittitas County. Revisions to the off-site alternatives analysis for the Desert Claim project have been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Tables included in this Section reflect only those items with revisions. Table entries in the DEIS that were not changed are not repeated here. Mitigation measures reflect those presented in the DEIS and the Development Agreement between the Applicant and Kittitas County (Appendix A).

## 3.10.2 Affected Environment

### 3.10.2.4 Project Site Visibility

The greatest numbers of turbines will be visible from the project site itself and from the tops of ridges in the area to the north. In the valley areas west of the project site and in the hilly lands to the south, many of the project's turbines will not be visible because they will be located in areas screened by the ridgeline of Whiskey Dick Mountain. Due to Federal Aviation Administration (FAA) requirements, nine turbine locations (A1, A2, A3, B1, B2, B3, D1, D2, D3) originally proposed and evaluated in the DEIS have been removed from the current proposal. As a result, it is anticipated that the project along the uppermost ridgelines would be less visible from all viewpoints.

### 3.10.2.5 Landscape Units

#### Landscape Unit 6 – I-90 in the Vicinity of the PSE Interconnect

#### Landscape Description and Scenic Quality

Landscape Unit 6 encompasses the short segment of I-90 between Kittitas and Vantage, from which there will be views of the transmission line and substation that will provide the electrical connection between the project and the Puget Sound Energy (PSE) transmission system. Figures 3.10-7a and b depict the existing and simulated views from SV 6, a point at the edge of the westbound lanes of I-90, just east of the overcrossing of Stevens Road. This view looks west toward the proposed alignment of the project's 230 kV PSE feeder line and the location of the project's proposed PSE Interconnect Substation. The landscape view here is of I-90, a railroad trestle, the existing PSE transmission line, a canal that cuts

across the side of the slope visible in the middleground, and a wireless communications tower. Given the moderately low levels of vividness, unity, and intactness of this landscape, the overall level of visual quality is low to moderately low.

Since the DEIS was issued, the proposed location for the PSE substation has been moved to the east side of Stevens Road. The new location is expected to be far less visible as it would be situated on lower lying ground than the original location and would not be as visually prominent from I-90 or other major public vantage points.

#### Visual Sensitivity

In this area, I-90 carries an average of 11,000 vehicles per day. The transmission line alignment and substation are situated within the immediate foreground of the view to both westbound and eastbound travelers on I-90. The level of visual sensitivity is considered to be high.

## 3.10.3 Impacts of Proposed Action

### 3.10.3.1 Analysis Procedure

Levels of impact were classified as *high*, *moderate*, and *low*. In general, high levels of aesthetic impacts were assigned in situations in which turbines would be highly visible from sensitive viewpoints and would alter levels of landscape vividness, unity, and intactness to the extent that there would be a substantial decrease in the existing level of visual quality. Moderate levels of aesthetic impact were assigned in situations in which turbines would be visible in areas with high levels of visual sensitivity and would alter levels of landscape vividness, unity, and intactness to the extent that there would be a moderate change in existing visual quality. Moderate levels of visual sensitivity and moderate change in existing visual quality. Moderate levels of visual impact were also assigned in situations in which the presence of turbines in the view would lead to more substantial changes in visual quality, but where levels of visual sensitivity were moderate to low. Low levels of visual impact were assigned in situations where the project would have relatively small effects on overall levels of landscape vividness and/or where existing levels of landscape aesthetic quality are low or where there are low levels of visual sensitivity.

Due to FAA concerns, nine turbine locations have been removed from the proposal since the DEIS was issued in August 2004. Revised Figure 1-4 in Chapter 1 shows the new site layout with the nine turbine locations removed. Figures 3.10-3b and 3.10-5b show revised photo simulations of the most-likely scenario with the nine turbine locations removed. In all cases, the visual impact in the Landscape Units analyzed in this section would be reduced by some degree, since the locations that would not be sited all occur along the uppermost, most visible ridgelines in the project area. See Section 3.14, Traffic and Transportation, for a more detailed discussion related to FAA considerations.

### **3.10.3.3 Operations and Maintenance Impacts**

Landscape Areas/ Simulation Views	Existing Level of Visual Quality	Level of Visual Sensitivity	Assessment of Visual Change	Potential Level of Visual Impact
6 – I-90 in the Vici	nity of the PSE	Interconnect		
(Figure 3.10-7a) View looking west from I-90 east of the freeway's overcrossing of Stevens Road	Moderately Low	High	Figure 3.10-7b is a simulation of the view from the westbound lanes of I-90 looking toward the proposed PSE transmission feeder line and the substation that would connect this line with the PSE transmission system. In this view, the PSE interconnect substation would be visible at the base of the communications tower located at the top of the knoll in the center of the view. The substation's takeoff structures and the H-frame transmission towers, which would be seen against the sky backdrop, would be the project's most visible features. The impact of the proposed PSE interconnect substation and the PSE transmission feeder line on the visual character and quality of views in this area would be low. Since the Draft EIS was issued, the proposed location for the PSE substation has been moved to the east side of Stevens Road. The new location is expected to be far less visible as it is situated on lower lying ground than the original location and will not be as visually prominent from I-90 or other major public vantage points (Young, prefiled testimony 2004).	Low

#### Table 3.10-2. Analysis of Impacts on Visual Resources During Project Operation

#### Light and Glare

#### **Turbine Lighting**

The project would be marked according to guidelines established by the FAA's aircraft safety lighting requirements. FAA guidelines for lighting of wind turbines call for lights that flash white (at 20,000 candela) during the day and red (at 2,000 candela) at night. These lights are designed to concentrate the beam in the horizontal plane, thus minimizing light diffusion down toward the ground and up toward the sky. The exact number of turbines that will require lighting will be specified by the FAA after it has reviewed final project plans; however, FAA has typically required that warning lights be mounted on the first and last turbines of each string, and every 1,000–1,400 feet on the turbines in between. A preliminary lighting plan is presented in Figure 3.10-11 of this FEIS. Aside from any required aircraft warning lights, the turbines will not be illuminated at night.

#### [...]

Based on experience at the operating Stateline and Nine Canyon wind power projects in Washington, it appears that the white flashing lights would be visible during daylight hours and will likely create a low level of visual impact.

At present, the project site and immediately surrounding area are dark at night except for the lighting present on the communications towers on Cribb Peak near the eastern end of Whiskey Dick Mountain's ridgeline. The flashing red lights associated with the project would be operated at night and would

introduce a new element into the project area's nighttime environment. These lights would be limited in number, red, and directional with little potential to create skyglow<sup>1</sup> or backscatter.<sup>2</sup> Figure 3.10-11 in this FEIS shows the proposed lighting locations.

## 3.10.4 Impacts of Alternatives

### 3.10.4.1 Impacts of Offsite Alternatives

#### **Desert Claim Alternative**

Under this alternative, visual impacts would be greatest for the Northwest Valley Floor unit, with high level impacts from 4 viewpoints, moderate level impacts from 6 viewpoints (1 to 4 miles from the project), and low level impacts from the remaining viewpoint. Of the remaining units, this alternative would have moderate level impacts to one of three viewpoints in the greater Ellensburg unit and to the Hayward Hill and Table Mountain slope units. The remaining viewpoints would all experience low level impacts.

Visual impacts from the Desert Claim alternative are likely to be less than from the Wild Horse Wind Power Project (WHWPP) and the Kittitas Valley alternatives because the site is less visible from the Gorge Amphitheater as compared to the WHWPP, and greater distance from major transportation routes such as I-90 and US-97 and with fewer residences in close proximity than the Kittitas Valley alternative.

Impacts from light and glare under the Desert Claim alternative would be similar to those described for the WHWPP but greater due to closer proximity to residences. The Applicant has developed a proposed lighting plan whereby 48 of the total 120 turbines (40 percent), would be equipped with a dual lighting system. This lighting system includes low-intensity flashing red lights (L-864) for nighttime use and medium-intensity flashing white lights (L-865) for daytime and twilight use. As described for Kittitas Valley, white lights flashing during the day will be noticeable but will have a low level impact while red lights flashing at night would be noticeable from roads and residences and could have a high level impact on views in the project area. Residences in the Northwest Valley and Table Mountain slope assessment units would experience the greatest impact. Night lighting of project facilities would also contribute to increased night lighting in the project area.

Blade glare or glint, which can be seen over distances of 6 to 9 miles, may also occasionally occur.

Mitigation measures include relocating turbines into distinct visual units or groupings and relocating selected turbines near ridgetops to better follow and reinforce the natural topography.

## 3.10.5 Mitigation Measures

Mitigation measures proposed by the Applicant and incorporated into the project's design include the following:

- Active dust suppression will be implemented to minimize the creation of dust clouds during the construction period.
- Areas disturbed during the construction process will be reseeded to facilitate their return to naturalappearing conditions when construction is complete.
- The wind turbine towers, nacelles, and rotors will be uniform and will conform to the highest standards of industrial design to present a trim, uncluttered, aesthetically attractive appearance.
- The turbines will have neutral gray finish to minimize contrast with the sky backdrop.
- A low-reflectivity finish will be used for all surfaces of the turbines to minimize the reflections that can call attention to structures in a landscape setting.
- The rotors will be turning approximately 80–85% of the time as a result of local wind conditions and the equipment used. This will minimize the appearance of the turbines being non-operational.
- The small cabinets containing pad-mounted equipment located at the base of each turbine, will have an earth-tone finish to help them blend into the surrounding ground plane.
- The only exterior lighting on the turbines will be the aviation warning lighting required by the FAA. This lighting will be kept to the minimum required intensity to meet FAA standards. It is anticipated that the FAA will soon be issuing new standards for marking of wind turbines that will entail lighting fewer turbines in a large wind farm than is now required, as well as synchronizing all the lights. These potential regulatory changes are being closely monitored and if, as is likely, they are made before project construction begins, the aviation safety marking lighting will be designed to meet these revised standards.
- Most of the project's electrical collection system will be located underground, eliminating potential visual impacts.
- Where feasible, existing road alignments will be used to provide access to the turbines, minimizing the amount of additional surface disturbance required. Where possible, access road widths will be restricted to 20 feet (approximately half of all access road miles.) The access roads will have a gravel surface and will have grades of no more than 15%, minimizing erosion and its visual effects.
- The Operations and Maintenance (O&M) facility building will have a low-reflectivity earth-tone finish to maximize its visual integration into the surrounding landscape.
- The parking areas at the O&M facility will be covered with gravel, rather than asphalt, to minimize contrast with the site's soil colors.
- Outdoor night lighting at the O&M facility and the substation(s) will be kept to the minimum required for safety and security, sensors and switches will be used to keep lighting turned off when not required, and all lights will be hooded and directed to minimize backscatter and offsite light trespass.
- All equipment at the substation(s)will have a low-reflectivity neutral gray finish to minimize visual sensitivity.

- All insulators in the substations and takeoff towers will be non-reflective and non-refractive.
- The control buildings located at each substation will have a low-reflectivity earth-tone finish.
- The chain-link fences surrounding the substations will have a dulled, darkened finish to reduce their contrast with the surroundings.

### Section 3.11 POPULATION, HOUSING, AND ECONOMICS

Revisions to sub-sections within Section 3.11 of the Draft Environmental Impact Statement (DEIS), presented below, are based on corrections provided by the Applicant and information provided in comments submitted on the DEIS. The off-site alternatives analysis for the Desert Claim project has been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Table3.11-9 included in this Section reflects only those items with revisions. Table entries in the DEIS that were not changed are not repeated here. Mitigation measures reflect those presented in the DEIS and the Development Agreement between the Applicant and Kittitas County (Appendix A).

## 3.11.2 Impacts of Proposed Action

Table 3.11-9. Summary of Potential Construction, Operation, and Maintenance Impacts: Population, Housing, and Economics

	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1.0 MW
Housing			
Increased demand for temporary and permanent housing.	Same as 136-turbine/1.5-MW scenario.	Demand for a maximum of 160 units during peak employment for construction phase.	Same as 136-turbine/1.5 MW scenario.

### 3.11.2.2 Operation and Maintenance Impacts

#### Fiscal Impacts

As noted in Section 1.2.2 of this FEIS, PSE announced its intention to purchase the WHWPP. If the project is approved by the Governor, and if ownership is transferred to PSE pursuant to EFSEC regulations and procedures, the fiscal analysis would be different than that presented in Section 3.11.2.2 of the DEIS.

As a private utility, PSE is centrally assessed by the Washington State Department of Revenue. This has two major impacts on the property tax analysis (Strand 2005). First, the entire project would be considered new construction, and would be exempt from the property tax limiting Initiative 1-747. Second, the assessed value of the project would be determined each year by using a discount rate rather

than being depreciated over the life of the project. The discount rate is determined by the Department of Revenue and is usually close to 50%. As a result, a higher assessed value would be used to calculate property taxes and the assessed value would remain more constant over time rather than being depreciated to a zero value.

Using PSE's current discount rate of approximately .505 and an initial capital investment of \$270,000,000, PSE would pay approximately \$1.5 million annually in taxes. Of this \$1.5 million, almost \$1.3 million would be new tax dollars and would have positive impacts on local taxing entities. The project will increase the assessed value in the Kittitas School district by an additional 75%, resulting in a \$500,000 in the district's tax revenue. The county general fund would see an additional \$180,000 and the county road fund would see an additional \$220,000.

## 3.11.3 Impacts of Alternatives

### 3.11.3.1 Impacts of Off-Site Alternatives

#### **Desert Claim Alternative**

Impacts on economics within the County during operation of the Desert Claim Alternative are estimated at \$0.9 million in labor income and \$2 million in other value added annually. Potential property tax revenues from the Desert Claim Alternative are estimated at a maximum of nearly \$1.1 million for the first year of operation. Current research has generally found that wind farms have either no effect on tourism or a positive effect.

Decommissioning impacts would be similar to, but less than, those described above for the Proposed Action.

## 3.11.4 Mitigation Measures

There is an adequate supply of temporary housing available to accommodate non-local workers; therefore, no mitigation measures are proposed. The overall socioeconomic impact of the project for the County would be increased property tax base and employment opportunities; therefore, no mitigation measures are planned for population, housing, and economics.

## Section 3.12 PUBLIC SERVICES AND UTILITIES/RECREATION

Revisions to sub-sections within Section 3.12 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant. The off-site alternatives analysis for the Desert Claim project has been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Mitigation measures reflect those presented in the DEIS and the Development Agreement between the Applicant and Kittitas County (Appendix A).

## 3.12.1 Affected Environment

### 3.12.1.1 Fire Protection

There are two fire districts to the southwest and southeast of the project area, Fire District No. 2 (Rural Ellensburg) and Fire District No. 4 (Vantage). The proposed wind turbines will be located outside of any existing fire district, as this area is almost totally uninhabited (see Figure 3.12-1, "Project Area Fire Districts"). The City of Ellensburg also has its own fire department. Since the DEIS was issued, the Applicant has secured a contract for fire protection with Fire District #2 for the project. The agreement will be submitted to Washington Energy Facility Site Evaluation Council (EFSEC) prior to construction as part of the Fire Protection and Prevention Plan.

## 3.12.2 Impacts of Proposed Action

### **3.12.2.1 Construction Impacts**

#### Fire Protection

Concerns raised by the County Fire Marshall include water supply for fire fighting, fire safety and prevention for personnel, and signed agreements in place for service prior to construction and operation phases. Since the DEIS was issued, the Applicant has secured a contract with Fire District #2 (September 10, 2004) for fire protection services for the project site. Implementation of the emergency preparedness measures proposed by the Applicant would reduce potential impacts to rescue personnel during an emergency situation. For further information see the mitigation measures discussed in Section 3.12.4 below.

### **3.12.2.2 Operation and Maintenance Impacts**

#### Fire Protection

Impacts from fire, either from a turbine or wild land fire in the project area, could increase or be more difficult to control unless provisions are made for firefighters to have easy access to the project site. Mitigation measures including facilitating access to the project will be made as described under Section 3.12.4 below to address these concerns. For mechanical fires, this impact would be greatest under the 158-Turbine/1-MW scenario, which would operate the largest number of turbines. However, for wildland fires, this impact would be the same for all three scenarios, which would disturb approximately 164 acres of land. Since the DEIS was issued in August 2004, the Applicant has entered into an agreement with Fire District #2 for fire protection services at the proposed project site.

#### Parks and Other Recreational Facilities

Some amount of tourism to the project site is expected once the wind turbines are in operation. It is difficult to estimate the number of visitors the project will receive. The Stateline Wind Energy Center near Walla Walla has attracted thousands of visitors since it was built in 2001, while other projects are visited far less frequently. However, given the Wild Horse project site's remote location, it is not anticipated that large numbers of tourists will visit the project.

During operations, access to the project site will be controlled but permitted to the extent that it does not cause conflicts with the safe and efficient operation of the project. The Applicant will implement an adaptive management approach to allow access to and through the Project Area and recreational use of the site. In general, the Applicant will permit controlled access to and through the site as long as it does not interfere with or adversely impact on project operations or personnel. This controlled access will include:

- Property owners who wish to access their property from the Project Access Road will be allowed to do so as necessary under a formal access license and a key to a gated entrance;
- Officials of the Washington State Department of Natural Resources (DNR) and the Washington State Department of Fish and Wildlife (WDFW) are currently allowed to access the site and will continue to be allowed access by key;
- The Applicant will allow others to access the Project site on a case by case basis.
- Active recreation activities such as camping, off-road vehicle usage will not be allowed in order to avoid and minimize potential impacts to habitat and wildlife from such activities.

Controlled hunting will be allowed during project operations, as described in Section 3.5.2, "Impacts of Proposed Action." The potential impacts to habitat and wildlife of project operations is also discussed in Section 3.5, "Wildlife," and potential impacts to recreation are also discussed in Section 3.10, "Visual Resources/Light and Glare."

## 3.12.3 Impacts of Alternatives

### 3.12.3.1 Impacts of Off-Site Alternatives

#### **Desert Claim Alternative**

Calls for fire response to the project area could increase during construction and would be similar to those described for the Proposed Action and Kittitas Valley Alternative. Site clearing, road building, and construction of the wind turbines and transmission system could contribute to an increased risk of accidental fire. The Desert Claim Alternative is not expected to have more than a slight potential increase in the demand for law enforcement over existing conditions. Impacts on local schools would be the same as that described for the Proposed Action. Impacts to recreational resources and opportunities would be very low or negligible, generally limited to some temporary audible and visual intrusion and congestion along roadways. Impacts to public water supply, stormwater, and sewer services are not anticipated since these services are not available on-site. It is also anticipated that the local landfills would be able to accommodate the level of solid waste and debris generated by the project. Recreational users of the Iron Horse State Park/John Wayne Trail and the Yakima River would experience noise, views of construction equipment and activities, and possibly blowing dust during the construction period.

During operation, impacts to fire and emergency medical services would occur to a lesser extent than those described for the construction period. Few workers, using minimal amounts of machinery, and reduced traffic would account for this lesser impact. The project area lands are not managed for recreation, and incidental use within the project area would be able to resume at current levels during operation and maintenance. Some hunting activity could potentially be allowed during the operating period. During operations, users of the recreational resources noted above would be exposed to views of wind turbines and other project facilities at some specific locations.

## 3.12.4 Mitigation Measures

Potential impacts to public services and utilities will be mitigated by tax revenues generated by the project. Fiscal impacts of the project are addressed in Section 3.11, "Population, Housing and Economics."

### 3.12.4.1 Construction

Because construction activities at the project are not expected to result in significant impacts to medical services, schools, public utilities, communications, water supplies, sewage/solid waste disposal, or stormwater systems, no mitigation measures will be necessary for those services or utilities.

The following mitigation measures will be implemented to reduce impacts to public services resulting from construction of the project:

All operations personnel working on the turbines will work in pairs. In the unlikely event that an injury occurs while working in the nacelle, all staff will be trained in lowering injured colleagues from the nacelle. A rescue basket, specially designed for this purpose, will be kept at the operations and maintenance facility and will be available for use by local emergency medical services personnel.

Training in rescue basket recovery will also be provided to local Emergency Medical Service (EMS) personnel by the Applicant.

- The Applicant will provide all police, fire, and emergency medical personnel with emergency response details for the project including detailed maps of the project site access roads, Applicant contact information, procedures for rescue operations to the nacelles, and location of the rescue basket.
- The Applicant will consult with the County regarding the impact on county law enforcement staffing. If additional staffing is required, the Applicant shall pay the additional costs for law enforcement associated with construction impacts and activities to be provided by the County Sheriff's office or by private onsite security, as deemed necessary.

Potential impacts on fire services will be mitigated by the following:

- The Applicant has initiated discussions with local fire district(s) regarding a contract for fire protection services during construction and ongoing fire protection services during operations;
- Provisions for special training of fire district personnel for fires related to wind turbines;
- Training for EMS personnel in the use of a rescue basket that will be kept at the operations and maintenance facility for the purpose of removing injured employees from the Wind Turbine Generators (WTGs);
- Providing detailed maps to fire districts that show all access roads to the project;
- Providing keys to a master lock system to fire districts that will enable emergency personnel to unlock gates that would otherwise limit access to the project;
- Use of spark arresters on all power equipment (e.g., cutting torches and cutting tools), when necessary due to extreme fire danger conditions;
- Informing workers at the project of emergency contact phone numbers and training them in emergency response procedures;
- Carrying fire extinguishers in all maintenance vehicles;
- Providing water supply for fire fighting locations beyond the contracted fire districts;
- Implementing a Federal Aviation Administration (FAA)-style lighting plan to prevent aircraft mishaps to limit fire response;
- Having an environmental clean-up company under contract to provide services to protect the environment up to and beyond small incidents, including planning, implementing, and storing of all material considered to be harmful; and
- Supplying water for fire fighting at locations up and beyond the contracted fire districts to keep the fire in a manageable size incident.

### 3.12.4.2 Operation and Maintenance

During operation of the project, impacts to local services and utilities are expected to be insignificant. However, emergency preparedness planning will be implemented as mentioned above, to reduce potential impacts in the event of an emergency.

- The Applicant will make arrangements with the Kittitas Valley Community Hospital for helicopter transportation service in the unlikely event that any operations personnel are seriously injured and require evacuation from a remote location within the project area.
- Since the DEIS was issued, the Applicant has secured a signed agreement with Fire District #2 (dated September 10, 2004) for fire protection services, which will be submitted to EFSEC prior to construction. Currently, the Applicant does not plan to have signed agreements with the hospital and/or EMS as these services are provided on a fee-for-service basis.
- The Applicant will work with Kittitas County Fire Marshal and effected fire districts for all aspects of operations.

## Section 3.13 CULTURAL RESOURCES

Revisions to sub-sections within Section 3.13 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant or other comment submissions. The off-site alternatives analysis for the Desert Claim project has been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Mitigation measures reflect those presented in the DEIS and the Development Agreement between the Applicant and Kittias County (Appendix A).

### 3.13.1 Affected Environment

#### 3.13.1.3 Prehistory

#### Ethnography/Ethnohistory

The Confederated Tribes of the Colville Reservation (CCT) have an interest in the project area since CCT ancestral territory includes Northeastern Washington. The tribes of the CCT are the Sinkayuse or Moses-Columbia, Wenatchee, Entiat, Chelan, Methow, Okanogan, Nespelem, Lakes, Colville, Palus, Sanpoil and the Chief Joseph Nez Perce.

#### 3.13.1.5 Cultural Resource Assessment

#### Traditional Cultural Properties

Consultation with the Native American tribes prior to issuance of the DEIS indicated that no field survey for Traditional Cultural Properties had been conducted. According to the CCT, Traditional cultural properties (TCPs) had been previously identified 3 miles west of the proposed project area for a separate project.

The Yakama Nation stated in a letter dated January 14, 2004 that they are particularly concerned with the regional effects of the wind farms on flora and fauna, especially as these resources relate to tribal cultural practices. They also expressed concerns about impacts to important food resources and medicines in a letter sent January 5, 2004. The Yakama Nation, in a letter dated April 6, 2004, reiterated the CCT's concern that TCPs have not been researched adequately to date. Please refer to Appendix A of the DEIS for the tribal correspondence letters described above. Since issuance of the WHWPP DEIS, the Yakama
Nation issued Yakama Nation Tribal Resolution T-058-05 (Confederated Tribes and Bands of the Yakama Nation 2005), rescinding previous Tribal resolutions to the extent that they may have been interpreted to prevent agreements between the Yakama Nation and business and government entities that would allow wind power development. However, no additional comment from the Yakama Nation has been received by EFSEC regarding the specific impacts of the WHWPP.

Since the DEIS was issued in August 2004, the CCT entered into a contract with the applicant and has conducted a TCP study in the project area. The results are confidential and proprietary to the CCT. The CCT History/Archaeology Program was contracted to conduct research to assist Zilkha to be in compliance with Federal and State cultural resource laws, specifically in obtaining its EFSEC permit.

The History/Archaeology Program staff reviewed contractor reports, site forms and maps from OAHP, ethnographic literature related to the project area, and performed in-field documentation resulting in inventory. Tribal members with personal and family history in the general area were interviewed for input regarding TCPs that may be impacted by the undertaking. Their responses demonstrate archaeological features considered TCPs exist in and adjacent to the proposed WHWPP area. Their input enhances the understanding of the extent of the traditional territories of the Wenatchi people, the significance of traditional resources, and the relevance and importance of current property studies. Concerns have been forwarded and are being addressed between the Applicant and the CCT.

# 3.13.2 Impacts of Proposed Action

#### 3.13.2.1 Construction Impacts

As recommended by the Assistant Archaeologist at Washington State Office of Archaeology and Historic Preservation (OAHP), 100-foot design and construction buffers would be maintained around the archaeological and historical sites identified during this current cultural resource survey, even though they do not meet the standard qualifications for National Register of Historic Places (NRHP). OAHP requested the project archaeologist should flag off or otherwise delineate the archaeological sites with a 100-foot buffer. Ground disturbing actions within a specified radius of any archaeological sites, either recorded during the initial survey or previously documented, would be monitored by a professional archaeologist to prevent damage or destruction to both known and unanticipated archaeological resources. Any areas wherein the presence of TCPs are in question would be avoided. If any archaeological materials, including but not limited to human remains, are observed, excavation in that area would cease, and OAHP, Washington Energy Facility Site Evaluation Council (EFSEC), the affected tribes, and the Applicant would be notified. At that time, appropriate treatment and mitigation measures will be developed and implemented. If the project could not be moved or rerouted to avoid resources, the resources would have to be tested for eligibility for listing in the NRHP. Any excavation or disturbance to the archaeological sites would require an excavation permit from OAHP per Revised Code of Washington (RCW) 27.53.060. The archaeologist would remove any flagging tape or pin flags at the end of the construction-monitoring phase of the project.

# 3.13.3 Impacts of Alternatives

#### 3.13.3.1 Impacts of Off-Site Alternatives

#### **Desert Claim Alternative**

Potential direct impacts to documented cultural resources have been identified based on the proposed layout of project facilities relative to the locations of the known resources. Any cultural resources within or very close to the area of temporary construction disturbance around the various project facilities would presumably be subject to direct impacts. Project construction would potentially demolish or alter the setting and character of existing historic resources. Construction impacts would include out-of-character visual elements, change in use, structural vibration, and dust. A map analysis (which is not documented in the EIS because the locations of the cultural sites are confidential and not appropriate for disclosure) indicates that five identified cultural resource sites would experience unavoidable adverse impacts associated with turbine, access road and power collection system construction if the project facilities were sited according to the modified design. Three of these five sites are historic sites with either standing structures or structural remains. The two remaining sites are prehistoric sites. One of these sites is a large prehistoric lithic procurement site located at the northwest periphery of the project. Destruction of or damage to these resources would represent a significant adverse impact.

Measures such as clearly marking areas that need to be avoided to protect sensitive resources and ensuring that project personnel observe those markings and their associated restrictions could minimize the potential for indirect impacts such as increased opportunities for removal of artifacts.

The proposed project is not expected to cause access-related indirect impacts to cultural resources because the degree of public accessibility to cultural resources within the project area would be less with the project than it is at present. Project operation would also change the historic character of the surrounding area. Existing cultural sites in the general vicinity of the project would be subject to possible changes to their visual setting. This would primarily be limited to historic sites, and would depend on the visibility of project facilities from those sites. Development of the project would not affect access to or the ability to use TCPs in the vicinity. TCPs in the general area might be subject to indirect effects through visibility of project facilities.

The prospects for avoiding cultural sites would be addressed in the final micro-siting of wind turbines and other project facilities, which would occur during final design and prior to construction.

No additional mitigation would be necessary if all identified cultural resource sites were avoided in the final layout and construction of project facilities. If final placement of the project elements resulted in unavoidable adverse impacts to a significant resource, then mitigation would be required to retrieve the scientific and historical information that makes the site significant. Appropriate mitigation measures should be tailored to the specific circumstances of the resource and developed in consultation with the Washington State Historic Preservation Officer (SHPO). If the affected resource is prehistoric, then the SHPO would require consultation with all affected Native American tribes of the Mid-Columbia River Basin. As a mitigation measure, an historic narrative with photos could be written to document changes within the landscape should some historic structures be affected.

Decommissioning the project at the end of its useful life also poses the potential for further impacts if decommissioning activities strayed beyond the perimeters of the pre-existing disturbance zones used during construction.

# 3.13.4 Mitigation Measures

The Applicant has identified the mitigation measures described below.

As recommended by the Assistant Archaeologist at OAHP, 100-foot design and construction buffers will be maintained around the archaeological and historical sites identified during this current cultural resource survey, even though they do not meet the standard qualifications for NRHP. OAHP requested that the project archaeologist flag off or otherwise delineate the archaeological sites with a 100-foot buffer. Ground disturbing actions within a specified radius of any archaeological sites, either recorded during the initial survey or previously documented, will be monitored by a professional archaeologist to prevent damage or destruction to both known and unanticipated archaeological resources.

If any archaeological materials, including but not limited to human remains, are observed, excavation in that area will cease, and OAHP, EFSEC, the affected tribes and the Applicant will be notified. At that time, appropriate treatment and mitigation measures will be developed and implemented. If the project cannot be moved or re-routed to avoid resources, the resources will be tested for eligibility for listing in the NRHP. Any excavation or disturbance to the archaeological sites will require an excavation permit from OAHP per Revised Code of Washington (RCW) 27.53.060. The archaeologist will remove any flagging tape or pin flags at the end of the construction-monitoring phase of the project.

If a tribe requests to have one of their representatives present during earth-disturbing construction activities, the Applicant will comply with their wishes. In all cases, the project shall note all concerns raised through tribal requests.

# Section 3.14 TRAFFIC AND TRANSPORTATION

Revisions to sub-sections within Section 3.14 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant and EFSEC in addition to information contained in the Development Agreement between the Applicant and Kittitas County (Appendix A). Revisions to the off-site alternatives analysis for the Desert Claim project have been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Tables included in this Section reflect only those items with revisions (except Tourism). Table entries in the DEIS that were not changed, other than "Tourism" are not repeated here.

# 3.14.1 Affected Environment

#### 3.14.1.2 Traffic Volumes

#### **Roadway Limitations**

The Kittitas County road network would comprise the primary public haul routes used in the construction of the Wild Horse Wind Power Project (WHWPP). The regulatory framework for transportation in Kittitas County consists of program and project planning, design standards related to roadway geometry and paving materials, load limits for bridges, and weight limits or closures under defined circumstances. Kittitas County roads are designed to sets of standards with respect to paving materials and methods and with respect to roadway geometry and design. The planning and programming of funding for construction of public roads is included in the Kittitas County Transportation Plan, the 6-year Transportation Improvement Program and Annual Road Program. Kittitas County Road Standards state the minimum requirements for public and private road construction in the county, as well as any exceptions to these standards. All new public road and bridge construction must also be in accordance with the current edition of Washington State Department of Transportation's (WSDOT) "Standard Specifications for Road, Bridge, and Municipal Construction."

#### **Roadway Hazards**

Roadways are typically evaluated based on accident rate, where accident occurrence is indexed to the amount of traffic using a given roadway. For roadway segments, accident rates are computed as the number of accidents per million vehicle miles (mvm) of travel.

Table 3.14-3 shows an estimated number of accidents for I-90 based on multi-year accident rates. The most recent accident rates provided by WSDOT are from 2001. These 2001 accident rates were used to predict the number of accidents in 2002 along the transporter routes.

#### Future Plans and Projects

Kittitas County Department of Public Works staff has stated that there is currently no construction project planned on county roads in the project area.

WSDOT has also been contacted, and the following projects that may affect the transport and/or operations of the proposed project have been identified:

- I-90: Gold Creek to Easton Hill paving project (MP 55.51 to MP 67.32). Scheduled for spring of 2005.
- I-90: Cle Elum Weigh Station roadway preparation project (MP 78.46 to MP 78.81). Scheduled for spring of 2005.
- I-90: Yakima River Bridge deck repair project (MP 78.81 to MP 78.85). Scheduled for 2006.

#### Air Traffic

There are no regional or municipal airports in the vicinity of the project site. The nearest airport is Kittitas County Airport (Bowers Field), approximately 1.5 miles north of the City of Ellensburg. The Kittitas County Airport (Bowers Field) does not have scheduled air service, though charter plane service is available. Small planes may use private runways at ranches or farms in the area, but none has been identified in the immediate vicinity of the WHWPP, and the frequency of this type of use is unknown.

The Federal Aviation Administration (FAA) has determined various maximum allowable construction ceilings (site elevation plus structure height above ground level) surrounding the WHWPP site as shown in new Figure 3.14-2. The various sectors and their limiting heights as depicted in the figure are determined by different Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) Approach and Departure Procedures, Minimum Vectoring Altitudes, and Low Altitude Enroute IFR Airways, as well as the Restricted Areas to the South. Within the boundaries of each sector the maximum height for any specific location must not exceed that indicated to satisfy the height restriction criterion for a Determination of No Hazard from the FAA. (Source: Aviation Systems, Inc., 2004A)

# 3.14.2 Impacts of Proposed Action

		•	
Impacts	104 Turbines/3 MW	136 Turbines/1.5 MW (Most Likely Scenario)	158 Turbines/1 MW
Construction Impacts			
Roadway limitations	Less impact than Most Likely Scenario: 14% fewer trucks	Large number of trucks and trucks exceeding legal weight limits may cause pavement deterioration	Less impact than Most Likely Scenario: 7% fewer trucks
Operation and Maintenance Im	pacts		
Aviation hazards	Same as Most Likely Scenario	The FAA has issued Determinations of No Hazard (DNH) for 127 wind turbine generators proposed for the project.	Same as Most Likely Scenario
Road maintenance and public access requirements	Same as Most Likely Scenario	32 miles (165 acres) of private roadways. There are no public access requirements.	Same as Most Likely Scenario
Tourism-induced traffic	Unknown	Unknown	Unknown
Decommissioning Impacts			
	Slightly less than Most Likely Scenario: proposal as there are fewer wind turbines	Similar to those described for construction. However, assuming that roadways would remain in place, the resulting workforce and corresponding vehicle trips would be smaller.	Slightly more than 1.5 MW proposal as there are more wind turbines

#### Table 3.14-4: Summary of Potential Transportation Impacts

1 Daily trips with rock quarry on-site.

Source: Wind Ridge Partners LLC 2004, c, f

#### **3.14.2.1 Construction Impacts**

#### **Air Navigation Considerations**

Construction equipment that might impact air navigation includes cranes used to assemble the towers. The FAA issued a Determination of No Hazard (Appendix C) for construction equipment provided that specific guidelines are followed during construction. There would be no difference between the three scenarios.

#### **Roadway Limitations**

The large number of trucks during constuction raises concerns regarding the deterioration of the roadway pavement on Transporter Route 1. Existing pavement conditions on Main Street, No. 81 Road and Vantage Highway will be videotaped prior to construction of the WHWPP. This video log will be compared with the condition of the roadways after construction. If significant degradation in pavement condition is noted, the Applicant will restore the pavement to equal or better condition than it was prior to construction. The Applicant will be responsible for restorative work made necessary by the WHWPP. The video log will be used to document pavement conditions in lieu of a pavement analysis.

#### [...]

The WHWPP could also impact traffic operations on transporter routes. Construction activities will be limited to periods of appropriate weather both because of access to the site and the ability to pour concrete and erect towers. Thus, construction activity will take place during the spring, summer, and fall seasons. Seasonal traffic volumes are likely to be unaffected by construction because of the low traffic volumes in the area and lack of tourist-oriented facilities along the route. One special event that could potentially result in added traffic congestion would be tourists attending day concerts at the Gorge.

#### [...]

The roadway preparation project and deck repair project at MP 78 are not anticipated to affect projectrelated traffic. The Traffic Management Plan will include coordination between project-related construction traffic and these planned WSDOT construction projects.

The recent completion of the I-90 Rye Grass Summit to Vantage auxiliary lane project is in an area covered by Transporter Route 2 of the project. The addition of this lane will improve traffic operations and safety on this segment of I 90.

#### Roadway Hazards

It is anticipated that the addition of construction-generated traffic by the WHWPP would have little effect on the existing accident rate or pattern. The largest potential change is along Vantage Highway west of the site access. Along this segment of roadway the increase in truck traffic may result in more motorists attempting to pass slow-moving vehicles. This may result in a slightly higher number of accidents.

#### 3.14.2.2 Operation and Maintenance Impacts

#### <u>Traffic</u>

Traffic between the Operations and Maintenance (O&M) facility and the individual turbines would be light. Besides day-to-day maintenance, there would be scheduled maintenance every 6 months.

Traffic as a result of tourism related to the project is unknown. Other wind energy projects have a wide range of activity depending on location, visibility and company policy. A similar facility in southern Washington limits group tours every other Friday from March to November. The site has difficult access during winter months and is closed for tours. Individuals attending these tours arrive on one bus or in carpools with tours typically taking 1.5 hours, done once a day and with a maximum capacity of 25. There is also a kiosk at the site entrance where photos and graphics depicting the operations are available. The WHWPP will have a similar facility near the site entrance along Vantage Highway. Visitors to such a facility would likely be intermittent and throughout the day.

Because the facility is along the I 90 corridor and is close to the Seattle metropolitan area casual tourist traffic and guided tours may be higher than at other locations. However if other wind power generation facilities were constructed in Kittitas County the tourist traffic would be distributed among several sites. Because of this no projection of tourist traffic has been made.

#### [...]

Maintenance trails for the transmission feeder line(s) would be privately owned and located on the project site and along the feeder line(s). Maintenance roads for turbines would be the same turbine string roads used for project construction. The trails and roads would be maintained by WHWPP. There would be no uncontrolled public access to project facilities on privately owned land during construction, operation, or decommissioning of the WHWPP.

#### **Air Navigation Considerations**

The installation of wind turbines on the site may impact air navigation. The highest land formation of the project site is Whiskey Dick Mountain, a ridge with an approximate elevation of 3,700 feet at one end and 3,900 feet at the other. The 3-MW turbines would be 410 feet above the ground and the 1-MW turbines would be 249 feet above the ground. All proposed towers at the proposed Wild Horse project site would be below the FAA 4,000-foot AMSL structure ceiling that covers the project area (see new Figure 3.14-2). Since the Draft EIS was issued, the FAA issued Determinations of No Hazard (DNH) for 127 wind turbine generators (WTGs). As such, nine turbine locations have been removed from the proposed project. An example FAA DNH for the WHWPP is included in Appendix C of the FEIS. The FAA considered all IFR Approach and Departure procedures and other published IFR procedures, and also studied the effect of proposal(s) on IFR procedures known to be in development for the Ellensburg Airport.

To provide adequate air traffic safety, the wind turbines will meet FAA safety lighting requirements. At present, FAA guidelines for lighting of wind turbines call for lights that flash white during the day (at 20,000 candela) and red (at 2,000 candela) at night. The exact number of turbines that would require lighting will be specified by the FAA after it has reviewed final project plans; however, typically, FAA has required that warning lights be mounted on the first and last turbines of each string and every 1,000 to 1,400 feet on the turbines in between. The 158-Turbine/1-MW scenario would have a slightly higher

impact because of a larger number of wind turbines than the 104-Turbine/3-MW and 136-Turbine/1.5-MW scenarios. See Figure 3.10-11 in this FEIS for the proposed lighting plan.

## 3.14.3 Impacts of Alternatives

#### 3.14.3.1 Impacts of Off-Site Alternatives

#### Kittitas Valley Alternative

Project operations and maintenance could generate up to 20 workers commuting to and from the O&M facility on paved state and county roads during a 24-hour period. As for the WHWPP, this is not expected to affect LOS on roads in the project area such that Level of Service (LOS) would be different than if the project wasn't built. Employees would park at the O&M facility parking lot, with no more than 25 vehicles parked at the facility at any one time. The proposed O&M facility parking lot will be sufficient to accommodate future parking needs of both project employees and potential visiting tourists. The project applicant would be responsible for maintenance of turbine access roads, access ways, and other roads built to construct and operate the project. There would be no public access to project facilities on privately owned land during construction, operations, and maintenance.

#### **Desert Claim Alternative**

Potential construction impacts include additional traffic generated by construction workers, delivery of construction materials, and transport of wind turbine components that would be assembled on-site. Potential short-term impacts resulting from the construction of access roads would be potential delays or detours necessitated by construction activities on or adjacent to county roads. Under this alternative, construction traffic is expected to result in an increase in PM peak traffic of 80 trips, which would not alter the level of service on roads in the project area. This impact would be similar to the WHWPP and less than described for the Kittitas Valley alternative. Construction related parking would be located on the project site.

Construction activities could also require temporary modifications to intersections of county roads to accommodate trucks transporting tower components, and damage to road surfaces may result from transport of components or construction materials. Construction traffic impacts, including the potential for an increase in the number of accidents on roads in the project area, would be mitigated though the development and approval of a construction Traffic Management Plan that would address transportation and access concerns during the construction period.

The traffic directly associated with project operations and maintenance would not impact existing levels of service on public roads in the project vicinity. Additional trips generated by service and supply deliveries would be occasional and negligible in volume. A tourist kiosk, if located along S.R.97 or Smithson Road could potentially affect traffic levels as a result of tourism.

As a result of a modified project configuration, ten of the proposed turbine locations within the Desert Claim project area would conflict with the protected airspace associated with the existing VFR traffic pattern, although the conflict involves operation by a category of aircraft that use Bowers Field on a very rare basis. The airspace conflict could be resolved, and the potential operations impact could be avoided by further modifying the project plan to remove or relocate turbines and/or to install even smaller turbines (modified proposal is 340 feet in height) in selected locations or changing the airport operating procedures to employ a right-hand VFR traffic pattern for two of the four runways at Bowers Field. The project would include dual lighting systems on 48 turbines to comply with FAA standards for marking and lighting tall structures.

# 3.14.4 Mitigation Measures

No significant unavoidable adverse impacts on traffic and transportation are associated with construction or operation of the proposed action. However, the Applicant has proposed the implementation of the following measures.

#### 3.14.4.1 Construction

- The Applicant will prepare a Traffic Management Plan (to be submitted to EFSEC and Kittitas County prior to construction for review), with the construction contractor outlining steps for minimizing construction traffic impacts;
- The Applicant will provide notice to adjacent landowners when construction takes place to help minimize access disruptions;
- The Applicant will provide proper road signage and warnings of "Equipment on Road," "Truck Access," or "Road Crossings" along Vantage Highway;
- When slow or oversized wide loads are being hauled, appropriate vehicle and roadside signing and warning devices will be deployed per the Traffic Management Plan. Pilot cars will be used as the WSDOT dictates, depending on load size and weight;
- The Applicant will construct necessary site access roads and an entrance driveway that will be able to service truck movements of legal weight and provide adequate sight distance;
- The Applicant will encourage carpooling for the construction workforce to reduce traffic volume;
- In consultation with Kittitas County, the Applicant will provide detour plans and warning signs in advance of any traffic disturbances;
- The Applicant will employ flaggers as necessary to direct traffic when large equipment is exiting or entering public roads to minimize risk of accidents;
- Where construction may occur near the roadway, one travel lane will be maintained at all times.

In addition to mitigation measures proposed by the Applicant, the following will be implemented:

- The Applicant will videotape the portion of Transporter Route 1, from the southern City of Kittitas City Limits to the project site access and Transporter Route 2 from Vantage to the project site access to document pavement conditions before and after construction if project construction results in pavement degradation will restore the pavement to equal or better condition than it was prior to construction.
- The Applicant will construct a commercial driveway access meeting the WSDOT Design Manual Standards Chapter 920.

The Applicant will monitor traffic volumes using the driveway and if they exceed 1,500 vehicles per day will modify the driveway and intersection with Vantage Highway to meet the WSDOT Design Manual Chapter 910 requirements for intersections.

#### 3.14.4.2 Operation

The following measures would be implemented during operation of the WHWPP:

- The Applicant will follow FAA guidelines for a wind turbine lighting and warning system.
- The Applicant will provide financial assurance for decommissioning of the turbine access roadways.

# 3.14.5 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts on traffic and transportation, including air navigation, are associated with construction or operation and maintenance of the WHWPP.

# Section 3.15 HEALTH AND SAFETY

Revisions to sub-sections within Section 3.15 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant. The off-site alternatives analysis for the Desert Claim project has been updated, where applicable, with the August 2004 Final Environmental Impact Statement (FEIS) issued for that project. Mitigation measures reflect those presented in the DEIS and the Development Agreement between the Applicant and Kittitas County (Appendix A).

# 3.15.2 Impacts of Proposed Action

#### **3.15.2.1 Construction Impacts**

#### **Construction Activities**

The Applicant has entered into an agreement with Fire District No. 2 for fire protection services. The Applicant will also develop a Fire Protection and Prevention Plan in coordination with local and state response agencies. The Fire Protection and Prevention Plan would be approved by Washington Energy Facility Site Evaluation Council (EFSEC) prior to the start of construction.

#### 3.15.2.2 Operation and Maintenance Impacts

#### Shadow-Flicker

The proposed project should not produce shadow-flicker effects on any existing residences in the area because the residences are too far from the turbines and are additionally shielded by existing terrain that separates them from the turbines. Further, the frequency reported to trigger seizures is between 5 and 30 flashes per second. The shadow flicker frequency from an individual project wind turbine would be 1 flash per second for a three-bladed rotor revolving at 20 revolutions per minute.

# 3.15.3 Impacts of Alternatives

#### 3.15.3.1 Impacts of Off-Site Alternatives

#### **Desert Claim Alternative**

Shadow-flicker caused by wind turbines is not expected to result in health effects in residential areas. Sixty five receptors would however experience varying degrees of exposure to shadow flicker. Maximum duration of exposure in any given day is estimated to be from 6 minutes up to 2 hours. Micro-siting some turbines was determined as a possible mitigation measure to reduce exposure of some receptors. In response to comments on the Desert Claim DEIS and with guidance from Kittitas County, the proposal was modified to include 487-foot setbacks from turbines to minimize potential impacts from tower collapse, blade throw, and ice throw.

The proponent would implement recommendations received from the Kittitas County Fire Marshal to mitigate fire hazards in the project area. In addition, the proponent would conduct studies to determine microwave interference prior to siting turbines, monitor television reception interference, and investigate claims of diminished signal quality.

# 3.15.4 Mitigation Measures

In addition to the mitigation measures stated below, Section 5.17, Turbine Setbacks from Residences, of the Development Agreement between the Applicant and Kittitas County states "a minimum safety zone set back of 541 feet shall be maintained between Project wind turbines and residences located outside the Project boundaries illustrated in Exhibit B. In the event that Applicant wishes to install wind turbines closer than 541 feet to the Project boundary, Applicant shall obtain an easement or covenant that restricts the construction of any new residences within 541 feet of any Turbine as measured from the nearest Turbine tower center point to any such new residence."

#### 3.15.4.1 Fire and Explosion

Table 3.15-2 provides the mitigation measures that would be implemented to reduce risk of fire and explosion.

Type of Impact Construction (C) Operation (O) Decommissioning (D)	Potential Fire or Explosion Source	Mitigation Measures
C, O, D	General fire	All onsite service vehicles will be fitted with fire extinguishers.
	protection	Fire station boxes with shovels, water tank sprayers, etc., will be installed at multiple locations on site along roadways during summer fire season.
		Based on the Applicant's agreement with Fire District No. 2, a number of dedicated water trucks will be stationed at various locations on the project site during construction during the fire season. The number and locations of these dedicated water trucks will be set forth in a detailed Fire Protection and Prevention Plan prepared in consultation with the fire district and submitted to EFSEC prior to construction.
C, O, D	Dry vegetation in	No gas-powered vehicles will be allowed outside of graveled areas.
	contact with hot exhaust catalytic	Mainly diesel vehicles (i.e., without catalytic converters) will be used on site.
	converters under vehicles	Any vehicles used off road on site will be high-clearance vehicles.
C, O, D	Smoking	Restricted to designated areas (outdoor gravel covered areas).
C, O	Explosives used during blasting for	Only state-licensed explosive specialist contractors are allowed to perform this work. Explosives require special detonation equipment with safety lockouts.
	excavation work	Vegetation will be cleared from the general footprint area surrounding the excavation zone to be blasted.
		Standby water spray trucks and fire suppression equipment will be present during blasting activities.
С, О	Electrical fires	All equipment will be designed to meet NEC and NFPA standards.
		All area surrounding substation, fused switch risers on overhead pole line, junction boxes and pad switches will be graveled with no vegetation.
		A fire suppressing, rock-filled oil containment trough will be created around the substation transformer.
C, O, D	Lightning	Specially engineered lightning protection and grounding systems will be used at wind turbines and at substation.
		Footprint areas around turbines and substation will be graveled with no vegetation.
C, D	Portable generators –	Generators will not be allowed to operate on open grass areas.
	hot exhaust	All portable generators will be fitted with spark arrestors on exhaust system.
C, D	Torches or field	Immediate surrounding area will be wetted with water sprayer.
	welding on site	Fire suppression equipment will be present at location of welder/torch activity.
С, О	Electrical arcing	Electrical designs and construction specifications will meet or exceed requirements of NEC and NFPA.

#### Table 3.15-2.Fire and Explosion Risk Mitigation Measures

#### **Release or Potential Release of Hazardous Materials**

#### Phase I Environmental Site Assessment

The Applicant conducted a Phase I Environmental Site Assessment for the project site. The Phase I Environmental Site Assessment did not reveal the presence or potential presence of any environmental contamination on the project site. In the event that contaminated soil would be encountered during construction, the Applicant would coordinate with the Washington Department of Ecology (Ecology) to determine the measures to be taken.

#### Emergency Medical Response

Medical emergencies would normally be handled by calling 911 and alerting the Emergency Medical Services (EMS) system. The City of Ellensburg Fire Department provides EMS for the entire County, directly billing for services that include treating burns, fractures, lacerations, fall injuries, and heart attacks. Ambulances are located in Ellensburg and Kittitas; Cascade Search and Rescue is located in Ellensburg. Emergency calls are dispatched through the sheriff's office to the fire districts that provide search and rescue support.

Kittitas Valley Community Hospital in Ellensburg serves the entire County. The hospital has level four trauma service, with a limited number of specialists available. Patients with head injuries, severe burns, and/or trauma are transported to a different facility, usually Harbor View Medical Center in Seattle. Less severe accident victims are sometimes transported to Yakima for hospitalization and treatment. There is a heliport on the roof of the hospital, and a helicopter is available for emergency response. MedStar, a critical care transport service located in Moses Lake, Washington, also provides air ambulance support services to the County.

All operations personnel working on the turbines would work in pairs. All turbine maintenance staff would be trained in lowering injured personnel should an injury occur while working in the nacelle. A rescue basket, specifically designed for that purpose, would be kept at the operations and maintenance facility and would be available for use by local EMS staff. Training in use of the basket would be provided to local EMS staff.

#### **Compliance with Standards**

The wind turbines for the proposed project would meet international engineering design and manufacturing safety standards including the International Electrotechnical Commission standard 61400-1: Wind Turbine Generator (WTG) Systems–Part I: Safety Requirements.

#### Aircraft Impact

The project facilities would be marked and lighted in accordance with Federal Aviation Administration (FAA) regulations to minimize the potential for a low-flying aircraft to collide with a structure.

#### Transmission Line Audible Noise and Electromagnetic Interference

The conductors for the proposed transmission line would be designed in accordance with National Electric Code standards and good utility practice to control corona effects. Also, the Applicant has indicated that special care would be employed during construction to minimize nicks and scrapes to the conductors.

#### Emergency Plans

Emergency plans would be prepared by the Applicant to protect public health and safety, and the environment on and off the site in the case of a major natural disaster or industrial accident relating to or affecting the proposed project. The Applicant would be responsible for implementing the plans in coordination with the local emergency response support organizations. The plans would address the following:

- medical emergencies;
- construction emergencies;
- project evacuation;
- fire protection and prevention;
- floods;
- extreme weather abnormalities;
- earthquakes;
- volcanic eruption;
- facility blackout;
- spill prevention, control, and countermeasures;
- blade or tower failure;
- aircraft impact;
- terrorism, sabotage, or vandalism; and
- bomb threat.

Section 4.6 of the Application for Site Certification (ASC) provides a brief description of the plans. EFSEC, as well as local emergency response organizations, would review and approve all plans prior to implementation. During the construction and startup period, the emergency plans would be revised, as needed, to conform to manufacturer and vendor safety information for the specific equipment installed. Preliminary operations and maintenance emergency plans would similarly be developed and approved prior to the start of project operations.

The project operating and maintenance group and all contractors would receive regular emergency response training as part of the regular safety-training program to ensure that effective and safe response actions would be taken to reduce and limit the impact of emergencies at the project site.

# Section 3.16 CUMULATIVE IMPACTS

Revisions to sub-sections within Section 3.16 of the Draft Environmental Impact Statement (DEIS), presented below, are based on additional and updated information or corrections provided by the Applicant and revisions consistent with the August 2004 Final Environmental Impact Statement (FEIS) issued for the Desert Claim project, where applicable.

# 3.16.2 Desert Claim Wind Power Project

On January 28, 2003, Desert Claim Wind Power Project, a limited liability company wholly owned and managed by enXco, Inc., submitted an application to Kittitas County for permits to build and operate a wind electrical generation facility in the Reecer Creek area, approximately 8 miles north of Ellensburg (Desert Claim Wind Power LLC 2003). A DEIS for the Desert Claim project was issued by Kittitas County in December 2003. The Desert Claim project consists of a maximum of 120 wind turbines, with a total nameplate capacity of 180 megawatts (MW), associated generators, towers, foundations, and padmounted transformers on 5,237 acres. The project also includes the following other elements:

- Access roads, control cables, and power collection cables necessary to serve the project;
- One or more substations to convert project-generated electricity to the higher voltage required to interconnect into the regional electric transmission grid;
- An overhead transmission line required to connect the project substation with nearby high-capacity electrical transmission lines; and
- An Operations and Maintenance (O&M) facility co-located at the project substation site or, alternatively, located in an area zoned for industrial use within or near Ellensburg.

An FEIS was issued for the Desert Claim project in August 2004. The FEIS evaluated a modified proposal, along with the potential for phasing construction of the project. The modifications to the project resulted in shifting of the proposed locations for the wind turbines, access roads, power collections cables and other project facilities. These modifications do not alter the conclusions of the cumulative impact analysis presented in the Wild Horse DEIS issued in August 2004. Washington Energy Facility Site Evaluation Council (EFSEC) is aware that the Kittitas County commissioners acted on April 5, 2005 to deny the Desert Claim application submitted to the County [reference: Notice of Decision – Final Resolution, Findings of Fact and Conclusion of Law – Desert Claim Wind Power Project].

# 3.16.6 <u>Cumulative Impacts</u>

The following sections discuss the potential contribution of the wind power projects and projected County population growth to cumulative impacts in the study area. The discussion is presented by resource topic.

### 3.16.6.2 Air Quality

Kittitas County is not designated as a non-attainment area for air pollutants of concern, and current air quality problems do not exist. Development of the Wild Horse project would result in vehicle exhaust and fugitive dust emissions during construction and decommissioning. Similar impacts would be associated with construction of the two other wind power projects. The wind power sites are within predominately agricultural areas where operation of agricultural equipment in cultivated fields and range land and on gravel and dirt roads are common sources of exhaust and dust emissions.

[...]

The only anticipated cumulative air emissions during operation of the three proposed wind power projects would be from vehicles used for operation and maintenance activities. Given the small number of employees and associated trips anticipated during project operations, no significant cumulative air quality impacts would occur during project operation. Further, the generation of electricity by the three proposed wind power projects would avoid cumulative emissions from other fossil-fuel power plants that might otherwise be operated to produce an equivalent amount of electricity.

No significant aggregated air pollutant concentrations that would exceed national or Washington State ambient air quality standards are anticipated. In addition, the generation of electricity through the three proposed wind power projects may avoid cumulative state-wide emissions of regulated pollutants from other fossil fuelled sources of power that may have otherwise been built or operated to produce an equivalent amount of electricity.

Development associated with population growth (6,976 additional people by 2020) in the County would result in an incremental increase in exhaust and dust emission from construction and operation of infrastructure and housing and resultant increases in vehicular traffic. It is not anticipated that the incremental impact would be sufficient for regional air pollutant concentrations to exceed applicable air quality standards.

#### 3.16.6.3 Water Resources

The Kittitas Valley and Desert Claim projects would involve similar construction activities (except no onsite gravel extraction and concrete batch plants) and project features, similar areas of ground disturbance, similar restoration and mitigation actions, and similar water demands. Neither of the projects would require extensive construction activity or project facilities along or near major streams, however construction of proposed access roads at the Kittitas Valley project site would affect three minor streams. Potential impacts on the affected stream channels related to construction would be short term. For the Desert Claim project, approximately one acre of stream and riparian habitat would be affected by temporary construction activities, with 112 square feet permanently affected by project operations. Because the three projects are sufficiently distant from each other and are located in different tributary watersheds, there would not be a combined effect from multiple projects on the same stream or aquifer. The minor, localized effects of each project would occur within the drainages of minor tributaries to the Yakima River and the Columbia River and at a distance of at least several miles upstream from either river.

#### 3.16.6.4 Vegetation and Wetlands

#### **Vegetation**

Construction of the Wild Horse project could temporarily disturb up to 401 acres of existing vegetation with 165 acres permanently displaced by project facilities. It is anticipated that approximately 323 acres of shrub-steppe vegetation would be disturbed under the most likely scenario. Impacts on vegetation from development of the Desert Claim project and/or Kittitas Valley project would be similar to those described for the Wild Horse project and would generally consist of localized impacts on similar vegetation communities. Construction of the Kittitas Valley project could temporarily disturb up to approximately 371 acres of vegetation with up to 118 acres permanently displaced by project facilities. The majority of disturbance (309 acres for most likely scenario) would occur in shrub-steppe and grassland community types. Construction for Desert Claim project would temporarily disturb approximately 311 acres and permanently impact a total of approximately 88 acres.

Collectively, there would be a permanent loss of up to 371 acres of existing vegetation, including approximately 100 acres of lithosols. The remaining areas affected by temporary impacts would be revegetated through mitigation measures proposed by each of the projects. However, the success of revegetation efforts in shrub-steppe habitat and fragile lithosols is not well documented. Disturbed sites in these areas become readily vulnerable to invasive, non-native plant species (e.g., cheatgrass) that could interfere with successful native plant reestablishment.

#### <u>Wetlands</u>

The effects of the Wild Horse project on wetlands would be additive to other effects from past, present, and reasonably foreseeable future actions. Cumulative impacts of the three proposed wind power projects on wetlands would result from directly filling or grading wetland systems, as well as from indirect effects caused by stormwater runoff, increased pollutant loading, and water quality degradation, which in turn would result in loss of wetland diversity and reduced wetland functions and values. No wetlands were identified within or near any of the planned locations for Wild Horse project facilities; therefore, no impacts on wetlands are anticipated for the Wild Horse project. No streams, springs, or riparian areas would be impacted by construction disturbances related to the Wild Horse project. The Kittitas Valley project would disturb between 135 and 185 square feet of one potential wetland system at the Kittitas Valley project site (Based on current plans for the proposed Desert Claim project, construction activities would permanently impact 3 acres of wetland area, with an additional 17 acres of temporary disturbance. Final "micro-siting" for project facilities would be used to avoid some of the wetland areas. To the extent that avoidance of wetland areas is not feasible, mitigation would be developed to enhance or replace wetland areas in accordance with the federal and local jurisdictions (Kittias County 2003).

#### 3.16.6.7 Energy and Natural Resources

The three proposed wind power projects would provide a combined nameplate capacity of 565 MW of electricity (under the middle scenario for the Kittitas Valley). Assuming long-term operation of the three projects at a net capacity of 33%, the Wild Horse, Desert Claim, and Kittitas Valley projects would

produce approximately 186 average MW of electricity on a long-term basis, which would serve, on average, approximately 46,500 houses per year. Two proposed hydroelectric projects (Easton Diversion and Kachess to be developed by Symbiotics, LLC), would generate 6.2 MW of electricity Northwest Power Planning Council 2004). The collective energy output from those five projects of 532.7 MW, would represent the first electrical generating facilities in Kittitas County. Operation of the three wind and two hydroelectric projects would also cumulatively add to the capacity, production, and availability of renewable energy sources in Washington State and the greater Pacific Northwest. The projects would provide a sustainable, renewable source of electric power supply to supplement the region's existing hydroelectric, nuclear, and coal or gas-fired power projects, although it would represent a relatively small addition to the total regional electricity supply. Utilities receiving the wind energy would be able to diversify their energy resource portfolios and stabilize a portion of their long-term energy supply costs. Power produced by the wind projects would also be responsive to the identified needs of regional utility providers, including Avista, Puget Sound Energy (PSE) and Pacific Power.

#### 3.16.6.13 Cultural Resources

During consultations between EFSEC and the Yakama Nation regarding the Kittitas Valley project, tribal representatives expressed concern about the cumulative effect wind power projects could have on tribal lands. Concerns raised on past wind projects include how wind power developments may affect the cultural and spiritual practices of the Yakama People, particularly projects located on sacred lands that could affect sacred foods and medicines (Benton County and Bonneville 2003). The Yakama Nation submitted a comment letter to EFSEC on the Kittitas Valley DEIS raising concerns regarding potential impacts on several resources including cultural, bird migration, lithosol degradation and riparian zones. Efforts to bring together wind power facility applicants, state and federal government agencies, and tribal representatives to discuss these and other issues of concern are ongoing. The Confederated Tribes of the Colville Reservation (CCT) expressed potential concerns about Traditional Cultural Properties (TCP) for the Wild Horse project (CCT 2004). The Applicant and EFSEC met with CCT on February 19, 2004 and the Applicant responded to CCT's concerns by entering into a contract with the CCT for a TCP study, which has been completed and provided to EFSEC.

The archaeological and historical sites identified during this current cultural resource survey likely do not meet the standard qualifications for National Register of Historic Places (NRHP). Nevertheless, it has been recommended that the newly recorded archaeological sites be avoided to prevent any damage. The Assistant Archaeologist at the Washington State Office of Archaeology and Historic Preservation (OAHP) has informed the Applicant that there is no set standard for setbacks, but recommended that 100 feet would be adequate for avoidance. A copy of the cultural resource discipline report has been forwarded to OAHP and the affected tribes. The cultural resources study area includes impacted areas for all design scenarios under consideration. Project design will implement the recommended 100-foot setback around culturally sensitive areas for all design scenarios.

While impacts from these and other projects in Kittitas County could result in a net cumulative loss of cultural resource values in the region, implementation of mitigation programs in each individual project should help to limit project-specific impacts, therefore reducing overall cumulative impacts on cultural resources.

#### 3.16.6.14 Transportation

#### **Cumulative Air Navigation**

Aircraft operations in the Kittitas Valley are centered at Bowers Field. Airspace over and near the Yakima Training Center is restricted by military operations in that area. Given its location, the proposed Desert Claim project would represent a cumulative addition to natural and constructed features within the Bowers Field airspace. Ten of the proposed turbines would intrude into the protected airspace for Bowers Field. The Kittitas Valley and Wild Horse projects would not present potential conflicts with air traffic operations at Bowers Field or other facilities and there would be no cumulative significant impacts to air transportation resulting from development of those projects.

# Chapter 4

# Comments on Draft EIS and Responses

# Chapter 4 COMMENTS ON DRAFT EIS AND RESPONSES

# 4.1 Introduction

The Draft Environmental Impact Statement (DEIS) for the Wild Horse Wind Power Project (WHWPP) was issued on August 4, 2004. The comment period for the DEIS ended on September 10, 2004. A public comment meeting was held on August 24, 2004, in Ellensburg, Washington.

During the comment period, Washington Energy Facility Site Evaluation Council (EFSEC) received comments from agencies, citizens, and interest groups. Comments were submitted in letters, orally at the public comment meeting, and via email (together these are called "comment submissions" in this Final Environmental Impact Statement (FEIS). A list of those who commented on the DEIS is provided in Table 4-1.

# 4.2 Organization of this Section

This section contains the comment submissions and corresponding responses to the comments. Each comment submission – whether a letter, meeting transcript, or email – has been assigned a number (see list of comment submissions in Table 2-1). Within each comment submission, comments on specific issues have been designated using a line and a number in the margin. In most cases, a single comment submission contains numerous comments addressing a variety of topics. For example, Comment Submission 1 (Harold Hochstetter) contains three comments numbered 1-1 through 1-3. Comments submitted orally at the public hearing, and recorded in the public transcript (Comment Submission 33) are marked with the alpha designation C, the sequence number of the oral submittal, and the comment number of that oral submission (e.g. first public comment is denoted as C1-1).

As described in Washington Administrative Code (WAC) 197-11-560, possible options for responding to comments on a DEIS include modifying the alternatives or developing new alternatives, improving or modifying the analysis, making factual corrections, or explaining why the comments do not warrant further agency response. In this regard, for each numbered comment we have provided additional information or elaboration on a topic previously discussed in the DEIS; noted how the Environmental Impact Statement (EIS) text has been revised to incorporate new information or factual corrections; referred the reader, when appropriate, to another comment response; explained why the comment does not warrant further response; or simply thanked the commenter when the commenter was stating an opinion.

Commenter	Assigned Comment
Harold Hochstetter	
Keith and Karen Johnson	2
Green Dot Man Submittal – Illustration (see also Comment 33.C3)	3
Lynne Mahre	4
James Whitmire	5
David Forster	6
Erin Duleba	7
Lee Bates	8
Gwen Clear: Department of Ecology	9
Helen Wise	10
Paul Bennett: Kittitas County Dept. Public Works	11
Keith Johnson Janet Nelson: Kittitas Audubon Society	12
Clay White: Kittitas County Community Development Services	12
John Lane: Office of Attorney General of WA	14
Janet Nelson	15
W R Eseman	16
James Huckabay, VP of Kittitas County Field and Stream Club; Steering Committee of the Kittitas County Big Game Management Roundtable	17
David A. Bricklin; Bricklin Newman Dold, LLP	18
Chris Taylor: Zilkha Renewable Energy	19
Sonia Ling, Troy Gagliano: Renewable Northwest Project	20
Ted A. Clausing; WA Dept. of Fish and Wildlife (Brent Renfrow)	21
Kenneth R. Bevis	22
Phelps Freeborn; WA Native Plant Society (President/Central)	23
Paul Lasha	24
Brigid Dean; WA State Parks and Recreation Commission	25
Sandy Swope Moody; WA Dept. of Natural Resources	26
Hal Lindstrom	27
Erin Duleba (Dated September 9, 2004)	28
David Crane	29
Debbie Strand; Economic Development Group of Kittitas County	30
Camille Pleasants; The Confederated Tribes of the Colville Reservation	31
Merle and Sharon Clemmo	32
Public Meeting Transcript (Various commenters)	33

Table 4-1. List of Draft EIS Commenters and Ass	signed Comment Submission Numbers
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# 4.3 <u>References Cited in the Responses to Comments</u>

The Settlement Agreements reached between the Applicant and various agencies and organizations that were granted intervenor status before EFSEC were used as sources of updated information, especially in regard to mitigation. The Settlement Agreements are listed in Chapter 5, References, and are available for review from EFSEC.

Other references used in preparing this Final EIS are cited in the responses to comments and listed in Chapter 5.

# 4.4 Index to Draft EIS Comments by Topic

Table 4-2 provides a cross reference index showing which comments on the DEIS (and which corresponding responses in this FEIS) address various topics of interest. The numbers in the right-hand column correspond to the individually numbered comments shown in the margin of each comment submission (letter, email, or hearing transcript).

Topic		Comments on Draft EIS that Address this Topic
Propos	sed Action and Alternatives	12-20, 12-21, 13-12, 13-15, 13-49, 13-50, 13-51, 13-52, 19-5
	Site selection / Relocation	15-5, 18-1, 18-17, 18-18, 20-6, 24-4, 24-6, 27-2, 28-7, 28-10, 28-11, C3-9, C13-4, C13-5, C15-1
	Purpose and Need	31-3
	Decommissioning	8-21, 12-22, 13-16, C7-1
	Offsite Alternatives	13-17, 13-45, 13-46, 13-67, 19-51, 19-52, 19-66, 19-72, 19-73, 28-2, 28-8, 28-9
	No Action Alternative	8-1, 12-33, 13-5, 15-8
Earth		13-31, 13-53
Air Qu	ality	13-32, 13-54, 19-1, 19-54
Water	Resources	9-1, 13-33, 13-34, 13-54, 18-2, 19-29
Shrub Restora Adapti	•steppe Habitat – Expanse / ation / Habitat Rehabilitation / ve Management	7-1, 7-9, 12-23, 12-25, 13-6, 13-35, 14-1, 19-30, 20-3, 21-3, 21-6, 21-7, 21-8, 21-9, 22-1, 24-1, 24-2, 26-1, 26-2, 26-3, C16-1
Wetlar	nds	9-2, 13-6
Lithos	ols	12-6, 12-21, 12-24, 14-2, C14-2
Specia	l-status plants	14-3, 23-1, 23-5, C14-3
Weeds		19-31, 23-2, 23-3, 23-4
Wildli	fe	7-8, 8-17, 13-36, 14-11, 18-5, 18-13, 19-5, C3-1
	Avian species: Status/presence	12-5, 12-7, 12-8, 12-9, 15-6, 19-3, 21-5, 21-21
	Bird / bat collisions (Mortality)	8-2, 8-5, 12-20, 12-32, 13-12, 14-4, 14-5, 14-6, 14- 8, 14-13, 18-12, 19-2, 19-55, 21-12, 21-20, 21-27, C11-1

Table 4-2.	Index to Draf	t EIS Comme	ents by Top	oic
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Topic		Comments on Draft EIS that Address this Topic
	Birds / bat habitat – migratory/corridors - nesting	2-1, 2-2, 2-3, 12-1, 12-2, 12-3, 12-4, 14-7, 14-9, 14- 12, 15-3, C12-1, C12-2, C16-2
	Sage grouse	14-10, 18-11, 19-4, 19-32, 21-1, 21-4, 21-13, 21- 14, 21-15, 21-16, 21-17, 21-18, 21-19, 24-3, 28-4
	Big game - Elk and mule	7-4, 7-5, 7-6, 7-7, 8-16, 18-2, 18-3, 18-4, 18-15, 21- 11, 28-3, 28-5, 28-6, C3-3, C3-4, C3-5, C3-6, C3-7, C3-8
	Habitat loss and fragmentation	7-3, 7-9, 15-2, 15-7, 22-1, 24-4, 26-2, 27-1, C12-4
	Studies	8-4, 12-10, 12-11, 12-12, 12-13, 12-14, 13-10, 15- 4, 29-1, C3-2, C11-3
	Mitigation, Monitoring and Adaptive Management	8-3, 12-17, 13-7, 14-14, 17-2, 18-14, 18-15, 18-16, 20-3, 20-4, 20-5, 21-2, 21-6, 21-9, 21-12, 26-3, C8-2, C8-2, C8-3, C11-2
	Cumulative Impacts	2-4, 2-6, 12-15, 12-29, 15-6, 24-5, C12-2
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Торіс	Comments on Draft EIS that Address this Topic
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# 4.5 Comment Submissions and Responses to Comments

The rest of this chapter presents the comment submissions on the DEIS and responses to the comments. Each comment submission appears first, followed by corresponding responses.

Wild Horse Wind PP Draft EIS Comment- 1

# Dear Irina

loose Beacon road (Road 18) places a heavy burden on Parke Creek road. Viewing the RCW's and Thark you for sending the Draft EIS for Wild horse project and thanks for our phone conversation Tue. Aug.10 2004. I am sending my AUG. 3 letter to Chris Taylor and some maps. Also find in the controversy. Again as I told Chris Taylor I do not want to impede Wild horse project but to enclosed RCW's and case law pertaining to public roads. The below individuals also are involved case law the public should not have to defend it's interest in court.

Your Seryant

Kittitas Co Commissioners 962-7508 Golladay & Huston Prosecutor Zempel 962-7520 Gordon Blossom 964-2377

ENERGY FACILITY SITE EVALUATION COUNCIL RECEIVE AUG 1 6 2004

Collelsyrof March 10 anion poil AND SHOT Easen 98837

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Dear Chris

page 7 of adjacent landowners north of Wild horse. The Sec. Line between 6&31 is on my 24 acres. I am writing concerning Beacon Ridge Road specifically and Kittitas gate locking in principle. many citizens I have used Beacon for years. My understanding is the road was built in the 1920's to corral panel gate the old fence wire gate could not be locked. I doubt you could find proof of it ever being locked. Chris understand I do not want to impede your project neither do I want to become Vantage road after an altercation with Larry Wyatt's horse in the mid 1990'S. that gate soon had a Here's some history. My ownership on the clockum dates from1988. I am a newcomer but like so string of locks (9 I believe) and much controversy. The gate was unlocked in 1997 but before the My name is Harold Hochstatter; we talked on the phone Wed. P.M. Aug. 3 2004. I am listed on service the beacon on the southwest corner of Sec. 29 a mile north of my Parke Creek lots. The beacon was used to guide airmail planes before the war. The corral panel gate was placed on part of a privileged elite. But I don't want Windridge or Wildhorse to become an elite either.

Prosecutor Zemple is aware of the public access problem on Beacon, Cariboo and other Kittitas county roads. Also former Kittitas road official Gordon Blossom of Thorp is well acquainted with the situation.

amendment ninth bullet point states "orte primary private road..." Page 4 says, "Site is located on a project facilities will have controlled access across private land which limits access to the facilities to persons aware of safety setbacks and potential risks". Page 3 of Sec.3 comprehensive plan map If you look on page 2 of the application for development agreement at the bottom it says "All private road Ucheck one. Name of road Beacon ridge Road." public road

courts is a good idea but keeping me out of the courts is a good idea too. St. Paul says, "Let everything be done decently and in good order". 1 Cor. 14:40. I wouldn't cut any lock without calling you and the sheriff first but BEACON is a public road, if's a point to prove, I just hope there This looks to many of us like the open access on Beacon is about to be eliminated. Gating the read would force the courts to define the status of Beacon under RCW. 36.75.070 and City of Seattle v. Smithers (1905) 37 Wash. 119, 79 P. 615. I think keeping the public-private question out of the is fine, cattlegaurds too. Any change that could cause me to be prosecuted for criminal trespass is some other way

Your servant

Kittitas Co. Commissioners Gordon Blossom Merle Clemmo Greg Zemple Harry Bacon 20

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and the second		
tly roads Page 1 § 47,12.010 et seq. LIBRARY REFERENCES 1991 Main Volume Highways ∞= 18. WESTLAW Topic No. 200. C.J.S. Highways §§ 1, 3, 24. WESTLAW Topic No. 200. C.J.S. Highways §§ 1, 3, 24. ANNOTATIONS After the section 50 for DECISIONS In general 2 Adverse to state action 5 Kept up at public expense 4 Validity 1 1. Validity 1 1. Validity 1 Provision of this section conferring upon a county right to action for this section conferring upon a county right to activite highway property in an uniscorporated area by	prescription after seven years does not unconstitutionally discriminate between those persons owning property in an uniscorporated for the those persons owning property in an incorporated for to rown who have affiltan-years in which to do so, since section applies equally to all countries and persons holding property within unincorporated areas and there is a reasonable basis for distinguishing between counties and cities for purpose of establishing toads by prescription intanuch as section provides counties with an intensive to expand public roads. Todd v. Kitsap County (1984) 101 Wash.22.45, 676 P.24 484.	across and uncoverce by creating waters of take to dock maintained at public expense for more than seven years before 1926 and hence had become a "public road and trainitationed at public expense for more than seven years before 1926 and hence had become a "public road" and statute providing for correction of informalities of record in v. Hagen (1943) 30 Wash.2d 847, 194 P.2d 357. Where somer of land agreed that two methologing owners could use his land for a road to a public highway and a road was opened, and threather a third person used highway under former statute making roads public highway wider former statute making roads public highway wider former statute making roads public for not less than seven years. Saeger v. Baldwin (1913) 72 Wash. 197, 130 P. 114. <b>3. Adverse possession</b>
RCWA 36.75.070, Highways worked seven years are coun *44205 West's RCWA 36.75.070 *44205 West's RCWA 36.75.070 WEST'S REVISED CODE OF WASHINGTON ANNOTATED TITLE 36. COUNTIES CHAPTER 36.75. ROADS AND BRIDGES-GENERAL PROVISIONS CHAPTER 36.75. ROADS AND BRIDGES-GENERAL PROVISIONS Current through End of 2000 Second Special Session 36.75.070. Highways worked seven years are county roads All public <u>highways</u> in this state, outside incorporated cities and towns and not designated as state highways, which have been used as public highways for a period of not less than seven years, where they have been worked and	<ul> <li>kept up at the expense of the public, are county roads.</li> <li>CREDIT(S)</li> <li>CREDIT(S)</li> <li>1991 Main Volume</li> <li>1993 c 4 § 36.75.070. Prior. 1955 c 361 § 2; prior. 1945 § 6450-10, part. 1937 c 187 § 10, part. Rem. Supp. 1945 § 6450-10, part. 1937 c 187 § 10, part. Rem. Supp. 1945 § 6450-10, part.</li> <li>Central Materials (GM) - References, Annotations, or Tables&gt;</li> <li>HISTORICAL NOTES</li> </ul>	HISTORICAL AND STATUTORY NOTES 1991 Main Volume Source Laws 1937, ch. 187, § 10. Laws 1945, ch. 125, § 1. Laws 1945, ch. 125, § 1. Laws 1955, ch. 361, § 2. REFERENCES CROSS REFERENCES Acquisition and disposition of state highway property, see Acquisition and disposition of state highway property, see

Page 2 expenditure of \$3.50 former statute, when of public right by Pierce County (1914) mitations, and had no n kept up at public 0) 57 Wash, 602, 107 0) 57 Wash, 602, 107 10 aquite the by and state had been in of way of Pacific d to aquite the by a stornove when of fland way pr Lewis Service & t P. 584.	
<ul> <li>VA 36.75.070, Highways worked seven years are county roads</li> <li>der former statute, where county road had been ar furge selv and the county for more than 20 years, use considered with county filts vante of the county for more than 20 years, use considered with county filts vante of the county for more than 20 years, use county for more than 20 years, use county and the county of Seattle v Similars (1903) 37 Wash. 119, Former statute was only statute of 1 spleiten of the spleiten of the species of the former statute of the spleiten of the spleiten</li></ul>	Copyright (c) West Group 2001 No claim to original U.S. Govt works

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		RCWA 47.04.010, Definitions		
, Definitions	,t		rage 2	
CWA 47 04 010	Lage	(c) I he junction of an alley with a street or highway shall not constitute an intersection.	law to execute criminal process or to make	
	(5) "Center of intersection." The point of		or of any particular statute or statutes relative to	
REVISED CODE OF	intersecting highways;	(12) "Intersection control area." The intersection area as herein defined to order with	the highways of this state;	
TURANNOTATED	(f) "Citter and " T	such modification of the adjacent roadway area	(22) "Pedestrian." Any person afoot.	
GHWAYS AND	defined or part thereof located within the factor	as results from the arc or curb corners and		
NSPORTATION	of incorporated cities and towns, except alleys,	together with any marked or unmarked crosswalks adjacent to the intersection.	(23) "Person." Every natural person, firm,	
ER 47.04. GENERAL	(7) "Contribution of a contribution of the con		oupartures up our portation, association, or or or organization;	
KUVISIONS	combination of motor vehicle and motor vehicle	(13) "Laned highway." A highway the		
and End of 1000 C	motor vehicle and trailer, or motor vehicle and	roauway or writch is dryned into clearly marked lanes for vehicular traffic.	*58520 (24) "Pneumatic tires." Every tire of	
ougn znu oj 2000 second Special Session	semitrailer;	CITATION OF ACTIVATION PARTICI	inflated with commenced air to minimize the lood	
	(8) "Commercial vehicle." Any vehicle the	(14) "Local authorities." Every county,	thereon;	
11(UOBS)	principal use of which is the transportation of	having authority to adont local public board or body		
words and phrases wherever	commodities, merchandise, produce, freight,	under the Constitution and laws of this state;	(c) filter total of university. Every way of blace in private ownership and used for travel of	
shall have the meaning as in	autunate, or passengers for nife;		vehicles by the owner or those having express or	
ed to them, unless where used	(9) "County road," Every highway as herein	(15) "Marked crosswalk." Any portion of a	implied permission from the owner, but not by	
of shall clearly indicate to the	defined, or part thereof, outside the limits of	crossing by lines or other markings on the	other persons;	
bevare a nart	incorporated cities and towns and which has not	surface thereof;	(26) "Highway " Fvery way lane road street	
	thereof.		boulevard, and every way or place in the state of	
highway within the ordinary		(16) "Metal tire." Every tire, the bearing	Washington open as a matter of right to public	
not designated for general	(10) "Crosswalk." The portion of the roadway	surface of which in contact with the highway is	vehicular travel both inside and outside the limits	
y used as a means of access to	between the intersection area and a prolongation	whould be partly of metal or other hard, nonresilient material.	of incorporated cities and towns;	
residences and business	or connection of the farthest sidewalk line or in		The second	
	intersection are no sidewalks then between the	(17) "Motor truck." Any motor vehicle, as	(z/) NAULUAU. A CALLIET OI PERSORS OF DIODERTY UDON vehicles, other than street cars	
ighway." Every highway, as	excession area and a merical feet therefrom,	herein defined, designed or used for the	operated upon stationary rails, the route of which	
portion thereof designated as	The substitute of a tital tool of Swally	transportation of commodities, merchandise,	is principally outside incorporated cities and	
iority;	*58519 (11) "Intersection area." (a) The area	produce, freight, or animals;	towns;	
	embraced within the prolongation or connection	(18) "Motor vehicle " Hyper vehicle on home		
alsurface." The territory	of the lateral curb lines, or, if none, then the	defined, which is in itself a self-aroundled unit	(28) "Kaulroad sign or signal." Any sign,	
in control to the state of the	lateral boundary lines of the roadways of two or		hole or acvice effected by authority of a public	
re are buildings in the solution	more highways which join one another at, or	(19) "Multiple lane highway." Any highway	why which of the measure of million during the second of the measure of the measure of million during the second of the second o	
al purposes, including but not	which we have an right angles, or the area within	the roadway of which is of sufficient width to	the approach of a railroad train.	
banks, or office buildings.	Princip ventories traveling upon dutterent highways	reasonably accommodate two or more separate		
and public buildings which		lanes of vehicular traffic in the same direction,	(29) "Residence district." The territory	
e hundred feet of frontage on	(b) Where a highway includes two roadwaws	each lane of which shall be not less than the	contiguous to and including the highway, as	
nundred teet collectively on	thirty feet or more apart, then every crossing of	network in a wind with and whether or	herein defined, not comprising a business	
nway;	each roadway of such divided highway by an	TIOL SUCH TAILS ALS THATKED.	district, as herein defined, when the property on	
e." The line marked or	intersecting highway shall be regarded as a	(20) "Operator." Every person who drives or is	build from the second terms of the second se	
to and equidistant from the	separate intersection. In the event such	in actual physical control of a vehicle as herein	the main improved with residences or residences	
raffic roadway of a highway	thirty feet or more anart that brown roadways	defined;	and buildings in use for business;	×.
rwise indicated by painted	two roadways of such highly average 1			
	regarded as a separate intersection;	(21) "Peace officer." Any officer authorized by	(30) "Roadway." The paved, improved, or	
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Copyright (c) West Group 2001 No cla	im to original U.S. Goyt. works		•	

\*58518 West's RCWA 47.04.01 RCWA 47.04.010, Definitions

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WASHINGTON ANNO TITLE 47. PUBLI HIGHWAYS AN TRANSPORTATI CHAPTER 47.04. GEN WEST'S REVISED CC PROVISIONS

Current through End of 2000 Special Session

47.04.010. Definitions

The following words and phrases used in this title, shall have the me-this section ascribed to them, unless the context thereof shall clearly indi-contrary or unless otherwise defir chapter of which they are a part: (1) "Alley." A highway within th meaning of alley not designated f travel and primarily used as a means o the rear of residences and establishments;

(2) "Arterial highway." Every herein defined, or portion thereof such by proper authority;

(3) "Business district." Th contiguous to and including a highw defined, when within any six hundre such highway there are buildings business or industrial purposes, inclu limited to hotels, banks, or offic railroad stations, and public build occupy at least three hundred feet of one side or three hundred feet col both sides of the highway;

(4) "Center line." The line, mu unmarked parallel to and equidistant sides of a two-way traffic roadway of a except where otherwise indicated by lines or markers;

1. 494 Ar 252 And I wanter Bridge is integral part of highway along which it is erected. Lucas v. Phillips (1949) 34 Wash.2d 501, 209 P.2d 279; Berglund v. Spokane County (1940) 4 Wash.2d 309, 103 P.2d 355. Road is public highway if, on establishment, it will be open to public and may be used by anyone although it also appears probable that, during immediate future, noad will be used only by particular individual or business. State ex rel. Oregon-Washington R. & Nav. Co. v. Walia Walia Coumy (1940) 5 Wash:2d 95, 104 P.2d 764. Surface roadway on university campus was not "public roadway" within meaning of § 47.04.010(26), which defines highways for purposes of statuse governing public highways and transportation, where road was used by public despite attempts to restrict its use to only authorized vehicles. Allemeier v. University of Washington (1985) 42 Forest service road open to public for purposes of relevant reveal and subjoct to jurisofton of state wage "public highway" within meaning of this section. Half ". McDowelf (1972) 6 Wash.App. 941, 497 P.2d 596. and is usually treated as constituting part of highways with which it is connected. State v. Vantage Bridge Co. (1925) 134 Wash. 568, 236 P. 280. Page 4 \*58523 Bridge across stream is in itself public highway 11.42 Wash.App. 465, 712 P.2d 306, review denied. . Copyright (c) West Group 2001 No claim to original U.S. Govt. works 1. Highway -1 -١. 58522 Department, commission, secretary, defined, see § Existing highway, defined, see § 47.52.011. Ferry employees, marine employees, definitions relating to, Limited access facilities, definitions relating to, see § Signs and scenic vistas, definitions relating to, see § Toll bridges, roads, definitions relating to, see § 47.56.010. Urban arterials, definitions relating to, see §§ 47.26.040, 47.26.090, 47.26.100, 47.26.110. LIBRARY REFERENCES NOTES OF DECISIONS 2001 Main Volume ANNOTATIONS Highways 🕿 18, 19. Statutes 🖉 179, 190. WESTLA W Topie Nos. 200, 361. C.J.S. Highways §5 1, 3, 24 to 25. C.J.S. Statutes §§ 315, 338. RCWA 47.04.010, Definitions see § 47.64.011. 47.42.020. 47.52.010. 47.01.021 seg. Highway I 🔅 Aeronautica, definitions relating to, see § 47.68.020. Annual report of street operations to secretary of transportation, see § 35.21.260. Canal, defined, see § 47.72.060. County road improvement districts, see § 3.6.88.010 et seq. Page 3 moved upon a highway and in, upon, or by which any person or property is or may be devices moved by human or animal power or present, and future tenses; words and phrases used herein in the masculine, feminine, or neuter [1975 c 62 § 50; 1967 ex.s. c 145 § 42; 1961 c 13 § 47.04.010. Prior: 1937 c 53§ 1; RRS § 6400-1.] Severability--1975 c 62: See note following RCW 36.75.010. (40) "Vehicle." Every device capable of being transported or drawn upon a highway, excepting present, or future tense shall include the past, gender shall include the masculine, feminine, herein in the singular or plural shall include the singular and plural; unless the context thereof <General Materials (GM) - References, (39) "Train." A vehicle propelled by steam, electricity, or other motive power with or without Words and phrases used herein in the past, and neuter genders; and words and phrases used cars coupled thereto, operated upon stationary used exclusively upon stationary rails or tracks. HISTORICAL AND STATUTORY CROSS REFERENCES HISTORICAL NOTES 2001 Main Volume 2001 Main Volume Annotations, or Tables> REFERENCES Additional definitions, see § 47.01.021 CREDIT(S) NOTES shall indicate to the contrary. Copyright (c) Wass Araph 2001 No claim to original U.S. Govt. works ails, except street cars; guiding proper driving portion of a highway designed, or ordinarily used for vehicular travel;

RCWA 47.04.010, Definitions

of pedestrians and which is protected or is set apart within a roadway for the exclusive use marked or indicated by painted marks, signs, buttons, standards, or otherwise so as to be (31) "Safety zone." The area or space officially

plainly discernible;

aside and intended for the use of pedestrians or such portion of private property parallel and in proximity to a highway and dedicated to use by (32) "Sidewalk." That property between the curb lines or the lateral lines of a roadway, as herein defined, and the adjacent property, set pedestrians;

resilient material which does not depend upon inflation with compressed air for the support of (33) "Solid tire." Every tire of rubber or other the load thereon; (34) "State highway." Every highway as herein defined, or part thereof, which has been designated as a state highway, or branch thereof, by legislative enactment; (35) "Street car." A vehicle other than a train, as herein defined, for the transporting of persons or property and operated upon stationary rails principally within incorporated cities and towns; \*58521 (36) "Traffic." Pedestrians, ridden or herded animals, vehicles, street cars, and other conveyances either singly or together while using any highways for purposes of travel; (37) "Traffic control signal." Any traffic device, as herein defined, whether manually, electrically, or mechanically operated, by which traffic alternately is directed to stop or proceed or otherwise controlled; (38) "Traffic devices." All signs, signals, markings, and devices not inconsistent with this title placed or erected by authority of a public body or official having jurisdiction, for the purpose of regulating, warning, or traffic;

# Responses to Comments in Local Agency Letter 1 from Harold Hochstetter

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

recently by Public Works Director Paul Bennett in a meeting road has been periodically closed and locked to the public so The legal status of Beacon Ridge Road has been clarified by that they do not consider Beacon Ridge Road to be a County currently not locked and the private landowner has allowed with the Applicant's staff. The gate from Vantage Hwy is Commissioners stated in a public discussion in May 1988 Kittitas County and the land owner. The Board of County landowner, has stated he has documentation to prove the as to maintain it as a private road, which the landowners have chosen to allow the public to use at their discretion. public access, with some interruptions, for many years. Attorney Jim Hurson at an EFSEC hearing, and again Anthony Hoare, the attorney representing the private or public road. This was affirmed in 2004 by County 1-1.

In a Development Agreement with Kittitas County (Appendix A), the Applicant has agreed to allow gated access to the road. Property owners who wish to access their property from Project Access Road will be allowed to do so as necessary under a formal access license and a key to a gated entrance. Officials of the Washington State Departments of Natural Resources and Fish Wildlife are currently allowed to access the site and will continue to be allowed access by key. Others will be allowed to access the road on a case-by-case basis.

- 1-2. See response to Comment 1-1. Landlocked property owners will be allowed to use Beacon Ridge Road as access to their private properties.
- 1-3. See response to Comment 1-1.
| If you use this analogy with just th<br>and the turbines are 400ft tall, you<br>gone. Now take the KVWP and D<br>Take the worst case construction s<br>equals Major bird and bat habitat l | Kittitas Valley has a uniqueness fi<br>windfarm projects along the North<br>should not be approached with has<br>With the increased emphasis on wi<br>remuest organizations, soverment | Thank you for allowing us to commented  | Keith and Karen Johnson<br>3050 Airport Rd.<br>Cle Elyun, Wa. 98922<br>509-674-7552  |  |  |   |   |  |
|--|--|---|--|--|--|---|---|--|
| RECEIVED<br>AUG 2 4 2004<br>EVALUATION COUNCIL   | To: Allen Fiksdal Manager, EFSEC<br>P.O. Box 43172<br>Olympia, Wa 98504-3172   | Re: Comments to the DEIS for the Wildhorse Wind Power Project.<br>We are Keith and Karen Johnson, residents of Kittitas County, We live at 3050 Airport<br>Rd. Cle Elum Wa. We are Washington State natives of 70 and 69 years. I have been<br>coming to Kittitas County, Cle Elum and Ellensburg since 1941, we have been paying<br>Kittitas County taxes from 1975 and permanent residents since 1994. We are representing<br>ourselves and the birds and bats. | We are very concerned that the Wa. State, National and political rush for more renewable<br>energy is being scientifically justified without adequate consideration given to the birds<br>and bats rights of habitat. For this reason we are not in favor of the three proposed wind<br>power projects in Kittitas Valley. | To make our case, we will address two primary issues of our concern with the DEIS.<br>-3.5.1.1 Primary habitat for birds is stated as grassland/shrub-steppe and riparian<br>communities.<br>-3.16.6.5 Cumulative effects of the three proposed windfarms due to their close<br>proximity. | HABITAT<br>Loss of Wildlife habitat for birds and bats is not addressed as a major priority in any of<br>the DEISs.<br>I make this observation by first looking at the definition of Habitat.<br>"Habitat—The place where an animal or plant naturally lives or grows."<br>Where do birds and bats naturally live? On the ground, in trees and in the air. That's what<br>differentiates birds and bats from other animals, they use air space to travel, migrate, hunt<br>and recreation.<br>The 2004 Washington State Audubon, Washington state of the Birds report, says the item<br>most responsible for affecting bird species, is the loss of habitat. Then I find it reasonable | to ask this question?<br>If agencies and organizations would use air space encompassed by the windfarm projects<br>as bird habitat, would this loss of bird habitat and the potential impacts to bird species be<br>more than presently stated in the DEIS? | CUMULATIVE EFFECTS<br>The cumulative loss of bird habitat of the three Kittitas Valley windfarms is simple math,<br>[area times height] |  |

st the Wildhorse WF, which is approximately 8000 acres you would have 3.2million acre-feet of bird and bat habitat d DCWP and it skyrockets to some 6.8 million acre-feet on scenario per the DEIS, 8 months for the three projects, tat loss in a short period of time. Is from other existing windfarms and the proposed three orth side of the valley from the West end to the East end

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ste. vind power in Washington State and across the U.S., we ts and agencies, that will be making the decisions for y, to address this bird and bat habitat loss and the ity issues before allowing siting of the three projects.

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## Responses to Draft EIS Comments in Individual Letter 2 from Keith and Karen Johnson; Kittitas Valley Residents

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 2-1. Thank you, your comment has been noted.
- 2-2. See Section 3.5.2.1 of the DEIS for an analysis of loss of wildlife habitat. The Applicant has proposed mitigation to existing areas (an approximately 600 acre "mitigation parcel" in Section 27, T18N, R21E in Kittitas County, WA, with the exception of that area which is being developed for the Project (String L)) to address habitat loss. Both the Washington Department of Fish and Wildlife, and EFSEC's WDFW contractor have indicated that all permanent and temporary impacts to habitat caused by the Project are being mitigated in accordance with the ratios outlined in the WDFW Wind Power Guidelines. Furthermore, the Applicant has also voluntarily committed to placing the entire Project Area in conservation easement (Appendix C).

2-3. The approach presented by the commentor is not a method of calculating habitat impacts commonly accepted by WDFW or the US Fish and Wildlife Service, and has not been used for the analysis of potential impacts. While the wind turbines and other project features would occupy air space, the rotorsweep area is not necessarily permanently "lost" as birds and bats may be able to safely utilize this air space during periods when the rotors are not turning, and may navigate this air space when the rotors are turning without colliding with them. Furthermore, the

historic presence of sage grouse at the Project site in the acres, 0.01 percent of the 8600 acre Project area. The collisions with project components, which is described in section 3.5.2.2 of the DEIS. Potential impacts to habitat used by Sage Grouse during the lekking season have also been addressed by the Applicant to the satisfaction of WDFW. The Applicant will consider the strategic plan for the location of rock sources and the location/operation of the concrete batch plant. During the Sage Grouse lekking season, no routine mile of an active lek will be conducted between the hours of sunset and 9:00 am, and recreational use of the actual footprint of the turbine corridors is only 9.4 primary impact of the proposed project on birds and bats would be an increased risk of mortality from maintenance of the substation area or facilities within 1/4 Project site will be restricted to the extent feasible

- 2-4. See response to Comment 2-3 above. Temporary construction impacts will also be mitigated by the Applicant through the updated mitigation measures presented in Section 3.5.4 of this FEIS.
- 2-5. Each of three wind power projects proposed in Kittitas County is being evaluated according to the State Environmental Policy Act (SEPA), through the production of an environmental impact statement (EIS), with the impact analyses supported by technical surveys and/or studies.

Under SEPA, the EIS is intended to provide an impartial analysis of significant environmental impacts and inform the decision-makers and the public of any reasonable alternatives that would avoid or minimize adverse impacts or enhance environmental quality (WAC 197-11-400). The process is intended to provide for more informed choices in decision-making. The EIS for the Wild Horse Project evaluated a range of scenarios, off-site alternatives, cumulative impacts, and identified potential impacts and mitigating measures for the proposal and each element of the environment identified during the scoping process. 2-6. See response to Comment 2-3 above. Cumulative impacts of the three wind power projects currently proposed in Kittitas County are discussed in Section 3.16 of the DEIS and revisions to this analysis are shown in Section 3.16 of this FEIS.

WH DSE	S comment 3 Page 1 of 1 Droff EIS Concernent # 3	
Judith	- I	
From: Sent: To: Subject	Makarow, Irina (EFSEC) [IrinaM@ep.cted.wa.gov] Friday, September 17, 2004 9:51 AM Judith Hillis WH DSEIS comment 3	
Judith -		
In case yo public hea	re wondering what comment 3 is, it is an illustrative exhibit (see reference to green dot map in the necord, page 41), a "Green Dot" map as follows:	
NANEUM "Green Dc Cooperativ Boise Cas Boise Cas Longview I Departmer Departmer Departmer	East Half and West Half a Management Area ade Corporation liber Company shington t of Natural Resources t of Fish and Wildlife ar Round	
Revised 8/	5	
lt is just an	illustrative exhibit that shows which roads are open to public access through the Green Dot program.	
lf you neec have me c	a copy of the map, let me know. It might be easier for you to go buy one (and charge it to us) than to py it.	
Lirina Maka Siting Man EFSEC P.O. Box 4 Olympia M	ow ger 3172 A 98504-3172	
(360) 956- irinam@ep www.efsec	047 ted.wa.gov wa.gov	

9/17/2004

# Responses to Draft EIS Comments in Individual Letter 3 from Robert Kruse (Exhibit: Green Dot Map); Kittitas County Landowner

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

3-1. Thank you, your Exhibit (Green Dot Map) submitted in support of Mr. Hochstetter's explanation to the Council of what a Green Dot Map is has been noted. Please note that the Washington Department of Fish and Wildlife (WDFW) has indicated that Beacon Ridge Road is not under Green Dot Management (pers comm. Stream, 2005).

Page 1 of 1	000544	
Wild Horse Wind PP Draft Els Comment- 4 Makarow, Irina (EFSEC)	nd PP tent- 4	
From: Thomas Mahre [tima@eburg.com] Sent: Wednesday, August 25, 2004 9:13 PM To: EFSEC Subject: [SPAM] Wild Horse Wind Power Project; Zilkha Renewable Energy; Letter in Support of Zilkha and Windpower		
Attn: Allen Fiksdal, Manager Energy Facility Site Evaluation Council		
I am a 40 year farm resident of Kittitas County and I have sat back for years listening and reading the pros and cons about windpower in our county and I have decided to speak out in favor of wind power plants. I base my opinion on the fact that my family has leased land for approximately 25 years to Altamont Infrastructure in the Montazuma HII region of Solano County in California for the purpose of harmessing wind therupted nor has enjoyed the relationship with Altamont; the dry-land farming operation has not been interrupted nor has the existence of the wind generated machines affected the herds of sheep my family raises or interrupted nor has the existence of the wind generated machines affected the herds of sheep my family raises or operation in the past 25 years and in addition my family has leased property to FPL Energy and Enxco presently under construction of additional new and more powerting machines in operation in the past 25 years and in addition my family has leased property to FPL Energy and Enxco presently and for construction of additional new and more powerting machines in the property lam referring to consists of large rolling hills with a view of Pittsburg. San Jauquin confluent, sa well. However, the generating machines on our property are not the lights at night are spectaular. The wind generating machines in ourse. To the West towards San Francisco are in the bay and approx. I mile of the nearest wind power machine is a very property the Sacramento and San-Juanquin rivers join the Bay. Approximately 13 miles to the East is the sources of the with fish and game. The migratory flight path is in part over and through property the Sacramento Delta, a region ripe with fish and game. The migratory flight path is in part over and through property the sacramenty and the source.		
To my knower is generated. To my knowledge the machines have not created or caused any negative environmental impact to man, fish, fow or mammel and the studies have been numerous prior and after construction of the machines. The machines are quet and non disruptive. The machines have if anything increased the property values. The property owners, many of whom are aging farmers. The power generated fis sorely needed in our economy, it is property owners, many of whom are aging farmers. The power generated is sorely needed in our economy, it is dean and efficient energy and does no harm whatsoever to the eco-system and environment. I am fed up with Kittlas County Commissioners who can't make a decision that benefits working farmity farmers who own the land in the county that is desireable to wind power companies for fear of stepping on the toes of bought property, built homes for "the natural senic view" and who have no intention what-so-ever to make their living in our county. It is time for the naysayers to stop slinging muck that just doesn't stick and allow those who wish to lease their properties to do so.	-4-	
Lynne Mahre AUG 2 6 2004 EVALUATION COUNCIL		

8/26/2004

### Responses to Draft EIS Comments in Individual Letter 4 from Lynne Mahre; Kittitas Valley Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 4-1. Thank you, your comment has been noted.
- 4-2. Thank you, your comment has been noted.



#### County says road access is state issue

#### Continued From Page One

routes for emergency medical ser-vice vehicles, he said. Courtright said problems began increasing about five years ago and pressure from recreationists Increasing about tive years ago and pressure from recreationists attempting to use the private lands started getting worse two years ago. Illegal dumping on his leased land has included the dumping of refrig-

erators. He said he has no problem with working with other property owners to get access to their lands from the road, and said he was will-ing to provide keys to these owners. He stressed that the local sports-men and hunters assembled at the Friday meeting were not the people he has problems with, but said those in the audience were probably only "one-tenth of one percent" of the

people using the road. "I don't have an issue with you here," Courtright said, but the many others either not living in the area or who don't care about private prop-erty. "I can't run recreation for everyone." He also said he wished other roads leading to the state lands could be opened that would take pressure off the private Beacon Ridge Road. Ridge Road.

3/30/2004

Wild Horse Wind PP Draft EIS Comment- 5 5-1 Page 1 of 1 ENERGY FACILITY SITE EVALUATION COUNCIL AUG 3 0 2004 Subject: WH Article\_Beacon Ridge Road access is state's concern\_August 1998[1].pdf RECEIV would like to submit this into evidence in regard to the Wild Horse Project. James Whitmire [whitmirej2000@yahoo.com] Thursday, August 26, 2004 4:40 PM Makarow, Irina (EFSEC) p.o. box 1345 Ellensburg , Wa. 98926 509 929-0705 EFSEC fames Whitmire From: Sent: ä

#### Responses to Draft EIS Comments in Individual Letter 5 from James Whitmire (Exhibit: Daily Record Kittitas Valley Resident Article):

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

stated by the BOCC when this issue was raised in May 1998, private road, which the landowners have chosen to allow the Thank you, your submittal has been noted. The legal status in 2004 by County Attorney Jim Hurson on the record at an has stated unequivocally that the County does not consider representing the private landowner at the site, has stated he of Beacon Ridge Road appears to be clear: Kittitas County interruptions, for many years. Anthony Hoare, the attorney this to be a County or public road. This position has been has documentation to prove the road has been periodically public road, and the County has made it clear they don't believe there is any merit to the legal claim that this is a public to use at their discretion. The Applicant does not closed and locked to the public so as to maintain it as a EFSEC hearing, and again recently by Public Works Director Paul Bennett to Zilkha staff. The gate from Vantage Hwy is currently not locked and the private landowner has allowed public access, with some intend to pursue such a claim. 5-1.

Nevertheless – the Applicant has agreed to allow controlled access to the property to allow landowners to access their property, as well as to allow recreation activities and hunting. The DEIS has been revised and conditions for access are indicated in Section 3.5.2.2 of this FEIS.

	<u>م</u> ع ب		6-2		
Page 1 of 1	Wild Horse Wind Draft ElS Commen	im: RAINWELD@aol.com nt: Tuesday, August 31, 2004 12:43 PM EFSEC bject: [SPAM] Wind Turbine Alternative Sites	iskstal- as a resident and land owner of Kittitas County I am against any siting of Wind Turbines in any part However if the Wind Turbines did have to be stied within the county the beaufiul scenery that this county has to the Wind Turbines did have to be stied within the county the best alternative site would be at key Dick Mountain. The reasons this site is a better alternative site are many-Whiskey Dick is not as tant of a scenic byway, the area has only one land owner whereas the 97 project would be built as close as it within adjacent property owners. Whiskey Dick also would have fewer environmental issues to deal with derations for not sting the Turbines in Kittikas County, but if we do have to have the turbines in Kittikas by hopefully they would be at Whiskey Dick a place where the towers would be less unsightly. Thank You for consideration David Forster	RECEIVED AUG 3.1 2004 ENERGY FACILITY SITE EVALUATION COUNCIL	

9/1/2004

### Responses to Draft EIS Comments in Individual Letter 6 from David Forster; Kittitas Valley Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 6-1. Thank you, your comment has been noted. The visual impacts of the project have been analyzed in Section 3.10.3 of the DEIS. A new proposed site layout complying with FAA regulations and two new visual simulations reflecting the removal of some previously proposed turbine locations along the Whiskey Dick ridgeline are presented in Chapter 1 and Chapter 3, respectively, of this FEIS.
- 6-2. Thank you, your comment has been noted.

**AECEIVED** B

Erin Duleba

×

Wild Horse Wind PP Draft EIS Comment- 7

P.O. Box 50346 Bellevue, WA 98015 (425) 765-0378 August 26, 2004

> ENERGY FACILITY SITE EVALUATION COUNCIL

Allen J. Fiksdal, Manager Energy Facility Site Evaluation Council P.O. Box 43172 Olympia, WA 98504-3172 Subject: Comments in opposition to the proposed Wild Horse Wind Power project

Dear Mr. Fiksdal,

I oppose the proposed Wild Horse Wind Power Project due to the proposed project area location. The proposed project area consists of about 13 sections of land mostly in T18N, *R21E*, adjacent to the Whisky Dick Wildlife Area in Kittitas County, Washington. The proposed project area lies within the largest remaining block of shub-teppe lands in Washington that is vital habitat for numerous species of birds and mammals. The proponent, Wind Ridge Power Partners, L.L.C., has requested to build and operate a generation facility consisting of up to 158 wind generation turbines. The proposed project would forever distroy and alter rare shrub-steppe habitat. The proposed project would forever alter the wildlife behavior and use of the project land and the adjacent state owned wildlife areas. The proposed project would forever alter the recreational opportunities on the project land and the surrounding areas such as photography, landscape and wildlife viewing, and hunting. Please choose a different area for development of wind power. Luge the State of Washington to appropriate sufficient funds to purclass the privately owned Wiiskey Dick Mountain and Skookumchuck Canyon areas and protect them from any and all development.

7-1

Carnyon areas and protect areas is virial to the health of the Colockum elk herd. The The proposed project area is virial to the health of the Colockum elk herd. The herd due to habitat destruction, visual and audible disturbances during construction and during operation and maintenance. The following taken from WDFW Fact Sheet "Elk and skiers at Mission Ridge", May 2001, by Dave Ware supports the above comments: "Colockum elk are currently in decline, with not enough calves born or surviving to adulthood to replace older animals that die. WDFW biologists believe that **decline is due to two factors- reduced forage** and increased disturbance. "Both of these factors have led to an increase in problems with elk damaging private agricultural croplands. The less forage and more **disturbance elk encounter in their natural setting**, the more likely they are to move on to these lands and **denage valuable crops.** Often offending elk have to be purposely killed, adding to the overall herd decline."

7-4

There are three state wildlife areas inhabited by the Colockum elk herd, the Whiskey Dick, the Quilomene, and the Colockum. These areas combined are some of the most unique in the state due to the fact that elk and mule deer can travel from summer range to winter range without any major human developments or obstructions. However, there are large areas of privately owned property between and around the Quilomene and Minskey Dick Wildlife Areas that are in danger of benty developed by this proposed project and therefore threaten the

7-5

continuity of the surrounding state owned wildlife habitats. The value of contiguous summer and winter range can be seen by looking at the nearby Yakima area. The Yakima elk herd does not have the freedom to move to winter range and therefore much human intervention is required as stated in the following from the WDFW Game Management Plan July 2003 - June 2009: "A large percentage of what is considered to be historic elk winter range prior to European settlement has been removed due to agriculture and housing development. At current population levels, **some elk in Washington must be fed every winter due to inadequate winter range**. To prevent elk in the Yakima herd from causing agricultural damage, elk **fencing and a winter feding program was established**." "Elk winter feeding programs can be problematic. They are **expensive** and cause elk to congregate at high densities, where they have a higher potential for spreading diseases."

We have the ability to preserve the land that is proposed for development and it is completely dependent on our policies as stated in the following from "Elk in Washington" published by the WDFW. "The future of Washington's elk depends entirely upon sound wildlife management policies. With civilization's borders constantly unconcolling upon the wilderness areas which form natural elk habitat, **adequate ranges must be maintained for their survival**. Purchases of wildlife Areas, and artificial feeding programs on Department lands have been beneficial to elk populations, particularly in the Yakima area where winter range is lacking." One of the privately owned areas that the proposed project threatens to develop is on and

around Whisky Dick Mountain. The wildlife in the proposed project area would be threatened but there would also be associated negative impacts imposed project area would be threatened but there would also be associated negative impacts imposed on the wildlife in the bordering state owned wildlife lands. The proposed Wild Horse Wind Power Project area borders the West side of the Whiskey Dick Wildlife Area. There are at least six natural springs that are located within the project site that are critical to the local elk and mule deer populations. Of all the places to build and the velop, this is not a good choice if you consider the value of the uninterrupted shrub-steppe range land, the value of the historical animal populations and behavior patterns, and the velopment on the private land directly in-between the Whisky

There is also potential development on the private land directly in-between the Whisky Dick and Quilomene state wildlife areas called Skookumchuck Creek Canyon. Skookumchuck Creek is one of the few in the area that has year-round water and does not have a road up the bottom of the canyon. This is a truly critical canyon for elk in the winter and for mule deer all year long. In Skookumchuck canyon, I have observed multiple elk herds of over 70 animals in each herd on the same day. It is an avesome and beautiful area that I hold dear to my heart. Skookumchuck Canyon and the areas surrounding Whiskey Dick Mountain must be protected from development.

7-3

7-2

7-7

There is much to be lost by the proposed Wild Horse Wind Power Project. The proposed project would destroy critical shrub-steppe habitat. The proposed project would cause disturbance to the native animal populations. The proposed project would destroy recreational opportunities. Please choose a different area for development of wind power. I urge the State of Washington to appropriate sufficient funds to purchase the privately owned Whiskey Dick Mountain and Skookumchuck Canyon areas and protect them from any and all development.

7-9

7-8

Erin Dulel Sincerely.

7-5

### Responses to Draft EIS Comments in Individual Letter 7 from Erin Duleba; Bellevue, WA Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 7-1. Thank you, your comment has been noted. The proposed permanent project footprint (165 acres) would occupy 2% of the 8,600 acres of project area. Mitigation ratios have been proposed that are consistent with WDFW wind power guidelines and temporary impacts shall be mitigated. Furthermore, the Applicant has voluntarily committed to place the entire Project area in a conservation easement (Appendix C).
- 7-2. Thank you, your comment has been noted. See response to Comment 1-1, and to Comment 7-4 below. The Applicant will implement an adaptive management approach to allow access to and through the Project Area and recreational use of the site. Refer to the revisions in Section 3.12.2.2 regarding controlled access.
- 7-3. Thank you, your comment has been noted. Purchase of the privately owned Whiskey Dick Mountain and Skookumchuck Canyon by the state of Washington is beyond the scope of this EIS. The Applicant has voluntarily committed to placing the property in conservation easement.
- 7-4. The project area is used primarily as winter range by the Colockum elk herd, although some year round use also occurs. Several Mitigation measures listed in Section 3.5.4 of this FEIS are intended to avoid or minimize impacts to elk. Results of a recent study on the interactions of elk populations with operating wind farms conducted in

Oklahoma were inconclusive but found no evidence that operating wind turbines have a significant impact on elk use of the surrounding area (Walter et al 2004). This information has been added to the Draft EIS and appears in Section 3.5.2.2 of this FEIS. The project would result in the permanent loss of approximately 165 acres of habitat, however this habitat loss would be offset by the approximate 600 acres mitigation parcel, form which livestock would be excluded either through cessation of grazing in the project area or through fencing, thus providing improved habitat quality for elk. As stated in Section 3.5.4.3 of this FEIS, the Applicant would also allow limited and controlled hunting on the site and allow WDFW access to the site to manage big game herds and minimize potential big game damage to nearby agricultural lands.

- 7-5. Thank you, your comment has been noted. As noted in Comment 7-1 above, a total of approximately 165 acres of the 8,600 acre project site would be permanently impacted, with the remaining area in it's current condition and available for use by big game. In addition, the Applicant has voluntarily committed to place the entire Project Area in a conservation easement.
- 7-6. Thank you, your comment has been noted. Please note that springs in the project area would be protected from further degradation by livestock as described in revised Section 3.5.4 of the DEIS, and in this FEIS.

- 7-7. Thank you, your comment has been noted. Please note that Skookumchuck Creek Canyon is outside of the WHWPP project area.
- 7-8. See Section 3.5.2 of the DEIS for an analysis of loss of wildlife habitat and potential disturbance impacts.
- 7-9. Thank you, your comment has been noted.

Page 1 of 10	. Page 2 of 10
Wild Horse Wind Pl Draft EIS Comment-	Bird Kills
From: lee bates [bateslee@eburg.com] Sent: Thursday, September 02, 2004 8:36 AM To: EFSEC Subject: [SPAM] Wild Horse Wind Farm Project DEIS Comments	The summary of projected mortality of birds and bats ( pages 3.5-24 and 25, 1-72 and/3 ) shows the research for this DEIS is incomplete. Studying other studies and giving a range of
Dwight Lee Bates	intormation does not substitute for doing an actual two year study of the turbine sites for the Wild Horse Project. The
1509 Brick Road	species listed (Section 3.5) offers a reason for a thorough two vear study and future monitoring.
Ellensburg WA	
98926 EVALUATION COUNCIL	
(509) 925-5055	Bird and Bat Kill Mitigation
bateslee@eburg.com	Mitigation methods (Table 1-2, page 1-20 and Section 3.5 ) to
August 5, 2004	reduce bird and bat kills is not satisfactory. The real problem is the 20 RPM blades cause bird kills. The estimated number of kills in Altamont Pass, California is 44,000 birds in 20 years. The only mitigation is to not build turbines period.
Allen J. Fiksdal	Study on Bird Kills
Manager, EFSEC	A two year study is needed before even writing this Draft Environmental Impact Statement ( DEIS ). We should halt this
P.O. Box 43172	process until the two year study is done. Section 3.5 shows a
Olympia WA	Passarina Rird Kills
98504-3172	The optimated Ville of hirds and hote / means 2 E 21 and 2E 4
Dear Mr. Fiksdal,	72 and 73 ) is unacceptable for the minor amount of electricity
This letter contains my comments on the Wild Horse Wind Farm Project DEIS. I am against the project.	generated by these bird and bat kliling turbines. Fire
-	

Page 2 of 10

8-2

8-3

8-4

8-5 bats ( pages 3.5-24 and 25, 1the minor amount of electricity t killing turbines.

9/2/2004

71212004

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Page 3 of 10

The fire mitigations ( pages 3.15-16 and 17, 1-78 ) are not good enough. Fires fanned by the wind have occurred in the area in the past. I do not want to lose my house like happened in the California fires. A Quick Response Plan by Department of Natural Resources is needed. It goes without saying that a Fire Prevention and Suppression Plan is needed. Without this Plan which should have been submitted in the DEIS, this process should not proceed further! Promises to provide a plan in the future ( pages 3.15-18, 3.12-1 ) is not good enough.

8-6

Page 2

#### Visual Impact of Turbines

The 410 foot high turbines (Section 3.10) are too high. They will impact the scenic view. I retired here for the scenic views of the valley. I do not want to see these 410 foot turbines with flashing lights all hours of the day.

8-7

The people on the I -90 and Vantage Highways will see these 410 foot turbines. These turbines should not be located anywhere near I-90. Wind farms are not scenic. Do not give me it is in the eye of the beholder. They may interesting at first but this soon fades. I have seen wind farms at Stateline, Tehachapi and Palm Springs so I know what I am talking about.

8-8 8

> The simulated views of turbines are ugly. I do not want to see 410 foot monstrosities out in the country where I drive to relax! You people have no right to destroy a scenic valley I retired to for the scenery. The only reason you want to destroy the scenery with ugly turbines is your greed for the Federal Subsidies. Painting the turbines gray will not help. I do not

9/2/2004

8-11 8-12 8-10 6-8 mandatory and common sense. What report can the public see cases. Shadow flicker was not properly addressed in this DEIS A set back from these turbines is needed. I disagree that there high wind. To ensure safety a 2000 foot set back from roads is effect throughout their houses causing headaches and sick to Which should be studied at these turbine sites. People living near the Lincoln Township Wisconsin Wind Farm stated in a available upon request ) that shadow flicker causes a strobe page 1-78 ). Blades and ice could be thrown 1000 feet in a to ensure inspections take place on a regular basis? Why is page 3.10-25). How about the recreational users and the s no impact and no risk to the public as stated in the DEIS People living near these turbines report health problems needed. The measures to reduce blade throw are both not a maintenance plan included in this DEIS? wildlife. They will experience shadow flicker. want to see any turbines at all. Shadow Flicker Blade Throw ce Throw stomach Page 3 survey

Page 5 of 10		Page 6 of 10	
fitigation measures to locate these turbines 2000 feet from bads should be stated to ensure safety. I disagree that there is o impact and risk to the public as stated in the DEIS ( page 1- 8 ). Monitoring sensors to make sure the system shuts down n icing conditions are needed. A 2000 foot set back from ublic roads is needed to prevent a passer by on the road from etting hurt. This 2000 foot set back is needed to ensure afety. A major injury law suit could shut down the project.		( page 3.13-1 ). The respect for the Yakama Tribe is lacking. The tribe's culture depends on preserving Historical Sites. This DEIS should not proceed without a response from the Yakama Nation since no response has been received to date ( page 2- 51 ). Also 38 cultural sensitive areas have been identified ( page 2-46 ).	8-15
ax Savings		disagree with the statement in the DEIS (page 1-72) that the	
The tax savings for this project stated (page 3.16-20) of \$3.8 nillion per year is in error due to initiative 747. This limits the rowth of local government property tax revenue to 1% per	<b>4</b>	inpacts on deer and elk are expected to be low. Approximately a 300 acres of mule deer winter range would be permanently lost due to the project ( page 3.16-9 ). Also what is the impact on the species listed on page 3.5-9 to 12?	8-16
		Power Generated	
age 4 his DEIS is in error, is insufficient, incomplete and lacking ata_It should he redone_To say it is a draft is not cood	the point of the second se	The level of generated power listed (page 1-5) shows that these monstrosity turbines generate only a minuscule amount of power. The beauty of a scenic valley is not worth destroying for so little	
nough. It should be written as thoroughly as possible before		Page 5	
ening submitted to the public for review. Does not the writer now the impact of these monstrosities in the Kittitas Valley for ears to come?		bower generated. Studies show that five tenths of one per cent <sup>8-</sup>	3-18
npact on Historical Culture		Washington power needs is all these turbines will	
he DEIS stated there are no anticipated unavoidable adverse practs to cultural resources as a result of the construction		generate. We now sell our power to other states due to our dams	
nd operation of the project ( page 3.13-23 ). This ludicrous! here was plenty of time to study this. This DEIS is insufficient, icomplete and lacking data. It should be redone. A upplemental EIS needs to be done per Section 106 egulations of the National Historic Preservation Act ( NHPA )		nigh output. We do our part to generate national electricity. Let other states do their share by building efficient dams in their states as we have done. Wind farms are not the answer!	
2/2004		9/2/2004	

Page 7 of 10	Page 8 of 10	
Lights	people near the wind farm were awakened by wind turbine	
These turbines will cumulatively contribute to increased nighttime lighting in the Kittitas Valley (page 3.10-24). These	noises. Decommissioning	
lights are likely to have an adverse cumulative effect on views from residential properties in the Kittitas Valley. This is unacceptable! I retired here for the scenic view. I do not want to see these horrible turbines with their flashing lights day and	Where is the information on a bond Zilkha should post so we can tear down the turbines when they result in being eyesores, inefficient and a waste of taxpayer money? I think Zilkha will be	8-21
night. The low power output does not justify building these turbines anywhere. They are not cost effective. I hate the lights we now have on the obnovious cell phone towers in Kittitas	long gone having sold the wind farm when we tear them down. Aircraft Safety	
County. The turbine red and white flashing lights ( page 3.10- 24 ) are too intense and will ruin views.	I disagree with the DEIS statement that: " There would be no cumulative significant impacts to air transportation resulting	
Noise	from development of these projects "( page 3.16-26 ). How can this be when 27 of the proposed turbines would intrude into the	8-22
The statement in the DEIS that the residents will not experience elevated noise levels ( page 3.8-5 ) is not true. The Lincoln Township Wisconsin Survey shows that residents can	projected air space for Bowers Field ( page 3.16-26 ). I am a Private Pilot who flies in the Kittitas valley and these monstrosity turbines are in the way. Midstate Aviation at	
not stand the constant noise from the turbines and have resulting health problems. The noise level of 50 dBA ( page 3.8-5 ) for these	Bowers field trains CWU students to fly in the valley. The turbines are dangerous and unsafe for these students. The very fact that the Federal Aviation Agency requires lights	
turbines will affect the local residents. This figure is too low since 50 dBA is equal to a quiet office. A more accurate figure	( page 3.10-24 ) proves these turbines are a hazard to flight. Setbacks	
is 70 dBA which is equal to busy traffic ( page 3.8-2 from the Wild Horse Wind Power Project DEIS ). This 70 dBA noise level will affect the health of local residents as the Lincoln Township Survey	The setbacks stated as needed in the DEIS (page 3.15-4) of 344 feet are inadequate to protect from shadow flicker, flashing lights, noise, ice throw and blade throw. These set backs as I	3-23
Page 6	mentioned earlier should be 2000 feet to ensure safety. This is especially true in our litigation society.	
	Page 7	
shows. The Lincoln Township Wisconsin Survey showed 67% of		
9/2/2004	9/2/2004	

8-22

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**Property Values** 

Regardless of the untruths in the local Daily Record Newspaper that property values would not be affected, the results of the

8-24

Lincoln Township Wisconsin Survey show that turbines within one mile lower property values by 26% and 74% of the people would not buy within a quarter mile of turbines. Real estate people in Kittitas county have stated that wind farms will affect property values. Who would want to live next door to these turbines? Where is the impact on the Kittitas County property values stated in the DEIS? This is another reason why this DEIS is incomplete and needs to be redone. I awaited anxiously one year for this DEIS. I was grossly disappointed in the quality of this DEIS! Is this DEIS an example of the quality of the turbines they build?

Dwight Lee Bates 1509 Brick Road

Ellensburg WA

98926

(509) 925-5055

bateslee@eburg.com Page 8

9/2/2004

## Responses to Draft EIS Comments in Individual Letter 8 from Dwight Lee Bates; Kittitas Valley Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 8-1. Thank you, your comment has been noted.
- 8-2. Mortality estimates provided in this FEIS are based on observed mortality rates at a number of wind energy developments. A range of rates is provided as opposed to an average number to incorporate uncertainty into the predictions, since actual mortality rates cannot be predicted. The Applicant has completed a one-year study of bird use of the WHWPP site, which exceeds the minimum requirement of one season of survey contained in the WDFW Guidelines for Baseline and Monitoring Studies for Wind Projects (WDFW 2003). The Applicant has also committed to post construction monitoring, as described in Section 3.5.4.4 of this FEIS.
- 8-3. See Section 3.5.3.2 of the DEIS for a discussion of impacts of the No Action Alternative on wildlife. It is widely recognized that conditions at Altamont Pass are conducive to high numbers of bird kills, and comparable numbers have not been recorded at other wind power facilities. Based upon the information obtained during wildlife studies for the WHWPP, mortality comparable to that observed at Altamont Pass is not expected for the WHWPP. Post-construction monitoring will be conducted to establish mortality levels for the WHWPP, as described in Scction 3.5.4 of this FEIS.
- 8-4. The Applicant has completed a one-year study of bird use of the WHWPP site, which exceeds the minimum requirement

of one season of survey contained in the WDFW Guidelines for Baseline and Monitoring Studies for Wind Projects (WDFW 2003).

- 8-5. Thank you, your comment has been noted.
- 8-6. The Applicant has entered into a Fire Service Agreement with Fire District #2 to provide expanded protection services for the project site. The Applicant has also committed to developing a Fire Control Plan for the project.
- 8-7. The Applicant has prepared a preliminary lighting plan. See Figure 3.10-11 in this FEIS for the proposed lighting Plan. The final lighting plan will have to meet FAA requirements. The visual impact of the lighting plan is determined to be low. The visual impacts of the project have been analyzed in the DEIS.
- 8-8. Thank you, your comment has been noted.
- 8-9. As stated in Section 3.15.2.2 of the DEIS, the proposed project should not produce shadow-flicker effects on any residences in the area because the residences are too far from the turbines and are shielded by existing terrain that separates them from the turbines. Further, the flicker frequencies that would be produced by the project turbines would be well below those reported to potentially cause health effects. The Lincoln Township survey reported anecdotal effects and it was not peer reviewed. The

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Keewaunee County Coop Extension posted the following disclaimer: Information on wind turbine survey has not been peer reviewed by University of Wisconsin-Extension and the University cannot endorse the information contained in the documents (pers com. Pat Walsh, Feb 6, 2004).

- ikely to trigger epilepsy seizures." Published research is not under consideration for the Wild Horse Project are 0.6 to 1.0 readily available on the affect of shadow flicker on animals. and safety, such low frequencies are harmless. Frequencies nigher than 3 Hz but below 10 Hz are widely used in strobe A detailed discussion and analysis of the project's potential has made a statement that frequencies below 10 Hz are not to create shadow flicker and any potential health effects is Hz (less than 1 alternation per second). In terms of health lights found in discotheques and the Epilepsy Foundation Recreational users would be moving through the area and included in Appendix A of the DEIS. The briefing states, "Typical blade pass frequencies for the types of turbines would be subject to shadow flicker only on a temporary basis. 8-10.
- 8-11. As stated in Section 3.15.2.2 of the DEIS, ice, blade fragment, and blade throw would extend perpendicular to the wind direction and downwind from a turbine. Because of the significant distances from the proposed tower locations to existing residences and public roads, and restricted site access, the proposed project should not result in any risk to the general public due to ice, blade fragment, or blade throw. A safety setback of 541 feet has been incorporated between Project wind turbines and residences located outside the Project boundaries through the Development Agreement with Kittias County (Appendix A).
- 8-12. Typically, detailed maintenance and inspection plans are not produced at this stage in the development of a project. Rather, the requirement for their production and

implementation would be specified in the Site Certification Agreement issued by EFSEC, if the project is ultimately approved by the Governor. The review, approval, and monitoring of such plans are normally conducted by EFSEC staff or their designees. Section 3.15.4 of the EIS, Mitigation Measures, lists emergency plans that will also be submitted to EFSEC and local emergency response organizations for review and approval.

- 8-13 See response to Comment 8-11.
- procedures and levy rates from both Washington Department property tax increases in Washington State, it is possible that Initiative 747, could generate an estimated \$1.9m in new tax this benefit would be received in the form of lower taxes for revenues. Should the project be purchased by a local utility, such as PSE, the project, subject to certain exemptions from estimated that the Wild Horse project will increase property Because of the recently passed Initiative 747, which limits tax collections by approximately \$460,000 (Pitzler 2004). revenue for the County. Based on project cost estimates of Revenue and the Kittitas County Tax Assessor, it is The project would result in added annual property tax other property owners rather than an increase in tax from Zilkha and on information on tax assessment revenue (Grover 2005). 8-14.
- 8-15. Thank you, your comment has been noted. The Applicant has conducted both records and ground surveys; and entered into a contract with the CCT to conduct a traditional cultural properties (TCP) study to be provided to EFSEC. The CCT have completed the TCP study, and revision has been made to the DEIS and appears in Section 2.11.4 of this FEIS. Both EFSEC and the Applicant contacted the Yakama Nation regarding the WHWPP. EFSEC provided the Yakama nation with a copy of the DEIS and the FEIS.

- 8-16. The conclusion that impacts to elk and deer habitat would be low is based on the finding that the approximately 300 acres of habitat that would be cumulatively affected by the three currently proposed projects is less than 2% of the total amount of the habitat currently available on the three sites and is less than 0.5% of the amount of winter range available in the vicinity of the project sites.
- 8-17. Potential impacts on these species are described in Section 3.5.2 of the DEIS. Impacts are described in the text of the DEIS rather than in a table.
- 8-18. The Draft EIS accurately and consistently refers to between 158 to 312 MW as the nameplate capacity of the proposed project, which is defined as the maximum output at a given time. The project is expected to have a 33% net capacity factor, and therefore would generate approximately 67 aMW under the middle scenario.

70 for the proposed Kittitas Valley Wind Power Project). For concluding that a diverse portfolio is the best strategy. Many (for more information see Ling, Prefiled Testimony, Exhibit future resource needs. Because of the continued volatility of there is a strong and growing interest by Northwest utilities of the major investor-owned utilities and public utilities are to acquire renewable resources, in particular wind, to meet regional utilities for the development of renewable energy sources. There is ample evidence to support the claim that Northwest, and the growing potential for future additional projected electricity demand in the Pacific Northwest, the finding that wind power is a cost-effective resource today Applicant has identified a need for a wind energy project example, Puget Sound Energy (PSE) estimates that wind based on analysis of market information and requests by Regardless of the percentage contribution to meeting gas prices, the increased dry or drought years in the regulation of environmental emissions, utilities are

energy will be "25 percent cheaper than natural-gas fired power and 5 percent cheaper than coal-fired power" (Duryee 2004).

For three of the four Pacific Northwest utilities actively seeking to integrate renewable energy sources into their system (PSE, Avista Corporation, and Portland General Electric), a total of 395 MW is currently being solicited for wind power capacity. Further discussion of how much wind power capacity the regional utilities are seeking is provided in Section 1.2.2 of the Draft EIS. Section 1.2.2 of this Final EIS has been updated to reflect recent changes in the demand for wind power by local utilities that have occurred since publication of the Draft EIS. For example, in September 2004, PSE announced plans to buy the WHWPP in Kittitas County. PSE also estimated that by 2008 it would need power sources that could generate 350 MW more power to serve its growing number of users (Duryee 2004). Also, PSE has acquired and will begin construction of the Hopkins Ridge project near Dayton, WA. Furthermore, in February 2004 PacifiCorp issued a request for proposals for up to 1,100 MW of renewable resources, including wind. SEPA regulations (WAC 197-11-440[4]) require the EIS to specify the purpose and need to which the proposal is responding. The regional demand for wind-generated energy exceeds the existing regional supply. This economic fact supports the underlying need for the project. 8-19. The Wild Horse project would have limited potential to add to cumulative impacts from the three proposed wind farms on night lighting since the site is located 14 miles away from the Desert Claim proposed site and 21 miles away from the Kittitas Valley proposed site. Turbine lighting is required to comply with FAA regulations.

- 8-20. Results of noise surveys near Wisconsin wind turbine projects are not directly meaningful for this FEIS. Noise levels caused by operation of wind turbines depend on the source:receiver distance, and for the Wild Horse project the nearest homes are far from the proposed turbine strings. As described in Table 3.8-7 the predicted wind turbine noise level at the homes nearest the Wild Horse project (more than 1.75 miles away) is less than 35 dBa, which is lower than the likely nighttime background noise levels.
- 8-21. Revisions have been made to the DEIS and appear in Section 2.2.6 of this FEIS for discussion related to Decommissioning.
- studied the effect of proposal(s) on IFR procedures known to be in development for the Ellensburg Airport. All proposed 1-4). The FAA considered all IFR Approach and Departure The FAA has completed their review of the project and has issued Determinations of Non-Hazard (DNH) for 127 wind proposed locations (see revised Project Site Layout, Figure which covers the project area. Future review of impacts of note that all 27 proposed turbines (since revised to 10) are Appendix C of this FEIS). Turbines A1, A2, A3, B1, B2, the WHWPP on Ellensburg airport has been incorporated into the Kittitas County Development Agreement. Please procedures and other published IFR procedures, and also towers are below a FAA 4,000ft AMSL structure ceiling, 33, D1, D2, and D3 will be removed from the original turbine generators (an example DNH is included in part of the Desert Claim project. 8-22
- 8-23. See responses to Comments 8-9 and 8-11.
- 8-24. Refer to Section 3.11.2.2 of the DEIS for a discussion related to property values. Additional information regarding the affect a wind power project might have on property values in the vicinity is provided by Barton DeLacy in the Applicant's

Prefiled Direct Testimony (Exhibit 35) which can be viewed on the EFSEC website at (http://www.efsec.wa.gov/wildhorse/adj/adj.html).

As stated in Mr. DeLacy's prefiled testimony, the Evergreen survey indicated a very high level of awareness of the pending Kittitas Valley and Desert Claim projects, however the analysis conducted showed no negative impacts on property values and sales based upon knowledge of the pending Kittitas Valley Wind Power Project.

	Page 1 of 1
Makarow,	Wild Horse Wind PP Draft EIS Comment- 9 Draft EIS Comment- 9
From: Clé Sent: We To: EF Subject: Wil	iar, Gwen [GCLE461@ECY.WA.GOV] kdnesday, September 08, 2004 2:33 PM SEC d Horse Wind Power Project
Thank you foi have reviewed	r the opportunity to provide comments on the Wild Horse Wind Power Draft EIS. We I the document and have the following comments.
Water Quality Any gravel or ( Permit or other	r concrete obtained from off site is to be from sources covered under the Sand & Gravel General wise approved (gravel sources only) by Ecology.
If you have at (509) 454-72.	ry questions concerning the Water Quality comments, please contact Phelps Freeborn at $77$ .
Shorelands/E1	nvironmental Assistance
In sections 1. from project a was not clear boundaries w	7.4 and 3.4.1.2, attention should also be directed to assessment of possible wetland impacts access road crossings (upgraded and new roads) of drainage swale and riparian areas. It from document language if upgraded transportation corridors outside the project are also assessed for wetland impacts.
If you have any Catherine Ree	y questions concerning the Shorelands/Environmental Assistance comments, please contact ed at (509) 575-2616.
Sincerely,	
Gwen Clear Regional SEJ Department Central Regi 15 W. Yakima, WA (509) 575-20 (509) 575-20	PA Coordinator of Beology onal Office a Ava, Suite 200 98902 12 12 EVALUATION COUNCH

9/8/2004

#### Responses to Comments in State Agency Letter 9 from Gwen Clear; Washington Department of Ecology

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 9-1. Sections 2.2.3 and 3.1.4.1 of the DEIS discuss the Sand & Gravel permit.
- 9-2. Sections 1.7.4 and 3.4.1.2 have been revised to reflect that no streams, wetlands, or riparian areas will be impacted by construction of Wild Horse Project facilities and that no project access roads cross any streams or riparian areas. Section 3.4.2.1 has been revised to include no impacts to wetlands from upgrading the project access driveway through Sections 9 and 4.

Wild Horse Wind PP Draft EIS Comment- 10 10-1 My interest in wind energy is not for personal economic gain. It is a response to my long-standing concern about the degradation of our environment. I retired more than 17 years which is, in part, created by the mountains and valleys to our northwest. Beauty is in the ago from my position as Senior Science Instruction Tech in Biological Sciences at CWU I wholeheartedly support the Wild Horse Project specifically and the harnessing of wind turbines will not destroy such grandeur; rather, turbines will be monuments to the wind At the public hearing on the DEIS for Wild Horse Wind Power Project in Ellensburg, I came to this valley 51 years ago when my boys were five and seven. I knew we had for electrical energy in general. If you are interested in my general comments, I have been blessed that life had brought us to such a beautiful and majestic country. Wind September 6, 2004 eye of the beholder and, therefore, is not subject to mitigation for many opponents. proposals for Kittitas County since they were first made public over two years ago. During my academic and work years I was immersed in environmental concerns. I attached copies of three of my most recent letters to the editor to help inform local addressing the concerns that had been expressed. I have supported the wind farm spoke briefly in support of the thorough report and the recommended mitigations backgrounds. There is nothing that I can bring to your attention that you have not respect each of you for the knowledge and experience you have gained in your reviewed and commented on in the DEIS for Wild Horse residents of the benefits this clean resource. 925 Plum Street S.E., Bldg 4 Olympia, WA 98504-3172 To the Council Members: EFSEC

Sincerely, Helen Mize

Ellensburg, WA 98926 1106 East 3rd Ave.

ENERGY EXALLITY SITE EVALUATION COUNCIL ROFINE SEP 0 9 2004

To the Editor:

May 4, 2004

are not isolated or insulated from the consequences of the many factors that contribute to Our planet Earth is under stress. Much as we might like to deny it, we in Kittitas County warming, loss of fertile land to wind erosion, water erosion, urban sprawl and highways. Add the overpumping of aquifers for irrigation---both the deep fossil aquifers which do not recharge and those nearer the surface which do recharge but not rapidly enough to earth's degradation. Among the many factors are: population, air pollution and global replace water being pumped out. Population exponentially increasing in a finite world means increased demands for water, food and energy. With all the global factors growing and interacting the prospect is agricultural, economic, social and political world chaos.

nurdle comes first. We must all realize that each of us is not only part of the problem but With recognition by all of us of the degradation of the earth that is taking place, with the also we must be part of the solution. We must support those methods and technologies which reduce the degradation of our air, water and soil whenever we have the opportunity. Clean energy is an essential in this effort. Supporting the proposed wind farms is one step we can take here and now. Every step is urgent--time is not on our leadership we can work toward the goal of living in a sustainable world. Our biggest knowledge and technologies we currently have (some old and many new) and with side.

For a clear picture of what is happening and what can be done, read <u>Plan B:Rescuing a</u> Planet under Stress and a Civilization in Trouble by Lester R. Brown. This book from the Earth Policy Institute is up to date and well documented. The Ellensburg Public library has a copy and I have one to share.

cality of the extent of the damage and the speed with which it is happening bring a new degradation. Though I have been involved in environmental issues for many years, the The prospect for the next twenty to fifty years is devastating unless changes are made now. Plan B describes proven methods and technologies which can help reverse the urgency.

Helen Wise Ellensburg 925-5594

ENERGY FACILITY SITE EVALUATION COUNCIL L'ALLENT 45P 0 9 7004



As we continue our on-going discussion of the pros and cons of proposed Kittitas Valley Wind Power Project and Desert Claim Wind Power Project, I would like to call attention to several points to consider as you read. Obviously, those of us who write have very strong concerns which seem to demand write have very strong concerns which seem to demand them more about the wind farm issue or for entertainment, read them carefully and thoughtfully. Remember we should be focusing on current design and technology as described in the proposals as well as our concerns for increasing demands for electricity in a world that is being devastated by a myriad of human demands.

statistics are true for Altamont and if the reader isn't aware that When opponents quote Altamont statistics they are referring to offered lots of attractive perching sites for birds. Bird kill and generating electricity. Yet experts in two guest columns (7/10 they don't relate to the Kittitas projects discussion., that is the the first sizeable wind farm in this country. Generators were and 7/17) used Altamont for examples of bird kill. Don't the wind farm have been addressed by engineers and technicians countless other problems presented by the original Altamont wind turbines. Comparing Kittitas Valley and Desert Claim experts realize the examples are not relevant? Yes, but their resulting in rapid improvement in design and technology of Wind Power Projects to Altamont isn't possible on a l level transmission lines. Unlike current design, Altamont towers meaningful for our discussion even though Altamont is still mounted on structures much like towers that support reader's problem.

Several letter writers as well as the 7/17 columnist expressed concern that wildfires would be caused by wind farms. Wildfires are frightening and devastating. So far this year there have been two such fires in or near the proposed project areas, both caused by human activity. The columnist referred to fires at Altamont related to transmission lines. Transmission lines are essential to the distribution of electricity regardless of the mode of generation. There are many crossing our county and will remain there for the foreseeable future. As for the collector lines on the proposed wind farms, most would be underground. The DIES for Kittitas Valley Wind Power Project, for example, shows pans that less than 5% of the collection lines would be above ground.

July 22, 2004

As for the turbines, the DIES on pages 2-19 and 2-20 gives details of fire safety features: "Each turbine would be equipped with an internal fire

detection system with sensors located in the nacelle (engine room) as well as the tower base. The fire detection system would be connected to the main controller ....In the event of a fire, the turbine would be immediately halted and an alarm activated in the control system that can page or send a message to a cell phone of the on-call operators and/or the local fire district as required."

"The turbines would be equipped with an engineered lightening protection that connects the blades, nacelle and tower to a grounding system at the base of the tower.......The blades would be constructed with an internal copper conductor with conductive path to the nacelle frame, which in turn would connect to the tower".

Having wind turbines in the area could be more of a protection than a hazard.

Again, focus on the projects here in Kittitas County. The first guest columnist says that wind power doesn't really mean less air pollution. Wind power is intermittent and "needs conventional power plants to supplement the power they do supply". Further, "most 'reduced levels, continuously." In Kittitas County no one is talking about building a fossil fuel power plant to go with the wind farm. In this state wind farms will be a supplement to hydropower. The BPA's policy to integrate wind power into the grid makes sense in carrying out its mission and operations as well as making ecological sense.

Sincerely,

Helen Wise 1106 East 3<sup>rd</sup> Ave. 925-5594

SEP 0 9 200

ENERGY FACILITY SITE EVALUATION COUNCIL

ENERGY FACILITY SITE EVALUATION COUNCIL

Having just read the July  $22^{nd}$  In Our View "It's time to approve wind farms", I feel you have summarized the situation so well that nothing more needed to be said. I stopped writing but I urge all who have not read that July  $22^{nd}$  column to do so.

To the Editor Ellensburg Daily Record Ellensburg, WA 98926

August 29, 2004

In the spring of 2002 when news was made public that a proposal to construct a wind farm in Kittitas County had been developed, I was eager to follow the permitting process and the progress of an alternative source of electrical energy. I attended, did lots of reading and studied the issues.

Two years later in a column (4/3/04) I delineated the events of the following months when the opponents made clear they would use every legal challenge they could to delay and defeat the project. After months of meetings without progress, filing with EFSEC was justified.

In yesterday's paper Senator Mullikin in her letter of support for local decision-making states that county commissioners "were elected to balance their constituents' environmental concerns, to protect their constituents' property rights, and to encourage the local jobs and economic development their constituents need." On the other hand, EFSEC has jurisdiction in this decision as declared by DOE. EFSEC's process includes public hearings, directs the applicant to institute mitigations to meet concerns submitted and studies all aspects of the project including the oral and written comments from the public. Members, including Kittitas County representative Patti Johnson, have work experience to bring to the process.

As you put it in your 8-27 editorial "At some point county officials will need to accept EFSEC as lead agency in these projects and focus on working within the system to best represent the needs of the county residents." With county cooperation, wind farms will be a win-win situation. There will be economic benefits to those who lease land to wind energy production (a property right of the land owner) and lower tax rates for all county taxpayers when the turbines are on the tax rolls. School districts containing turbines will benefit accordingly when going for bonds. Added jobs during and after construction will also bring more more into the county. Let that point at which county officials accepts EFSEC as lead agency come<sup>-</sup> soon so we can, at last, start harvesting the wind.

Sincerely,

Nelen Mare 925-5574



### Responses to Draft EIS Comments in Individual Letter 10 from Helen Wise; Kittitas Valley Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

10-1. Thank you, your comment and submittals have been noted.

	11-2	11-3		11-4		11-5		11-6	11-7		
Dept. of Public Works Page 2	reasonably funded and built within 6 years. For more details on the adequacy of each route please check with the Kittitas County Department of Public Works.	The intersection of the proposed access, across from the landfill is a potential hazard. EIS shall require a full design intersection based upon growing traffic, to include turn lanes. Structural improvements of the road may be required. Site distance for 60 mph must be proved or mitigated through route realignment of necessary.	<b>3.14.2 Impacts of proposed Action. Table 4.14-4.</b> The Conclusion of no adverse impacts to aviation is not supported by any documentation in the DEIS. The DEIS does not provide sufficient data to prove the instrument approaches to the two main runways.	are not impacted, because or the restricted arispace to the sourth and the ingit terrain to the north are relatively narrow windows for the straight in approaches recently approved (but under application for last 3 years). Provide charts that show the annuraches relative to the heinth rand Incretion of arch fower. Recruites EAΔ and I orol	sign off. This is a potential fatal flaw for this project unless it is resolved. You shall also demonstrate what impacts the towers have to VFR aviation through the use of charts	and tower placement <b>Land Ownership and Use</b> – Identify all existing Rights-of-way or public easements across the project property. Example – some public easements may exist in the vicinity of Wilson Creek and Charlton road and extend east. This identifies potential access routes and clearly identifies where tower setback are applicable.	Need to provide specifics on the potential size and location so impacts can be assessed	Schedule and General Sequence - References unspecified action to reduce and protect the county roads will be identified in the development agreement. Identify those now so we don't get into the position of agreeing now to agree on something in the future. If it is mitigation identified and approved in the EIS then it goes into the development agreement.	<b>Operation</b> I believe the impacts during tourist had been down played because of its uncertainty. I f there is so much uncertainty then consider an analysis based upon trigger points. If this level of impact occurs then the following mitigation should occur. If the impacts increase to this level then this occurs then the solution and monitoring program funded by Wild Horse to track impacts with potential mitigation identified based on the various trigger points. I think some public roads that go right through the project	are going to be subject to people just stopping in the middle of the road to look at the turbines. These road should be widened or numerous pull off constructed to allow for this.	411 North Ruby Street, Suite 1 TEL (509) 962-7523 Ellensburg, WA 98926 FAX (509) 962-7663
Wild Horse Wind PP Draft EIS Comment-11	UBLIC WORKS	ECEIVED SEP 1.0 2004	ERGY FACILITY SITE	t Draft Environmental		ld Horse Wind Power ., a wholly owned er is to address areas of as that need further review and Bowers Field.	<ul> <li>1 through the City of wing reasons:</li> <li>as County Public Works</li> </ul>	is to the damage being is project would not be nt and is currently seeking of loads expected for this	g taken by the equipment a city. impact the city. to adequately handle the	the County's 6 year and solutions. This is ss what project can be	TEL (509) 962-7523 FAX (509) 962-7663
KITTITAS COUN	DEPARTMENT OF PU Paul D. Bennett, P.E., Director	R	PA Responsible Official ENE	s for the Wild Horse Wind Power Project EIS)		pportunity to submit comments on the Wil ted by Wind Ridge Power Partners L.L.C. Renewable Energy. The intent of this lette arr regarding this project and identify area tas County Department of Public Works a	isting Road Network. Transporter Route ble and should be eliminated for the follov s through town is structurally failing. Kittit	artegat truck permits through the town due the main roads. Overlegal permits for this bridge through town is structurally deficier eplacement is too narrow to accommodate the size c	several 90 degree curves that must being have a significant negative impact on the is and legal lengths and widths would not atives: a restricted to Route 2 at vantage or ne roads, bridges and curves on Route 1 t	Imes. Numerous references are made to ment that identifies all road deficiencies a am is resourced constrained and identifie	5

Dept. of Public Works Page 3		Dept. of Public Works Page 4	
Sincerely,			
Paul D. Bennett, P.E. Director of Public Works			
ou. Original copy sent my mail on 10 September, 2004			
411 North Ruby Street, Suite 1 Ellensburg, WA 98926	TEL (509) 962-7523 FAX (509) 962-7653	411 North Ruby Street, Suite 1 Ellensburg, WA 99926	TEL (509) 962-7523 FAX (509) 962-7663

## Responses to Comments in Local Agency Letter 11 from Paul D. Bennett, P.E. Director of Public Works, Kittitas County Department of Public Works

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter

- No overweight or oversized trucks will be routed through the conditions before and after construction and address changes to road conditions in discussions with the City of Kittitas and Certification, Section 3.15.1.1 'Road Network', Transporter FEIS). In addition, the Applicant will monitor the condition overweight and oversized trucks will be routed through the larger vehicles, therefore, oversize and over length delivery Paul Bennett, dated October 5, 2004 in Appendix C of this County highways. Transporter Route 2 is better suited for vehicles will use Transporter Route 2. (see Zilkha letter to passenger vehicles, light-load delivery trucks, and singletown of Vantage (Transporter Route 2) via Interstate and City of Kittitas. As outlined in the Application for Site Route 1 will only be used for light duty traffic such as unit construction materials and equipment trucks. All of Transporter Route No. 1 and document pavement Kittitas County. 11-1.
- 11-2. The reference to the 6 Year Transportation Program was to advise the reader of this document and others that provided information on the planning and programming of funds for construction of roadway improvement projects. See revised DEIS Section 3.14.1.2 Roadway Limitations in this FEIS.
- 11-3. The proposed Project site entrance lies west of the existing access gate, across Vantage Hwy from the entrance to the Kittitas County Ryegrass Landfill, so the Project site entrance will not be on the crest of the vertical curve, thus

resolving any sight distance issues. Additionally the Applicant has agreed to construct the driveway in accordance with WSDOT Design Manual Chapter 920. Additionally the Applicant will monitor driveway traffic volumes and if volumes exceed 1500 ADT either during construction or during operations the access will be modified in accordance with WSDOT Design Manual Chapter 910.

are two instrument approaches to Bowers Field that currently VOR /DME -A Procedures. Aviation Systems independently impact on VFR Traffic Operations patterns. Revisions have have initial approach altitudes of 5,000 feet above mean sea level (AMSL). They are the RNAV(GPS) RWY 25 and the Inc to conduct a study of the instrument approaches. There Determination of No Hazard provided the structure heights been made to the DEIS and appear in Section 3.14.2.2, Air Regarding VFR aviation, Aviation Systems, Inc. found the Navigation Considerations of this FEIS (Aviation Systems distance from the airport, 12 nautical miles, precludes any turbines from the project to comply with this requirement. Wind Ridge Power Partners contracted Aviation Systems, evaluated this airspace and determined a structure height remains below 4,000 feet. The Applicant has removed 9 restriction for present procedures of 4000 feet AMSL. FAA has also evaluated the towers and has issued a [nc., 2004) 11-4.

- 11-5. There are no public rights-of-way or easements across the Project property, see response to Comment 1-1. The Project would be built on privately owned land, which has no public access. The Washington Department of Natural Resources (WDNR) has a management access easement at the Project entrance for the sole purpose of accessing one of their parcels, which is within the Project area. However, this easement does not grant access to the general public. Since there are no public roads on the site or near the turbines, there will be no need for setbacks. (See Zilkha letter to Paul Bennett, dated October 5, 2004 in Appendix C of this FEIS.)
- 11-6. The Applicant has secured a Development Agreement (Appendix A) with Kittitas County, which includes the specific mitigation actions identified in this FEIS (summarized in Table 1-2 and Section 3.14.4).
- signage directing interested visitors to it, near the Project site be adequate parking at this site. If appropriate, tourist traffic site cause an increase in traffic such that the total volume of entrance to provide the public with information. There will access to the Project property and there are no public roads, Project entrance. The existing and future estimated average unlikely, should any monitored tourist traffic at the Project which go through the Project. Wind Ridge Power Partners conditions would be adversely affected. Although highly vehicles in the peak hour exceed 400 vehicles (the traffic would drop from level of service C to level of service D), As noted under Comment 11-5 above, there is no public threshold at which LOS category for Vantage Highway proposes to construct a visitor's kiosk, with sufficient to the Project site may be monitored by installing tube counters at the driveway to the visitor's kiosk near the daily traffic volumes are very low on Vantage Hwy. conducted, it is unlikely that existing or future road Although monitoring for tourist-only traffic can be 11-7.

Wind Ridge Power Partners proposes to implement the following mitigation measures as appropriate: Wider shoulders and turn pockets for vehicles to turn into visitor kiosk. In the even more unlikely case that an increase in monitored tourist traffic cause peak hour volumes to exceed 1250 vehicles during the peak hour (the traffic threshold at which LOS category for Vantage Highway would drop from level of service C to level of service E), Wind Ridge Power Partners proposes to implement the following mitigation measures as appropriate: Possible construction of passing lanes near the Project site entrance. (See Zilkha letter to Paul Bennett, dated October 5, 2004 in Appendix C of this FEIS.)

Wild Horse Wind PP Draft EIS Comment- 12

Kittitas Audubon Society P.O. Box 1443 Ellensburg, WA 98926 September 9, 2004

> Allen J. Fiksdal, EFSEC P.O. Box 43172 Olympia, WA 98504-3172

Cc: John Lane, Assistant Attorney General Assistant Attorney General's Office P.O. Box 40100 Olympia, WA 98504-0100

RECEIVED SEP 1 0 2004

ENERGY FACILITY SITE EVALUATION COUNCIL

> Mr. Clay White Kittitas County Planning Dept. 411 N. Ruby St. Billensburg, WA 98926

Cc: Nina Carter P.O. Box 462 Olympia, WA 98507 Re: Comments to the DEIS for Wildhorse Wind Farm

Dear Mr. Fiksdal,

Kittitas Audubon Society submits our concerns on birds, bats and wildlife habitat. The concerns which we laid out in previous scoping comments for this project have not been adequately addressed in the DEIS Our areas of concern include: 1. Migratory Birds and Bats, 2. Lithosols and Sagebrush Steppe Habitats, 3. Wildlife Study Deficiencies, 4. Cumulative Impacts from the three proposed wind farms in the Kittitas Valley, 5. Public Access to the Whiskey Dick and Quilomene Wildlife Areas, 6. Impact on Sage Grouse, and 7. Large-Scale Industrial Intrusion into a Natural Area in the midst of what presently is a largely intact and contiguous natural area.

#### Migratory Birds and Bats

To quote page one of the USFWS Interim Voluntary Guidelines to Avoid and Minimize Wildlife Impacts from\_Wind Turbines of July 2003\*, "<u>Avoid locating turbines in known</u> bird <u>migration pathways</u> ..." also on page 3, <u>"Avoid placing turbines in documented</u> <u>locations of any species of wildlife, fish or plant protected under the Endangered Species <u>Act.</u>" \*(reference found at <u>www.fws.gov/f9dhcbfa/wind.pdf</u>)</u> Wildhorse, like the other two proposed wind farms, is situated within the Cascade Mts. Migratory Pathway for raptor and passerine migration. According to Phil Mattocks, Ph.D. ornithologist at Central Washington University in Ellensburg, WA, it is also the location of a "Funnel Effect" for hawk migration. He recently stated his concerns about the potential effects of all turbines proposed to be located in the Kittitas Valley because of this funnel effect. Hawks and other raptors are at the top of the food chain and the killing of migrating raptors could upset the ecological balance in this area.

HawkWatch International (HWI) is probably the best source of information about raptor numbers and their migratory flight patterns for western U.S.A. They have determined the major migratory pathways in the western US and one of these pathways is north south along the Cascade Mountains. They are currently trying to delineate specific pathways through the use of banding and transmitter attachment to raptors. HawkWatch International obtains data from extensive monitoring programs at many sites including some in Washington State. Diamond Head, which is a place about one mile south of Blewett Pass, was one of the sites from which observations were made from 1993-1998. The following table shows monitoring data for Raptor migrations as part of a 1998 study done by HWI for the U.S. Forest Service. There were 57 observation days starting August 27 and ending October 22, and totaled 389 observation hours.

Species	,93-,97 ave	1998
y Vulture	$82 \pm 61.4$	119
y	$14 \pm 4.2$	23
ern Harrier	$28 \pm 11.0$	18
-shinned Hawk	550 ± 224	677
sr's Hawk	$223 \pm 21.6$	417

12-1

Northern Gosnawk	$19 \pm 0.6$	C7
Unidentified accipiter	$64 \pm 17.4$	70
TOTAL ACCIPITERS	$980 \pm 345.4$	1349
Broad-Winged Hawk	$0.2 \pm 0.4$	0
Ferruginous Hawk	$0.4 \pm 0.8$	0
Rough-legged Hawk	$1 \pm 1.4$	Э
Red-tailed Hawk	$162 \pm 34.3$	183
Unidentified buteos	5 ± 2.4	7
TOTAL BUTEOS	$169 \pm 36.7$	193
Golden Eagle	$48 \pm 10.2$	46
Bald Eagle	$4 \pm 3.4$	5
Unidentified eagle	$0.2\pm0.5$	0
TOTAL EAGLES	$52 \pm 9.6$	51
American Kestrel	$34 \pm 7.8$	82
Merlin	$22 \pm 7.3$	38
Prairie Falcon	$4 \pm 1.2$	6
Peregrine Falcon	$2 \pm 1.6$	8
Unidentified Falcons	$5 \pm 5.6$	9
TOTAL FALCONS	$67 \pm 14.1$	146
Unidentified raptor	$26 \pm 12.2$	6
GRAND TOTAL	$1294 \pm 257$	1739
Permission to use data	granted by Jeff P. Smith,	Ph.D.,
Science Director,	HawkWatch	
	International	

The HWI Study gives emphasis to something most Valley residents are likely well aware of - that there are great numbers of birds that regularly "use" the Kittitas Valley as a fly follow ageless migration patterns. Fall migratory birds observed from Diamond Head (for awhile HWI also made observations from Red Top) head generally south into the Kittitas Valley. Many are observed hunting along the canyon ridges that run north to south in the tablelands north of Ellensburg. We assume a similar pattern would be in way, and/or live here at least part of the year. Also that birds in great numbers and variety are on the move heading south in the fall and returning in the spring as they effect for Wildhorse.

12-3

migrations of these birds, some of which mention the Ellensburg area and the Quilomene Hawkwatch has banded and put transmitters on raptors at Chelan Ridge near Wenatchee in an effort to learn more about migratory pathways and has descriptions of the

www.hawkwatch.org. go to Migration Research Sites, scroll down to Chelan Ridge, then area next to the Wildhorse site specifically, with maps available on their website at : choose HERE for tracking information.

12-6 going through the circles. Most commonly circle C and G. Also, page 3.5-4 "The ridge along found bird group during spring and summer and third behind corvids in the fall and winter. A consistent with behavior observed in similar situations." Turbine strings must be kept away a observation sites at site G. The Application submitted showed numerous species' flight paths precedent for this. Set backs could possibly have the effect of limiting some of the impact on appears to be a pattern of raptor flight paths parallel to the western side of the ridge which is generally north and south and are frequented by raptors to capture uplifting air currents. The Whiskey Dick Creek near station G is effectively perpendicular to prevailing winds. There In the DEIS for Wildhorse Windfarm on page 3.5-3 it was stated that passerines were the most abundant avian group found. In addition, raptors were the second most frequently Foote Creek Rim, WY, wind facility, which sports similar topography, has established minimum of 200 feet from the crests of land elevations or ridges in the area that run Table on page 3.5-10 shows that one Bald Eagle was found in the area of one of the he Lithosols and their sensitive plant community.

12-5

A total of 53 species of birds were seen. Of the four most frequently found species (53% for the total), the horned lark, which is also one of the most frequently killed species at other candidate for listing as endangered or threatened by the Washington Fish and Wildlife Commission. We are concerned about the impact on this bird of multiple wind farms. wind farms (This can be found in Vol. III, 14-35 of the Wild Horse Application) is a

12-7

12-8 Golden Eagle and Bald Eagle Protection Act. Other birds found on the site include 8 species additional 5 are also identified as Partners in Flight WatchList species (Reference: Important Endangered species (Bald Eagle), another, the Golden Eagle, is protected under the Federal Of all the 53 species found on the site, one is a Federally and State listed Threatened or that are candidates for listing by the Washington Fish and Wildlife Commission. An Bird Areas of Washington, Audubon Washington 2001).

The Migratory Bird Protection Act, the Golden and Bald Eagle Protection Act and the Endangered Species Act serve to protect migratory birds, and their tenets should be applied to wind farms. Historical reference on nesting activity was mentioned in the studies for the Application No. 2004-01. Burrowing Owl, Golden Eagle, and Sage Grouse nests were found either within the site or within a 1-4 mile radius of the site, Vol. III, Sec 14, pages 40-43. Will they return if the area is not developed for windpower or residences? There have been recent sightings of sage grouse in the project area. This bird is on a State listing because of its precarious circumstance.

12-9

Little to nothing is known about bat species or activities in the area. Concerns for bats are instemerging as a result of some large bat kills at other wind farms. There are no bat study in this DEIS.

#### Wildlife Study Deficiencies

Two-year wildlife studies should be done for both birds and bats. The wind industry is rapidly expanding into habitats and regions that have not been well studied. It is impossible to judge impacts from a 1-year baseline study. There is no statistical value. What do you compare it with? You must do two-year studies to account for variability, as wildlife does not always use the same areas every year. We understand that U.S. Forest Service protocols call for two-year studies on the land under their jurisdiction.

12-11

WEST carried out two year studies at Foote Creek Rim in Wyoming, Buffalo Ridge in Montana, and Stateline and Vansycle in Washington. There is precedence here. WHY WERE TWO-YEAR STUDIES NOT PERFORMED IN THE KITTITAS VALLEY?

#### Night Studies

Nocturnal migration routes must be determined. More thorough studies including might studies were done at the Stateline and Nine Canyon projects in this state thus setting a precedent for wind farms in Washington. Zilkha should have shown these migration routes in the DEIS and needs to prove that there will be no impact on them.

12-12

According to Mike Demry, Blue Mountain Audubon Board member and Stateline TAC member who has been involved in the project from early on, you absolutely cannot terference other wind farm studies to determine estimates of mortality for birds and bats. Each proposed development site is unique and requires detailed, individual attention. The dry lower Columbia River area of the Stateline and Nine Canyon projects is totally different from and is not analogous to the area that includes the Wild Horse Wind Power Project. The USFWS guidelines state " <u>Data on Wildlife use and mortality collected at</u> one energy facility are not necessarily applicable to each other. In addition, the wind industry is rapidly expanding into habitats and regions that have not been well studied. The Service therefore suggests a precautionary approach in making recommendations assessing the impacts of wind energy development."

The argument is made by Zilkha that thorough studies are too expensive. This project which costs millions to do will make millions of dollars for the Windpower company. May KAS suggest that THESE STUDIES ARE THE COST OF DOING BUSINESS.

12-14

#### Cumulative Effects

Cumulative effects cannot be over emphasized. What will be the effect 20 years from now from the many wind farms currently built? Wind farm technology and its largescale application is new. As additional wind farms are built, the cumulative effect of this rapidly growing industry has the potential to cause the decline of some species. Scientifically competent studies about wind farms' environmental effects are lagging, sparse, and expensive to perform. The cumulative effect of the three proposed Kittitas Valley wind farms is an unknown. However, each wind farm will produce conditions that will affect the next one – especially if they are side-by-side as they would be with the KVWP and Desert Claim projects with Wildhorse not far away. If from design or placement a turbine or set of turbines prove to cause disproportionately high mortality, subsequent turbine installations must reflect serious efforts having been taken to prevent a recurrence. As stated in previous wind farm testimony, KAS advocates an adaptive management strategy to be the rule where decisions are treated as experiments to guide future development.

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We are concerned about maintaining public access to the Quilonnene Wildlife Area which is a part of a Washington Audubon Important Bird Area *see Important Bird Areas of Washington, Washington Audubon, 2001*, and the Whiskey Dick Habitat Management Area if Wildhorse becomes a reality.

12-16

KAS's promotion of activities involving the need for public access is reflected in our support of Important Bird Areas (IBA), in providing suggestions of routes local citizens can follow for viewing wildlife, leading field trips, and in the core avocational interest of most members – birding in general. Public access is a vital part of our organizations and the community's well being.

If this project were approved we would like to see the following:

### Technical Advisory Committee (TAC)

The TAC should have the power to: Require studies, review reports (yearly and others), decide what is good for the site, have voting power for all participants, meet with the Wind farm owners, manage post construction monitoring with the ability to have data reviewed by an outside consultant, review mortality rates and determine appropriate ways to minimize impacts such as moving a turbine or a set of turbines, changing lighting, and the shutting down of a turbine for a period in response to an impact such as migratory interference. The TAC will decide its own ground rules and how to proceed. It should be possible to set fines for bird kills, i.e., \$50.00 for common species, \$5,000 for rare species such as a Ferruginous Hawk (The first one, \$10,000 for the second).

12-17

#### Additional Towers

In Section 2. 7 of Application 2004-01, Zilkha states that there is a possibility of increasing the number of turbines in the future. In Section 3.2-43 of the KVWPP DEIS there is reference to research on avian mortality associated with wind farms that states "Generally, the more turbines in a given project, the higher the range of potential

mortality associated with turbine collisions". There should be <u>a limit on megawatts for</u> the original project. Before any additional towers can be added, they must undergo a separate and thorough permitting process, including studies. Permitting should also address movement of towers. We understand that the developers at Stateline now want to move towers onto the ridge that they had stayed off of originally due to input from Blue Mountain Audubon who were concerned about migrating birds.

#### Tower lighting

 The FAA announced in February, 2004 that it was preparing to release a guidance memo

 that continuous or slow pulsing red lights no longer be recommended for new towers.

 White or red strobe lights would be the preferred lighting system. We recommend

 following this guidance.

### Meteorological (Met) Tower structure

Met towers should be required to be of <u>monopole design</u>. Lattice type towers kill many more birds than monopole design towers and even turbine towers. Even with bird deflectors on the guy wires they kill too many birds.

12-20

## Met Tower, Rock Quarry and Turbine Tower Placement

If possible, these should be placed so as to <u>avoid lithosols and lithosol plant communities</u>. 12-21 Set the turbines back 200 feet from ridgelines as discussed above.

#### Decommissioning

The provision of a <u>bond-upfront</u> by the developer to cover the cost of decommissioning should be required. There are evidently wind farms, which have been abandoned and never torn down due to lack of funds to do so on the part of the developer or someone who purchases the wind farm later.

Habitat Rehabilitation

We would suggest <u>fencing off the entire project to cattle grazing</u> to allow for habitat recovery and potential possible recovery of Sage Grouse. Remnants of their living there were found on the site.

12-23

It is unlikely that areas with Lithosol soil habitat can be rehabilitated once they are disturbed. Ridge setbacks and other placement changes would help by avoiding these areas.

12-24

Disturbed area of Sagebrush Steppe should be <u>reseeded with a mix of native species</u> <u>including Sage</u>, utilizing advice of the WDFW. This could be done as an adaptive management/research project. This would be of benefit to the whole area where the Sagebrush Steppe occurs.

12-25

#### Strengthening Guidelines

KAS supports the Washington Audubon Wind Power Policy. We feel that the current Washington Department of Fish and Wildlife Guidelines do not protect birds and bats adequately. KAS recommends that EFSEC and WDFW look at adding and strengthening guidelines for the siting of wind farms using the Washington State Audubon Windpower Policy available at, <u>http://wa.audubon.org/new/audubon</u>, as well as USFWS Guidelines at <u>www.fws.gov/P9dhcbfa/wind.pdf</u>. This would include development of a state windpower plan with a regional EIS to determine the most suitable sites and address cumulative impacts, development of a GIS database of wildlife use, utilize state, tribal and federal agencies to collect data, BFSEC to complete wind power siting criteria and a ranking program which would include "wind resource areas", adaptive management strategies, and funding by the state legislature.

12-26

In addition, the WDFW needs to focus on representing wildlife and not the developers financial interest. In the WDFW Wind Power Policy, p.3 Operational Monitoring, is found the following: "Adjustments that are not feasible because they would make the

wind project un-financeable include removing turbines or shutting down turbines during 12-27 certain periods of the year." Such constraints appear designed to ensure profitability, and their inclusion would be at the expense of wildlife protection.

It has become apparent to us in dealing with the three proposed wind farms and from talking with Audubon members in chapters in the neighborhood of existing wind farms that the process of siting them does not generally allow for environmental input early enough to be of use. It appears that once the application is made all the studies have already been done and further input is not listened to because of the investments in time and money that have already been made. Strong guidelines with clear requirements and public involvement early on would help the situation.

12-28

#### Conclusion

 Again, the major concerns we have with this wind farm DEIS are the potential negative

 impact on Migratory Birds and Bats, Lithosol and Sagebrush Steppe Habitats, Wildlife,

 Public Access, Large-Scale Industrial Intrusion into a Natural Area, and the Sage Grouse.

 12-29

 The Cumulative Impact of bird and bat kills from the three wind power projects in Kittitas

 Valley and the multiple sites within the state and U.S. must be addressed.

Kittitas Audubon believes National, State, County and City governments must develop energy conservation strategies to help offset the demand for more energy. Wind farm development in this country is at a stage similar to that of hydropower 50 years ago, and of muclear power 25 years ago. Planners for those projects may have thought they were doing the right things environmentally. However, here we are in 2004 with drastically impacted fish stocks, searching for ways to restore them that include dam removal. We are still trying to find places to store nuclear waste, and attempting to clean up the leaking sites at Hanford before contamination reaches the Columbia River. Now we have a rush to build numerous industrial wind farms in this part of the Kititas Valley that occupy thousands of acres --8,000 acres for the WHWPP alone. Since we cannot predict with reasonable accuracy the long-term environmental impacts of these projects, it is imperative that caution be taken.

and guidelines must be in plac ation for birds and bats and th	<ul> <li>e to protect the natural environment with special reatened habitat.</li> </ul>	12-30	
the development and implem and City level that will include roblems and global warming. all deserve serious considerati	entation of an energy policy at the National, State, e a multiplicity of actions designed to attack our Conservation, Solar power, Fuel Cell Power and ion.	12-31	
ower is only a small part of the ge of having less of an impact (	picture at best. These other methods may offer the on wildlife.		
general are in a state of declin- the Birds radio broadcast, and	e. This was stated by National Audubon in a recent published in the Audubon State of the Birds Report-	12-32	
Audubon Society comments ar ratory. The air space must be l	e made in behalf of birds and bats both resident kept safe for them.		
a the concerns expressed herei abon Society has voted to not a ation of energy should be pron find Power Project DEIS No a	n the Board of Directors of the Kittitas Chapter of support the three proposed wind farms. noted as an alternative. We recommend the Wild ction alternative be adopted.	12-33	
ùIIy,			
ihnson,	Janet Nelson Concervation Chair		
n Audubon Society x 1443	Kittitas Audubon Society P.O. Box 1443		
urg, WA 98926 @inlandnet.com	Ellensburg, WA 98926 <u>melson@inlandnet.com</u>		

# Responses to Comments in Organization Letter 12 from Keith Johnson and Janet Nelson; Kittitas Audubon Society

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 12-1. The WHWPP site is not located within a known migratory bird pathway. In the western United States, bird migration typically occurs across a broad front, unless a particular topographical feature is present that contributes to birds occurring in higher than normal densities. The topography of the WHWPP does not contain obvious features that would be expected to contribute to birds occurring in higher than normal densities (Cullinan, 2005, Counsel for the Environment's Prefiled Direct Testimony).
- 12-2. Red Top Mountain, located in Section 19 of Township 21 North, Range 17 East, on Teanaway Ridge, is approximately 32 miles from Whiskey Dick Mountain, while Diamond Head, located in Section 15, Township 21 North, Range 18 East, on Table Mountain, is approximately 27 miles from Whiskey Dick Mountain. Both are located to the northwest of the WHWPP site on prominent north-south trending ridge lines associated with the Cascade Mountains. Data from these sites is not directly applicable to the WHWPP project area given the distance between the areas. It is recognized that raptors utilize the WHWPP area, as documented in the DEIS. Spatial patterns of raptor use in the WHWPP area are described in the Section 3.5.1.1 of the DEIS, under the heading Species Occurrence, Birds.
- 12-3. See response to Comment 12-2 above.

- 12-4. It is recognized that raptors utilize the WHWPP area, as documented in the FEIS. Spatial patterns of raptor use in the WHWPP area are described in Section 3.5.1.1 of the DEIS, under the heading Species Occurrence, Birds.
- 12-5. A year long study of raptor use of the WHWPP site was conducted and the results of this study were incorporated into the decision making process for turbine placement. Please see Section 3.5.4.2 of this FEIS for site-specific mitigation measures intended to minimize potential impacts to raptors.
- 12-6. Nine turbine locations have been eliminated along the peak of Whiskey Dick Ridge due to FAA concerns. Although observational evidence suggests that lithosol habitats are common in the general Project vicinity, removal of these turbine sitings may reduce impacts to lithosols.
- 12-7. Thank you, your comment has been noted.
- 12-8. See Section 3.5.1.1 of the DEIS, tables and text, for a discussion on the legal listing status (state and federal) of the species observed during surveys for the WHWPP.
- 12-9. The WHWPP area is located on the western edge of the proposed Colockum sage grouse management area (Stinson et al. 2004). WDFW has expressed concern regarding habitat

Comments and Responses

protect sage grouse, including measures to limit maintenance The Applicant conducted a full year of surveys of bird use of activities within 1/4 mile of an active lek, should one occur on technology available for studying bats does not appear to be Wind Projects (WDFW 2003). The Applicant has agreed to WDFW since the issuance of the DEIS, that are intended to WDFW Guidelines for Baseline and Monitoring Studies for planning for rock source locations and concrete batch plant convene a TAC, as required under the WDFW Guidelines, mortality at existing wind energy facilities have found that Studies conducted for the WHWPP are consistent with the monitoring studies to determine site-specific impacts from development. The Applicant has also agreed to additional the WHWPP area and used the information obtained from highly effective for documenting migrant bat use of a site conservation easement (Appendix C), which will protect habitat within the 8,600-acre project site from additional required under the WDFW Guidelines for Baseline and considering the historic presence of sage grouse during mitigation measures, developed in discussion with the As noted in Section 3.5.2.2 of this FEIS, studies of bat (Johnson et al 2003). Additionally, bat studies are not locations. These mitigation measures are described in Monitoring Studies for Wind Projects (WDFW 2003). restricting recreational use to the extent feasible; and and has committed to two years of post-construction associated with the facility. Current state-of-the -art bats that are migrating are most at risk for mortality the site, between the hours of sunset and 9:00 a.m.; See response to Comment 12-11 above. Section 3.5.4.3 of this FEIS. the WHWPP. 12-13. 12-10. 12-11. 12-12. movement across the Project area. However, several turbine 2003). Relatively large blocks of intact shrub-steppe habitat Whiskey Dick Wildlife Area (28,549 acres), and the private constructed, within WDFW and WDNR lands to the east of between the two populations. Future changes in land use on the Project site and private lands to the east and west of the Project would not appear to significantly impact movement there are no studies that have shown that sage grouse avoid still do exist, and will continue to exist after the Project is the private lands surrounding the Project area could affect rows which were originally considered to be located along lands between them have vegetation similar to the Project movements of sage grouse. It should be further noted that Sage Grouse Management Unit. It is not expected that the eliminated, leaving a distance of approximately 3,937 feet Columbia River and topography of the area (Stinson et al. Project. The Quilomene Wildlife Area (17,803 acres), the Douglas County populations, and the Yakima and Kittitas approximately 492 feet apart and turbine rows are at least County populations. At this time, there is no documented between the nearest wind turbine and the western Project footprint is only 0.13% of the total area of the Colockum Project will significantly limit any potential sage grouse area, but are lower in elevation. At the present time, the potential movement corridors for sage grouse and other wildlife within the Project boundary. The Applicant has Government Springs, and Seabrook Springs, have been boundary. This layout modification provides additional further agreed to place the entire Project Area under a connectivity and Sage grouse movements between the exchange between the two populations. Limitations in wind turbines. The WHWPP has been designed to be 2,625 feet apart. The 165 acres of permanent Project movements already exist due to the presence of the permeable to wildlife movement. Turbines will be Beacon Ridge Road to the west of the Pines Area,

these surveys, along with information obtained from monitoring surveys of other wind energy projects, to provide an estimated range of potential mortality attributable to the WHWPP. This is described in Section 3.5.2.2 of the DEIS and is also described in greater detail in the Wildlife Baseline Study for the Wild Horse Wind Power Project, Exhibit 14 of the Application submitted to EFSEC.

- 12-14. Thank you, your comment has been noted.
- 12-15. As stated in Section 3.5.4.4 of this DEIS, the Applicant plans to convene a Technical Advisory Committee (TAC) to evaluate the mitigation and monitoring program and to determine the need for further studies or mitigation measures. The TAC will be involved in the development of a post-construction monitoring plan and knowledge gained from post-construction monitoring will add to the body of knowledge regarding wind energy projects and wildlife impacts to be considered if and when any future development is proposed.
- 12-16. Thank you, your comment has been noted. The application has specifically identified the Kittitas Audubon Society as a participating member of the TAC. Controlled access to the Project area will be allowed.
- 12-17. The WDFW Guidelines for Baseline and Monitoring Studies for Wind Projects describe the responsibilities of the TAC and specify that the range of possible adjustments to either the monitoring plan or the mitigation requirements should be clearly stated in the project permit. The guidelines go on to provide examples of changes that might be included, and to discuss changes that would not be feasible, which include removing turbines or shutting down turbines at certain times.

- 12-18. If the project is approved by the Governor, any additional future development of project facilities would be reviewed by EFSEC in accordance with its rules and procedures. Environmental impacts not evaluated within the range presented in this FEIS would be subject to environmental review under SEPA.
- 12-19. The project intends to use a dual system of white and red lighting as prescribed by FAA Advisory Circular 70/7460-1 AC70/7460-1K, Obstruction Marking and Lighting as prescribed by the FAA Determination of No Hazard. Figure 3.10-10 in this FEIS depicts the proposed locations of lights.
- 12-20. Section 2.2.3, Subsection: Meteorological Stations and Monitoring Towers has been revised in the DEIS and appears in this FEIS to state that meteorological towers would be free-standing (unguyed).
- 12-21. See response to Comment 12-6. Temporary construction facilities (rock crusher, concrete batch plant, and rock quarries) would also be located taking into consideration the historical presence of sage grouse and their lekking grounds.
- 12-22. Financial assurance mechanisms to decommission the project would be included in the Initial Site Restoration Plan prepared by the Applicant and submitted to and approved by EFSEC prior to commencement of construction. In addition, as stated in the Development Agreement (Appendix A) with Kittitas County, the Applicant or any Transferee, as the case may be, shall provide financial security for the performance of its decommissioning obligations through a Performance Bond issued by a surety registered with the Washington State Insurance Commissioner. The Performance Bond shall be in the amount equal to the Decommissioning Funds.

- 12-23. Thank you, your comment has been noted. The Applicant will be required to develop a post-construction grazing plan in coordination with WDFW and the TAC. Sensitive areas around streams and riparian areas would be fenced to prevent entry by cattle, but allow passage to wildlife.
- 12-24. The EIS acknowledges that lithosol soils would likely be difficult to rehabilitate due to their shallow depth and exposure to the elements (wind). Disturbed soils will be reseded with a designated seed mix, as appropriate for the location, in consultation with WDFW. Due to FAA concerns, nine turbines locations originally proposed along the ridgetops of Whiskey Dick Mountain (String A, B, and D) have been removed from the proposal.
- 12-25. See response to Comment 12-24. As noted in Section 3.5.4.4 of the DEIS and this FEIS, the Applicant intends to convene a Technical Advisory Committee (TAC) to evaluate the mitigation and monitoring program and determine the need for further studies or mitigation measures. This adaptive management approach includes monitoring habitat (e.g. shrub-steppe) conditions for wildlife use.
- 12-26. Thank you, your comment has been noted. Revision to the WDFW siting guidelines is beyond the scope of this EIS.
- 12-27. Thank you, your comment has been noted. WDFW's mandate is beyond the scope of this EIS.
- 12-28. Applications submitted to EFSEC must comply with EFSEC's Rules relating to siting energy facilities (Title 463, Washington Administrative Code), in accordance with the State Environmental Policy Act (SEPA), which includes public involvement through the scoping process. A Potential Site Study was prepared to inform the Council about agency or public concerns expressed during the study and to

summarize potential impacts. Several resource agencies, county and city staff, and other interested groups were contacted for their input regarding project related impacts early in the process (Jones & Stokes 2003). EFSEC held an informational and scoping meeting for the project on April 22, 2004 in Ellensburg, WA. Environmental resources analyzed in the Draft EIS are in response to issues identified through the scoping process. Please note that WDFW provides guidelines specific to siting wind farms in eastern Washington.

- 12-29. Cumulative impacts of the three wind power projects proposed in Kittitas Valley are described in Section 3.16 of the DEIS and revisions to this analysis are presented it Section 3.16 of this FEIS. Analyzing cumulative impacts at the state and national level is outside the scope of this EIS.
- 12-30. Thank you, your comment has been noted.
- 12-31. Thank you, your comment has been noted. Development and implementation of an energy policy at the National, State, County, and City level is beyond the scope of this EIS.
- 12-32. A reference to this report has been added to the FEIS.
- 12-33. Thank you, your comment has been noted.

		13-1	13-2	13-3	13-4	13-5	13-6	13-7	13-8	13-9		
	The following are my comments:	<ol> <li>Un page <i>in paragraph</i> 1 the DELS states that EFEBC is the only non-foctral agency authorized to permit the proposed project. This is not true, as Kittlas County is also a non- federal agency authorized to permit this project. At this time the Desert Claim Wind Power project submitted by enXco, Inc. is being processed by Kittlas County. <u>This paragraph</u> should be taken out, as it just, true.</li> </ol>	2) (Page 1-1) 1.1 - paragraph 3. The DEIS states "The information and resulting analysis presented in this Draft EIS are based primarily on information provided by the applicant" Kithitas County hopes that the analysis and proposed mitigation for the FEIS is prepared by consultants working for EFSEC, not the applicant.	3) (Page 1-2) 1.2 - Purpose and need for project and (Page 1-2) 1.2.1 - Need for Additional Power Generation Fabilities - Throughout this section the need for additional power in the Northwest is discussed. The information is based off information provided by the Northwest Power and Conservation Council (NWPCC 2003). If this information is going to be used in the DEIS I think the DEIS should situlate that all power created for the Wildhorse Wind Power Project will be sold within Washington, Oregon, Iadaho, and Montana. It would be very misleading to discuss regional power needs if the power may be sold outside the region being discussed. Please note that regional power needs are discussed throughout the DEIS. My comment above should be applied to all of those sections.	4) (Page 1-4) 1.3 – Decisions to be made – I find this section a bit disturbing as the focus of the section jumps from EFSEC's sole jurisdiction to land use inconsistency to preemption. This section should have addressed the necessary steps to gain consistency with local land use and zoning ordinances. At this point in the process why is preemption even being discussed as an option? <i>The method for gaining consistency should also be addressed on (Page 1-78 &amp;79) 1.8 – Issues to be resolved.</i>	5) (Page 1-7) 1.4.4 - paragraph 2. The DEIS states that the No action alternative would result in further subdivision of properties within the project area and uses as allowed within the Commercial Ag-20 and Forest and Range zones which is correct. What seems odd is the assertion that if this project is not built a gas fired combustion turbine facility may have to replace the power this project would produce. <u>That statement is wrong and should be taken out of the DEIS</u> . Please have this removed out of fall "No action alternative" sections where that is mentioned as it is meanioned as it is meanioned as it is meanioned as its meanioned as the substatement is wrong and solved where that is meanioned as its meanis as its meanioned as its meani	6) (Page 1-17) – Vegetation and Wetlands -The mitigation measures section should state that all proposed actions are required to comply with KCC 17A, Critical Areas.	7) (Page 1-19) – Wildlife - The mitigation measures section should state that all proposed actions are required to comply with KCC 17A, Critical Areas.	8) (Page 1-27) – Noise - The mitigation measures section should state that all proposed actions are required to comply with KCC 9.45, Noise.	9) (Page 1-34) – Public Services and Utilities/Recreation – The applicant has stated that they now have an agreement or preliminary agreement with the local fire districts. That agreement should be addressed and mitigation reviewed for the FEIS.	2	
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Wild Horse Wind PP Draft EIS Comment- 13	Kittitas County Community Development Services HIIN Ruby STE 2 Bllensburg, WA 98926			September 10 <sup>m</sup> , 2004 Fina Makarow, Siting Manager EFSEC 925 Plum Street SE, Building 4 P.O. Box 43172 Olympia, W.A. 98504-3172 RE: Comments on Wildhorse Wind Power Project DEIS	Dear Ms. Makarow: Thank you for this opportunity to comment on the Draft Environmental Impact Statement for the Wildhorse Wind Power Project. I hope the following information is useful when preparing the	FELS. As with the Kittitas Valley DEIS, these comments relate to those items needing further study or text changes needed prior to EFSEC issuing the Final EIS for this project. This letter should not be interpreted to reflect what additional information Kittitas County may or may not need prior to setting hearings on this project.	As or spectneds a 2 vOVA sturtured as a working starturg agreement wint in this at the severable Energy and we will now be looking at environmental information needed (if any) prior to setting hearings. We have net with Zikha staff on this issue and will continue to coordinate this issue with them. I encourage you to contact me at anytime if you have questions.	As part of the staffing agreement with Zilkha Renewable Energy, Kittitas County has hired Huckell/Weinman and Associates to assist us with the consistency process. Huckell/Weinman is	the company that was hired by Kittitas County for the Desert Claim Wind Power Project. As you know, Kittitas County issued a Final EIS for the Desert Claim project in August and it was not appealed. Attached to my comments please find comments from Huckell/Weinman on behalf of	Kittitas County.		

	13-20	13-21	13-22	13-23	13-25	13-26		13-27	13-28	_				
	20) (Page 2-48) 2.11.1 – County Planning Staff – The paragraph is inaccurate: June $4^{dh}$ , 2004 – Zilkha submitted the rezone, conditional use permits, and development agreement request. June $25^{dh}$ , 2004 – Zilkha submitted the request for a Comprehensive Plan change (sub-area plan). Kititias County then reviewed the application and down dual tai Zilkha did not supply us with a complete 300' adjoiners list as required by law. July $23^{dh}$ , 204 – A complete multionize use available.	approximation and necessary to prove a transmission of Approximation and out of Aprilance Country on July 28 <sup>6</sup> , 2004 with an August 30 <sup>6</sup> , 2004 comment deadline. 21) (Page 2-53) 2.12 – Potential for Future Activities – This section should state that if the project were to expand outside the scope of this request, permits would be required by Kithitas County.	22) (Page 3.7.2) 3.7.1.1 – Northwest Regional Energy Resources – Please see comment 3) within this document.	23) (Page 3.9-3) 3.9.1.2 – Existing Land Use – Last Paragraph - Please see comment 4) within this document. 24) (Page 3.9.12) Table 3.9-2 – G.P.O 6.34 should be listed under the Description section of the	table, not the Relationship to the proposed project. 25) (Page 3.9.13) Table 3.9-2 - Please see comment 20) within this document.	26) (Page 3.10-24) Turbine Lighting – Paragraph 1 – The last sentence is very misleading. A preliminary lighting plan should be prepared for this project. The plan should cover all three project scenarios. Please see previous comments on this issue.	27) (Page 3.10-29) 3.10.5 – Mitigation Measures – This section says that the mitigation proposed is from the applicant. Shouldn't this be the mitigation proposed by EFSEC? Bullet point 8	addresses lighting but it really isn't mitigation, it is required. A lightning plan would help identify any probable significant impacts, which would help in the mitigation process.	28) (Page 3.14-11) Table 3.14-4 – Aviation hazards – How can the aviation hazards be assessed when it hasn't been studied? The DEIS previously says that probably significant impacts are not known at this time but this table says that here would be "some rais?"? Please define "come rais" of the same show here and the says that provide the "some rais"? Please define	source that a state and the new new to be secure to use that the PERS, hearings and be addressed in the PERS.				
egenesene eksense son	13-10	13-11		13-12	13-13	13-14		13-15	13-16	13-17	13-18	13-19		10010
	10) (Page 1-79) 1.9.1 – Wildlife –Additional studies or information should be provided addressing potential significant impacts to wildlife as a result of maintenance operations. This shouldn't be left as an unresolved issue. This comment is also applicable to (Page 3.5-41) 3.5.5. Saying that impacts may or may not be significant needs to be resolved and addressed prior to the decision making process.	11) (Page 2-6) 2.2.1 – Impact analysis and design scenarios – paragraph 1 – The first sentence states "The applicant has fully analyzed the entire range of potential impacts and described all environmental effects from the full range of sizes and types of wind turbines". Since EFSEC is still accepting comments on the DEJS it doesn't seem prudent to assert that all impacts have been analyzed. This is pointed out in item 10 listed above where the applicant	acknowledges that Wildlife impacts are an unresolved issue. The statement may be relevant in the FEIS as long as EFSEC is also included in the statement and it reflects that based on DEIS comments, potential impacts were reviewed and additional mitigation (if necessary) proposed.	12) (Page 2-12) 2.2.3 – Meteorological Stations and Monitoring Towers – Prior to the FEIS being issued the applicant should explore the possibility of using free standing towers are guyed towers are more susceptible to bird kill.	13) (Page 2-15) 2.2.3 – Concrete Batch Plant – The proposed concrete batch plant will require a conditional Use Permit from Kittitas County. An application for that permit has been converted.	14) (Page 2-17) 2.2.3 – Lighting – Although the FAA has regulatory control on the lighting plan, the applicant should be able to provide a prediminary lighting plan. Or not applicant the applicant should be able to provide a set of the transformer of transformer of the transformer of transformer of the transformer of the transformer of transformer of the transformer of transfo	project scenarios. This should be moluded in the FEIN. Flease see the Desert Claim DEIN and FEIS for examples of lighting plans.	15) (Page 2-25) Table 2-3 Task/Milestone – This is an unrealistic timeframe. Needs to be revised.	16) (Page 2-26) 2.2.6. Decommissioning - paragraph 3 - The DEIS states that the funding source for decommissioning has yet to be determined but a plan would be completed prior to construction. This is an issue that needs to be addressed prior to the FEIS being issued. This should have been better addressed in the DEIS.	17) (Page 2-31) 2.6 – paragraph 2 – When did off-site alternatives become a requirement of EFSEC? On the Kittitas Valley project I was told that EFSEC has never produced an offsite alternatives section and that it wasn't necessary for your permit process. I am glad this is addressed within the DEIS but I wasn't aware that EFSEC is now requiring it.	18) (Page 2-32) 2.6.1 – bullet 1 – the Commercial Forest Zone – KCC 17.57 should be added to bullet 1 as Windfarms may be permitted within that zoning district with the proper permits (along with Ag-20, Commercial-Ag, and Forest and Range).	19) (Page 2-47) 2.10 – Table 2-10 – Under Noise control, KCC 9.45 should be included.		

				13-30			13-31		13-32	
Review Comments on Wild Horse Wind Power Project Draft EIS Issued by Washington Energy Facility Site Evaluation Council	Huckell/Weinman Associates, Inc. September 9, 2004	Chapter 1 Summary	1. Table 1-2	Many of the entries in Table 1-2 are overly generalized or vague, identify outcomes for measures that do not clearly define the dimensions of the specific impacts, and generally provide an insufficient description of impacts to support a conclusion as to impact significance. The overall result is that the impact summary provides an incomplete and not highly informative disclosure of the expected impacts from the project. Examples	of specific shortcomings are described below.	a. 3.1 Earth Resources, p. 1-10	The table entries for construction impacts simply identify acres of construction disturbance and cubic yards of cut-and-fill and material import requirements, with no indication or explanation of the impact level associated with these quantities. From the limited information provided, it is not possible for the reviewer to determine whether earth resource impacts would be significant, or how such a determination would be made. Information on operation and maintenance impacts is similarly sparse, limited to the total acreage of permanent ground disturbance and unsupported classification of earthquake, volcanic and landslide hazards as "Low."	b. 3.2 Air Quality, p. 1-14	The impact measures identified for construction impacts (row header entries) do not seem to follow consistent logic. The rows for "Odors" and "Fugitive dust and exhaust emissions" appropriately identify types of air quality impacts (pollutants) that would occur, while the middle row for "Impacts during construction of substations and transmission facilities" inconsistently refers to a subset of the project construction elements and locations; air quality impacts from substation and transmission construction would also be odors, fugitive dust and exhaust emissions. The specific table entries for construction of why impacts represent assertions that do not give a clear indication of why impacts would be "limited and negligible," "negligible" or "none."	
13-29		-	*****							
29) (Page 3.14-26) 3.14.5 – Significant unavoidable adverse impacts – I do not understand how the conclusion of this section can that no unavoidable impacts will result from the project when all of the studies have not been completed. Before this conclusion can be made aviation impacts should be identified and mitigation should be proposed.	Please do not hesitate to contact me if you need any assistance or further information.	Sincerely,	and	Clay White Planner II Kittifas County Community Development Services (509) 962-7506	cc: James Hurson, KC Deputy Prosecuting Attorney					~

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Water Resources,
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The table entries for construction and operation impacts simply identify acres of construction and permanent disturbance, gallons of water required and the depth of construction excavation for turbine foundations, with no indication of context or explanation of how these measures relate to impacts or the impact level associated with these quantities. In the case of the excavation depth, for example, the depth of the water table is not indicated so it is not evident from the table whether construction would intersect groundwater. From the limited information provided, it is not possible for the reviewer to determine whether water resource impacts would be significant, or how such a determination would be made. In addition, the table makes no reference to surface water resources in and near the project area or the potential for impact to those resources. Figure 1-2 appears to show project roads croads croassing upper reaches of Whiskey Dick and Whiskey Jim Creeks, indicating the potential for impacts to surface water bodies needs to at least be addressed.

13-34

### d. Vegetation and Wetlands, p. 1-17, 18

Intuitively, it does not seem plausible that the three development scenarios for the proposed action would have a relatively large range of temporary disturbance acreage (289.5 to 401.4 acres), but would all have the same permanent footprint (165 acres). Section 2.2.1 (page 2-6) provides a brief explanation for this condition, but that condition is not confirmed without a tabular breakdown of acreage for the respective project components (turbines, access roads, met towers, substation, Q&M facility, etc.) and all three scenarios.

13-35

e. Wildlife, p. 1-18, 19

The entries for construction impacts are sparse and non-specific, and provide no indication of context, impact levels or significance. Acknowledgement of "temporary disturbance" impacts to bald eagles provides little meaningful information without identification of the extent, frequency and intensity of the impact, or the size of the population affected. Likewise, the entry for "possible avoidance behavior" provides minimal context for this type of impact. With respect to operation impacts, the simple statements of "potential" for mortality, disturbance or avoidance do not support a determination of impact level.

13-36

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f. 3.6 Fisheries, p. 1-23

The entries in this part of the table state that there would be no impacts to fish habitat and that fish habitat is absent from the project area, both of which are plausible and consistent with more detailed information presented elsewhere in the document. However, Section 3.6 entries also state "See Water Resources," and the Water Resources section of the table is silent with respect to surface water bodies.

g. 3.7 Energy and Natural Resources, p. 1-24, 25

As noted for previous table entries for other resources, presentation of quantities for consumption of various resources is not meaningful information without context as to the significance of those quantities.

h. Visual Resources/Light and Glare, p. 1-29, 30

The table entries for this section, simply indicating moderate or low longterm impact or indicating that construction equipment would be visible, provide minimal description of the impacts and are not sufficiently informative.

i. Population, Housing and Economics, p. 1-33

The entries for construction impacts state the maximum number of employees and the number of rooms or units available at peak times, leaving the reviewer to note the apparent implication that there would be enough rooms or units available even if all project construction employees demanded temporary lodging, it would be more informative and direct to identify the estimated demand for temporary accommodations among construction workers, compare that to the available supply, and render an observation about the adequacy of the supply.

j. Public Services and Utilities/Recreation, p. 1-33, 34

As noted previously for other resources, this section of the table simply provides quantities associated with the project (numbers of construction or operations employees, acres disturbed, etc.), and makes no explanation of how those numbers translate to service demand or the adequacy of existing services. These entries do not directly address the level of impact for the resocrive services and utilities.

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	Kittias County Fire Marshal (nor has it rejected those recommendations) and Kittitas County has not yet defined conditions of approval for that project, so it would be appropriate to slightly revise the wording of the second entry on page 1-69. For the other resources indicated, the updates generally involve acreages and similar quantities.	3. Section 1.7 Cumulative Impacts, p. 1-70 to 1-78	Similar to Comment 2, some references in Section 1.7 to impacts of the Desert Claim alternative should be updated to be consistent with the content of the August 2004 Final EIS for the Desert Claim project.	4. Section 1.9.2, p. 1-79	The text in this location notes that peak-hour traffic noise would likely exceed FHWA noise criteria at homes within 75 to 100 feet of the haul route. This is inconsistent with Section 3.8 of Table 1-2, which indicates that commute vehicles and heavy trucks would cause traffic noise levels to exceed FHWA impact thresholds only at homes within 60 feet of the centerline. Table 1-2 states that construction traffic noise would be unlikely to cause any adverse impact, while Section 1.9.2 implies that construction traffic noise would be significant.	Chapter 2 Proposed Action and Alternatives	5. Section 2.2.3 or 2.2.4	As noted in Comment 1d, it would be helpful if the project description provided a tabular breakdown of acreage for the respective project components (turbines, access roads, met towers, substation, O&M facility, etc.) and all three scenarios. Table 2-1 shows aggregate project data for total permanent footprint acreage and road mileage, but not acreage data for the respective components of the project.	6. Section 2.9, p. 2-46, 47	The text of this section primarily addresses the disadvantages of reserving project approval for a later date. Kittitas County agrees that a delay in project approval might make the Wild Horse project infeasible. Contrary to the statement at the bottom of page 2-46, however, it is not intuitively obvious that failure to approve the project would make it more difficult for regional utilities to meet their energy supply goals, and the EIS does not provide support for this statement. Given the number and capacity of wind energy projects that have been proposed for various locations in the Northwest, regional utilities might well be able to meet their supply goals	Ъ	
	k. Cultural Resources, p. 1-36 The sparse entries of "None" do not adequately explain or characterize the situation with respect to potential impacts to cultural resources, and are likely to be misleading. Most reviewers would likely interpret these entries to mean there are no archaeolocical or historic sites within the <i>broiect</i>	area, while the correct implication is that there are no archaeological or 13-42 historic sites within the <i>disturbance area</i> for the project facilities. From the	information presented in Section 3.13 of Chapter 3, it is evident that there are some archaeological and historic sites within the project area, but that none of these sites are overlapped by locations for turbines, project access roads or other project facilities.	I. 3.14 Traffic and Transportation, p. 1-37, 38	The entries in this section of the table do not provide a sufficient description of impact levels for the various aspects of transportation. Information on the numbers of project-related trips is not meaningful in the absence of corresponding data for baseline traffic, or an indication of the potential changes in level of service. Similarly, simple statements such as "increased risk of accidents" and "Some risk to aviation" do not define the expected level of impact.	m. Health and Safety, p. 1-39, 40	In general, these entries do not provide meaningful information characterizing the immode accorded with the various health and estate	risks. It is not sufficient to simply indicate that the various means are specific in the simply indicate that the spill and security plans will address specific hazards; the reader is given no indication of the degree of residual hazard with those plans in place. Similarly, merely identifying the quantities of various hazardous materials that would be used provides no useful information about the level of hazard associated with those materials.	Table 1-3, Desert Claim impacts, p. 1-45 to 1-69	The impact entries for the Desert Claim Alternative are based on the content of the December 2003 Draft EIS for the Desert Claim Wind Power Project. Some of the impact quantities and other characteristics of the Desert Claim project have changed since the publication of the Draft EIS. Consequently, entries in Table 1-3 for Desert Claim (and corresponding information in Chapter 3) should be reviewed against the content of the August 2004 Desert Claim Final EIS, and updated as appropriate. This need primarily applies to Sections 3.3, 3, 4, 3.5, 3.9, 3.13, 3.14 and 3.15. With respect to Section 3.15, Desert Claim Wind Power LLC has not specifically committed to implement all of the recommendations of the	4	

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airspace limitations, and the project status relative to FAA notification requirements and obstruction standards.

Section 3.15.2.2 Health and Safety, O&M Impacts, p. 3.15-7

Similar to Comment 17, the discussion of fire and explosion hazards identifies possible sources of fire or explosion and safety measures that would apply to those hazards, but it stops short of actually defining an expected impact level for the proposed action. Without a more specific definition of the fire/explosion risk and potential impacts, including the residual level with implementation of assumed or proposed mitigation, this section does not provide sufficient support for the conclusion of no significant impacts in Section 3.15.5.

21. Section 3.15.5, p. 3.15-19

This section indicates that impacts associated with lightning strikes are a possible exception to the statement that there would be no significant unavoidable adverse impacts to health and safety, but provides no additional characterization or explanation concerning possible lightning-related impacts. Section 3.15.2.2 notes that the turbines and substations would have lightning protection systems, but does not indicate the expected impact level with those systems in place.

13-66

22. Chapter 3, multiple sections addressing Desert Claim impacts

As noted previously in Comments 2 and 3, material on the Desert Claim project in several Chapter 3 sections on impacts of the alternatives and Section 3.16.6 should be updated to be consistent with the content of the August 2004 Final EIS for the Desert Claim project.

# Responses to Comments in Local Agency Letter 13 from Clay White, Planner II Kittitas County Community Development Services

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

provides answers to questions raised in the County's own Please note, that although individual responses are provided below, it is stated in the draft County Staff Report on Proposed Wild Horse Wind Power Project – Comprehensive dated January 20, 2005, page 24, that "Kittitas County concludes that the analysis and additional information confirm that the environmental analysis is accurate and review comments. This review and evaluation, therefore, has provided sufficient basis to consider and address environmental issues, as required by SEPA, and to support have been addressed in the Final Development Agreement Plan Amendment & Wind Farm Resource Overlay Zone, many of the concerns expressed in the Letter 13 submittal between the Applicant and Kittitas County (Appendix A). Some of the responses point directly to the Development its decisions on the Wild Horse proposal.". In addition, Agreement for resolution to the issue raised. 13-1. While Kittitas County does have the authority to permit wind power projects in its jurisdiction, it does not have permitting authority over the proposed WHWPP because the Applicant chose to pursue project approval through EFSEC pursuant to state law. Revisions have been made to the DEIS for clarification and appear in the Fact Sheet for this FEIS. In cooperation with Kittitas County, the Applicant has sought approvals by the Board of County Commissioners, pursuant to KCC 17.61A.040, for a wind farm proposed within the Resources Overlay zone. The Applicant has negotiated a Development Agreement with Kittitas County. Furthermore

the County certified that the project was consistent with local land use plans and zoning ordinances.

In Table 2-10 of the DEIS, under SEPA, it is stated "Kittitas County would have been lead agency absent EFSEC jurisdiction, Washington Environmental Policy Act, Chapter 43.21C RCW; Chapter 197-11 WAC Washington Department of Ecology SEPA Rules, which establishes uniform requirements for compliance with SEPA."

- 13-2. Jones & Stokes is retained by EFSEC to prepare the EIS for the Wild Horse Wind Power Project.
- 13-3. Power produced by the project would be delivered to the regional power grid and transmitted to load centers. The location of those load centers would depend on the terms of the power sales agreements executed by Wind Ridge Power Partners LLC. Possible purchasers of the project's output include public utilities and/or investor-owned utilities in the Northwest, the Bonneville Power Administration (the federal power-marketing agency serving the Northwest), and/or private-sector power-marketing entities. PSE has also formally indicated its intent to purchase the WHWPP if permitting is successful.

The Applicant is currently marketing the electricity that would be produced by the WHWPP to local and regional utilities and power markets. It is not possible to predict at this time where the output would be delivered or how much

	of the electricity might be used in the local area. Wind power developers are not able to execute a power sales agreement	13-9.	Revisions have been made to the DEIS and appear in Section 3.12 and Table 1-2 of this FEIS.
	However, the power produced at the WHWPP would most likely serve a portion of the needs of the Northwest power pool.	13-10.	Information on the impacts of wind turbines on big game is lacking. Results of a recent study on the interactions of elk populations with operating wind farms, conducted in Oklahoma were inconclusive but found no evidence that
13-4.	Refer to Section 3.9.1.2 and Table 3.9-2, for additional discussion of the County's permitting process for locating Wind Farms. The County has certified that the Project is consistent with local land-use plans and zoning ordinances.		operating wind turbines have a significant impact on elk use of the surrounding area (Walter et al, 2004). This information has been added to the DEIS and appears in Section 3.5.2.2 of this FEIS. Site specific impacts of the
13-5.	Under the No Action Alternative, a gas-fired combustion turbine facility was presented as a potential source of new power generation, along with other possibilities, should the WHWPP not be built to support energy resource demands in		The post-construction in the post-construction monitoring to be conducted under the guidance of the Technical Advisory Committee convened for the WHWPP, as described in Section 3.5.4.4 of the DEIS and FEIS.
	the region. Given many of today's environmental concerns regarding the damming of rivers, two other wind projects already proposed in Kittitas County, and the number of gas- fired combustion turbine facilities already in production, this type of facility is presented in the EIS as a reasonable and likely facility to be considered for development.	13-11.	Revisions have been made to the DEIS and appear in Section 2.2.1 of this Final EIS to state that the full range of potential impacts and environmental effects associated with the three scenarios have been evaluated in the DEIS and additional mitigation measures are proposed in the FEIS as a result of further consultation with the agencies and comments submitted on the Draft EIS.
13-6.	Section 3.4 in Table 1-2 has been revised to note wetlands are designated as "critical areas" under the local jurisdiction of Kittitas County (Kittitas County Code Title 17A). Please see Section 2.10 Applicable Federal, State, and local Requirements in the DEIS for an explanation of the relationship between the Kittitas County Code and the EFSEC permitting process.	13-12. 13-13.	Section 2.2.3, Subsection: Meteorological Stations and Monitoring Towers, has been revised to state that meteorological towers would be free-standing (unguyed). Thank you, your comment has been noted.
13-7.	See Section 2.10 Applicable Federal, State, and local Requirements for an explanation of the relationship between the Kittitas County Code and the EFSEC permitting process.	13-14. 13-15.	See new Figure 3.10-10 in this FEIS. The construction schedule presented in Table 2-3, Section 2.2.4 has been updated.
13-8.	The requested information has been added to applicable regulations listed in Table 2-10 and appears in this FEIS.	13-16.	See response to Comment 12-22.
Wild Ho	rse Wind Power Project 1: S	-2	May 2005

Comments and Responses

Energy Facility Site Evaluation Council

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Comments and Responses

Energy Facility Site Evaluation Council

Energy F	acility Site Evaluation Council		Comments and Responses
13-32.	The requested changes were made to air quality items in Table 1-2. In addition, Table 3.2-1 of the DEIS has been updated in this FEIS to explain the rationale for describing the air quality impacts as "limited and negligible".	36. Th fo fo fo fi	e information in Table 1.2 "Summary of Potential Impacts Proposed Action (Including Transmission Feeder nes[s]) and No Action Alternative" is intended to mmarize information contained within Chapter 3 of the iIS. For a more detailed description of potential impacts to
13-33.	The purpose of the quantities provided in Table 1-2 is to summarize and allow comparison between the 3 different	wi	Idlife please see Section $3.5.2$ of the FEIS.
	sized turbine scenarios and the potential impact differences 13- between them due to constructing and operating the project. The only significance of the scenario quantities is to	37. Th 3.3	ank you, your comment has been addressed in Section 3.2, Table 3.3-3, and Table 1-2 of the FEIS.
	highlight the differences between the scenarios; similarly for Table 3.3-3. Please review the full sections to properly assess impacts. For example, Section 3.3.1.2 states "A	38. The all so all so all	the purpose of the quantities provided in Section 3.7 is to ow comparison between the 3 different sized turbine enarios and the potential resources consumed to construct
	review of nearby well logs indicates that these wells typically penetrate and draw water from the basalt aquifer, at	all	u operate trie project.
	depths of 100 to 500 feet." Thus, excavation depths would not be expected to encounter groundwater.	39. Th im Re	the intent of Table 1-2 is to summarize potential visual pacts. For further analysis, refer to Section 3.10 Visual sources. Section 3.10.2.3, and the last paragraph of
13-34.	Revisions have been made in the DEIS and appear in Tables 1-2 and 3.3-3; Section 3.3.2; and Section 3.3.2.1 of this FEIS. See Section 3.3 for a full discussion of surface water	Se cla	ction 3.10.3.1, Analysis Procedure, describe the issification of impacts reflected in Table 1-2.
	resources in and near the project area and the potential 13- impacts to those resources. The purpose of the quantities provided in Table 1-2 is to summarize and allow comparison between the 3 different sized turbine scenarios and the potential impact differences between them due to	40. Re 3. Cl <sup>2</sup> co	visions have been made to the DEIS and appear in Section 11 Population, Housing, and Economics, of this FEIS to urify peak demand for accommodations during the nstruction phase of the proposed WHWPP.
	constructing and operating the project. The only significance 13- of the scenario quantities is to highlight the differences	41. Th	ank you, your comment has been noted.
	between the scenarios. No project access roads cross any 13-stream or riparian areas.	42. Ta mi no	ble 1-3 provides a summary of the potential impacts and tigation measures resulting from the proposed action and action alternatives. More detailed discussion of the
13-35.	A breakdown of impact acreages for the respective project components (e.g. turbines, access roads, met towers, substation, O&M facility) is presented in Table 3.4-5 in Section 3.4, Vegetation and Wetlands, of the EIS.	po Iin see	tential impacts and the mitigation measures intended to nit those impacts can be found in Chapter 3, under the ction for the specific Affected Environment.
		dT nd	ere are several recorded archaeological sites and historic operties within the project area. Construction excavation,
Wild Hor	se Wind Power Project 13-4		May 2005

turbine installation, access roads, staging areas, or other project facilities will be sited to avoid known cultural resources. Appropriate measures will be taken if any significant cultural resources are identified during project construction activities. A professional archaeologist will inspect any identified archaeological deposit in order to ascertain its significance and contextual quality. If significant cultural resources are identified, all affected Native American tribes will be contacted.

- Highway may increase the number of collisions especially as volumes and traffic volumes during project construction and construction increases the risk of accidents. Additionally the increase in the number of vehicles operating on the Vantage Tables 3.14.6 and 8 provide a comparison of existing traffic operation. In both cases the level of service with the project vehicles attempt to pass trucks. However the small number WSDOT commercial driveway standards will substantially collisions is considered minor. The construction of a new requirement that the new access will be constructed to reduce this potential for collisions. Regarding risks to meets acceptable levels. The increased risk of traffic of vehicles operating on Vantage Highway and the driveway access with large traffic volumes during aviation see response to Comment 11-4. 13-43.
- 13-44. As documented in the Kittitas County Staff Report, Finding No. 45, this concern has been resolved via the Application for Site Certification and supplemental information submitted by the Applicant to EFSEC and Kittitas County.
- 13-45. Information on the Desert Claim alternative has been updated for some relevant quantitative values and mitigation measures in this FEIS to be consistent with the Final EIS for the Desert Claim project.
- 13-46. See response to Comment 13-44.

- 13-47. See response to Comment 13-45 above.
- Section 1.9.2 has been revised to reflect the noise conclusions in Section 3.8.
- 13-49. See response to Comment 13-35.
- 13-50. As the statement in Section 2.9 of the DEIS indicates, regional utilities are seeking wind power projects to diversify their resource portfolios *at a minimum cost to their customers* (emphasis added). Having fewer projects from which to chose from could limit the cost effectiveness of adding wind to a utility's resource portfolio, and could as a result increase power costs for their customers.
- 13-51. The Draft and Final EIS have identified several areas where the evolving wind industry is still collecting information, impacts to bats, and to elk herds, for example. A delay in project approval could allow the permitting agency to consider new studies that are produced in the interim.
- 13-52. As intended, the impact summary tables provide a general summary of potential impacts identified in the impact analysis that follows the table. See the subsequent discussion for an in-depth evaluation of potential impacts from implementation of the proposed project. The summary tables are duplicated in the Summary Chapter.
- 13-53. The Development Agreement between the Applicant and Kittitas County provides resolution to issues raised during the County's review of the Draft EIS. A detailed SWPPP will be developed by the Applicant, approved by EFSEC, and implemented to reduce the potential for erosion. Sitespecific BMPs will also be employed for site slopes (landslide hazards), construction activities, weather conditions, and vegetative buffers to reduce the potential for erosion. Project facilities would be constructed on relatively

low-gradient topography, and not on unstable slopes or landslide-susceptible terrain.

- 13-54. Section 3.3.2 of the DEIS states that impacts could occur, "If not properly mitigated, development under any of the three project scenarios could adversely affect nearby surface waters." However, by designing the project to avoid all surface waters by at least 200 feet and implementing SWPPP and BMPs based on Ecology's Stormwater Management Manual for Western Washington in addition to the other measures described in Section 3.3.4, impacts would be minimized or avoided.
- 13-55. Section 3.8.5 has been revised to reflect the findings of Section 3.8.2.1.
- 13-56. Section 3.10.2.3, Visual Sensitivity, encompasses consideration of the existing baseline conditions.
- 13-57. Section 3.10.3.1 describes the use of the FHWA methodology used to evaluate impacts and assessing viewer response to change. Measures to mitigate impacts of the proposed WHWPP are included in the Development Agreement between Kittitas County and the Applicant.
- 13-58. The figure shows the change in landscape with the proposed project in place. Areas where the turbines would not be seen were not evaluated, as the landscape view would not be changed by the presence of the project.
- 13-59. Measures to mitigate impacts evaluated in the visual impact analysis for the proposed WHWPP are included in the Development Agreement between Kittitas County and the Applicant.
- 13-60. See response to Comment 13-59 above.

- 13-61. Thank you, your comment and concurrence (at this time) with the EIS analysis has been noted.
- 13-62. Since the Draft EIS was issued in August 2004, the Applicant has entered into a fire protection plan with Fire District #2 for the proposed project site. Measures to mitigate for potential fire hazards are included in the Development Agreement between Kittitas County and the Applicant.
- 13-63. Indirect impacts to documented cultural resources, including archaeological sites and historic properties, could result from site disturbance, site access, and visual changes to the viewshed or viewscape. Measures such as clearly marking areas that need to be avoided to project sensitive resources, and ensuring that project personnel observe those markings and their associated restrictions, can minimize the potential for these type of indirect impacts. Roads that would be constructed or improved to provide access to project facilities would be controlled by lock gates, public access to the project area would be patrolled on a regular basis.
- 13-64. Revisions have been made to the DEIS and appear in Section
  3.14.2.2, Subsection: Air Navigation Consideration in this FEIS to reflect that nine turbine locations have been removed from the proposed project layout and FAA has issued a Determination of No Hazard for the remaining turbine locations proposed for the project. An example FAA DNH is included in Appendix C of this FEIS.
- 13-65. See response to Comment 13-44.
- 13-66. See response to Comment 13-44.
- 13-67. See response to Comment 13-45.

Wild Horse Wind PP Draft EIS Comment- 14

ATTORNEY GENERAL OF WASHINGTON Christine O. Gregoire

1125 Washington Street SE • PO Box 40100 • Olympia WA 98504-0100

RECEIVEI SEP 1 0 2004 September 10, 2004

Energy Facility Site Evaluation Council 925 Plum Street S.E., Bldg. 4 Olympia, WA 98504-3172 Allen Fiksdal, Manager

EVALUATION COUNCIL

ENERGY FACILITY SITE

Wild Horse Wind Power Project Draft Environmental Impact Statement: Comments З: В

Dear Mr. Fiksdal:

#### Introduction ¥.

The following Horse Wind Power Project (Wild Horse) Draft Environmental Impact Statement (DEIS). CFE Counsel for the Environment (CFE) appreciates this opportunity to comment on the Wild comments seek to ensure the Final Environmental Impact Statement provides the public with more detailed information on the environmental impact of the proposed wind power project takes no position in support or opposition of the Wild Horse at this time.

Vegetation B.

#### Shrub-Steppe Ξ.

The DEIS should provide more detailed information regarding the likely outcome of shrub-steppe revegitation efforts. The DEIS indicates how the applicant plans to revegitate, but does not provide any examples of successful revegitation programs. The DEIS also does not provide projections as to how long it will take to successfully revegitate temporarily disturbed shrub-steppe. The DEIS should indicate how long it will take for the temporarily disturbed areas to return to the current condition. The DEIS does acknowledge that "[s]uccess of revegitation efforts in shrub steppe habitat and fragile lithosols is not well documented. Disturbed sites in with successful native plant recetablishment." (3.16-6). Information regarding the likely success and time frame for revegitation of temporarily disturbed shrub-steppe is critical to understanding the overall environmental impact of the proposed project. If shrub-steppe cannot be successfully regrown, then "temporarily disturbed areas" should be reclassified as permanently disturbed and these areas become readily vulnerable to invasive, non-native plant species that could interfere accounted for as such in the mitigation parcel

14-1

September 10, 2004 Page 2

Lithosols r.

14-2 The DEIS indicates that the applicant proposes to permanently remove approximately 61 acress of lithosols, but does not seem to indicate how many acres of lithosols will be temporarily disturbed. The DEIS also states that "Iplant communities associated with lithosols are sensitive to disturbance and difficult to restore. Therefore, where revegitation efforts are implemented on lithosols, recovery would likely take longer." The DEIS should be more detailed in describing whether or not lithosols can be revegitated. Assuming lithosols can be revegitated, the DEIS should point to a project, wind related or otherwise, where lithosol revegitation has been successful. If no examples exist, the DEIS should be indicate. Simply stating that lithosols are "difficult to restore" is an unsulfisationy answer, which provides the Energy Facility Site Evaluation Counsel (EFSEC) and the public insufficient information regarding the effect of for as such in the mitigation parcel. If lithosols can be revegitated, the DEIS should indicate how long it will take for the temporarily disturbed areas to return to current condition. Lithosols are a Washington Department of Fish and Wildlife (WDFW) priority habitat. construction on the temporarily disturbed lithosols. If lithosols cannot be revegitated, these 'temporarily disturbed areas" should be considered permanently disturbed areas and accounted

#### Hedgehog cactus (3.4-16) *т*

14-3 construction of the project will impact the hedgehog cactus, but is "not anticipated to jeopardize the continued existence of the local population." (3.4-16) However, this assertion does not seem to be supported by any study. In fact, there does not appear to be a clear estimation of the abundance of this species in the local area beyond the fact that hedgehog cactuses were seen beyond the boundaries of the project area. The DEIS should contain more detailed information about the project's impact on the abundance of hedgehog cactus in the region. The DEIS indicates that The hedgehog cactus is on the Washington State review list.

Wildlife ن **Birds Generally (3.5-4)** ...

whether or not the project is located in an appropriate area. The DEIS states that "([]he potential exists for a few individuals of each species to collide with turbines over the life of the project however, no population impacts on these species are anticipated under any of the scenaros." (3.5-19). Upon what study or information is this statement regarding anticipated population impact based? Review of the DEIS only indicates that studies were conducted to determine wildlife use of the project area and not actual population counts. If abundance studies were not conducted, it is unclear as to how the DBIS could draw conclusions regarding population impact. In fact, the DBIS should include population impact information so that EFSEC and the public can appreciate what the local impact of the project will be on the avian species in Washington and Kittitas County. The effect of Wild Horse on avian populations must be considered when determining

turbine, per year.  $(\tilde{3}, 5.24)$ . The DEIS should evaluate what impact this ratio might have on local bird populations over a 20 year period (the currently projected life of the project). According to DEIS projections, over a 20 year period, as many as 200 raptors and 6,000 passerines might be killed. (3.5-24). Additionally, the DEIS indicates that bird fatality projections anticipate 0.6-3.5 deaths per

0

September 10, 2004 Page 3 The DEIS states that many avian species that might be killed by the turbines are "very common and widely distributed." (3.5-22) What is meant by this statement? Are the species common and widely distributed within the local area, county, region, state, or nation? Knowing what species are most abundant and where they are located is essential to understanding the project's potential impact on local populations of avian species.

The proper location of turbines is essential to avoiding avian mortality. According to the DEIS, there appeared to be a pattern of raptor flight paths parallel to the western side of the ridge near observation station G (3.5.4). Observation station G (3.5.4). Observation station G (3.5.4). Descretation station for the effect of placing turbines in this area might have on raptor mortality. Similarly, the DEIS indicates that the project area may be within a possible bird migration corridor. (3.5.3) The DEIS indicates that the project area may be within a possible bird migration corridor. (3.5.3) The DEIS indicates that the project area may be within a possible bird migration corridor. (3.5.3) The DEIS indicates that the project. The existence of a migration corridor corridor science of a migration corridor corridor science as flightly of moving urbines in proving urbines in proving avian mortality. Furthermore, the DEIS should address in greater detail the feasibility of moving urbines wind turbines in prominent addles along the main Whiskey Dick Ridge, the what about other ridges within the project area?

Finally, the DEIS should provide more detailed information regarding construction impact on raptor and other birds nesting in the project area during construction, including 14-9 recommendations for mitigating the impact on these species (3.5-4 & 23).

#### 2. Sage Grouse

The DEIS needs to provide a better overview of the project's possible impact on sage grouse. At one point, the DESIS states that there is limited information on the potential distubance and displacement impacts of wind projects on sage grouse. (5:22) The DEIS then states that it would appear the project should not significantly impact connectivity between 14-10 Douglas County and populations and the Yakima and Krittias County populations. A few pages later, the DEIS states that "filt is not known what impact the project will have on seasonal movements and novements, if they exist, between the two existing populations."(3:5-33) The DEIS needs to provide EFSEC and the public with a clearer picture as to the potential effect of the proposed project on the sage grouse recovery effort.

### 3. Other Wildlife/Lizards (3.5-20-21)

The DEIS states that disturbance and mortality may occur to various wildlife and lizards during construction, but never provides any information about the abundance of these species vithin the proposed project area. (3.5-20-21) The DEIS should provide more information regarding the presence of these species within the proposed project area.

### 4. Sage Sparrow and Sage Thrasher

The DEIS indicates that construction of roads and tower foundations could have "some effect on mesting pirits and their young." (3.5-21) The DEIS should provide more detailed information regarding what these effects will be and what mitigation measures should be taken to minimize the impact.

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5. Bats

CFE has concerns about the projected bat kills. Using estimates from other projects when no study of bat use in the project area was conducted makes the current estimates unreliable. In fact, the DEIS provides no information regarding bat kills at other wind power projects within Washington. The information gathered by Technical Advisory Committees at other wind farms would be valuable information to be included in the Wild Horse DEIS. The applicant should indicate what steps it intends to take, if any, if the bat mortality rate exceeds current expectations. Additionally, there is very little information included in the DEIS regarding the impact of bat deaths on the biological community.

## 6. Monitoring and Adaptive Management (3.5.4.4)

CFB agrees with the creation of the Technical Advisory Committee (TAC) as a means of monitoring mitigation programs at Wild Horse. However, the details of how decisions will be made, the powers of the TAC, etc., should be outlined in greater detail. The proposal does not describe how many members the TAC will have or how members will be selected. Most importantly, the proposal does not address what enforcement powers, if any, the TAC will have if violations of the EFSEC permit are discovered or what would occur if the TAC identifies serious adverse impacts of the Wild Horse once online.

D. Conclusion

Thank you for the opportunity to comment on the Wild Horse DEIS. If you have any questions regarding these comments, please do not hesitate to contact me at (360) 586-2438.

Very truly yours. John Lane

Assistant Attorney General Counsel for the Environment

JL:mb

# Assistant Attorney General, Counsel for the Environment, Attorney General of Washington Responses to Comments in State Agency Letter 14 from John Lane,

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- management for monitoring and mitigation. During surveys, Small-scale vegetation and soils maps typically do not break WDFW, USFWS, local interest groups, Project landowners, out lithosol sites. These soils were observed during surveys inclusions in the shrub-steppe and herbaceous habitat types. addition, WDFW has stated that mitigation provided by the herbaceous habitat types (see Table 3.4-3 of the DEIS). In to be common in the general Project vicinity. As such, See response to Comment 12-25. The TAC (proposed lithosols would incur a small portion of the temporary membership to include representatives from EFSEC, and the Applicant) will provide a means of adaptive ithosolic habitats were found to be present as small impacts presented in the EIS for shrub-steppe and Applicant is consistent with WDFW guidelines. 14-1.
- 14-2. See response to Comment 14-1.
- 14-3. Hedgehog cactus (*Pediocacus simpsonii*), was observed at the project site during surveys conducted by a qualified botantist. This plant was observed scattered in lithosolic habitats throughout the project area. Suitable habitat (lithosol) is relatively common in the general vicinity of the project site. The WNHP database shows three other known populations within approximately 5 miles of the project area. Loss of several occurrences of hedgehog cactus would not affect the viability of the species in the general region. The

"Review" designation carries no legal requirement for protection.

- 14-4. For a more thorough analysis of population impacts please see the Wildlife Baseline Study for the WHWPP (WEST, Inc. 2003b).
- 14-5. As stated in Section 3.5.2.2 of the DEIS, most avian fatalities associated with the WHWPP would likely involve resident songbirds such as horned lark, vesper sparrow, and western meadowlark. These species are described by Smith et al (1997) as being common, abundant, and widespread throughout suitable shrub-steppe habitat in the eastern portion of Washington State.
- 14-6. As stated, the flight pattern was observed as occurring parallel to the ridgeline, not directly above the ridge. In order to reduce the risk of mortality to raptors utilizing this flight pattern and potentially crossing the ridge, turbines would not be placed in prominent saddles along the main Whiskey Dick Ridge, as stated in Section 3.5.4.2 of the DEIS.
- 14-7. The WHWPP is located within the Pacific Flyway, a broad flyway that extends from the Pacific Ocean to the Rocky Mountains and is also located near the Cascade Mountains, and many species are known to migrate along this mountain range. Studies conducted for the WHWPP noted use of the

WHWPP area by migratory bird species, and some may have been migrating through the area; however, the site is not within a known migratory route.

- Dick Ridge because of FAA concerns. Raptor use near these risks associated with these turbines are likely similar to most Whiskey Dick Ridge, where raptors were observed crossing count station that showed high relative raptor use during the proposed Project Site Layout (Revised Figure 1-2). Section of the turbines within the Project area. However, they were measures intended to minimize potential impacts to raptors. ocations have been eliminated along the peak of Whiskey previously proposed turbine locations was high relative to Turbines were not placed within prominent saddles along addition, some of these turbines were located near a point road located to the west of the "Pines" area. The collision located in areas that have had historic sage grouse use. In conducted and the results of this study were incorporated portion of the project area along the existing north-south or would be expected to cross the ridge. Also, 9 turbine Several turbines were initially proposed in the northwest A year long study of raptor use of the WHWPP site was into the decisionmaking process for turbine placement. most other locations where measurements were taken. pre-project studies. These turbines were subsequently eliminated from the layout and are not shown on the 3.5.4.2 of this FEIS presents site-specific mitigation 14-8.
- 14-9. Construction is scheduled to occur during spring and summer in order to avoid impacts to wintering big game and to allow work to occur during dry soil conditions, thus minimizing soil impacts.
- 14-10. This FEIS has been updated to include new information from the Sage Grouse Recovery Plan (WDFW 2004) and new

information about sage grouse that has become available since the issuance of the DEIS.

- 14-11. See Section 3.5.1.1 of the DEIS, Other Wildlife, for information regarding presence of the referenced species.
- 14-12. Potential effects are described in the referenced paragraph. The paragraph in the DEIS has been revised to clarify this and appears in Section 3.5.2.1 of this FEIS.
- 14-13. Pre-construction surveys to predict impacts to bats may be relatively ineffective because current state-of-the-art technology for studying bats does not appear to be highly effective for documenting migrant bat use of a site (Johnson et al 2003). Available information was used to describe potential bat use of the WHWPP site in the DEIS and postconstruction monitoring would be conducted, as described in the revised DEIS Section 3.5.4 of this FEIS. Postconstruction mitigation for higher than expected mortality would be determined by the TAC, which would be convened as required by the WDFW Wind Power Guideline (WDFW 2004) and as described in the revised Section 3.5.4 of the DEIS and appearing in this FEIS.
- 14-14. The WDFW Guidelines for Baseline and Monitoring Studies for Wind Projects describe the responsibilities of the TAC and specify that the range of possible adjustments to either the monitoring plan or the mitigation requirements should be clearly stated in the project permit. The guidelines go on to provide examples of changes that might be included, and to discuss changes that would not be feasible, which include removing turbines or shutting down turbines at certain times.

	<u>ل</u> م	15-6	15-7 15-8	15-9	
	The USFWS guidelines state: "Data on wildlife use and mortality collected at one energy facility are not necessarily applicable to each other. Each site poses its own set of possibilities for negative effects on wildlife. In addition, the wind industry is rapidly expanding into habitats and regions that have not been well studied. The Service therefore suggests a precautionary approach to site selection and development and will employ this approach in making recommendations assessing the impacts of the wind energy development in making Recommendations." This area, the Kittitas Valley, is one of those areas that has NOT been well Studied.	-The cumulative impact studies only compared the 3 windfarms proposed for the Kittitas Valley to each other. Cumulative impacts are those of regional and wildlife population concern. This was not even mentioned. There were a number of birds that are being considered for listing by the Washington State Wildlife Commission, the Partners in Flight list of threatened neotropical songbirds and Audubon lists.of birds of concern.	Even with the mitigation area, this is a huge area of Sagebrush Steppe with no development in it at this time. Plus it is right next to the Quilomene and Whiskey Dick wildlife areas making it a part of a massive natural area. Putting a large windfarm in with many towers, facilities, borrow pits and roads will fragment this area when it could well be left and acquired for one of the wildlife areas in existence. For all these reasons, I recommend that the NO ACTION ALTERNATIVE be adopted.	We are being asked to sacrifice our area for the windfarms and yet the developers are trying to get by with doing things as cheaply as they can. If this windfarm is built 1 would like to suggest that THE RESIDENTS OF KITTITAS COUNTY BE GIVEN THE FIRST CHOICE ON ELECTRICITY PRODUCED BY IT AND AT THE BEST RATE.	Most Sincerely, M. Janet Nelson
se Wind PP omment- 15		5-2	Υ Υ	5-4	
Wild Hor Draft EIS C	P.O. Box 203 Easton September 9, 2004 Allen J. Fiksdal, EFSEC P.O. Box 43172 P.O. Box 43172 P.O. Box 43172 P.O. Box 43172 P.O. Box 4304 EVALUATION COUNCIL Olympia, WA 98504-3172 Re: My personal comments on the DELS for Wildhorse Wind Power Project. Dear Mr. Fiksdal, I am speaking for myself. I have been a resident of Kittitas County for 19 years.	The Wildhorse Wind Power Project is located in a somewhat different area than the other two windfarms proposed for Kittitas County (KVWPP and Desert Claim). It is in almost total SageBrush Steppe habitat rather than farmland or pasture or homesites as the other projects are. Windfarm policies such as the WDFW Wind Power Guidelines urge the use of already developed areas such as agricultural land for siting of windfarms rather than areas of existing habitat. For this reason the site is not really appropriate. It represents an area which could actually limit habitat fragmentation in the area not being disturbed by the windfarm but I don't know if that is something we can assume will happen. Turbines in the KVWPP project are being put on private homesites already.	To me, there are still the same concerns on this project that affect the other two areas. Namely: - Potential for negative impact on both Migratory Passerines and Raptors who use the Cascade Migratory Pathway through the whole valley. To quote the USFWS guidelines of 2003 at <u>www.fws.gov/r9dhcbfa/wind.pdf</u> "Avoid locating turbines in known hird micretion nathways."	<ul> <li>The length and type of studies done CANNOT PROVE that the Migratory</li> <li>The length and type of studies done CANNOT PROVE that the Migratory</li> <li>Passerines, Raptors and Bats will NOT be affected.</li> <li>Two year studies including night studies have been done at a number of other sites including Stateline and Nine Canyon in the state of Washington.</li> </ul>	Wild Horse and the other two sites, KVWPP and Desert Claim are being compared to sites in totally different areas such as the Stateline and Nine Canyon Projects and assumptions being made that the effects will be similar.

# Responses to Draft EIS Comments in Individual Letter 15 from M. Janet Nelson; Kittitas Valley Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 15-1. Thank you, your comment has been noted. Please note that Kittitas County zoning allows for agricultural/range use of the property where the WHWPP is proposed and that this property is not protected habitat under County zoning. However, the Applicant has voluntarily committed to place the entire Project area in a conservation easement (Appendix C).
- 15-2. Thank you, your comment has been noted. See response to Comment 15-1 above. If the property is voluntarily placed into a conservation easement, then fragmentation would not occur.
- 15-3. Although the WHWPP is located within a broad area that is likely used by migratory birds, it is not within a known migration pathway.
- 15-4. As stated in Section 3.5.2 of the DEIS, effects on these species are expected to occur. Section 3.5.2 provides estimates on the level of effect based on use of the area as observed during the year-long wildlife study conducted for the WHWPP. Actual effects will be monitored during post construction monitoring, as described in Section 3.5.4.4 of the DEIS and updated in this FEIS. The studies conducted for the WHWPP are consistent with the WDFW Guidelines for the WHWPP are consistent with the WDFW Guidelines for Baseline and Monitoring Studies for Wind Projects. The Technical Advisory Committee convened for the WHWPP will use post-construction monitoring to monitor project

impacts and develop further mitigation through the adaptive management process.

- 15-5. Thank you, your comment has been noted.
- 15-6. To date, the Kittitas Valley and Desert Claim Wind Power Projects are the only other major construction projects that have been identified as reasonably foreseeable in the project vicinity, thus contributing to cumulative impacts; therefore, they are the only other projects considered in the cumulative effects analysis.
- 15-7. The majority of the land within the WHWPP is privately owned land, with portions of the proposed project also located on lands owned and managed by the Washington State Department of Natural Resources (DNR) and the WDFW. The Applicant has signed lease option agreements with both the DNR and WDFW for the parcels owned and managed by these agencies. Neither the DNR nor the WDFW have expressed an interest in acquiring additional lands in the vicinity of the WHWPP during discussions for the WHWPP. An analysis of any such plans would be outside of the scope of this EIS.
- 15-8. Thank you, your comment has been noted.
- Thank you, your comment has been noted. See response to comment 13-3.

Page 1 of 1	Wild Horse Wind PP Draft Els Comment-16	an@elitel.net] ber 10, 2004 2:49 PM	Wind Project/Kittitas County	0, 2004 2:07 PM Project/Kittitas County	(8770 Brick Mill Rd, Ellensburg, WA 98926 509-968-4532). I am chairman of the am Club's Big Game Committee. I would like to express two concerns that are not application. The first is access through the project to public lands (Whiskey Dick, 16-1 MLA's) and the second is hunting opportunity on the project. Thank you 16-2	RECEIVED SEP 1 0 2004 EVALUATION COUNCIL	
	ow, Irina (EFSEC)	Essman [essman@elltel.net] Friday, September 10, 2004 3	EFSEC : Fw: Wild Horse Wind Project	al Message man <u>29p.cted.wa.gov</u> 201 Project/Küttlar Vild Horse Wind Project/Küttlar	s W. R. Essman (8770 Brick M unty Field & Stream Club's Big ntified in Zilkha's application. 1 and Colockum WLA's) and th		
	Makan	From: Sent:	To: Subjec	From: Es From: Es Fo: efsec Sent: Fric Subject: )	My name Kittitas Co slearly ide Quilomen		

9/10/2004

## Responses to Draft EIS Comments in Individual Letter 16 from W. R. Essman; Kittitas Valley Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 16-1. See response to Comments 11-5 and 11-7.
- 16-2. Thank you, your comment has been noted.

	Page 1 of 1
akarow, Irina (EFSEC)	Wild Horse Wind PP Draft ElS Comment- 17
<ul> <li>James Huckabay [Huckabay@cwu.ED</li> <li>nt: Friday, September 10, 2004 4:18 PM</li> <li>EFSEC</li> <li>bject: Comments on Wild Horse DEIS</li> </ul>	Inc
se accept the following comments of the Draf	ft EIS for the Wild Horse site.
vice president of the Kittitas County Field an as County Big Game Management Roundtabl	d Stream Club and a member of the Steering Committee of the le, and these comments are offered within those contexts.
, it is not clear in the DEIS what sort of public ing and wildlife recreation areas (Quilomene, in over access to the Beacon Ridge Road a co ig.	c access will be provided to the site or surrounding public Colockum, etc.). The Field and Stream Club considered legal J7-1 Suple years ago and our concerns about its future remain
indly, Skookumchuck must be protected as pa inucus, protection must be somehow provide as for the abundant outdoor and wildlife-rela	art of the mitigation for the wind power project. Long term, defor this important (perhaps even critical) wildlife habitat, as the recreation which takes place in this area.
nk you for the opportunity to get these comm	nents on the record.
s: L. Huckabay ) 963-1185 ss: L. Huckabay, Ph.D. ss: of Geography ) 509-963-1185	RECEIVED SEP 1 0 2004 ENERGY FACILITY SITE EVALUATION COUNCIL
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## Responses to Comments in Organization Letter 17 from James Huckabay, Vice President, Kittitas County Field and Stream Club; Steering Committee of the Kittitas County Big Game Management Roundtable

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 17-1. See Section 3.5.4 of this FEIS for an updated discussion on controlled hunting within the project area. The Applicant will implement an adaptive management approach to allow access to and through the Project Area and recreational use of the site. The Applicant will also prepare a hunting plan for the Project area in consultation with WDFW and the Technical Advisory Committee (TAC).
- 17-2. The Applicant has agreed to mitigate for the loss of shrubsteppe habitat in the project area by protecting over 600 acres of this habitat type within the project area, which is consistent with the WDFW Wind Power Guidelines.

	Allen J. Fiksdal September 10, 2004 Page 2	Our alternative would still allow the project proponent to site turbines in areas with good energ generation potential. As depicted on the wind energy maps submitted herewith, this area has th same or better wind energy potential as the area within which the northern string is current, proposed.	This alternative string alinement would significantly reduce impacts to wildlife and wildlife habitat The northern string as currently proposed would run along the headwaters of five canyon important to wildlife: Whiskey Dick Canyon, the North Fork of Whiskey Dick Canyon, Hartman Canyon, Bryant Canyon, and Stockumchuck Canyon. These canyons serve as valuable wildliff	habitat, in part because of the springs that are located at the head of these canyons. The spring provide an all important water supply in this arid region. The canyons provide shelter from majo storms and cover for habitat, while the wind-blown ridge tops provide a snow free area for winte foraging. This combination of habitat attributes is rare in this region. The proposed norther string of wind generators will disrupt wildlife use of this critical habitat.	While relocating the northern string as proposed above would not eliminate all wildlife impacts it certainly would significantly reduce the magnitude of those impacts. There are few, if any springs in the area of the proposed relocation thus reducing significantly the value of this area a wildlife habitat.	The proposed relocation also is consistent with and furthers the objectives of WDFW's Winc Power Guidelines. Those Guidelines call for steering "wind projects towards crop land and developed areas and away from undeveloped native habitat; " Letter from Dr. Jeff Koenigs Director, WDFW (Aug. 25, 2003). The Guidelines specify that:	Wind project developer should be encouraged to site wind power projects on disturbed lands ( <u>i.e.</u> , developed, cultivated or otherwise disturbed by road or other corridors).	Wind project developers should be encouraged to place     Hinor featilities (such as collaster cold a routes transmission	Integr takinues (such as concector caote routes), transmission line routes or access roads) in or adjacent to existing disturbed corridors in order to minimize habitat fragmentation and degradation.	• Wind project developers should be discouraged from using or degrading high value habitat areas, especially shrub- steppe habitat in 'excellent' condition.
Wild Horse Wind PP Draft EIS Comment- 18	Bricklin &Newman &Dold, LLP DAVID A BRICKLIN CLAITIDA BRICKLIN CLAITIDA M NEWMANN CLAITIDA M NEWMANNN CLAITIDA M NEMMANNN CLAITIDA M NEMMANNNN CLAITIDA M NEMMANNN CLAITIDA M NEMMANNN CLAITIDA M NEMMANNNNN	CLADID AN INTERIA DOLD I 424 FOURTH AVENUE, SUITE 1012 RYAN P. VANCIL TEL. 2006 621-6512 FAX. 2006 621-6512 Littp://www.bud-law.com	September 10, 2004 VIA E-MAIL: <u>efsec@et.cted.wa.gov</u>	Allen J. Fiksdal, Manager BFSEC PO Box 43172 Olympia, WA 98504-317 SEP 1 0 2004	RE: Wild Horse Wind Power Project DEIS ENERGY FACILITY SITE EVALUATION COUNCIL	Dear Mr. Firstaal: I write on behalf of Friends of Wildlife and Wind Power regarding the DEIS for the above referenced project. While the DEIS contains much useful information, we believe it is deficient in several important respects.	One, the EIS has not analyzed in detail all reasonable alternatives. In particular, we believe there is an alternative that is not only "reasonable," but superior to any of the alternatives (including the proposal) that are discussed in the EIS. The omitted alternative would satisfy the applicant's purpose of developing a commercially viable wind power genetrating facility near BPA transmission lines in eastern Kittitas County, but would do so with a much lower risk of significant	harm to wildlife and wildlife habitat.	The omitted alternative would move the northern string of turbines from their proposed location to an area that is east and southeast of the southeast portion of the current project site. This alternative area for the second turbine string would utilize land areas along the ridgetop of Whiskey Dick Mountain - the same ridgeline used for the currently proposed southern string -	south to Highway 10 and easterly. This alternative would simply extend the current proposed southern string further east along lands bounded by Whiskey Dick Mountain Ridge on the north and Highway 10 on the south. The accompanying maps depict this proposed re-location.

18-1

Allen J. Fiksdal September 10, 2004 Page 3 WFWD Wind Power Guidelines, § 2.

By relocating the northern string as recommended above, the applicant could avoid unnecessary fragmentation of this valuable and dwindling habitat. Relocation as suggested above would result in more of the project being closer to the existing developed areas south of the project including Highway 10.

18-1

In sum, the proposed re-location would meet the proponent's objectives, appears to be technically feasible, and would likely result in less adverse impact to wildlife and wildlife habitat. This is a reasonable alternative which should be discussed in detail in the EIS.

While the EIS discusses wildlife habitat and wildlife impacts at some length, the adequacy of an EIS is judged not by its length but by the quality of the analysis. We are concerned that lost in the discussion is a focus on some key wildlife issues. There is virtually no discussion of the springs at the top of the five canyons and their importance to wildlife. There is no discussion of the wildlife importance of those springs in conjunction with the deep canyons (for refuge) and windswept ridgelines (for winter forage).

The site occupies a grouping of streams and natural springs vital to wildlife. Wildlife will be affected adversely in the use of these water sources by construction activities, permanent features of the project, roads and operations activities. These water sources are miles from alternative water sources. As a result the present eco-system will be permanently affected and wildlife will be forced to occupy a smaller portion of the brush steppe habitat with consequent impacts on wildlife populations. The springs providing water are:

- Wild Horse Springs
- Skookumchuck Heights Springs
  - Seabrook Springs
    - Pine Springs
- Government Springs
  - Thorn Springs
- Reynolds Springs
  - Dorse Springs

The current project design places the northerly string of turbines in immediate proximity to these water sources for wildlife.

The EIS does not acknowledge the project's significant impact on the vital use of these water resources by wildlife.

Allen J. Fiksdal September 10, 2004 Page 4 The EIS does not adequately address the impact of the project on mule deer, elk, and other species that use these areas. The EIS acknowledges that the construction of the project is expected to temporarily displace elk and mule deer. But it then asserts that this impact will be "insignificant" without giving any consideration to the springs and other unique habitat attributes in this area.

Regarding big game impacts during the project's operational phase, the EIS acknowledges that it is not known if human activity associated with regular maintenance will exceed tolerance thresholds for wintering elk. But despite this important gap in scientific information, the EIS apparently concludes that it does not matter because maintenance activity may be less than current human activity (<u>e.g.</u>, access by humers and recreationalits). But this is pure conjecture. The EIS does not state that other formus of human access (other than maintenance activity) will be eliminated or controlled by the applicant during operations. Access by others "may" be minimized but it also may not. Overall human activity "may" be less than pre-development levels but it may not.

18-3

In the face of this speculation about possible declines in non-project human activity, the EIS must analyze the adverse impacts associated with the known increase in activity that would result from maintenance activities by the wind farm operator. And with regard to that analysis, it is not sufficient to say that "it is not known if human activity associated with regular maintenance activity will exceed tolerance thresholds for wintering elk." Where information important to assessing environmental impacts is not known, the drafters of the EIS must obtain that information. If the information rando bobained, a worse case analysis should be performed. WAC 197-11-080. The current analysis inadequate.

The same defect impacts the analysis of operational impacts on mule deer. In fact, in this regard, the EIS is even more deficient. There does not appear to be any analysis of the impact of regular maintenance activity on the mule deer use of this important habitat area.

18-2

Elk and deer occupy the site year-round and rely on the water sources for survival. It is not only the riparian corridors of Whisky Dick Creek which provide cover but also the adjoining corridors of:

- Hartman Canyon
- Bryant Canyon
- The North Fork of Whisky Dick Canyon
  - Skookumchuck Canyon Bohinkleman Canyon

All of these corridors would be adversely affected by construction activities, permanent features and operations, all of which would occur in immediate proximity to these riparian corridors. Wildlife including avian species and big game are more densely congregated in these deeper more

18-2

Allen J. Fiksdal September 10, 2004 Page 5 protected features of the heads of these canyons which are in immediate proximity to the project site. In a similar vein, the EIS underestimates the value of the habitat in the vicinity of the proposed northern string of turbines. In the table on page 3.4-6, there is no reference made to the springs in the vicinity of the strings that make up the northern run. Ignoring the value of these springs to the overall value of the habitat results in a reduced rating for that habitat. This underestimation of the value of the habitat in turn leads to an underestimation of the severity of the project's impacts on that habitat and the wildlife that use it.

18-5

The EIS does not adequately describe the project's impacts on recreational use. Members of Friends of Wildlife and Wind Power use this area for various recreational pursuits including hiking, wildlife viewing, and nature photography. Because the EIS inadequately describes the magnitude of the impacts on wildlife, it also inadequately describes the impact on these recreational uses. Indeed, there appears to be absolutely no discussion of these types of impacts in the EIS.

18-6

The brief discussion of the project's impacts on recreational activity does contain two other items which are worthy of comment. One, in this section the EIS discusses public access to the project during operations. Contrary to the statements made in the wildlife impact section, this part of the EIS suggests that public access will be virtually unrestrained during operations. Only that access which would cause conflict with safe and efficient operation of the project would be precluded. That does not sound like a general problibition on public access which formed the basis for the speculation in the wildlife impact analysis discussed above.

18-7

Second, in discussing the potential increased demand on recreational facilities caused by people visiting the wind power project, the EIS gratuitously adds a sentence stating that those visitors will contribute to the economy of the community. That sentence has nothing to do with accessing the project's impact on recreational facilities. It sounds like project boosterism, wholly inappropriate in an EIS. Further, the statement is wholly unsubstantiated. Presumably most tourists who visit the facility will be tourists who would have been in the area anyway and add the wind farm to their list of attractions in the area to visit. There is no support for the unstated premise that any significant number of fourists from outside this area will come to this visiting the project will overburden local recreational facilities.)

18-8

In the assessment of visual impact, it appears that no consideration was given to the impact on recreational users of the site and areas east of the site. All the visual assessment perspectives are on roads, primarily west and southwest of the site (there is one perspective from the north). There are no perspectives from the east or from within the site itself. (There is one perspective from the east or from within the site itself.

18-9

Allen J. Fiksdal September 10, 2004 Page 6 of the site (SV5) but it is so distant as to not be useful in assessing impacts to visual quality to recreational users of lands within the site and directly east of the site.)

The EIS states that visual impact to recreationalists is "low to moderate" because there are few recreationalists in this area. EIS at 3.10-9. This statement confuses the assessment of the magnitude of the visual impact with the number of persons suffering that impact. To any of the users of these recreational lands, the visual impact will be severe. That should be acknowledged in the EIS.

The EIS did not give adequate attention to the project's potential impacts on grouse, listed as threatened by WDFW and a candidate species for listing by USFWS. The EIS apparently takes the view that few if any grouse use this area and therefore impacts will be slight. The EIS fails to recognize that its assessment of the current use of the area is based on limited inventorying and that greater use of the area is probably occurring now but simply is unrecognized by the few studies that have occurred. Because those subside in time and space, the EIS should not state with such certitude that grouse use of this area is limited.

Further, the EIS fails to consider the significance of this area of the state's efforts to increase the grouse population in the future. The state's Recovery Plan calls for re-introducing grouse into suitable areas of their former range. The EIS fails to discuss the adverse impact of the project on these recovery efforts.

To the extent grouse use (or will be re-introduced to) this area, their habitat and population will be adversely impacted by construction and operation of the northern string of turbines of this project in close proximity to the springs along the ridge. These impacts are not discussed in the EIS. The EIS also fails to adequately acknowledge the adverse impact to other avian species that will be drawn to those springs and related water resources and then be subjected to the danger of the turbines. While the EIS discusses the danger of turbines to birds generally, it does not adequately address the concentration of birds in the vicinity of the northen string of turbines because of the springs in that location.

The EIS states: "Other species that may occur in the project site include several species of bats, other mammals including badger, coyote, pocket gopher, ground squirrels, rabbits, voles and mice. Several species of reptiles and amphibians are also present. The potential for bats to occur (exists) at the Pines near Government Springs and within the riparian corridors of Whiskey Dick and Skookumchuck Creeks. The springs within the project area may be used as foraging and vatering areas." (**15**, 5.)

•		
Allen J. Fiksdal September 10, 2004 Page 7	, 1997;1999;1999;1999;1999;1999;1999;1999	Allen J. Fiksdal September 10, 2004 Page 8
But the EIS does not adequately acknowledge that construction activities, permanent features and 06r13 operations of the facility would adversely affect these forms of wildlife.	1	The areas south, southeast, east, and west of the currently proposed project site are less dense in wildlife population due to the lack of water and the topography which does not provide as much 18-18
The offering of 600 areas of shrub/steppe riparian habitat in Section 27 is meaningless mitigation for these impacts. It is much too small of an area to compensate for the more than 8,000 acre project.		in the way of high quality cover for the wildlife. Very truly yours,
Fencing of springs to protect from degradation of wildlife will impede use by wildlife. The EIS asserts wildlife access can be maintained but does not describe how this is possible, especially for the deer and elk.		BRICKLIN NEWMAN DOLD, LLP
The EIS states that "with mitigation, no significant unavoidable adverse impacts are anticipated for birds or other wildlife." This is either a typographical error or an incredible diminishment of the quality of the DEIS as a whole. This would suggest that one can place a 24/7 industrial development in the middle of one of the most sensitive eco-systems in the world without effect. This is not credible.		DAB:kmw Enclosures cc: client (w/out enclosures)
Friends of Wildlife suggests a project relocation scenario wherein the northerly string of turbines would be relocated to the south, southeast and east onto lands owned or controlled by WDFW or DNR. We suggest further that the Applicant contribute these presently privately owned lands currently within project boundaries vacated by the northerly string of turbines as mitigation in exchange for occupancy of lands less dense in wildlife to the south and southeast presently owned or controlled by WDFW and DNR. Lease arrangements or royalties similar to the present proposal are suggested so that WDFW and DNR can benefit financially in a more meaningful way.	ing in a state of the	
Friends of Wildlife is sensitive to maintaining the fiscal interests of the private landholder who will play a key role in any successful final agreement for the wind power project.		
Regrettably the contemplated project as designed has been sited in a significant portion of the largest remaining shrub steppe habitat in Washington State and in one of the most unique and vibrant yet sensitive wildlife populations in the world.		
The project is not properly sited given more favorable alternatives on lands in close proximity to the presently contemplated site which, when studied further, would be found to have less dense wildlife populations. Specifically the project should be altered so that turbine development is not undertaken in any areas north of the ridgeline of Whiskey Dick Mountain. These areas are more dense in wildlife population due to the naturally occurring water resources and the riparian corridors which provide cover.	-	
	6670-1	




#### Responses to Comments in Organization Letter 18 from David A. Bricklin; Friends of Wildlife and Wind Power

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

18-1. Friends of Wildlife and Wind Power have proposed moving approximately 65% of the proposed wind turbines off the WHWPP site to adjacent WDFW and DNR lands (Petition for Intervention located on EFSEC webpage efsec.wa.gov). The Applicant has investigated the proposal made by Friends and has found it to be not feasible due to 1) the property proposed by Friends is not available and would require a site investigation process that would be lengthy and costly; 2) the Friends' proposal requires additional easement for 4 miles of transmission lines; 3) a significant loss of potential energy generation through relocation of nearly 65% of the turbines from the current project proposal; and 4) the Friends' proposal would require additional environmental studies that may conclude more significant impacts (site is closer to potential traptor use areas, closer to state parks with potentially greater visual impacts, and requires a larger area than the present proposal).

18-2. As stated in Section 3.5.2.1 construction activities would occur outside of the critical winter period for big game, therefore construction impacts during winter are not expected. Mitigation measures designed to avoid impacts to springs and streams/riparian areas in the project area are described in Section 3.5.4 of this FEIS. In addition, the Applicant has agreed to protect over 600 acres of shrub-

steppe and riparian habitat in the project area, which exceeds the requirements of the WDFW guidelines for Wind Project Habitat Mitigation.

- 18-3. The Development Agreement (Appendix A) between the Applicant and Kittitas County for the proposed WHWPP includes both restrictions on project site access and a requirement to develop a hunting plan. Access by private landowners, officials of the WDFW and DNR, and individuals on a case-by-case basis will be allowed, however recreational use of the site will not be allowed in order to minimize potential impacts to habitat and wildlife. The hunting plan for the site will be developed in consultation with the WDFW and the technical advisory committee (TAC), which will be formed for the project.
- 18-4. As stated in Section 3.5.4.1 of the DEIS and FEIS, the proposed project has been designed to avoid sensitive areas such as streams, riparian zones, wetlands, and forested areas.
- 18-5. Springs in the northern portion of the WHWPP would be treated as all other springs in the area; they will be fenced to exclude livestock but with fencing that allows wildlife use, as described in Section 3.5.2.2 of this FEIS. Excluding livestock from the immediate vicinity of the springs is expected to decrease disturbance to vegetation in these areas

new information appears in sections 3.5.1.1 and 3.5.2 of this

FEIS.

information acquired since the DEIS was published. This

power project sites, some of which contain a greater number

observations of bird use of the WHWPP area recorded during the year long study conducted for the proposed

of water features than the WHWPP, and 2) from

susceptible were derived from 1) data from other wind

Estimates on mortality and which species are most

18-12.

estimates based on use in these areas include birds attracted

to the springs.

and Section 3.5.2.2, Operations and Maintenance impacts,

Other Wildlife in the DEIS for a discussion on potential

impacts to these species from project construction,

operations, and maintenance.

See Section 3.5.2.1 Construction Impacts, Other Wildlife

18-13.

project. Since data was collected in the northern portion of the WHWPP area, in the vicinity of the referenced springs,

and so lead to improved wildlife habitat in the immediate area around the springs.

- The Applicant will implement an adaptive management approach to allow access to and through the Project Area and recreational use of the site. Refer to the revisions in Section 3.12.2.2 regarding controlled access.
- 18-7. The Applicant will implement an adaptive management approach to allow access to and through the Project Area and recreational use of the site. The Applicant will also prepare a hunting plan for the Project area in consultation with WDFW and the Technical Advisory Committee (TAC). Refer to revisions in Section 3.12.2.2 and 3.5.2.2.
- 18-8. Thank you, your comment has been noted
- 18-9. Section 3.10.2.4 of the DEIS states that the proposed project would not be visible from areas in the Columbia River gorge or from the developed areas of Ginkgo Petrified Forest State Park, which are located east of the proposed project site. Wanapum Recreation Area was also included in the assessment, which is located east of the proposed project site along the Columbia River. Recreational facilities were included in the visual assessment modeling and areas within 0.5 mile were given a "high" rating of potential visual impact. Section 3.10.2.4 of the DEIS acknowledges "the greatest number of turbines will be visible from the project site itself and from the tops of ridges in the area to the north".
- 18-10. See response to Comment 18-9.

Whiskey Dick Creek, be contiguous with adjacent state lands

(WDNR and WDFW), and preserve a diversity of habitats.

Furthermore, the Applicant has voluntarily committed to

place the entire Project area in a conservation easement

(Appendix C).

parcel, Section 27 would provide protection of a segment of

meet or exceed the required habitat replacement ratios under

scenarios. See Comment 21-9 submitted by WDFW on the DEIS (Letter 21 in Chapter 4 of this FEIS). As a mitigation

the WDFW Wind Power Guidelines for any of the three

approximately 165 acres would be required to accommodate

As noted in the DEIS, a permanent footprint of

18-14.

the proposed turbines and related support facilities. WDFW

has indicated that the 600-acre parcel (Section 27) would

18-11. The discussion of sage grouse in Sections 3.5.1.1 and 3.5.2 of the DEIS has been updated to reflect additional

- 18-15. The Applicant, in coordination with the WDFW, has agreed that any permanent fencing on the site will be built to be passable to wildlife but not to livestock. Specific guidelines for fencing have been added to the mitigation measures in the DEIS, and appear in Section 3.5.4 of this FEIS.
- 18-16. Although impacts will occur, the mitigation measures identified in the DEIS, and as revised and presented in this FEIS, are expected to avoid, reduce, or minimize such impacts to a level below that deemed significant. The Applicant has worked with the WDFW from the early stages of project development and has met the mitigation requirements of the WDFW Wind Power Guidelines.
- 18-17. See response to Comment 18-1 above.
- 18-18. See response to Comment 18-1 above.

Ziikha Renewable Energy H+JK+YK+

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September 10, 2004

Irina Makarow, Siting Manager Olympia, WA 98504 EFSEC P.O. Box 43172

Comments on the Draft Environmental Impact Statement for the Wild Horse Wind Power Project dated August 2004. Re:

Thank you for the opportunity to offer comments on the Draft Environmental Impact Statement (DEIS) for the Wild Horse Wind Power Project. I am submitting the following comments on behalf of Wind Ridge Power Partners, LLC, (the Applicant). The following comments are based on review of the DEIS by our development team as well as the consultants who were involved in the original studies and field work that were submitted as part of our Application for Site Certification.

Sincerely,

Project Development Manager Chris Taylor



Wild Horse Wind PP Draft EIS Comment- 19

Portland, OR 97204

	-
General Comments:	Applicant assumes the 'other avian species' refers to other grassland 19-3
The DEIS is very thorough and complete and addresses all of the issues that were raised during the scoping process. The organization of the document is logical and easy to read.	Regarding the 'Potential for disturbance', no leks are present at the Project site, so there is no likely disturbance impact to sage grouse.
Specific Comments by Section and Page:	Page 1-21, Section 1.6.1, Table 1-2: Subsection 3.5, Wildlife, Decommissioning Impacts
Page 1-15, Section 1.15, Table 1-2: Subsection 3.2 Air Quality, Greenhouse Gas Emissions	Decommissioning Impacts:use of bird flight diverters on guyed permanent meteorological towers or use of unguyed permanent.
Greenhouse Gas Emmissions: In addition to the above mitigation measures, construction would cease during periods of high wind strong enough to generate visible dust plumes from process equipment and unpaved roads.	<b>Comment:</b> Applicant will use freestanding (unguyed) permanent 19-5 meteorological towers to minimize avian impacts.
Comment: The above text should be deleted from the EIS. This action	Page 1-26, Section 1.6.1, Table 1-2: Subsection 3.8, Noise, Construction Impacts
would be costly and disruptive to construction causing more traffic for workers to leave the project and return based on wind speeds. Furthermore, with very low population densities near the Project site, dust	Construction Impacts: No impact. Nearest home is more than 2 miles away from the closest WTG.
plumes are not a significant visual impact issue since they are temporary in nature. An additional paragraph between the original second and third paragraph should be inserted. Please add the below text to the EIS:	<b>Comment:</b> The EIS should be revised to read "No impact. Nearest home is 1.75 miles away from the closest WTG." This is the correct distance.
'If during periods of high winds, the dust suppression equipment on the rock crushing or batch plants are rendered ineffective, the machinery shall	Page 1-27, Section 1.6.1, Table 1-2: Subsection 3.8, Noise, Construction Impacts
be halted to prevent excessive fugitive dust plumes.	Construction Impacts: No impact. Blasting would be done only during daytime, and the nearest home is more then 3 miles away from theclosest rock quarry.
Page 1-20, Section 1.20, Table 1-2: Subsection 3.5, Wildlife, Operational Impacts, Mortality/Disturbance	<b>Comment:</b> The EIS should be revised to read "Blasting would be done
Mortality: bats, small mammals, sage sparrow, and sage thrasher / Same as most likely scenario / Potential for mortality, number unknown.	only during daytime, and the nearest home is more than 2.5 miles away 19-7 from the closest rock quarry where the majority of blasting activities would occur."
Disturbance: sage grouse and other avian species. / same as most likely scenario / Potential for disturbance	Page 1-27, Section 1.6.1, Table 1-2: Subsection 3.8, Noise, Operations and Maintenance Impacts
<b>Comment:</b> Regarding 'Potential for mortality', the risk of collision appears low for sage sparrow and sage thrasher, based on flight behaviors (i.e. these species tend to fly below the rotor swept area). This should be	Operations and Maintenance Impacts: No impact. Nearest home is 2 miles form the nearest WTG.
revised to indicate that although the numbers are unknown, the mortality risk is low.	<b>Comment:</b> The EIS should be revised to read "No impact. Nearest home is 1.75 miles away from the closest WTG." This is the correct distance.
Wild Horse DEIS Comments Wild Ridge Power Partners, LLC	Wild Horse DEIS Comments Wind Ridge Power Partners, LLC

Page 1-34, Section 1.6.1, Table 1-2: Subsection 3.12, Public Services and Utilities/Recreation, Operation and Maintenance Impacts	Comment:	
Operations and Maintenance Impacts: Increased demand for water / 10.5 million gallons; <1,000 gallons per day at O & M facility	On page 1-37, in Table 1-2, a footnote is noted after the text "478 Daily Trips". The footnote is non-existent and should be added or the reference should be deleted.	9-12
<b>Comment:</b> This statement is incorrect. The statement should read "<1,000 gallons per day used for <b>operations</b> ." 10.5 millon gallons is the estimated amount needed for construction.	Page 1-38, Section 1.6.1, Table 1-2: Subsection 3.14, Traffic and Transportation, Construction Impacts, Roadway Limitations	
Page 1-35, Section 1.6.1, Table 1-2: Subsection 3.12, Public Services and Utilities/Recreation, Operation and Maintenance Impacts	Roadway Limitations: Large number of trucks and trucks exceeding legal weight limits may cause pavement deterioration.	
Operations and Maintenance Impacts: A FCCstyle communication study or appropriate study will be conducted to ensure that energency responders communications will not be derogated by the wind generators, thus eliminating or reducing all communications on site by any emergency responders.	<b>Comment:</b> The EIS should note that , as described in Section 3.15.1.3 of the ASC, existing pavement conditions will be videoctaped as necessary. This video log will be compared with the condition of roadways after Project construction is completed. The Applicant and Kittitas County, or the City of Kittitas, will develop a plan for pavement restoration should any	19-13
<b>Comment:</b> Applicant has already completed and submitted to EFSEC in the ASC a thorough communications impact study and has documented microwave and freshel zones over the Project area based on the FCC's database. Please refer to Section 3.12.2.1 of the DEIS and Exhibit 24A 19-10	significant pavement degradation occur. Page 1-38, Section 1.6.1, Table 1-2: Subsection 3.14, Traffic and Transportation,	
of the ASC. This analysis concludes that there will be no impact to existing communications pathways, including those used by cellular telephone providers, therefore, no further study is necessary.	Aviation Hazards: Some risk to aviation because of wind turbine height, numbers, and placement	
Page 1-36, Section 1.6.1, Table 1-2: Subsection 3.12, Public Services and Utilities/Recreation, Decommissioning Impacts	<b>Comment:</b> The FAA has a defined process for evaluating aviation risks. Applicant will provide to EFSEC FAA 'No Hazard' determinations for all turbines and permanent MET towers prior to construction of the Project	19-14
Decommissioning Impacts: The Applicant will have signed agreements to provide for emergency services, fire, and EMS, with closest Fire/Hospital District or Department	Page 1-38, Section 1.6.1, Table 1-2: Subsection 3.14, Traffic and Transportation,	
<b>Comment:</b> The Applicant signed an agreement with the Fire District #2 on September 10, 2004. A copy of this agreement will be provided to ESFEC. At this time, the Applicant does not have plans to have signed agreements with the hostital and/or EMS as these services are provided on a feefor-	Operation and Maintenance impacts, road maintenance and rublic Access Requirements Road Maintenance and Public Access Requirements: 32 miles (165 acres) of roadways to maintain	
Service basis. Page 1-37, Section 1.6.1, Table 1-2: Subsection 3.14, Traffic and Transportation, Construction Impacts, Construction Trips	<b>Comment:</b> These 32 miles (165 acres) of roadways are <b>private</b> and will be maintained entirely by the Applicant, not the County or any other public entity. This statement should therefore be deleted from any discussion of public service impacts.	19-15
Construction Trips: 478 Daily Trips <sup>1</sup>	Page 1-40, Section 1.6.1, Table 1-2: Subsection 3.15, Health and Safety, Construction Impacts, Terrorism/Sabotage/Nandalism	
Wild Horse DEIS Comments Wind Ridge Power Partners, LLC	Wild Horse DEIS Comments Wind Ridge Power Partners, LLC	

teatth and Safety, Construction Impacts, Terrorism/Sabotage/Vandalism: A ainimum of one water truck with scravers will be present on each turbine string	scrambled and/or important phrases were left out, making the text hard to follow. Some rewrites would make these statements more intelligible.	19-19
oad during construction activities during fire season.	Define 'clos <del>e</del> at-hand views' in paragraph 2.	19-20
<b>Comment:</b> The above text should be deleted from the EIS, and the below paragraph should be inserted:	Paragraph 4 states the exact opposite of what the Applicant's visual resources expert concluded about the flashing white lights. The ASC	19-21
Based on Applicant's agreement with the local fire district, a number of dedicated water trucks shall be located at various locations on the Project 19 site for fire safety during construction activities during fire season. The	9-16 P-16 P-16 P-16 P-16 P-16 P-16 P-16 P	
number and locations of these dedicated water trucks will be defined in a detailed Fire Protection Plan prepared in consultation with the local fire district and submitted to EFSEC prior to construction.	Page 1-66, Section 1.6.1, Table 1-3: Subsection 3.14 Traffic and Transportation, Kittitas Valley	
age 1-41, Section 1.6.1, Table 1-2: Subsection 3.15, Health and Safety, Operation Ind Maintenance Impacts	Kittitas Valley: The project applicant would be responsible for maintenance of turbine access roads, access ways, and other roads built 6 construct and operate the project.	
/laximum Tower Collapse Hazard Zone Risk / Estimated Maximum Blade Throw Distance/Risk / Estimated Maximum Ice/Blade Fragmert Throw/Risk	Comment: Under the Kittitas Valley Project alternative, the DEIS states "The project applicant would be responsible for maintenance of turbine"	10-22
<b>Comment:</b> Each of these sections in Table 1-2 reference 344 feet/Low and 295 feet/Same as Most Like Scenario. These numbers are incorrect and should be replaced with accurate numbers which are equivalent to the	access roads, access ways, and other roads built to construct and operate the project". This is true for the Wild Horse Wind Power Project as well and the EIS for Wild Horse should reflect that.	77-61
turbine tip length. The corrected numbers are: 328 feet/Low and 249 feet/Same as Most Likely Scenario.	Page 2-2, Section 2.1.1, Subsection: Kittitas Valley Wind Power Project (181.5 to 246 MW)	
<sup>2</sup> age 1-41, Section 1.6.1, Table 1-2: Subsection 3.15, Health and Safety, becommissioning Impacts, Release of Hazardous Materials	Energy would be sold to Puget Sound Energy or the Bonneville Power Administration.	
The conductors for the proposed transmission line would be of sufficient diameter o control corona effects.	<b>Comment:</b> PSE and BPA are not the only two potential buyers for the project's output. It is possible that the output from the Project could be	19-23
<b>Comment:</b> The text should read: "The conductors for the proposed transmission line would be of sufficient design in accordance with National 19. Electric Code standards and utility exercise to control exercise for the second	sold to other utilities, however power would be transmitted through ener BPA and/or PSE transmission systems.	
בופנווני לסמס אמוממים מות פסטת מוווין אומנונפ ול לטוווא נטוטומ פוופרוא.	Page 2-3, Section 2.1.1, Subsection: Tierras Morenas, Costa Rica (24MW)	
age 1-58, Section 1.6.1, Table 1-3: Subsection 3.10, Visual Resources/Light and ilare, Proposed Action	Sagebrush Power Partners was created as a Delaware limited liability company	
see referenced page	Comment: The statement "Sagebrush Power Partners was created as a	
<b>Comment:</b> Paragraphs 1, 2, and 3 consists of the analysis presented in the ASC in a rewritten form. In the pocess, some information was	Delaware limited liability company and subsequent text should be moved into the Kittitas Valley section, rather than the Costa Rica -19	19-24
'ild Horse DEIS Comments 'ind Ridge Power Partners, LLC	Wild Horse DEIS Comments Wind Ruge Power Partners, LLC	

paragraphs, as Sagebrush Power Partners is the Applicant for the Kittitas Valley Wind Power Project.	19-24	Page 3.3-12, Section 3.3.2.2 Subsection: Surface Water, Runoff, and Erosion
Page 2-12, Section 2.2.3, Ssubsection: Meteorological Stations and Monitoring Towers	(enleyense-inspirerentaal	Presently disturbed areas that would be impervious include the individual WTG foundations with approximately 16-foote concrete diameters, nnnnn x ft by x ft impervious transformer foundations/spill containment structures
The permanent towers would consist of a central lattice structure supported by three to four sets of guy wires and would be as tall as the hub height (HH) of the WTGs which is 6-80 meters (151-262 ft) and would be connected to the plant's central SCADA system.		<b>Comment:</b> 'Presently' should be changed to 'permanently' and the neasurements 'nnnnxft by x ff should be '10ftx10ff'.
<b>Comment:</b> Applicant will use free-standing (unguyed) permanent meteorological towers for the Wild Horse Project.	19-25	Page 3.4-4, Section 3.4.1.1, Subsection: Riparian Communities. Assessments of habitat quality were made using the Natural Resource Conservation Service (NRCS) "Range Condition Classes," which classify ange
Page 2-49, Section 2.11.1, Subsection: County Planning Staff		Comment: The EIS should also note that Washington Department Fish
Once the application has been deemed complete by CDS, the County will issue a notice of application and begin its formal review process	delen de constante en constante	and Wildlife (WDFW) reviewed and approved Applicant's study methodolgoy. WDFW has determined the studies conducted for the
<b>Comment:</b> Kittitas County CDS issued a notice of application on July $2\delta^{1}$ , 2004.	19-26	Project are appropriate and consistent with WDFW's wind power guidelines.
Page 2-49, Section 2.11.1, Subsection: County Public Works Department		Page 3.4-18, Section 3.4.2.2 -Operation and Maintenance Impacts
Mr. Bennett indicated he would prefer to wait for the permit application to be filed before conducting a detailed review of the potential issues associated with the project.	adaratika katego ng	The potential for this impact would be greatest under the 158turbine/1-MW scenario since approximately 401 acres would be disturbed and winerable to weed introduction and establishment if revegetation efforts failed.
<b>Comment:</b> The text should say "Mr. Bennett is conducting a detailed review of the potential issues associated with the project through this DEIS and the Land Use Permit Application filed with the County".	19-27	<b>Comment:</b> The EIS should note that the Applicant has proposed active weed control efforts, as well as comprehensive mitigation for impacted areas. Revegetation will be conducted in consultation with WDFW.
Page 2-49, Section 2.11.1, Subsection: Fire District		Page 3.5-2, Section 3.5.1- Affected Environment
Chief Baker planned to visit the Stateline Wind Power Project in Walla Walla County and respond to the Applicant with a proposal for a fire protection arrangement for the project. There have been no written responses resulting from this consultation.		Both aerial and ground surveys focused on areas of known historical occurrence and other areas of similar habitat.
<b>Comment:</b> The Applicant has executed a fire services contract with Fire District #2 for the Wild Horse Project on September 10, 2004. A copy of this agreement will be provided to ESFEC.	19-28	Guidelines.
Wild Horse DEIS Comments Wind Ridge Power Partners, LLC		Wild Horve DEIS Comments Wind Ridge Power Partners, LLC

Page 3.7-7, Section 3.7.1.3 -Renewable Resources		<b>Comment:</b> It should be noted that the FHWA criteria referenced are for determining if noise walls should be built. FHWA would not require noise	19-35
Several electric utilities have recently issued RFPs to acquire wind pow including PSE, Avista Corporation, and Portland General Electric.	ər,	wails in this case because the impact is temporary.	
Comment: The EIS statement should also include PacifiCorp which		Page 3.8-8, Section 3.8.2.1, Table 3.8-6 and Subsection: Construction Traffic Noise	
seeking 1100 MW of new renewable resources, including wind power.	19-33	For the estimated peak-hour traffic volumes, the noise levels would exceed FHWA's noise impact criterion (66 dBA) only at homes within 50 feet of the street	·
Page 3.8-4, Section 3.8.1.2, Subsection: Environmental Impact Thresholds for Noi Increases Above Background	e S	centerline. However, there are few, if any, homes that close to the road. Thus, it is concluded there is little potential for construction vehicles to adversely impact homes in the town of Kittitas	
The British Wind Energy Association recommends that the noise levels result from new wind generation facilities should be kept within 5dBA of the avera evening and nighttime background levels at homes (British Wind Ener	ng ge gy	<b>Comment:</b> Table 3.8-6 is inconsistent with Table 3.8-4 the correct distance to 66 dBA is either 50 or 60 feet.	
Association 2003). That recommended restriction of 5 dBA above backgrou has been used as the environmental impact significance criterion for this no analysis.	ise	Again the FHWA regulations referenced were not developed to address temporary construction noise - rather they were developed to determine when and where noise barriers or other mitigation would be needed.	19-36
<b>Comment:</b> The explanation of the British guidelines is incomplet "Preliminary recommendations from the Wind Turbine Noise Worki Group, established by the DTI, are that turbine noise level should be ke	e. Ing	Page 3.8-12, Section 3.8.5 - Significant Unavoidable Adverse Impacts	
to within 5 dB(A) of the average existing evening or nighttime backgrour noise level. This is in line with standard practice for assessment of mc sources of noise except for transportation and some mineral extracti and construction sites when higher levels are usually permitted. A fix low level of between 35 and 40 dB(A) may the specified when backgrour noise is very low, i.e less than 30 dB(A)."	ld bst on ed 19-34	Haul truck traffic during construction would cause high noise levels at homes near the roads being used to access the site. Peakhour traffic noise would likely exceed FHWA's noise impact criteria at homes within 75 to 150 feet of the haul route. Although temporary in nature, these traffic noise levels would be adverse and unavoidable.	
The Wild Horse DEIS fails to mention that British recommendatio established a fixed level (similar to the Oregon Noise rules) of between and 40 dBA; therefore the 5 dBA increment only applies when the existin noise level is creater than between 35 and 40 dBA Nonetheles	su 35 35	<b>Comment:</b> It should be noted that the FHWA criteria were not developed to evaluate temporary noise from haul traffic but rather longterm noise impacts.	19-37
WSDOT's June 2004, statewide noise analysis and abatement polidefines a "substantial increase" as an increase greater than 10 df	S A C	Page 3.10-12, Section 3.10.2.5, Subsection: Landscape Unit 6, Visual Sensitivity	
fo dBA and therefore its increase would not be considered substant under the WSDDT criteria	ial	The level of visual sensitivity is considered to be high.	
Page 3.8-6, Section 3.8.2, Table 3.8-4, Subsection: Construction Impacts		<b>Comment:</b> It should be noted that although the level of <b>visual sensitvity</b> is considered high, the analysis presented in the Wild Horse ASC (Section 3.11.2 and Table 3.11.3-1, Landscape Area 6) concluded that the level of visual runality and visual immaart at this location are low	19-38
Commute vehicles and up to 49 heavy trucks per hour would cause traffic nois levels to exceed FHWA impact thresholds only at homes within 60 feet of t street centerline.	se he	Page 3.10-24, Section 3.10.3.3, Subsection: Light and Glare, Turbine Lighting	
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Based on experience at the operating Stateline and Nine Canyon wind power projects in Washington, it appears that the whiteflashing lights would be visible and likely to create a moderate or high level of visual impact.		existing communications pathways, including those used by cellular 19-42 telephone providers. Therefore, no further study is necessary, and this suggestion should be deleted.	42
<b>Comment:</b> It was concluded in the Project ASC that, based on experience at Stateline and Nine Canyon, the white lights which flash during the davtime would be unlitedy. to create a moderate or hich lawal of visual	19-39	Page 3.12-21, Section 3.12.4.2-Operation and Maintenance	
impact. Applicant questions whether Jones and Stokes reached the opposite conclusion or whether this is a typo.		<ul> <li>The Applicant will have signed agreements to provide for emergency services, fire and EMS, with closest Fire/Hospital District or Department prior to work starting on any phase of the project once approval is given</li> </ul>	
Page 3.10-24, Section 3.10.3.3, Subsection: Light and Glare, Turbine Lighting		Comment: This statement is incorrect. The Applicant has signed an	
The FAA is now in the process of reviewing its safety lighting standards for wind energy facilities and is in the process of developing revised requirements.		agreement only with Fire District #2. At this time, the Applicant does not have plans to have signed agreements with the hospital and/or EMS, as these services are provided on a fee for-service basis.	-43
<b>Comment:</b> The EIS should note that the FAA implemented a new lighting plan at Zilkha's Blue Canyon Wind Power Project in Oklahoma as a real- world test of the neurosed new liciting standards.	19-40	Page 3.13-14, Section 3.13.1.5, Subsection: Traditional Cultural Properties	
Page 3.12-1. Section 3.12.1.1 -Fire Protection		The Yakima Nation, in a letter dated April 6, 2004, reiterated Colville Tribe's concern that TCPs have not been adequately researched to date.	
The Applicant is in the process of determining which Fire District will be responsible for fire protection services for the project and will submit this information to EFSEC prior to construction as part of the Fire Protection and Prevention Plan		<b>Comment:</b> The Applicant is committed to working with tribal nations and has entered into a contract with CCT to conduct a TCP study, which will be provided to EFSEC upon completion.	44
		Page 3.14-7, Section 3.14.1.2, Subsection: Future Plans and Projects	
<b>Comment</b> : The Applicant has signed a contract for fire protection with Fire District #2, a copy of which will be provided to EF玺C. Section 3.12.2.1, 'Construction Impacts: Fire Protection', details the Applicant's initial discussions with Fire District #2.	19-4-1 11-11-11-11-11-11-11-11-11-11-11-11-1	<ul> <li>I-90: Highline Canal to Elk Heights auxiliary lane project (MP 90.57 to MP 92.76). Scheduled for completion in July 2004.</li> <li>Comment: The WSDOT Highline Canal to Elk Heights Auxiliary Lane</li> </ul>	4 L
Page 3.12-20, Section 3.12.4.1 -Construction		Project on I-90 has been completed.	Ç.
-Conducting FCC-style communication study or appropriate study to ensure that emergency responders communications will not be derogated by the wind generators, thus eliminating or reducing all communications on site by any emergency responders;		Page 3.14-10, Section 3.14.2, Table 3.14.4, Subsection: Construction Impacts, Roadway Limitations Roadway Limitations: Large number of trucks and trucks exceeding legal weight limits may cause pavement deterioration	
<b>Comment:</b> This study was not listed as a mitigation measure anywhere in the Wild Horse ASC. Applicant has completed a thorough communications impact study and has documented microwave and fresnel zones over the Project area based on FCC's database. Please refer to Section 3.12.2.1 of the DEIS and Exhibit 24A of the ASC. There will be no impact to	19-42	<b>Comment:</b> The EIS should note that , as described in Section 3.15.13 of the ASC, existing pavement conditions will be videotaped as necessary. This video log will be compared with the condition of roadways after Project construction is completed. The Applicant and Kittitas County, or 19-46	46
Wild Horse DEIS Comments Wind Ridge Power Partners, LLC	and a second	Wild Horse DEIS Comments Wind Ridge Power Partners, LLC	

<b>Comment:</b> The FAA has a defined process for evaluating aviation risks. Applicant is working with the FAA to evaluate all proposed structures and will provide to EFSEC FAA 'No Hazard' determinations for all turbines and permanent MET towers incrit or construction of the Project		Page 3.14-22, Section 3.14.3.1, Subsection: Kittitas Valley Alternative	Project operations and maintenance could generate up to 40 workers comm <b>t</b> ing to and from the O&M facility on paved state and county roads during a 24hour period.	<b>Comment:</b> As stated in the Kittitas Valley ASC, project operations and maintenance would more likely generate up to 20 workers, rather than the 40 the Wild Horse DEIS states.	Page 3.14-22, Section 3.14.3.1, Subsection: Kittitas Valley Alternative	The proposed $O$ facility parking lot may not be sufficient to accommodate future parking needs of both project employees and potential visiting tourists.	<b>Comment:</b> The Applicant believes that the parking lot will be sufficient 19-52 and sees no basis for this statement.	Page 3.15-10, Section 3.15.2.2, Subsection: Shadow Flicker	In addition to being an annoyance, concerns have been raised regarding shadow-flicker causing epileptic seizures.	<b>Comment:</b> Applicant did investigate the possibility of photosensitive epilepsy sensitivity from the Project. Photosensitive epilepsy is a type of epilepsy which is triggered by the flickering or flashing of light. The Epilepsy Foundation has	excellent information available which explains photosensitive epilepsy. The frequency known to trigger seizures is between 5 and 30 flashes per second. The shadow flicker frequency from wind turbines vary between 0.5 and 1 flash per second for all of the turbine scenarios under consideration for the Project. This is considerably less than the frequency known to trigger photosensitive epilepsy seizures. Due to the large difference in the flicker frequencies and the minimod shadow immode the more than contact and the considerable context.	seizures should not result from Project operations.	Page 3.16-4, Section 3.16.6.2 -Air Quality	Wild Horse DEIS Comments Wind Rüdge Power Parmers, LLC	
vement restoration should any 19-46 cont	l, Subsection: Operation and		ted vehicle trips that would be ently known with precision, it com operating wind projects in	n) and the location of the WH 19-47 the anticipated touristrelated unlikely for example, that 100 disit the WH project once it is		, Subsection: Operation and ss Requirements	ents: 32 miles (165 acres) of	niles (165 acres) of roadways It by the Applicant, not the	y Limitations	dded traffic congestion would	in increased traffic congestion ally concerts, that occur at the night after Wild Horse Project Also, the majority of traffic to uate capacity for such traffic.	gation Consideration	oact air navigation.	Page 13 of 21	
the City of Kittitas, will developa plan for pav significant pavement degradation occur.	Page 3.14-11, Section 3.14.2, Table 3.144, Maintenance Impacts, Tourism-induced Traffic	Tourism-induced Traffic: Unknown	<b>Comment:</b> While the number of tourism-relat generated by the WH project is not prese should be possible. based on information fro	Washington (e.g. stateline and Nine Canyon project site, to estimate an upper limit of t trips the project may generate. It is highly u or more vehicles per day would travel to vi operating.	0 	Page 3.14-11, Section 3.14.2, Table 3.144, Maintenance Impacts, Road Maintenance and Public Acces	Road Maintenance and Public Access Requireme roadways maintain	<b>Comment:</b> The EIS should note these 32 m are <b>private</b> and will be maintained entirely County or any other public entity.	Page 3.14-17, Section 3.14.2.1, Subsection: Roadway	One special event that could potentially result in ac be concerts at the Gorge.	<b>Comment:</b> Project traffic should not result in due to special events. The events, specifica Gorge Ampitheatre occur most commonly at construction will have ceased for the day. A Gorge concerts is along H90 which has adequ	Page 3.14-21, Section 3.14.2.2, Subsection: Air Navig	The installation of wind turbines on the site may imp.	Wild Horse DEIS Comments Wind Rüge Power Partners, LLC	

<b>Comment:</b> Applicant questions the basis for this statement. Kittitas County is not a lightning-prone area and is in fact in the second lowest of	eight categories of lightning intensity (refer to Figure 2.2.4.1-1 of the ASC). It should be noted that in addition to extensive grounding systems at the WTGs, all critical electrical and control systems at the substation and the WTGs are fitted with lightning suppressors and are surrounded by gravel.	The EIS should refer to Mike Bernay's prefiled testimony for the Kittitas	Valley Project which indicates there is a minimal fire risk associated with wind power projects. Mr. Bernay states that neither of the two fire claims received by his company, Wind Pro Insurance, (which insures over 60% of the wind projects opreating in the US and many more abroad) was	lightning-related. Mr. Bernay goes on to state that lightning damages are typically related to blade structure and downtime. Furthermore, he states that the indicators for lightning risk are older turbine technology, and a project located in a high-lightning density area, neither of these conditions apply to the Wild Horse Project.		<u>Comments Related to the Impacts of the Aternatives, by Section and Page:</u>	Throughout the WH DEIS, in sections with comparisons of the impacts of the	alternatives, the treatment of the anticipated impacts of the Wild Horse, Kittitas Valley and Desert Claim projects are not consistent. It appeas that most of the information in the comparison tables was simply extracted directly from the respective DEISs without noting or drawing attention to the fact that the analytical approaches mathodologies and ness lithing conclusions were very different andall	performed by difference constructions of a final does not afford the public and decision makers a true "apples to apples" comparison. Also, there are some clear factual	errors in these comparisons that have the effect of presenting the anticipated impacts of the Kittitas Valley project as substantially greater than those of the Desert Claim projects (particularly with regard to noise, shadow flicker,	telecommunications and traffic) when in fact the Kittitas Valley project impacts are the same or less for those elements of the environment. The Applicant has noted specific examples in the following paragraphs where such comparisons are	not accurate and should be revised. More detailed information regarding Desert Claim in now available in the Final EIS for thatproject.	Page 1-59, Section 1.6.1, Table 1-3: Subsection 3.10, Visual Resources/Light and Glare, Desert Claim	Wild Horse DEIS Comments Wind Ridge Power Partners, LLC
ttainment area for air pollutants of .	tt and should be changed to read, 19-54 xist."	sp	meadowlark appear to have the mortality for these species may	to n populations of these common 19-55 ally are more likely tied to loss of	Natural Resources	pjects at a net capacity of 33%, the Valley projects would produce	n a long-term basis.	public to put the MW of output into 19-56 V would serve on average 46,500	sources	ebruary 19,2004 and the Applicant	into a contract with the CCT for a 19-57 SEC once it is completed.	ifety	ere are none, would likely increase te the grounding systems that the increased likelihood of fire.	Page 15 of 21
Kittitas County is not designated as a non-at concern, and current air quality problems exist.	<b>Comment:</b> This statement is incorrect "current air quality problems do not ex	Page 3.16-11, Section 3.16.6.5, Subsection: Bir	Of these species, horned lark and western highest collision risks. Increased risk of contribute to decline in local populations.	<b>Comment:</b> The low fatality levels expecexpected to have a measurable affect bird species. Declines observed region habitat.	Page 3.16-12, Section 3.16.6.7 -Energy and N	Assuming long-term operation of the three pro Wild Horse, Desert Claim, and Kitttas	approximately 186 average MW of electricity or	<b>Comment:</b> It would be helpful for the p perspective by noting that that 186MW houses per year.	Page 3.16-23, Section 3.16.6.13 -Cultural Rec	The Applicant and EFSEC met with CCT on Fist responding to CCT's concern.	<b>Comment:</b> The Applicant has entered i TCP study which will be provided to EFS	Page 3.16-27, Section 3.16.6.15-Health & Sa	The presence of turbine towers where now the the probability of lightning strikes and, despit wind power projects would employ, provide an	Wild Horse DEIS Comments Wind Ridge Power Partners, LLC

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Answer         This statement about farge from low level (a minute about the relationships of the 3 projects for international program in the about of a statement about the relationship of the based of about an about and a minute about a statement about and about and a minute about a statement about a statement about and about and a minute about a statement about about a statement about a statement about a statement about about a statement about a statement about about about a statement about about a statement abou
<ul> <li>visual impacts would range from low level to visual impacts would range from low level to visual impacts.</li> <li>visual impacts.</li> <li>visual impacts would range from low level to the more strates, the besart claim EIS conducted by the statement in three are relidences (32 aled in immediate proximity to turbines. Recease this poject is, for the most part, and there are relidences (32 aled in immediate proximity to turbines. Recease this poject is is not under the columbia Gorge.</li> <li>vexpert disagrees with the statement in visual be would be visible from the Columbia Gorge.</li> <li>vexpert disagrees with the statement in project, until the suggestion that the Desert Claim project.</li> <li>with the suggestion that the Desert Claim project.</li> <li>subsection 3.10, Visual Resources/Light and the larger number of viewers and residences in project.</li> <li>Subsection 3.10, Visual Resources/Light and the larger number of viewers and residences in project.</li> <li>Subsection 3.10, Visual Resources/Light and the larger number of viewers and residences in project.</li> <li>Subsection 3.10, Visual Resources/Light and the larger number of viewers and residences in project.</li> <li>Subsection 3.10, Visual Resources/Light and the larger number of viewers and residences in project.</li> <li>Subsection 3.10, Visual Resources/Light and the larger number of viewers and residences in project.</li> <li>Subsection 3.10, Visual Resources/Light and the supplementation in the best provided prove the superstance from the superstant the importance from the superstant the moderate. The three the three distance from the superstant the importance would be note fair to supt the Applicant's visible from the superstant to the MMMPP, and greater distance from the superstant to the moderate. The three the three distance from the set of the three distance from the set of the three distance from the supervise supervise and more from the set of the three distance from th</li></ul>
visual impacts would range from low level to elevel impacts. we of the Desert Claim EIS conducted by the expert, Dr. Tom Priestley, it would be more st areas, the Desert Claim Project's visual . Because this poject is, for the most part, aa, there are relatively few residences (32 cated in immediate proximity to turbines. ences within 1/2 mile of the Desert Claim with the suggestes with the statement in would be visible from the Columbia Gorge. map makes it clear that the project would be filmiting the turbines' visibility. with the suggestion that the Desert Claim pact would be substantially less than that of the larger number of viewers and residences in project. <b>3: Subsection 3.10, Visual Resources/Light and</b> <i>fis alternative are likely to be less that the</i> <i>ratives due to it not being visible from the</i> <i>to the WHWPP, and greater distance from</i> <i>s 190 and US-97 and fewer residences in</i> <i>y alternative</i> . <b>3: Subsection 3.10, Visual Resources/Light and</b> <i>fis alternative are likely to be less that the</i> <i>ratives due to it not being visible from the</i> <i>to the WHWPP, and greater distance from</i> <i>s 190 and US-97 and fewer residences in</i> <i>y alternative</i> . <b>3: Subsection 3.10, Visual Resources/Light and</b> <i>fis alternative are likely to be less that the</i> <i>ratives due to it not being visible from the</i> <i>to the WHWPP, and greater distance from</i> <i>s 190 and US-97 and fewer residences in</i> <i>y alternative</i> . <b>3:</b> Plog and US-97 and fewer residences in <i>y alternative</i> . <i>Polect's lower visual impact presented in</i> <i>is flawed</i> as outlined below: De significantly visible from the Columbia Review of the ZVI map makes it clear that the in only limited areas of the Gorge, and miles and more from the site, limiting the <i>Review of the ZVI</i> map makes it clear that <i>Review of the ZVI</i> map makes it clear that <i>Review of the ZVI</i> map makes it clear that <i>Review of the ZVI</i> map was the site, limiting the <i>Review of the ZVI</i> map makes it clear that <i>Review of the ZVI</i> map makes it clear that <i>Review of the ZVI</i> map makes it

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د ۲	Page 3.8-11, Section 3.8.3.1, Subsection: Desert Claim Alternative Predicated operational noise levels at all receptor locations would meet applicable noise limits.	<b>Comment:</b> Desert Claim shows exceedences of the 50 dBA limit at two locations. The EIS for Desert Claim assumes that the applicable noise limit will be 70 dBA (Table 3.96) at almost all residences. The WH EIS should note that KVWPP and WHWPP both assume a lower regulatory threshold of 50dBA.	Page 3.10-27, Section 3.10.4.1, Subsection: Desert Claim Alternative Visual impacts from this alternative are likely to be less than the WHWPP and the Kittitas Valley alternatives due to it not being visible from the Columba River Gorge as compared to the WHWPP and greater distance from major transportation routes such as F90 and US-97 and fewer residences in close proximity than the Kittitas Valley alternative.	Comment: Based on a review of the Desert Claim EIS, by the Applicant's visual resource consultant, it would be more fair to say that in most areas, the Desert Claim project's visual impacts would be moderate. The three premises for the Desert Claim Project's lower visual impact presented in the above comment are seriously flawed as outlined below. 4. None of the projects will be significantly visible from the Columbia River Gorge. The Wild Horse Project would not be significantly visible from the Columbia Gorge, and these areas would be 7 miles and more from the site, imping the turbines' visibility. 5. This statement about the relationships of the 3 project from the forces and more from the life closest turbines will be located considerably further in the distance from Ho distance from Ho visibility. In the case of the Wild Horse from Ho for the visibility. In the case of the Wild Horse from Ho forces from Ho0 and will here located the visibility. In the case of the Wild Horse from Ho0 and will here also and will be located or sitely further in the distance from Ho0 and will be located or sitely further in the distance from Ho0 and will be located considerably further in the distance from Ho0 and will be located considerably further in the distance from Ho0 and will be located or sitely. In the case of the Wild Horse from Ho0 and will be located considerably further in the distance from Ho0 and will be located considerably further in the distance from Ho0 and will be located considerably further in the distance from Ho0 and will be visible are on the order of 8 to nine miles from the closest turbines will be visible are on the order of 8 to nine miles from the closest turbines.	Wild Horse DEIS Comments Wind Ridge Power Partners, LLC
	similar. The data appears suspect (perhaps a typo) and should be further researched. The Wild Horse project should have the lowest peak construction traffic due to the use of the onsite gravel quarries and batch plant.	Page 2-37, Section 2.6.2, Subsection: Desert Claim, Location and Site Characteristics A total of 31 occupied singe-family residences (and one abandoned trailer) are within the project area or within 1000 feet of the project area boundary (Kittitas County 2003b).	<b>Comment:</b> The statement is incorrect according to the Desert Claim FEIS. In the Desert Claim FEIS on page 3138 the following is stated "32 residences (including 1 abandoned trailer) are located either within the project area, or within 1000 fed of the project boundary. An approximately 8 residences are located within the boundary of the project area". It is also important to note that the DC FEIS also states there are 83 residential structures within one-half mile of the project site.	Page 3.8-5, Section 3.8.1.5 Desert Claim AlternativeNoise-sensitive areas in the project vicinity include Class A and Class C EDNA.The predominant sources of existing noise on and near the project site include agricultural activities, traffic on local roadways, and occasional overhead aircraft (including helicopters). At some locations, wind at higher speeds is also a major source of noise.Comment: The number of receptors used in noise impact studies is described in the FEIS for the Desert Claim Projed and should be listed to be consistent with the noise study information provided under the Kittitas Valley Project Alternative.19-68Page 3.8-10, Section 3.8.3.1, subsection: Kittas Valley Alternative MHWPP indicated the potential for significant noise impacts (EFSEC, 2004)19-69Comment: This statement is incorrect and should be deleted or modified. Please refer to section 3.12.2 of KV DEIS which concludes that Project impacts.19-69	Wild Horse DEIS Comments Wind Ridge Power Partners, LLC

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6. There are clearly not fewer residences in close proximity to the Desert Claim Project compared with either the Kittitas Valley or Wild Horse Projects. Because the Desert Claim project is, for the most part located in a remote agricultural area, there are relatively few residences located in immediate proximity to turthes. However, there are 83 residences within 1/2 mile of the Desert Claim Project (DC FEIS page 3-136) compared to approximately 53 residences within ½ mile of the KWPP and one residence within 1.75 miles of the Wild Horse project.	19-71 cont	
There is thus good reason to conclude that the visual effects of the Deser Claim Project would <b>not</b> necessarily be substantially less than those of the KVWPP or WHWPP.		
Page 3.14-9, Section 3.14.1.4-Desert Claim Alternative Given the proximity of the Kittitas Valley alternative to the WHWPP		
<b>Comment:</b> The statement is incorrect. The EIS should state "Given the proximity of the <b>Desert Claim</b> alternative"	19-72	
Page 3.14-23, Section 3.14.3.1, Subsection: Desert Claim Alternative		
Entire Section		
<b>Comment:</b> No reference is made to the potential for increases in acciden rates as a result of the construction of the DC project, while in the preceding section regarding the KV project, it is noted that accident rates might increase due to project-related construction. This lack of consistency should be corrected in the EIS to reflect the fact that the potential for increased accident rates is similar and low for all three winc power projects.	19-73	
Wild Horve DEIS Comments Wind Ridge Power Partners, LLC		

# Responses to Comments in Organization Letter 19 from Chris Taylor, Project Development Manager, Zilkha Renewable Energy

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

Please note, that not all, but many of the comments provided by the Applicant in this Letter 19 submittal are editorial and provide information for purposes of correction, clarification, or to update the Draft EIS. Revisions have been made to the Draft EIS, where appropriate, and appear in the sections of this FEIS. To reduce repetition, this statement has not been repeated for every response that refers to an edit.

- 19-1. The referenced paragraph has been deleted and a paragraph on dust suppression at the rock crushing and batch plants has been added in 3.2 Air Quality, Mitigation Measures.
- 19-2. The finding that these species generally fly below the rotor swept area applies to breeding individuals only whereas mortality may occur among both breeding, and migratory individuals. For this reason, the table was not changed.
- 19-3. Because Table 1-2 is a summary, it is referring to all other avian species that may occur in the WHWPP area. Table 1-2 has been changed to reflect this.
- 19-4. Although leks were not detected during surveys for the WHWPP they have been known to occur in the vicinity in the past and may occur in the future; therefore, disturbance impacts are possible.
- 19-5. Table 1-2 has been edited to reflect the Applicant's commitment to using unguyed meteorological towers.
- Wild Horse Wind Power Project Final EIS

- 19-6. Section 1.6.1, Table 1-2, Subsection 3.8, Noise, Construction Impacts of the Final EIS, has been revised to reflect the nearest home is 1.75 miles away from the closest WTG.
- 19-7. Section 1.6.1, Table 1-2, Subsection 3.8, Noise, Construction Impacts of the Final EIS has been revised to reflect the nearest home is more than 2.5 miles away from the closest rock quarry.
- 19-8. Section 1.6.1, Table 1-2, Subsection 3.8, Noise, Operation and Maintenance Impacts of the Final EIS has been revised to reflect the nearest home is 1.75 miles away from the closest WTG.
- 19-9. Section 1.6.1, Table 1-2, Subsection 3.12, Public Services and Utilities/Recreation, Operation and Maintenance Impacts of the Final EIS has been revised to reflect a daily usage of less than 1,000 gallons for operations.
- 19-10. Section 1.6.1, Table 1-2, Subsection 3.12, Public Services and Utilities/Recreation, Mitigation of the Final EIS has been revised to reflect that the Applicant has completed a thorough communications study that concludes no anticipated impact to existing communication pathways.
- 19-11. Section 1.6.1, Table 1-2, Subsection 3.12, Public Services and Utilities/Recreation, Mitigation of the Final EIS has been revised to reflect that the Applicant has secured an

maximum ice/blade fragment throw distance for the 104 and 158 WTG scenarios.	. Section 1.6.1, Table 1-2, Subsection 3.15, Health and Safety, Mitigation, has been revised to define transmission line conductors to be of sufficient "design in accordance with National Electric Code standards and good utility practice"	to control corona effects.	<ul> <li>Section 1.6.1, Table 1-3, Subsection 3.10, Visual Resources/Light and Glare, Proposed Action has been edited.</li> </ul>	<ul> <li>Section 1.6.1, Table 1-3, Subsection 3.10, Visual Resources/Light and Glare, Proposed Action has been edited.</li> </ul>		<ul> <li>Section 1.6.1, Table 1-3, Subsection 3.10, Visual Resources/Light and Glare, Proposed Action has been revised to indicate that the white flashing lights would be visible during the daylight hours and likely to create a low</li> </ul>	level of visual impact.	. Section 1.6.1, Table 1-3, Subsection 3.14, Traffic and Transportation, Proposed Action has been revised to reflect that the Applicant will maintain project roads at the site.	. Section 2.1.1, Subsection: Kittitas Valley Wind Power Project has been revised to reflect that power generated at the site may be sold to either PSE, BPA, or another utility, but would be transmitted over PSE and/or BPA transmission	systems.	<ul> <li>Section 2.1.1, Subsection: Kittitas Valley Wind Power Project has been revised to include text originally misplaced in Section 2.1.1, Subsection: Tierras Morenas, Costa Rica.</li> </ul>
	19-18		19-19	19-20		19-21		19-22	19-23		19-24
agreement with Fire District #2, and does not plan to have signed agreements with the hospital and/or EMS services.	2. Section 1.6.1, Table 1-2, Subsection 3.14, Traffic and Transportation, Construction Impacts has been revised to include a footnote: 1Daily trips with rock quarry on-site.	3. Section 1.6.1, Table 1-2, Subsection 3.14, Traffic and Transportation, Mitigation has been revised to reflect that the	Applicant will videotape existing road conditions, compare to road conditions after construction, and as described in the Development Agreement (Appendix A) if construction of the project results in the degradation of the existing payement	and/or shoulders the Applicant shall reinstate these facilities to equal or better condition prior to construction.	4. Section 1.6.1, Table 1-2, Subsection 3.14, Traffic and	Transportation, Operation Impacts has been revised to reflect that FAA has issued a Determination of No Hazard for the project.	5. Section 1.6.1, Table 1-2, Subsection 3.14, Traffic and Transportation. Operation Impacts has been revised to reflect	that roads on-site are private and will be maintained entirely by the Applicant.	6. Section 1.6.1, Table 1-2, Subsection 3.15, Health and Safety, Mitigation, Terrorism/Sabotage/Vandalism has been revised as requested regarding the presence of dedicated water trucks during construction.	7. Section 1.6.1, Table 1-2, Subsection 3.15, Health and Safety, Operation and Maintenance Impacts for maximum tower	collapse hazard zone, blade throw, and ice/blade fragment throw distances are correct as stated in the DEIS. However, for clarification, 328 feet was added to the estimated
	19-1	19-1			19-1,		19-1		19-1	19-1	

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- 19-25. Section 2.2.3, Subsection: Meteorological Stations and Monitoring Towers has been revised to state that meteorological towers would be free-standing (unguyed).
- 19-26. Section 2.11.1, Subsection: County Planning Staff has been updated.
- 19-27. Section 2.11.1, Subsection: County Public Works Department has been updated.
- 19-28. Section 2.11.1, Subsection: Fire District has been updated to reflect the Applicant executed a contract with Fire District #2 for fire protection services for the Project on September 10, 2004
- 19-29. Section 3.3.2.2, Subsection: Surface Water, Runoff, and Erosion, 2nd paragraph, 1st sentence has been corrected to reflect "permanently" disturbed areas and a "10-foot-x-10foot" impervious footprint for transformer foundations/spill containment structures.
- 19-30. Section 3.4.1.1, Subsection: Riparian Communities has been revised to reflect WDFW's approval of the NRCS study methodology and determination that the studies conducted for the Project are appropriate and consistent with WDFW's Wind Power Guidelines
- 19-31. Section 3.4.2.2 Operation and Maintenance Impacts has been revised to include a reference to the Mitigation Section and that the Applicant will implement revegetation in consultation with WDFW.
- 19-32. Section 3.5.1 Affected Environment has been revised to reflect sage grouse survey protocols were developed in consultation with WDFW and are consistent with WDFW Wind Power Guidelines.

- 19-33. Section 3.7.1.3 Renewable Resources has been revised to include "PacifiCorp" as a utility that has recently issued a RFP to acquire wind power.
- 19-34. Section 3.8.1.2, Subsection: Environmental Impact Thresholds for Noise. The requested text has been added. However, note that the requested additional text has little relevance to this FEIS, because the background levels at all receivers evaluated for this FEIS are higher than 30 dBA.
- 19-35. Section 3.8.2, Table 3.8-4 has been revised to include a footnote for the FHWA criteria referenced explaining it is for determining if noise walls should be built.
- 19-36. Section 3.8.2.1, Subsection: Construction Traffic Noise has been corrected to reflect a distance of 60 feet to 66 dBA.
- 19-37. Section 3.8.5 Significant Unavoidable Adverse Impacts FHWA criteria, Section 3.8.1.2 of the FEIS has been updated to describe that FHWA's 66 dBA noise impact criterion (which was developed by FHWA to assess permanent traffic noise) has been used in this FEIS as a relevant impact criterion for temporary construction noise.
- 19-38. In Section 3.10.2.5, Subsection: Landscape Unit 6, visual quality is acknowledged as being moderate to low due to other features in the immediate landscape, with the visual sensitivity noted as high due to the location of the substation in close proximity to many viewers. Please note that Table 3.10-2 in Section 3.10.3.3 of the Draft EIS presents a "low" value for potential level of visual impact for Landscape Unit 6. Both sections have been updated to include the substation's proposed relocation and that the relocation would make it less visually prominent to I-90.

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- Section 3.10.3.3, Subsection: Light and Glare, Turbine Lighting has been revised to reflect a "low" level of impact from white flashing lights during daylight hours.
- 19-40. Section 3.10.3.3, Subsection: Light and Glare, Turbine Lighting FAA has not been revised. It is not pertinent to the WHWPP visual analysis that the FAA is conducting it's research at the Applicant's Blue Canyon Wind Power Project in Oklahoma for it's review of safety lighting standards.
- 19-41. Section 3.12.1.1 and Section 3.12.2.1 Fire Protection have been updated to reflect the contract secured with Fire District #2 for fire protection services for the project site.
- 19-42. Section 3.12.4.1 Mitigation Measures, Construction has been revised to delete the bullet suggesting further study for impacts to communication pathways.
- 19-43. Section 3.12.4.2 Mitigation, Operation and Maintenance has been updated to include the status of the signed agreement with Fire District #2, and the explanation that emergency services are billed on a fee-for-service basis.
- 19-44. Section 3.13.1.5, Subsection: Traditional Cultural Properties has been updated to reflect the Applicant entered into a contract with the CCT for a TCP study and that the study has been completed.
- 19-45. Section 3.14.1.2, Subsection: Future Plans and Projects has been revised. The I-90: Highline Canal to Elk Heights auxiliary lane project has been deleted from the bulleted list of future projects as well as the Eastbound Cle Elum ramp paving project and the Rye Grass summit to Vantage auxiliary lane project

- 19-46. Section 3.14.2, Table 3.14-4, Subsection: Construction Impacts, Roadway Limitations discusses the potential impacts. The mitigation section has been revised to reflect the Development Agreement.
- 19-47. Section 3.14.2, Table 3.14-4, Subsection: Operation and Maintenance Impacts, Tourism-induced Traffic remains as "unknown". See Section 3.14.2.2 for an updated discussion on expected levels of tourism at the WHWPP site.
- 19-48. Section 3.14.2, Table 3.14-4, Subsection: Operation and Maintenance Impacts, Road Maintenance and Public Access Requirements has been revised to reflect that 32 miles of roadways are private and the body of the text revised to indicate WHWPP will maintain them.
- 19-49. The Gorge events combine both arrival and departure peaks. The largest single peak would occur after events however smaller peaks would occur during the arrival period and the day after as overnight campers leave the event facilities. Though the primary route for arrival and departure is I 90 some event attendees may use Vantage Highway. The Traffic Management Plan will monitor these events and if congestion results measures will be implemented to reduce impacts.
- 19-50. Section 3.14.2.2, Subsection: Air Navigation Consideration has been updated to reflect that nine turbines have been removed from the proposed project and FAA has issued a Determination of No Hazard for the project. (See Appendix C)
- 19-51. Section 3.14.3.1, Subsection: Kittitas Valley Alternative has been corrected to "20" workers.
- 19-52. Section 3.14.3.1, Subsection: Kittitas Valley Alternative has been revised to "The proposed O&M facility parking lot will

be sufficient to accommodate future parking needs of both project employees and potential visiting tourists."

- 19-53. Section 3.15.2.2, Subsection: Shadow Flicker has been revised to include the shadow flicker frequency threshold for triggering an epileptic seizure and the shadow flicker frequency of the turbines proposed for the WHWPP relative to it.
- 19-54. Section 3.16.6.2, Air Quality has been corrected to reflect "...current air quality problems do not exist."
- 19-55. Population declines are likely to be attributable to a variety of factors, with the cumulative result being local declines.
- 19-56. Section 3.16.6.7, Energy and Natural Resources has been revised to include the average annual number of households served by 186 average MW of output.
- 19-57. Section 3.16.6.13, Cultural Resources has been updated to reflect that the Applicant entered into a contract with the CCT for a TCP study and that the study has been completed.
- 19-58. The existing text in Sections 3.15.2.1, 3.15.2.2, and 3.15.4.1 acknowledges that the project site is not in a lightning-prone area; that grounding systems will be in place at the WTGs and substations, and that the footprint areas around the WTGs and substations would be graveled with no vegetation. Regardless, the presence of project facilities represents a change from the existing conditions that may increase the probability, however small, of a lightning strike.
- 19-59. See response to Comment 19-58 above.
- 19-60. Subsections and Tables of the Final EIS under "Impacts of the Alternatives" have been updated for consistency with the Desert Claim Final EIS.

- 19-61. Section 1.6.1, Table 3-1: Subsection 3.10, Visual Resources/Light and Glare, Desert Claim has been revised to "moderate" visual impact given the number of residences in close proximity to the proposed project (Figure 3.7-2 of the Desert Claim FEIS).
- 19-62. Section 1.6.1, Table 3-1: Subsection 3.10, Visual Resources/Light and Glare, Desert Claim has been revised to correctly refer to the Gorge Amphitheater rather than to the Columbia River Gorge.
- 19-63. See response to Comment 19-61. Please note that it is stated in Section 1.6.1, Table 3-1: Subsection 3.10, Visual Resources/Light and Glare, Desert Claim of the Draft EIS that "Impacts from light and glare under the Desert Claim alternative would be similar to those described for the WHWPP but greater due to closer proximity to residences."
- 19-64. See response to Comment 19-62 above. Please note that Section 3.10.4.1 of the Draft EIS does state that the Desert Claim project would have moderate visual impact at several viewpoints.
- 19-65. Section 1.6.1, Table 3-1: Subsection 3.10, Visual Resources/Light and Glare, Desert Claim has been updated to be consistent with the Desert Claim FEIS.
- 19-66. The Desert Claim Final EIS estimates there will be 80 PM peak trips in the outbound direction. The Wild Horse Project estimated 250 PM peak hour trips. This Wild Horse value was intentionally high to evaluate the impacts on roadway capacity.
- Section 2.6.2, Desert Claim, Location and Site Characteristics has been updated to be consistent with the Desert Claim FEIS.

- 19-68. Section 3.8.1.5, Subsection: Desert Claim Alternative has been revised to reflect that the Desert Claim EIS modeled 29 noise receivers within 3/4 mile of the turbine strings.
- Section 3.8.3.1, Subsection: Kittitas Valley Alternative has been revised to reflect conclusions presented in 3.12.2 of the KVDEIS.
- 19-70. Section 3.8.3.1, Subsection: Desert Claim Alternative has been revised to reflect that the 50dBA limit is exceeded at two residential receptor locations.
- 19-71. See response to Comment 19-62 above.
- 19-72. Section 3.14.1.4 Desert Claim Alternative has been corrected to "...Given the proximity of the Desert Claim alternative..."
- 19-73. An increase or decrease in accident rates would likely be the result of changes in geometric roadway features, pavement type, or constructing a new intersection. With all three projects the accident rates along the access roadways are unlikely to change. However the increase in traffic volumes may result in additional accidents. Section 3.14.3.1, Subsection Desert Claim Alternative has been revised to acknowledge the potential for increased accidents due to project-related construction.

Е 83	20-2		20-3		20-4	20-5	20-6
09/10/2004 15:22 5032234554 RENEWABLENW	to the three Washington utilities highlighted, Idaho Power, Northwestern Energy, and Portland General Electric are also seeking to acquire wind power in the near-term.	Section 3.4.4 Mitigation Measures for Vegetation and Wetlands (pgs. 3.4-21 to 3.4-23)	The DEIS states that the Applicant proposes to mitigate for all temporary and permanent impacts on vegetation by acquiring, protecting and enhancing approximately 600 acres of habitat for the life of the WHWPP. The 600 acres will exceed the habitat mitigation recommendations in the WDFW Wind Power Guidelines. We believe that the Applicant's proposed mitigation plan is comprehensive and consistent with the WDFW Wind Power Guidelines. We are also pleased to see the DEIS conclude with the implementation of the mitigation measures and avoidance of wetland and ripatian areas, no significant unavoidable adverse impacts are anticipated on vegetation resources and	wetlands. Section 3.5.4 Mitigation Measures for Wildlife (pgs. 3.5-37 to 3.5-41)	RNP has reviewed the pre-project assessment studies conducted for the WHWPP and we believe that the studies conducted are consistent with the WDFW Wind Power Guidelines. We support the project design measures, the construction techniques and best management techniques outlined in the DEIS that will help avoid and munimize impacts on wildlife. The minimization and avoidance measures are also consistent with the WDFW Wind Power Guidelines. Once the project is operating, a Technical Advisory Committee (TAC) will be used to develop a monitoring plan and evaluate the direct impacts of the project on wildlife and habitat. Should any significant unanticipated impacts of the project is operating, we believe that it is the role of the TAC to discuss and propose further mitigation measures for the unanticipated impacts. Again, we are pleased to see the DEIS conclude that if the proposed mitigation measures are implemented, no significant unavoidable adverse impacts are anticipated for birds and other wildlife.	RNP generally believes that the Applicant's mitigation measures for potential impacts to habitat and wildlife are more than adequate—they either meet or exceed the recommendations in the WDFW Wind Power Guidelines, which are rigorous and science-based.	We believe that the Applicant thus far has taken the necessary steps to properly site the WHWPP. The Applicant has been working with state and federal wildlife agencies along with environmental groups, such as Kithitas Audubon, and concerned stakeholders to address their concerns. And based on our experience, eliciting input carly on in the development process from interested stakeholders is a critical component to properly siting a renewable project. Given the potential environmental, social and economic benefits identified in the DEIS, we believe that the project should be sited and built.
15:22 5832234554 RENEWABLENW PAGE 02	BECEIVE D	ENERGY FACILITY SITE Renewable Northwest Project September 10, 2004EVALUATION COUNCIL WILd Horse Wind PP	Allen J. Fiksdal, Manager EFSEC P.O. Box 43172 Olympia, WA 98504-3172 Re: Comments on Wild Horse Wind Power Project DEIS	Dear Mr. Fiksdal,	I the Renewate Nortuwest Project (NVP) appreciates the opportunity to comment on the proposed Wild Horse Wind Power Project (WHWPP) Draft Environmental Impact Statement (DEIS). RNP is a non- profit organization composed of environmental organizations, consumer groups and renewable energy companies and manufacturers that work together to promote solar, wind and geothermal resources in the Northwest. Overall, we believe that the DEIS has thoroughly evaluated all the potential impacts of the WHWPP and the proposed mitigation for the potential impacts of the WHWPP and the proposed mitigation for the potential impacts for wildlife.	The DEIS highlights three Washington utilities (Avista, PSE, and PacifiCorp) that intend to acquire wind power for meeting future load growth and concludes that the WHWPP could help meet the growing demand for renewables, in particular, wind power in the region. We	believe the demand for wind power by Northwest utilities should be further underscored in this section. In fact, many of the major investor-owned utilities in the region, as well as many public utilities, are finding that wind power is a cost-effective resource today. In PSE's 2003 IRP, PSE set a goal of serving 5% of PSE's load with renewable resources: and a target of reaching 10% over the next 10 years. PacifiCony's 2003 IRP concluded that adding 1,400 MW of renewables over the next ten years was cost- effective for PacifiCony's system. PacifiCony issued a 1,100 MW RFP for renewable energy earlier this year. And Avista has acquired 35 MW of wind resources with the intention to acquire more in the future. In addition
89/18/2884	Renewable Northwest Project	917 SW Oak Suite 303 Portland, OR 97205	lel 503.223.4544 fax 503.223.4554 www.rnp.org Members American Wind	Calpine Corporation Center for Energy Efficiency and Renewable Technologies	Citizens' Utility Board FPL Fruergy, Inc. FPL Fruergy, Inc. Cechternal Resources Control MidAmerican Energy MidAmerican Energy MidAmerican Energy MidAmerican Energy Natural Renources Defense Control Energy Contition	Northwerd Environmental Advocates Northweettern Wind Powel Oregon State Revearch Group Revearch Group	Pacificary Powe Marketin Contervation Inc Contervation Inc Gonerweigher Energy Reservation Experiments Saalway Association of Orogof Association of Orogof Association Orogof Associatio Association Orogof Association Orogof Association Orogof

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#### Section 3.7.1.3 Renewable Resources (pg. 3.7-7)

The first paragraph on this page improperly credits "recent legislation" as the sole reason for the growing renewable energy market in the Northwest. Wind power is expanding without the help of any recent legislation in the region and in response to a variety of financial and market conditions including:

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- Electricity from wind power is cost-competitive with other resources;
   Customer demand for renewable energy;
   Utilities are using wind power to diversify their resource portfolios because
- the price of electricity from renewable resources is predictable and stable over
  - time: Utilities are interested in the ability for wind power to help hedge against the costs of possible future environmental regulations such as carbon taxes. .

We appreciate this opportunity and thank you for considering our comments.

Sincerely,

Sonia Ling Troy Gagliano 3 Ŕ

## Responses to Comments in Organization Letter 20 from Sonja Ling (Policy Associate) and Troy Gagliano, Renewable Northwest Project

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 20-1. Thank you, your comment has been noted. PSE's intent to purchase the project has been included in Section 1.2.2 of this FEIS.
- 20-2. Thank you, your comment has been noted. See response to Comment 20-1 above.
- 20-3. Thank you, your comment has been noted.
- 20-4. Thank you, your comment has been noted.
- 20-5. Thank you, your comment has been noted.
- 20-6. Thank you, your comment has been noted.
- 20-7. Thank you, your comment has been addressed and appears in Section 3.7.1.3 of this FEIS.

Definition         Definition           State of Washington         State of Washington           State of Washington         State of Washington           State of Washington         State of Washington           Department of Fish and Wildlife         State of Washington           Department of Fish and Wildlife         Department of Fish and Wildlife           State of Washington         Department of Fish and Wildlife           September 10, 2004         SEP 10, 2004           Allen J. Fiksdal, Manager         SEP 10, 2004           Dispupia, Washington Dower (300, 925-1013, Fax (509) 925-1073         SEP 10, 2004           Dispupia, Washington Dower (300, 925-1013, Fax (509) 925-1073         SEP 10, 2004           Dispupia, Washington Dower (300, 925-1013, Fax (509) 925-1073         SEP 10, 2004           Dispupia, Washington Dower (300, 950-3172         SEP 10, 2004           Subject:         Wild Horse Wind Power Project – Comments on Draft EIS for proposed 158-312           Dispupia, Washington Dower Wind Power Project – Comments on these reserver of Ellensburg         Dout           Dear Mr. Fiksdal.         Dout comments and the Ellensburg           Don commendations with Horse Wind Power Project DEIS assessment of fish and Wildlife (WDFW) has been working with 2004           Dear Mr. Fiksdal         Dout comments and the Elses Proposed 158-312           Dout comments b	Vid Horse Wind PP Draft EIS Comment- 21 Praft EIS Comment- 21 Praft EIS Comment- 21 Praft EIS COUNCIL 2004 2004 2004 2004 2004 2004 2004 200	Alan Septe Septe Than Regi CC:	Fiksdal mber 10, 2004 2 of 3 2 of 3 cenclosed our more detail k you for the opportumity t nation, please contact Bre rely, rely, rely, Clausing nal Habitat Program Man and Habitat Program Man Drauri Vigue, WDFW Brent Renfrow, WDFW	ed comments on separate pages. o review the DEIS. If you have questions or need additiona at Renfrow of my staff at (509) 925-1013. ager	
suguricance, and uter is new mornanou avanator than needs to be included in the analysis. There are some additional elements in the DEIS that should be corrected and/or clarified in the Final EIS, however they affect only specific portions of the overall analysis. Chapter 3 of the DEIS identifies mitigation measures incorporated in the proposal to address project impacts and cumulative impacts. In gerneral we agree with the value of these mitigation measures and request that they be incorporated in the project license if the project is approved. We are also requesting some additional mitigation measures.	ied in the ddress mitigation 21-2 pproved.				

Alan Fiksdal September 10, 2004 Page 3 of 3

Attachment 1: WDFW Comments on DEIS September 10, 2004 Page 2 of 6	• Post-Construction Restoration of Temporary Disturbed Areas - Standards for site restoration: The DEIS should identify a reference standard (or a process to establish one) for evaluation of site restoration success. The standard could be based on a reference site selected within the project area for each vegetation type, the typical vegetation description for each soil type in the draft NRCS soil survey,	<ul> <li>or other agreed-upon standard. Fost-construction respondently disturbed areas should be sufficient to achieve site stability and agreed-upon similarity to the reference standard. Selection of reference standards should be done in consultation with WDFW and the Technical Advisory Committee.</li> <li>Promoved Acquisition of Hahirat Mitigration Site and Clarification of</li> </ul>	proposed mitigation ratios: The proposed habitat mitigation site is suitable, strategically located and should achieve the mitigation goals for which it is to be acquired. This site would address direct footprint impacts from roads, towers and construction.	• <b>Domestic Stock Grazing</b> : The EIS implies that grazing may continue on the project lands. Shrub-Steppe habitat quality on the site has been diminished by excessive grazing of cattle, horses and sheep, particularly in the area around springs. If grazing is to be continued on project lands, we recommend specific management of this activity, to minimize or eliminate these impacts. Such management would include fencing of sensitive areas, rest rotations, limited numbers and timing of stock, and other techniques. Domestic sheep pose a significant risk to the re-established bighorn sheep herd in the area, and we recommend that they not be allowed on the project area if grazing is to occur.	• <b>Big Game:</b> The WHWPP area is correctly identified as winter habitat for deer and elk. WDFW would like to continue working with the project proponent for the use of hunting and other means on the site to achieve big game management objectives. These objectives may include limiting human use during the winter season to help keep big game animals from causing damage to private lands in the Kittitas Valley. Legal hunting is desired on all of the project lands, including state and project lands. WDFW would like to expand the discussion on this topic,	and work it into the public access question below. Wildlife - Direct Impacts and Mitigation	• Meteorological Towers – Guyed Towers verses Free Standing: The project proposes the installation of five meteorological towers. These towers should be free-standing towers, which are demonstrably less likely to result in bird mortality.	It is well documented that towers with guy wires kill birds at a significantly greater rate than free standing towers. The DEIS notes that the typical avian
Attachment 1: WDFW Comments on DEIS September 10, 2004 Page 1 of 6	Washington Department of Fish and Wildlife Comments on Draft EIS for Wild Horse Wind Power Project General Comments	Shrub steppe is a State of Washington Priority Habitat because of the assemblage of wildlife dependent upon it. Any loss or fragmentation of shrub steppe is of concern. Many shrub steppe-associated wildlife species require large areas of land, and thus management of shrub steppe wildlife tends to focus on large tracts.	The Wild Horse Wind Power Project (WHWPP) is located in the center of the largest block of remaining shrub steppe habitat in Washington. WDFW has significant concerns with potential impacts from this project, particularly at a larger scale in terms of ecosystem impacts. Ecosystem impacts may be beyond the scope of any project element-	specific mitigation. We believe this project site warrants special consideration. Over the long term the ability to sustain the full array of shrub steppe species depends upon such large blocks of shrub steppe habitat. The project also lies with the state's Sage Grouse Recovery Area. Sage grouse are a state listed Threatened Species, and federal Candidate species. In addition, the project lies within an area designated by Washington Audubon as an "Important Bird Area" (IBA). IBAs are areas identified by the Audubon Society as places across the globe essential to maintaining healthy bird populations. Shrub Steppe Plant Communities and Associated Wildlife – Impacts and Mitigation	<ul> <li>Construction timing: Section 3.4.4 should include construction timing as a mitigation measure to avoid and minimize impacts to soils and vegetation. To the greatest extent possible, construction activities outside of the hardened footprint of the project (i.e. "temporary disturbance areas") should be done during the late spring, summer and fall when soil moisture is very low. Working in the winter is impractical, and subject to thawing conditions in unpredictable manner.</li> </ul>	For most of the project area, the time of year of construction will greatly influence the amount of long-term damage to soils and plants. The shrub steppe communities identified in the DEIS (particularly lithosol communities) are very fragile when soils are wet. Even a single day of driving equipment on these sites 21-7	when wet can result in substantial permanent damage. In contrast, during summer when soils are dry they can withstand traffic with minimal soil displacement and breakage of plant roots. Moreover, vegetation is more tolerant to damage during the dry period as the period of rapid growth has ended, many plants have completed flowering and setting of seed, and many are dormant.	·

Attachment 1: WDFW Comments on DEIS September 10, 2004 Page 3 of 6 mortality associated with modern wind turbines at comparable sites is about 2 birds per tower per year. In sharp contrast, the guyed meteorological towers at the analogous Foote Creek Rim wind project in Wyonting had a mortality rate of about 8 birds per tower per year. Thus, if unprotected guyed meteorological towers were used on this project instead of free-standing towers, annual avian diverters has been proposed, but there is no information provided as to the effectiveneses of bird flight diverters in reducing avian tower strikes. Bird flight diverters have been used at many places in North America to deter large waterfowl from striking transmission lines near waterways, but their effectiveness on passerine mortality may be limited. We have not been able to find documentation of successful use of bird flight diverters on tower guy writes to prevent avian collisions during either daylight or during night-time migrations.

21-12

The use of free-standing towers is a demonstrated mitigation technique for reducing avian mortality. Bird flight diverters should not be used in lieu of freestanding towers unless their effectiveness can be demonstrated or their use is part of an approved adaptive management effort coordinated with WDFW and other natural resource management agencies, and the Technical Advisory Committee.  Sage Grouse – New Information Available and Expanded Discussion Needed in DEIS. New information relevant to sage grouse occurrence within the project and potential impacts of wind power facilities on sage grouse has become available since the Application for Site Certification was submitted and the available since the Application for Site Certification was submitted and the scoping of the EIS. The discussion in the DEIS should be expanded to include this information. Because of the special status of sage grouse, the overall discussion of sage grouse in the DEIS meeting and analysis.

21-13

A recent briefing paper from the US Fish and Wildlife Service (July 30, 2004: Prairie Grouse Leks and Wind Turbines...), reiterates their "concern with clearly declining trends in prairie grouse populations", and restates that "avoidance of vertical structures by grassland and shurb steppe obligate wildlife is not a new siste.". The USFWS recommends a buffer of 5 miles of protected habitat in areas of settlers etcs, etcs, "suitable, but abandoned" habitat (USFWS Recs. p. 11). The WHWPP project area represents an area of potential (and likely) breeding, and necessary connectivity for linking populations in WA. Potential areas for re-establishment of lekking grounds are within the WHWPP.

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21-14

Greater Sage Grouse (Centrocercus urophasianus) were listed as a federal candidate species in April, 2004, with a finding that listing "listing may be warranted". They are also a state of Washington Threatened species, with a recently completed recovery plan (WDFW 2004).

21-15

Historically, sage grouse occurred in large numbers in and around the Kittitas valley, and were a hunted game species until the 1980s. Numbers have declined

21-16

Attachment 1: WDFW Comments on DEIS September 10, 2004 Page 4 of 6 significantly in WA, primarily due to habitat loss (WDFW Sage Grouse Recovery plan 2004). Sage grouse have been observed in recent years in and around the WHWPP project site, including sightings of hens with broods (Lee Stream, WDFW data). Although no active leks were located during surveys for this project, the presence of broods indicates reproductive populations occur in the area. A radio marked female sage grouse spent much time in this area in 2004. The WHWPP as The Colockum Management Unit, a part of the recovery plan. Two disjunct populations of sage grouse currently exist in Washington, to the north in Douglas County, and to the south on the Yakima Training Center. The intact shrub steppe landscape between the Kittitas Valley and Columbia River is the necessary connection to link these two populations for recovery.

The DEIS recognized this fact, but incorrectly states the protected status of parts of this critical connection. On page 3.5-22 the DEIS states: "It would appear the project would not significantly impact connectivity between the Douglas County population and the Yakima and Kittitas County populations, given that the shrubsteppe habitats (Whiskey Dick and Quilomene Wildlife areas and private lands between the two Wildlife areas) to the east of the project would remain intact." This statement is untrue. The private lands to the east and west of the project will not necessarily "remain intact", and under current zoning in Kittias County would likely be fragmented into small holdings, with the associated severe impacts to shrub steppe habitats and species. WDFW has a long held interest in protecting these critical lands between the two wildlife areas. The Colockum Management unit in the Sage Grouse Recovery Plan (in and adjacent to the WHWPP) is identified as having potential for breeding, connectivity and seasonal use (SG plan, p. 60). The DEIS should more fully discuss how the presence of the WHWPP plant affects the use of the Colockum unit in sage grouse recovery.

WDFW participates in the Washington Sage Grouse working group, represented by Dr. Mike Schroeder. He, and other members of this working group, have expressed concerns about the potential impact to sage grouse habitat connectivity from the proposed Wild Horse project. The Sage Grouse working group is a technical working group of sage grouse experts from a variety of entities, including federal and state agencies. WDFW has concerns with maintenance of viable and necessary habitats for linking and restoring sage grouse populations. The WHWPP would impact the functionality of this corridor and habitat. This topic requires additional analysis and discussion of impacts, mitigation and alternatives in the DEIS.  Micro-siting of Turbines to Reduce Turbine Mortality: Mitigation for direct mortality from turbines should include close attention to micro-site locations of towers. Towers should not be place in locations of raptor concentrations, such as
21-20

21-16

21-17

Attachment 1: WDFW Comments on DEIS September 10, 2004 Page 6 of 6	alternate public access routes. Alternative routes, tinning of open routes, managed public access, or mitigation by providing other access: All alternatives should be	<ul> <li>Recreation Opportunities on Project Area. Lost opportunities for hunting, hiking, birdwatching, shed antler gathering and other dispersed activites will occur on the project. It has been open land for public activity in the past. This loss is not mentioned in the EIS Recreation section. The WDFW would like to</li> </ul>	preserve these opportunities to the maximum extent possible. Table 1-2 and 3.12- 3 fails to mention lost dispersed recreation opportunities as an impact from the moviest	<ul> <li>Impact to WDFW Wildlife Areas and bird populations: Adjacent wildlife areas will suffer some loss of avian and bat populations (note direct mortality estimates in the document). Birds are a feature of the landscape that visitors to WDFW lands enjoy. In addition, the presence of large wind turbines would diminish the wild land experience of those visiting the Quilomene and Whiskey Dick Wildlife Areas. These elements should be discussed in the DEIS.</li> </ul>			
	21-20	21-21		21-22	21-23	21-24	21-25
Attachment 1: WDFW Comments on DEIS September 10, 2004 Page 5 of 6	along steep ridgelines or at the top of cliff faces. The DEIS should more thoroughly describe micro site alternatives.	• <b>Sharp-tailed Grouse</b> : Sharp-tailed grouse historically occurred in Kittitas County. The three proposals for wind generation facilities are sited in habitat that is suitable for the species. Population recovery and restablishing is an agency priority that may be affected by the emulative effects of wind energy projects. Sharp tailed grouse are a species of concern that are not mentioned in the DEIS.	Recreation – Impacts and Mitigation	• Public Access to Public and Private Lands: Many people use the project area and adjacent public lands for activities such as hunting, hiking, horseback riding, shed antler gathering and other dispersed activities. WDFW has considerable lands immediately adjacent to the WHWPP, as indicated in Table 3.12-4. Access to public lands is not mentioned in the analysis of recreation impacts from the project, and should be included. The DEIS discussion on impacts of the project on recreation is conflicting. Within the cumulative impacts section (3.16.6.12) it is noted that public access to all project areas, to the extent it currently exists, would be maintained. However, Tables 1-2 and 3.12-3 fail to mention lost access to public land and dispersed recreation opportunities as impacts from the project.	Hunting specifically would be the subject of a management plan developed by WDFW and the Applicant. But elsewhere the document notes that the project area would be closed to the public during construction and section 3.12.2.2. (Parks and Other Recreational Facilities) notes that access to the project site will be controlled. There is also reference to organized tours.	The public lands in the immediate vicinity of the project are most accessible via the Beacon Ridge Road. There is no equivalent alternate route. The public has enjoyed relatively unfettered access on this road for many years. Also, WDFW uses this road as its primary access to these lands for administrative, management and law enforcement purposes. The road and project area would become "controlled access" under this proposal. What this means for recreation is not adequately described in the DEIS.	The DEIS should discuss the terms and conditions for public access to/through the project or the process by which an access plan will be established. It is important for the reviewer to understand as to whether public access will continue to be allowed whenever weather and road conditions permit, or whether access will be limited to set times, numbers, activities, etc Traditional alternate access routes into the area via Park Creek or Caribou Creek have recently been posted as closed by the property owners. The DEIS should also discuss possible mitigation measures, ranging from providing "user friendly" controlled access to securing

21-28

21-27

21-26

	Page 1 of 1		
Makarow, Irina (EFSEC)			
From:Brent Renfrow [renfrbr@dfw.wa.gov]Sent:Friday, September 10, 2004 5:49 PMTo:Makarow, Irina (EFSEC)Subject:Wild Horse WPP DEIS comments			
Irina. attached are WDFW's comments on the Wild Horse Wind Power Project			
Thanks, BDR			
Brent Renfrow Beru of Fish and Wildlife 2011 North Pearl Street Ellensburg, WA 98926 509-925-4702 FAX 509-925-4702			
9/13/2004			

## Regional Habitat Program Manager, Washington Department of Fish and Wildlife Responses to Comments in State Agency Letter 21 from Ted A. Clausing,

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 21-1. The discussion on sage grouse has been updated to reflect new information that has become available since the DEIS was issued.
- 21-2. Mitigation measures identified in the DEIS have been incorporated into the Development Agreement (Appendix A, with Kittitas County, with additional mitigation measures identified since the DEIS was issued. These mitigation measures appear in this FEIS, along with those agreed to by the Applicant and WDFW under the settlement agreement (Appendix B) between the two parties.
- 21-3. The importance of shrub-steppe habitat is recognized in the EIS and the Applicant has agreed to a variety of mitigation measures that would maintain or improve shrub-steppe habitat in the WHWPP area, including setting aside an approximately 600 acre parcel of shrub-steppe habitat, which conforms to WDFW Guidelines. Furthermore, the Applicant has voluntarily committed to place the entire Project area in a conservation easement (Appendix C).
- 21-4. Information about the listing status of the sage grouse, and the presence of the recovery area as described in Stinson et al 2004, has been incorporated into this FEIS.
- 21-5. This information has been added to this FEIS.
- 21-6. Revisions have been made to the DEIS and appear in Section3.4.4 of this FEIS. Construction timing has been included as

a mitigation measure to avoid and minimize impacts to soils and vegetation. The Applicant has agreed to avoid, to the greatest extent possible, construction activities outside permanently disturbed areas except for during the months of May through October when soil moisture is low. Trenching of underground electric collection cables may be performed outside this time window, as the soil cover in those areas will be disturbed regardless of the season and will need to be restored and reseeded.

- 21-7. See response to Comment 21-6.
- Advisory Committee (TAC) and WDFW, but not necessarily cover temporarily disturbed areas in accordance with erosion will develop a restoration plan and conduct habitat reseeding ensure effective erosion and weed control. The Applicant is WDFW, USFWS, local interest groups, Project landowners, management for monitoring and mitigation. The Applicant conditions are deemed favorable. The Applicant will work programs as determined in consultation with the Technical immediately following the disruption. The Applicant will control measures set forth in the EIS at such time as site See response to Comment 12-25. The TAC (proposed restoration efforts using an agreed-upon reference site, not required to provide additional mitigation measures with WDFW and the TAC to evaluate the success of and the Applicant) will provide a means of adaptive membership to include representatives from EFSEC, 21-8.

May 2005	21-2	orse Wind Power Project	Wild Ho
approach to allow access to and through the Project Area and recreational use of the site. The Applicant will also prepare		information available on sage grouse and potential impacts to sage grouse.	
area. Refer to the revisions in Section $3.12.2.2$ that describe how the Applicant will implement an adaptive management		. Revisions have been made to DEIS Sections 3.5.1.1 and 3.5.2.1 and appear in this FEIS to reflect additional	21-13.
It is acknowledged in Section 3.5.2.2 (Big Game), that the Applicant will allow controlled hunting within the project	21-22.	reflect this and this revision is shown in this FEIS.	
geographic area in winch sharp-tarted groups are of concern as being WDFW Regions 1 and 2. Kittitas County is located within Region 3.		The Applicant has committed to using only unguyed meteorological towers. Section 3.5.4.2 (Mitigation Measures Project Design) of the DFIS has been revised to	21-12.
Sharp-tailed grouse were not included based upon review of the WDFW Priority Species list, which identifies the	21-21.	will prepare a hunting plan for the Project area in consultation with WDFW.	
This information has been added to the FEIS.	21-20.	. See Section 3.5.4 of this FEIS for an updated discussion on	21-11.
See response to Comment 21-18 above.	21-19.	protect these springs, they will be constructed using rence designs conducive to passage by wildlife.	
has been revised and appears in this FEIS to include information from the Sage Grouse Recovery Plan regarding habitat connectivity in the WHWPP area.		overall habitat throughout the project area. At the request of the WDFW, livestock grazing near the springs within the project area will be eliminated. If fences are needed to	
The analysis of sage oronise habitat connectivity in the DFIS	21-18	on shrub steppe rangelands. The implementation of a Demotion of the more th	
This FEIS has been updated to reflect information available	21-17.	and big game on the project. The Plan shall include provisions for the restoration of shrub steppe lands, native	
(WDFW 2004) has been incorporated into the FEIS.	21 <u>-</u> 16	project area which is intended to improve residual grass cover and potential nesting, brood-rearing and habitat for	
On January 12, 2000 the UDF WO FINDING that listing was not warranted for the greater sage grouse was published in the Federal Register (70FR 2244-2282). Information from the State of Washington Greater Sage-Grouse Recovery Plan	.61-12	<ul> <li>The Applicant has committed to developing and implementing a post-construction Rangeland Management and Grazing Plan in coordination with the TAC for the entire</li> </ul>	21-10.
		Thank you, your comment has been noted.	21-9.
The FEIS has been revised to include new information about sage grouse that has become available since the issuance of the DEIS.	21-14.	beyond what has been proposed should restored habitat differ in quality from the reference standard.	

Energy Facility Site Evaluation Council

a hunting plan for the Project area in consultation with WDFW.

- 21-23. It is acknowledged in Sections 3.5.2.2 (Big Game) and
  3.12.2.1 (Parks and Other Recreational Facilities) that during construction, no public access to the project site will be allowed. After construction is complete controlled hunting will be allowed pursuant to the terms of the hunting plan the Applicant will prepare in consultation with WDFW.
- 21-24. Refer to the revisions in Section 3.12.2.2 that describe how the Applicant will implement an adaptive management approach to allow access to and through the Project Area and recreational use of the site.
- 21-25. See response to Comment 21-24.
- 21-26. See responses to Comments 21-23 and 21-24. The Applicant will also prepare a hunting plan for the Project Area in consultation with WDFW.
- 21-27. Thank you, your comment has been noted.
- 21-28. See Section 3.10.2.5, Viewer Sensitivity, of the DEIS for a discussion on viewer sensitivity from the Quilomene and Whiskey Dick Wildlife Areas. Since hunting generally occurs on the lower slopes where there is less snow during hunting season, and few visitors other than hunters commonly use these areas, viewer sensitivity is expected to be moderate to low. Due to FAA concerns, nine turbines, from String A, B, and D have been removed from the proposal (see Revised Figure 1-2 of this FEIS), which would further reduce viewer sensitivity from most viewpoints.

		₹; 1] 	\$ 5 5 5 8		
Wild Horse Wir Draft EIS Commer	RECEIVED SEP 1 3 2004 EVALUATION COUNCIL	ment for the proposed Wildhorse fer these comments. the most significant fact that the ft is on more than 15 square miles to perelands cape in Washington. allysis, and I did not see it in there. pact.	<ul> <li>has spent much time on the titing is only mentioned as one of the changes to access to the main access point to public lands</li> <li>22-2 ds. This must be addressed in a ds. This must be addressed in a ls crossing the project are closed. on this lost access to public land as fifcant omission.</li> </ul>	open for hunting, hiking, bird and other dispersed activities for activities in the larger landscape. is to all project areas, to the extent it ble 1-2, on page 1-18, under infolled". On page 3.12-21 it says infolled". On page 3.12-21 it says arrolled". On page 3.12-21 it says infolled". On page 3.12-21 it says arrolled". On page 3.12-21 it says arrolled". On page 3.12-21 it says infolled". On page 3.12-21 it says arrolled". On page 1-18, under arrolled". On page 3.12-21 it says arrolled". On page 3.12-21 it says arrolled". On page 1-18, under arrolled". On page 3.12-21 it says arrolled". On page 1-18, under arrolled". On page 1-18, under arrolled". On page 3.12-21 it says arrolled". On page 4.18, under arrolled". On page 4.18, under arrolled". On page 4.18, under arrolled". On page 4.18, under arrolled". On page 5.12-31 it says arrolled". On page 4.18, under arrolled". On page 5.12-31 it says arrolled". On page 7.12-31 it says arrolled". On page	
	Kenneth R. Bevi 3204 Sharon Way Yakima, WA 989 Allen Fiksdal, Manager Energy Facility Site Evaluation Council P.O. Box 43172 Olympia, WA 98504-3172 September 9, 2004	Dear Mr. Fiksdal: I have reviewed the Draft Environmental Impact Stat Wind plant east of Ellensburg WA. I would like to o I. <u>Impacts to wildland</u> : The EIS does not mention tl project proposed is in large expanse of wild land. in a key location within the best remaining shruh This large industrial facility would significantly d large area. This fact needs to be included in the a This is an unmentioned, significant cumulative in	2. Access to Wildlife Area: I am an avid hunter whe Quilonnene and Whiskey Dick wildlife areas. Hu the activities out there, and no mention is made of wildlife areas. The Beacon Ridge road is one of i adjacent to the project. By your analysis, I think ( and therefore limit my ability to use the public lar clear manner, and alternatives proposed if the road Table 3.12-3 on page 3.12-10 does not even ment an impact from the project. I believe this is a sign.	3. Recreation on the site: The project area has been watching, shed antler gathering, horseback riding, many, many years. It is a central location to these many, many years. It is a central location to these. The EIS states on page 3.16-22 that "Public acces currently exists, would be maintained." Yet, in The Noxious weeds, it states that "Access will be of that there are no significant unavoidable impacts that there are no significant areas. Foot and wind plant	

22-4 <u>Domestic Stock grazing</u>: Most of the degradation to the habitat on the project site has been caused by heavy grazing of cattle, horses and sheep. Elimination of this land use would help with habitat quality on the project. Domestic sheep can pass diseases that could kill the bighorn sheep nearby as well. At a minimum, allow no domestic sheep.

lands between the Wildhorse project and the Columbia River, and between the project Wildlife areas. This would be adequate and appropriate mitigation for the impacts to wildlife and wildlands from this large scale, high impact project. The proposed 600 acres of protected land is a good start, but is not adequate for a project of this scale. Inadequate overall mitigation: I believe that this project is located in a bad place in regard to wildlife, habitat and recreational impacts. If it must go through, I would like to see the mitigation be long term protection of the rest of the private lands that lay across the Wildlife areas. I understand that WDFW has been working towards protecting the Skookumchuck lands for many years. I would like to see the private through land transfers to WDFW for addition to the Quilomene and Whiskey Dick and the Kittitas Valley, protected as open wild land forever. This could be done

ank you for considering my comments.

Kener R. Beins itizen, Yakima WA 509) 576-7836 /iskd@televar.com nneth R. Bevis ncerely,

## Responses to Draft EIS Comments in Individual Letter 22 from Kenneth R. Bevis; Citizen, Yakima WA

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 22-1. Information about the location of the WHWPP within the landscape has been added to the DEIS and the revisions appears in Section 3.5 of this FEIS.
- 22-2. As described in the Development Agreement (Appendix A) between Kittitas County and the Applicant, the Applicant will control access to the project site and will develop a hunting plan for the project area. The DEIS has been revised and this information has been added to Sections 3.12.2.2 and 3.5.4 of this FEIS.
- 22-3. As described in the Development Agreement between Kittitas County and the Applicant, the Applicant will control access to the project site. This information has been added to Section 3.12.2.2 and 3.5.4 of the DEIS and these revisions are shown in this FEIS.
- 22-4. See response to Comment 21-10. The Applicant has committed to developing and implementing a postconstruction Rangeland Management and Grazing Plan in coordination with the TAC for the entire project area.
- 22-5. WDFW has indicated that the 600-acre parcel (Section 27) would meet or exceed the required habitat replacement ratios under the WDFW Wind Power Guidelines for any of the three scenarios. See Comment 21-9 submitted by WDFW on the DEIS (Letter 21 in Chapter 4 of this FEIS). As a mitigation parcel, Section 27 would provide protection of a

segment of Whiskey Dick Creek, be contiguous with adjacent state lands (WDNR and WDFW) and wildlife areas (Quilamene and Whiskey Dick Wildlife Areas), and preserve a diversity of habitats. Furthermore, the Applicant has voluntarily committed to placing the entire area in a conservation easement (Appendix C). Acquisition of private lands by WDFW is beyond the scope of this EIS.
Wild H Draft EIS	orse Wind PP Comment- 23	
9 September 2004 Allen J. Fiksdal, Manager EFSEC P.O.Box 43172 Olympia, Washington Subject: Wildhorse Wind Power Project DEIS		
I am writing to you as the president of the local (Central Washington) chapter of the Washington Native Plant Society. We are concerned about the potential adverse impacts that the construction of the proposed wind power project could have on the native plants in the area. The most severe, short term impacts will be where native vegetation is removed. There are several long term issues which we fear could result in even more significant impacts on the native plant communities which we would like to focus on.		
1) Improvements to the roads accessing the project will increase the vulnerability of the hedgehog cactus (Pediocactus simpsonii) to wholesale removal - we have seen this same species of cactus stripped from Selah Butte in the vicinity of the road accessing the towers on top of the ridge (between I-82 and SR 821 just south of the Kittitas-Yakima County Line), it is still present in reasonable abundance further from the road along the ridge top.	23-1	
2) Construction of improved gravel roads using non-local materials (that is created by moving material more than a hundred feet) increases the probability of spreading noxious weeds, such as diffuse knapweed and puncturevine, and other non-native species such as mullein. Careful cleaning of equipment before entry into the area can reduce the risk of introducing seeds and other propagules of weeds and other non-native species. Selection of stees for raw materials such as crushed gravel and fill, which are free of weeds or or eads before moving any material to be used elsewhere can limit the spread of weeds already present in the area.	23-2	
3) Maintenance of gravel roads can enhance the spread of weeds. Operation of road graders to resurface the road moves material along the road, if this includes weeds or weed seeds they can be spread or "pushed back toward their origin" depending upon the direction of travel relative to existing populations of weeds within the roadway. Stockpiles of crushed gravel, which have been left exposed for more than one graving season, are often sources of weed seeds - in our experience weeds colonize gravel stockpiles more frequently than mative species. The use of herbicides along roads generally excludes native species without controlling several invasive weeds (most notably: russian thistle or tumbleweed, diffuse knapweed and kochia).	23-3	
While we appreciate the ready access we have had to the public and private lands around Whiskey Dick Mountain and recognize that this is not pristine habitat, we would like to see measures adopted to address the concerns stated above. In particular, require the adoption of the measures we have suggested (or equivalent) for controlling the introduction and spread of weeds during construction and operation of the facilities. We are less certain of what would be effective measures to reduce the risk of poaching	23-4	
of the cactus without significantly interfering with public access to these marvelous public	23-5	

are used by the fisheries programs to uniquely identify individual juvenile salmon. There are also small, marked pieces of wire (coded wire tags), which are used to mark populations of fish (e.g. which hatchery they were raised in). If either of these were embedded in the cactus, they would allow identification of stolen plants - once they have been located and identified as probably stolen. Knowledge that the population had been tagged might serve to deter theft. lands, but do ask you to consider reasonable measures to protect a species which has been stripped from many areas already. There are small electronic devices (PIT tags, passive integrated transponders: capsules about the size of a grain of wild rice) which

If we can be of any assistance in reviewing proposals to address these issues, consulting with people interested in implementing our suggestions or otherwise helping to improve the protection of our natural heritage, please do not hesitate to contact us.

Phelps Freeborn 0 Sincerely,

Yakima, Washington 98902 (509) 454-0871 H (leave a message if I am not there) Washington Native Plant Society Central Washington Chapter 3409 Taylor Way President

23-5

# Responses to Comments in Organization Letter 23 from Phelps Freeborn, President, Central Chapter; Washington Native Plant Society

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 23-1. In the event that collection becomes a problem at the project site despite controlled access, the Applicant proposes to post signage indicating that collection of any plants in the project area is prohibited (see Section 3.4.4.3 of the DEIS).
- 23-2. As noted in the DEIS, Sections 3.4.4.3 and 3.5.4.3, best management practices (BMPs) include cleaning construction vehicles to reduce the introduction and spread of noxious weed seeds and noxious weed control will be implemented in coordination with the Kittitas County Noxious Weed Control Board.
- 23-3. As presented in the Draft EIS, Section 3.4.4, the spread of opportunistic and/or noxious weeds would be controlled through implementation of best management practices (BMPs), seeding disturbed sites with appropriate seed mixes, and weed control in cooperation with the Kittitas County Noxious Weed Board.
- 23-4. See responses to Comments 23-1, 23-2, and 23-3.
- 23-5. Many individuals of hedgehog cactus were observed in the general project vicinity. The DEIS acknowledges that hedgehog cactus could potentially be collected from the proposed project site. The "Review" designation for this plant carries no legal requirement for protection. However, as noted in Section 3.4.4.2 of the DEIS, the Applicant proposes to provide controlled access to the site and post signage prohibiting collection of the species should

collection become a problem. These measures should provide greater protection than is currently afforded to this species.

se Wind PP omment- 24 impacts of all the above issues and issue statements are not addressed manner by the draft. From the information provided and local knowle difficult to find a more <i>unsuitable</i> location for an industrial facility of as a state agency should not site a facility that wars so completely agai another state agency. These facilities should be limited to areas alrea- developed. It is profoundly illogical and indefensible to place a facility between vulnerable populations in the last of the best habitat. If ever F opportunity to demonstrate credibility, vision and wisdom, this is it.			4 <del>1</del>
Wild Hor Draft ELS C RECEIVEU SEP 13 2004 SEP 13 2004	The uniqueness of the property (Wild Horse and the surrounding property) in the State of Washington, namely, size, quality, context, flora, fauna and ecological role. The intact atture of the property and environs compared to elsewhere in the State. The Nature Conservancy's Columbia Plateau Eco-regional Assessment which assigns global ignificance to the nearby property. The critical status of shrub steppe in Washington State. The strategic location of the Wild Horse property as it relates to the largest cology of shrub steppe flora and fauna. The almost complete lack of success in attempts recuted shrub steppe at a significant scale, failures, expenses, logistics and exotics. mplications for degrading habitat and habitat function in the last of the best shrub steppe.	The critical status of the sage grouse and the long-term impacts of <b>any</b> mortality on a continuent that is so critically low. There are no surplus individuals in the population which is apparently discounted. Recently and in the recent past, living and dead sage sprouse have been identified north, south, east and in the project area, (Kuehn, zvingston, Teske all from WDFW). The certain and documented West Nile Virus nortality threat on sage grouse and likelihood of further population decline needs to be didressed. Bats are killed by turbines whether they occur locally or are migrating. Bats art mosquitoes in huge quantities. Mosquitoes carry West Nile. West Nile kills people and agge grouse as well as other animals. This issue has not been addressed adequately. Permanent disconnection or isolation of the remaining grouse populations isn't dequately adfrassed. The effects on recovery efforts of placing a mortality to knowledgeable managers the spending of limited sage theorem the two grouse ore use areas isn't addressed. The impact on recovery efforts, opecifically, trying to justify to knowledgeable managers the spending of limited sage	grouse recovery money anywhere near such an obvious mortality source. It appears that he Sage Grouse working group was not contacted or consulted regarding their expert ppinion as to the advisability of this project at this location. The area is identified mapped) in Washington State sage grouse recovery plan. The lost opportunities on mapped) in Washington State sage grouse recovery plan. The lost opportunities on uitable habitat for ferruginous hawks has been identified in the State recovery plan in or djacent to the site. These hawks and forage 15 kilometers from their nests. Ground quirrels occur on and/or near the property and are closely associated with ferruginous hawks as a food source. Opportunities to recover this threatened bird species will also have been materially damaged by placing this facility at this location. The cumulative

24-5 24-6

### Responses to Draft EIS Comments in Individual Letter 24 from Paul Lasha; Yakima, WA Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 24-1. Revision has been made to the DEIS and appears in Section
  3.4.1 of this FEIS to reflect that the proposed project site is contiguous with undeveloped lands and wildlife areas and, as such, is part of a larger expanse of shrub-steppe habitat. See Section 3.5, Wildlife of the EIS for further descriptions of contiguous habitat and its ecological value.
- 24-2. The DEIS acknowledges that shrub-steppe is considered a priority habitat by WDFW. Impacts to shrub-steppe have been evaluated in the DEIS (Section 3.4.2.1). The Applicant proposes to mitigate for all permanent and temporary impacts to vegetation caused by the project in accordance with the guidelines outlined in the WDFW Wind Power Guidelines (WDFW August 2003) for siting and mitigating wind power projects east of the Cascades (see Section 3.4.4 of the EIS). Furthermore, the Applicant has voluntarily committed to placing the Project Area in a conservation easement (Appendix C).
- 24-3. The discussion on sage grouse in Sections 3.5.1 and 3.5.2 has been updated to reflect new information that has become available since the Draft EIS was issued in August 2004 and these revisions are shown in this FEIS.
- 24-4. Ferruginous hawks were not observed during surveys conducted in association with the WHWPP; however, they may occur on the site in the future. The Applicant has agreed to protect over 600 acres of native shrub steppe

habitat in the project area, as described in Section 3.5.4 of the DEIS, which will provide habitat for prey species for ferruginous hawks.

- 24-5. Cumulative impacts are intended to describe the impacts of all reasonably foreseeable construction projects. Since the Kittitas Valley and Desert Claim Wind Power Projects are the only other known projects currently proposed in the vicinity of the WHWPP, they are the only projects included in the cumulative impacts analysis.
- 24-6. Thank you, your comment has been noted. WDFW and the Applicant have presented a settlement agreement (Appendix B) to EFSEC indicating that all of WDFW's concerns have been addressed.

	Kittitas Valley Project 181 - 246 combined total between 419 and infrastructure (including roads, th more than 17,966 total acres (p. technology of these power plants to the operation of gas or coal fir be expected to have significant in opportunities.	The Iron Horse Trail, a former re the three proposed wind farms. recreational use was a landmark development and towards recreat represent a significant move tow impacts section of the Wild Hors land use, "the proposed projects off development." With three w erroneous conclusion. Were all	Aitready gone a long ways toward kititias County. Since the Iron H impacts of all three proposed win include a map locating all three I Trail. Figure 3.12-2 of the Wild the Iron Horse Trail and orders the other proposed wind projects. A the Iron Horse Trail by name, no map legend for figure 3.9-1, but	Finally, State Parks appreciates t to the environmental and econom providing valuable new renewab support for energy development. project be accompanied by a mau wise use and energy conservation Sincerely,	Brigid Dean WCC Environmental Specialist CC Deborah Petersen, Envirc Jim Harris, Region Mana Tom Ernsberger, ARM, F Deaydra Wise, Central Fi	
/ Wild Horse Wind Pp Draft ElS Comment- 25	EATION COMMISSION gton 98504-2650 • (360) 902-8500 s.wa.gov añ: (360) 664-3133	RECEIVED SEP 1 3 2004 EVALUATION COUNCIL	ttal EIS Horse Wind Power Project Draft ental EIS. Our comments acts(Wild Horse, Kittitas Valley, d the Iron Horse Trail.	at the Wild Horse Project will the trail between Ellensburg and lation of the proposals sites from the trail itself, but it is eet he wind turbine site from the 25-1 on to the PSE substation near the 25-2 ect on our users. It will also 25-3 sing. We request that final idual impacts to the viewshed sponse.	in (Wild Horse) or on either side we any other significant direct on Horse Trail. However, State at resources be more thoroughly g Summary (June 2004, p.2) cumulative effects of three unulative effects of three in the scoping process. The ud 312 megawatts (MW), the	¢
	STATE OF WASHINGTON WASHINGTON STATE PARKS AND RECR 7150 Cleanwater Lane • P.O. Box 42650 • Olympia, Washin Internet Address: http://www.park TDD (Telecommunications Device for the De	Allen J. Fiksdal, Manager Energy Facility Site Evaluation Council (EFSEC) 2.0. Box 43172 Dlympia WA 98504-3172 September 7, 2004	RE: Wild Horse Wind Power Project Draft EIS; Kittitas Valley Wind Project Draft Supplemen Dear Mr. Fiksdal: Thank you for the opportunity to comment on the Wild J EIS and the Kittitas Valley Wind Project Draft Supplem concern the individual(Wild Horse) and cumulative imp und Desert Claim) to recreational users at State Parks an	After a brief review of the proposed action, it appears th nave at least a minimal effect upon the viewshed from th ust east of Kittitas. This is determined from visual simu WHSV4 and WHSV2. Neither of these points is visible slose enough to produce likelihood that one could also s rail. The Wild Horse proposal also identifies a comechi- gin The Wild Horse proposal also identifies a comechi- mact the viewshed from the trail as it nears the 1–90 cm roject design include modeling of cumulative and indiv rom the three proposed Wind Farms and a mitigation re-	Veither the proposed turbines on Whiskey Dick Mounta of Highway 97 north of Thorpe (Kittitas Valley) will ha mpacts on nearby State Parks or users of the adjacent Ir Parks asks that cumulative indirect impacts to recreation addressed. The Wild Horse Wind Power Project Scopin addressed and Stokes notes that the issue of the proposed wind farms in close proximity was raised early Wild Horse Project proposes to generate between 158 at	working the second s

I fired stations, any development of this magnitude can still at impacts to wildlife, habitat, scenic values and recreational urts won't contribute the usual air borne emissions common nd 738 MW. These power stations, with all the supporting s, transmission lines and sub-stations), are spread out over p. 1-74: Wild Horse DEIS). Although the wind based 46 MW, and the Desert Claim Project 180 MW, for a

r railroad converted to a recreational trail, is near the area of sts would not likely attract supporting uses or generate spin-State Park properties, but does not show the location of the on Horse document does attempt to address the cumulative ild Horse Wind Power Project of the Draft EIS does show se projects, clearly labeling State Parks and the Iron Horse Also, the map legend for Figure 3.12-2 does not identify nor is the Trail itself labeled. The Trail is included in the e wind projects proceeding simultaneously, this seems an wind farms, it would be helpful if the final project design orse Draft EIS states that despite the proposed change in all three projects to be built as proposed, this would have s. The conversion of the former railroad right of way to owards construction and development. The cumulative reational use. The proposed power generation projects ards significant development and change in land use in ut in small, difficult to read, fuchsia colored print. rk decision to move away from construction and

es the potential for the proposed wind projects to contribute vable resource inputs to the power grid. However, our ant must necessarily be conditional. We request that the nandatory education and outreach program that teaches iomic well-being of the region, state and country by ion.

4, Resource Stewardship 1 Files vironmental Specialist mager

25-7

25-8

### Responses to Comments in State Agency Letter 25 from Brigid Dean; Washington State Parks and Recreation Commission

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 25-1. Thank you, your comment has been noted. Due to FAA concerns, nine turbines, from String A, B, and D have been removed from the proposal (see Figure 1-2 of this FEIS for a revised project site layout), which would further reduce viewer sensitivity from most viewpoints.
- 25-2. Since the Draft EIS was issued, the proposed location for the PSE substation has been moved to the east side of Stevens Road. Access to the PSE interconnect substation would be achieved at a new access driveway from Stevens Road to the west. The new substation location offers easier access for both construction and operations compared to the original location. Also, the new location is expected to be far less visible as it is situated on lower lying ground than the original location and will not be as visually prominent from I-90 or other major public vantage points (Young, prefiled testimony 2004). See Section 3.14, Traffic and Transportation, for measures the Applicant proposes to mitigate impacts to transportation during construction.
- 25-3. Thank you, your comment has been noted.
- 25-4. The Development Agreement (Appendix A), between Kittitas County and the Applicant includes the required mitigation measures for potential visual impacts from the Wild Horse project. These mitigation measures are presented in this FEIS. The Wild Horse project would have limited potential to add to cumulative impacts of the three

proposed wind farms to the viewshed, since the site is located 14 and 21 miles away from the Desert Claim and Kittitas Valley proposed sites, respectively.

- 25-5. Thank you, your comment has been noted. See response to Comment 25-4.
- 25-6. The EIS for the Wild Horse Project evaluated a range of scenarios, off-site alternatives, cumulative impacts, and identified potential impacts and mitigating measures for the proposal and each element of the environment identified during the scoping process.
- 25-7. Section 3.16, Cumulative Impacts, of the Final EIS has been revised to include a map (Figure 3.16-2) locating all three projects, clearly labeling State Parks and the Iron Horse Trail.
- 25-8. Thank you, your comment has been noted.

	ordinator	90 Box 47014, Olympia WA 98504-7014
Allen J. Fiksdal, Manager Beptember 10, 2004 Allen J. Fiksdal, Manager EFSEC PO Box 43172 Olympia WA 98504-3172 Olympia WA 98504-3172 Colympia WA 98504-3172 Dolympia WA 98504-3172 Colympia WA 98504-3172 The Washington Natural Heritage Program is re state's rare plant species as well as high quality for the Wild Horse Wind Power Project and har The Washington Natural Heritage Program is re state's rare plant species as well as high quality for the Wild Horse Wind Power Project and har The survey of the project site adequately descril habitat. Over half of the sagebrush steppe habita habitat. Over half of the sagebrush steppe habita acreage with this project adds to the cumulating The placement of wind turbines, although minil large shrub-steppe landscape. The Natural Heri turbines and supporting facilities to be on existi Short of avoiding loss of shrub-steppe habitat a should be required to offiset the loss of habitat i Thank you for the opportunity to provide comm at (360) 902-16671 if you would like more infor- Sincerely,	Sandy Swope Moody, Environmental Review C Washington Natural Heritage Program	Asset Management & Protection Division

N

## Washington Department of Natural Resources (Washington Natural Heritage Program) Responses to Comments in State Agency Letter 26 from Sandy Swope Moody;

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 26-1. Of the 8,600-acre project site, 356 acres would be disturbed by the proposed project (4%), and 165 acres (2%) permanently removed from its current land use. Furthermore, the Applicant has voluntarily committed to place the entire Project area in a conservation easement (Appendix C), which would prevent more invasive development on this site.
- 26-2. Thank you, your comment has been noted. Please note that WDFW has indicated the mitigation that has been proposed is in accordance with WDFW guidelines.
- 26-3. See response to Comment 24-3.

Wild Hore Draft EIS Co	Horse Wind PP S Comment- 27
September 10, 2004 RECEIVED	
Allen J. Fiksdal EFSEC SEP 1 3 2004 P.O. Box 43172 ENERGY FACILITY SITE Olympia, WA EVALUATION COUNCIL	
With the exception of an intervening five contiguous years I have lived in the Kittitas Valley since 1948 in and near the city of Ellensburg. I taught chemistry and biology at Ellensburg High School for 25 years. There is a tie between my biology teaching and how I view land use. I taught what was called the Green version of the Biological Studies Curriculum Study (BSCS) which, of the three versions published, is the ecological one. It jived with my ecological predilections.	
The Wild Horse wind farm site is in the Whiskey Dick area between, and will assume a small portion of one of two (call them) wildlife areas bordering the wind farm, the Whiskey Dick Habitat Management Area and the Quilomene Wildlife Area. Wild Horse will have an effect on the entire area, and it won't be a positive one. There will be bird kills. A late-emerging problem is bat kills. This is an area where Sage Grouse have been sighted. It is a shrub steppe area – a habitat we are losing at a high rate.	27-1
There is no way that recovery of species, whose numbers have been so reduced – such as the sage grouse, can occur if we keep moving into these kinds of places. They are rare and becoming more so.	
If it happens that the project is ultimately approved, the entirety of the area other than that taken up by the turbines should be given to the WDFW to be managed in ways consistent with the two natural areas on either side of the project. Which brings to mind the issue of public access – access must be provided to the wildlife areas.	27-2
Hal Lindstrom 1831 Hanson Road Ellensburg, WA 98926	

### Responses to Draft EIS Comments in Individual Letter 27 from Hal Lindstrom; Kittitas Valley Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 27-1. See Section 3.5.2 of the DEIS for a description of potential impacts to birds and bats. Section 3.5.2 of the DEIS has been revised to include additional information on potential impacts to sage grouse, and this information is presented in this FEIS. Section 3.5.4 of the DEIS has also been revised to include additional mitigation measures to reduce potential impacts to sage grouse and this information is presented in this FEIS. The Applicant has agreed to mitigate for the loss of shrub steppe habitat in the project area by protecting over 600 acres of this habitat type within the project area, which has agreed to place the entire project area under a consistent with the WDFW Wind Power Guidelines and has agreed to place the entire project area under a
- 27-2. As stated in Section 3.5.4 of the DEIS the Applicant has agreed to mitigate for the loss of shrub steppe habitat in the project area by protecting over 600 acres of this habitat type within the project area, which is consistent with the WDFW Wind Power Guidelines.
- 27-3. The Applicant will implement an adaptive management approach to allow controlled access to and through the Project Area, including access for hunting. Section 3.5.4 of the DEIS has been revised to include a discussion on controlled access to the site and this information is presented in this FEIS. Furthermore, the Applicant has voluntarily agreed to place the entire Project Area into conservation easement.

Wild Horse Wind PP Draft ElS Comment- 28

SEP 1 3 2004 Evin Duleba P.O. Box 50346 Bellevue, WA 98015 (425) 765-0378

September 9, 2004

ENERGY FACILITY SITE Allen J. Fiksdal, Manager Energy Facility Site Evaluation Council P.O. Box 43172 Olympia, WA 98504-3172 Subject: Comments on the DEIS for the proposed Wild Horse Wind Power Project

Dear Mr. Fiksdal,

I contend that the Draft Environmental Impact Statement (DEIS) for the proposed Wild Horse Wind Power Project does not fully evaluate or address the impacts on sensitive environmental resources contained within and adjacent to the proposed project area. I further attest that the proposed project area contains sensitive environmental resources to a degree that actually sets itself apart from the alternative sites discussed within the DEIS and therefore the proposed project should not be approved.

It is clearly stated in the DEIS that the impacts on the environment in and around the proposed project area are not fully known or evaluated. In section 1.9.1 on page 1-79 of the 28-3 DEIS, it is stated that "ti is currently not clear what indirect impacts the project may have on big game winter range and big game movements" and "The level and effect of disturbance impacts on big game from maintenance operations is not known, and may or may not be significant." In section 3.5.2.2 on page 3.5-33 of the DEIS, on the topic of Sage Grouse which are a state "Threatened Species, it is stated." It is not known what impact the project will have on seasonal movements and movements, if they exist, between the two existing populations."

The DEIS does not address a potential impact on elk calving. The proposed project is very close to an elk calving area as stated in section 3.5.1.1 on page 3.5-5 of the DEIS: "the northern boundary of the project is approximately 0.5 mile (0.80 km) from the Colockum elk calving area". However close the proposed project is to the eaving area, the proposed construction time period encompasses the elk calving period as stated on page 3.5-20 of the DEIS: "All heavy construction, including road and foundation construction and blasting, will ouce the the encompasses the elk calving period of May to ULME.

28-5

It is evident that the applicant's consultant recorded sightings should not be used to make conclusions about the use of elk on the proposed project land area and that the sightings represent only a fraction of the actual elk use of the area. It is stated in section 3.5.1.1 on page 3.5.6 of the DEIS that there were no elk observed in the fall period on the proposed project area: "no observations made in the fall period". This statement suggests that the recorded sightings are of little value and represent only a fraction of the actual elk use of the area due to the fact that elk use the proposed area in the fall period". This statement suggests that the recorded sightings are of little value and represent only a fraction of the actual elk use of the area due to the fact that project area is needed to support the fact that elk use the proposed area in the fall season.

28-6

In the first paragraph of section 1.1 on page 1-1 of the DEIS, the following is stated: "The project site has been selected primarily for its energetic wind resource and its access to existing high voltage transmission lines, which have adequate capacity to allow the wind generated power to be integrated into the power grid system." There is nothing contained within the previous statement that represents any consideration to the environmental resources such as habitat and wildlich.

and allows for distortions of the requirements. In section 2.6 on page 2-32, one criterion is stated conflicting land uses typically experience higher construction costs. Such sites are also subject to historic high use Sage Grouse area. 2) The proposed project area is located immediately adjacent Criteria are either satisfied or they are not. The use of the words "generally meet" is ambiguous Code states or defines, lies within critical habitat that consists of deer and elk winter range and a significant on-site environmental constraints include lakes, rivers and streams; wetlands; critical DEIS: "Skookumchuck and Quilomene are both located immediately adjacent to wildlife areas stated criterion as follows: 1) The proposed project area, regardless of what the Kittitas County constraints or conflicting land uses." The proposed project area is inconsistent with the above proposed project. An example is in section 2.6 on page 2-31 of the DEIS, it is stated: "To be There are stated inconsistencies in the evaluation of the environmental impacts by the considered as a potential off-site location, a site had to generally meet the following criteria." habitat; or recorded cultural or archaeological resources. Conflicting land uses include parks, unpredictable. It is often best to entirely avoid sites burdened with substantial environmental as: "Absence of significant environmental constraints or conflicting land uses. Examples of to the Whisky Dick Wildlife Area. Conflicts of other areas were stated on page 2-35 of the that could be problematic for a wind farm operation. Quilomene also abuts Ginkgo Petrified recreation areas and wildlife refuges. Sites with significant environmental constraints or a complicated federal, state and local permitting process that can be time consuming and Forest State Park, and both are heavily used recreation areas."

28-1

28-2

Another example of inconsistency is the following reference to sensitive environmental resources, in section 1.4.2 (Alternatives Considered But Rejected) on page 1-6, it is stated: "The project infrastructure was sited to avoid all documented locations of sensitive environmental resources." If the statement applies to the proposed Wild Horse Wind project area then I assert that the proposed project area does not avoid all documented locations of sensitive environmental environmental resources. I further assert that the proposed project area does not avoid all documented locations of sensitive environmental resources. I further assert that the proposed project area does not avoid all documented locations of sensitive environmental resources to a degree that actually sets itself apart from **any** other site discussed within the DEIS. The cited statement could be construed to pertain to the proposed Wild Horse project or the alternatives considered But Rejected) on page 1-6, does not apply to the proposed project area then I argue that the statement should apply so that all areas have the same basis for evaluation.

28-9

The proposed project area appears to have potential wind resources but it also is an area that has unique undeveloped habitat and sensitive wildlife resources. More evaluation is needed of areas winque undeveloped that are not located in areas of sensitive or important undeveloped habitat. There is no wind map of the proposed area to review in the DEIS. From my inspection of wind power maps obtained from the NREL website (<u>http://www.nrel.gov/gis/energyallas</u>), it appears that the proposed project area is used in sumque thabitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the torbox of maps of the proposed project area has unique habitat resources that the torbox of maps wind power potential do not have and therefore the proposed project area has unique habitat resources that other areas of wind power potential do not have and therefore the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the torbox of the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed project area has unique habitat resources that the proposed

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28-11

for development. No other proposed or alternative wind power project area can claim all of the attributes that the proposed project area can as follows:

- stated in Appendix A of the DEIS: in the letter dated April 30, 2004 from Brent Renfrow, 1) The proposed project area "lies with[in] the state's Sage Grouse Recovery Area", as WDFW
- 2) The proposed project area encompasses a "Historic Sage Grouse High Use Area", as indicated on Figure 3.5-2 of the DEIS.
- 3) The proposed project area lies within the largest remaining block of shrub-steppe lands in Washington, as stated in Appendix A of the DEIS in the letter dated April 30, 2004 from Brent Renfrow, WDFW.
- designated by Washington Audubon as an "Important Bird Area", as stated in Appendix The proposed project lies within an Important Bird Area: "the project lies within an area A of the DEIS: in the letter dated April 30, 2004 from Brent Renfrow, WDFW 4
  - 5) The proposed project area is located adjacent to an elk migration corridor, as stated on page 3.5-5 of the DEIS: "located adjacent to the Quilomene migration corridor"
- DEIS: "the northern boundary of the project is approximately 0.5 mile (0.80 km) from the The proposed project is very close to an elk calving area, as stated on page 3.5-5 of the Colockum elk calving area' ତ
- The proposed project area is within elk and mule deer winter range, as stated on page 3.5range for mule deer and elk" and "The site appears to get some year-round use by mule deer and elk, but is more concentrated in the winter." The last portion of the last because that is what wintering deer and elk populations do - they concentrate on winter 5 of the DEIS: "The project is located within habitats designated by WDFW as winter statement makes it very clear that the proposed project area is in critical winter range range. 3

28-11

- appears to get some year-round use by mule deer and elk, but is more concentrated in the The proposed project area is used by mule deer and elk all year round, as referred to on page 3.5-5 of the DEIS: "Mule deer and elk also use the site during the other seasons. developed and undeveloped springs provide a constant water source." and "The site The riparian corridors of Whiskey Dick Creek provide some cover and the various winter." 8
- The proposed project area is directly adjacent to a state-owned wildlife area of significant size and heavily used by the public for its outdoor recreational values. The proposed project is adjacent to the West side of the Whisky Dick Wildlife Area (28,5498 acres), refer to page 3.5-33 and 3.9-2 of the DEIS. 6
- 10) The proposed project area is within 1 mile away from a two state-owned wildlife areas of proposed project is within 1 mile of both the Quilomene (17,803 acres) and the Whisky significant size and heavily used by the public for its outdoor recreational values. The Dick Wildlife Area (28,5498 acres), refer to page 3.5-33 and 3.9-2 of the DEIS.
  - traveled roads during hunting season, all join in the proposed project area: Beacon Ridge Colockum, the Quilomene, and the Whisky Dick Wildlife Areas. The following heavily 11) The proposed project area is used every year for mule deer and elk hunting as stated on page 3.5-5 of the DEIS: "Mule deer and elk hunting have been allowed on the project area lands historically." Furthermore, the proposed project area has some of the most area lands historically. Road, Skookumchuck Ridge Road, Bryant Ridge Road, and the Hartman Ridge Road. heavily utilized road networks in the area used by hunters to access and hunt in the

the Yakima and other areas of the state inhabited by elk and deer, the contiguous summer range that the proposed project area lies within is not developed or adjacent to any major major road or human development, from low elevations of less than 600 feet along the Columbia River to high elevations of over 6000 feet along the Naneum Ridge. Unlike and winter range allows for a large elk and deer herd to survive without assistance of (2) The proposed project area is part of the largest contiguous summer and winter range winter feeding programs. Unlike the Yakima and other areas of the state, the winter habitat remaining in the State that allows elk and deer to move, unobstructed by any human development.

has unique undeveloped habitat that is vital to sensitive wildlife resources. The proposed project The proposed project area appears to have potential wind resources but it also is an area that area has unique habitat resources that other areas of wind power potential do not have and therefore the proposed project should not be approved.

2 res

Enclosed: wind map

28-11 cont

Sincerely, Erin Duleba



### Responses to Draft EIS Comments in Individual Letter 28 from Erin Duleba; Kittitas Valley Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 28-1. The EIS for the Wild Horse Project evaluated a range of scenarios, off-site alternatives, cumulative impacts, and identified potential impacts and mitigating measures for the proposal and each element of the environment identified during the scoping process.
- 28-2. Thank you, your comment has been noted.
- 28-3. Several mitigation measures listed in Section 3.5.4 of the DEIS, as revised and shown in this FEIS, are intended to avoid or minimize impacts to elk. As stated in the pre-filed testimony for the WHWPP, disturbance impacts may still exceed the tolerance threshold for elk in the area, however, causing them to shift use to other areas. Results of a recent study on the interactions of elk populations with operating wind farms conducted in Oklahoma were inconclusive but found no evidence that operating wind turbines have a significant impact on elk use of the surrounding area (Walter et al 2004). This information has been added to Section 3.5.2.2 of the DEIS and is presented in this FEIS.
- 28-4. The discussion on sage grouse in Sections 3.5.1.1 and 3.5.2 of the DEIS has been updated to reflect additional information acquired since the DEIS was published and this additional information is presented in this FEIS.
- 28-5. The WHWPP is located in an area that is used primarily as winter range for elk and, therefore, construction was planned

Wild Horse Wind Power Project Final EIS

to avoid impacts during this period of use. The 0.5-mile distance between the project area and the elk calving area should provide a buffer for disturbance impacts.

- 28-6. Although elk were not observed within the project area during the fall surveys, the DEIS recognizes that elk occur in the WHWPP area on a year-round basis, as stated in Section 3.5.1.1 Big Game, with the majority of use occurring during winter.
- 28-7. To comply with the requirements of EFSEC Energy Facility Siting Rules Title 463 WAC and Chapter 80.50 RCW, EFSEC requested an investigation into potential off-site alternatives within Kittitas County (Figure 2-6). Consideration was given to sites meeting criteria that could potentially meet the Purpose and Need for the proposed project (Section 2.6.1 of the DEIS). All sites have varying degrees of environmental constraints (presence of environmental resources [e.g. wetlands, streams] and wildlife use). The Applicant did consider avoidance of environmental resources when designing project layouts (see DEIS Section 2.5.2).
- 28-8. Ground-truthing was not conducted at the off-site alternatives sites considered, except for the Kittitas Valley and Desert Claim projects. The off-site alternatives analysis was conducted with available public information to provide a comparative analysis.

- 28-9. Thank you, your comment has been noted. Revisions have been made to the DEIS and appear in Section 1.4.2 of this FEIS to clarify that "project infrastructure was sited to avoid all documented locations of sensitive environmental resources *within the project area*." Also, see Section 2.5.2 of the DEIS for a more detailed description of sensitive environmental resources avoided by the proposed project layout.
- 28-10. The off-site alternatives analysis included in the DEIS, although more qualitative in scope than the analyses done for the proposed WHWPP project site, did reveal that there are other areas with potential wind resources to support wind farm development. However, based on this investigation (see Section 2.6 of the DEIS), sites with potential wind resources were either already proposed for wind farm development or had greater environmental constraints or conflicting land uses than those identified at the WHWPP site.
- 28-11. Unique attributes of the site are described in Section 3.5.1 of the DEIS, as revised and shown in this FEIS. Revisions to the DEIS presented in this FEIS include additional information on sage grouse habitat, sage grouse recovery efforts, and the location of the project site in the context of the larger landscape.

29-1 If the Wind FARM Delate Ever Come to a Uak here 20-2 It would, I Bellien be overwhermingly Approved. D.L.C. ENERGY FACILITY SITI EVALUATION COUNCIL Wild Horse Wind PF Draft EIS Comment- 29 David Crane 1201 Vista Rd. Ellensburg, Wa. 98926 P.S. The Environmental Shokes were, in my opinion, Adequate and Tholough, wind FARMS ARE The Rest Sovere Of Energy ILLogical, Shopt Sighter and without foundation. To Dany approval FOR ZILKha's 2 FARMS Hew in Kittike County would be a huge Loss to ALL of Mr Residents of This SEP 1 4 2004 praitable to us And Shoved be Encouraged. All the letters to the Editor And constant complaining by a few people are Fifty years ago when T.V. was still in its infancy the ensuing controversy sounded devil is under the hood". My father-in-law commented "we now know he was behind the cheapen family life and divert finances from more noble pursuits. Kids would no longer The benefits of wind farms are, however, widely acknowledged as with highways, power Wind farms may kill birds and cause some fires. So also do cars, and dams are a problem for some fish. Wind farms can be hit by lightning as are tall buildings and trees. benefits. When the automatic washer replaced the rub board people found other ways to When the early automobile replaced the horse drawn carriage one man said "the lines, railroads, dams and T.V. We have learned to cope. People will still buy and sell bought property above future dam sites or in the path of modern freeways had to sell or property and values will not plummet. We will deal with the problems and realize the hopefully sensible minds will prevail for the common good. Some who built homes or move. This was for them a tragic loss, but we live in a world of change and often we like the wind farm debate of 2004. T. V. would destroy our morals, waste our time, Most of these have proven to be valid concerns, and though we can't re-write printing press effectively destroyed the human memory. The frenzy over Y2K was history, we are dealing with these issues. It has been said that the invention of the Although for most of us the wind farm issue decision is not ours to make. can't have it both ways. We liked the old but often the new is really better. read books or get proper exercise and healthy minds would turn to mush. 1871-205 (605) Wind Le Clan Sincerely, David Crane Sincerely, 70-01-6 mostly hype as we now know. Ellensburg, Wa. 98926 ALLEN J. FIKSdal To The Editor: Và 1/en. Daily Record 401 N. Main EFSEC exercise. wheel"

Word Lee Crosen

### Responses to Draft EIS Comments in Individual Letter 29 from David Crane; Kittitas Valley Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 29-1. Thank you, your comment has been noted.
- 29-2. Thank you, your comment has been noted.

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	ment <b>Gro</b> u	Kittitas Count
	cDevelop	of
	Economi	

Wild Horse Wind PP Draft ElS Comment- 30



September 10, 2004

Mr. Allen Fiskdal, Manager Energy Facility Site Evaluation Council PO Box 43172 Olympia, WA 98504-3172

Dear Mr. Fiskdal:

The attached spreadsheets provide additional information for the draft environmental impact statement that EFSEC prepared for the Wild Horse Wind Power Project proposed by Zilkha Renewable Energy related to the tax impacts. As shown, some new tax revenue is generated and taxes are lowered for all taxpayers in the county. The Project Tax Impacts spreadsheet supports the information presented on pages 3.11-9 through 3.11-11. It was prepared based on information obtained through the Kittitias County Assessor's office and the Washington State Department of Revenue. As noted the distinction between real property and personal property is important as real property only is considered new construction and therefore exempt from the 1% revenue cap put in place through 1.747. We have been given an estimate by the Washington State Department of Revenue that 20% of the project would be designated as real property.

The study commissioned by the Phoenix Economic Development Group (the name of this organization prior to 2004) was prepared prior to the passage of 1-747. Page 3.11-11 notes that the added tax base could reduce other taxes. The calculations on the Project Tax Impacts spreadsheet show this to be a true statement. The construction of this \$200 million project would result in a new tax rate that is lower for all taxing districts. The sheet labeled example shows the savings expected in three Tax Code Areas. As you can see substantial savings occur in the Tax Code Areas where the project is located but savings do occur in other districts. Property taxes are lowered for everyone in the community.

509-962-7244 • Fax 509-962-7141 phoenix@elltel.net • www.phoenixgroupedc.org

enix@elltel.net • www.phoenixgroupedc.org

Tourism and a visitor information kiosk were discussed on page 3.12-16. While the information kiosk and parking area proposed by the applicant will provide some tourism opportunities, this project should be considered individually from the other projects being proposed in the county. No assumption should be made that other projects will be built in more accessible areas of Kittitas County as no permits have been issued at this time and EFSEC has no way of determining at this time if any will be permitted. This may be the only project built and the only opportunity for attracting torurism and providing educational information. We would like to see additional mitigation factors related to tourism required for this project.

30-4

From an economic development perspective this is a good project for our community. The Economic Development Group of Kittitas County supports the project due to the economic benefits it brings to Kittitas County.

Sincerely,

Defle Star

Debbie Strand, CEcD Executive Director

30-5

EXAMPLE

Id Horse Wind Power Project

In following shows examples of savings in three districts if the Wild Horse Wind Power Project is built. Ste that the project is located only in Tax Code Areas 25. As you can see, the rates are lowered ost dramatically in the district where the project is built, however, there is a savings across e board in the countywide taxing districts such as County Current Expense and State School.

3100,000 Hot	ise in Tax Code	Area 25 - Kittitas S	chool District		
	Old levy Rate T	ax at old rate	New levy Rate Ta	ax at new rate	Savings
County CE	\$1.3140	\$131.40	\$1.2527	\$125.27	\$6.13
state School	\$2.9587	\$295.87	\$2.8197	\$281.97	\$13.90
soad #1	\$1.6161	\$161.61	\$1.4946	\$149.46	\$12.15
lospital #1	\$0.0028	\$0.28	\$0.0026	\$0.26	\$0.02
school 403	\$3.3487	\$334.87	\$1.9811	\$198.11	\$136.76
Sonds)					
lospital #1	\$0.4409	\$44.09	\$0.3952	\$39.52	\$4.57
chool 403	\$2.9459	\$294.59	\$1.4500	\$145.00	\$149.59
otals	\$12.6271	\$1,262.71	\$9.3959	\$939.59	\$323.12
100,000 Hoı	ise in Tax Code	Area 34 - Cie Elum	Roslyn School District		
istrict	Old levy Rate Ta	ax at old rate	New levy Rate Ta	tx at new rate	Savings
county CE	\$1.3140	\$131.40	\$1.2527	\$125.27	\$6.13
tate School	\$2.9587	\$295.87	\$2.8197	\$281.97	\$13.90
toad #1	\$1.6161	\$161.61	\$1.4946	\$149.46	\$12.15
lospital #1	\$0.0028	\$0.28	\$0.0026	\$0.26	\$0.02
ire #1	\$0.8434	\$84.34	\$0.8434	\$84.34	\$0.00
chool 404	\$1.3854	\$138.54	\$1.3854	\$138.54	\$0.00

EXAMPLE Wild Horse V	nue rollowin Note that the most dramat the board in	<b>\$100,000 Ho</b> County CE	State School Road #1 Hospital #1 School 403	(Bonds) Hospital #1 School 403	Totals \$100,000 Hou District	County CE State School Road #1 Hospital #1 Fire #1	School 404 Bonds Hosptial #1 Fire #1 School 404 <b>Totals</b>	<b>\$100,000 Hot</b> District	County CE State School Hospital #1 Ellensburg School 401	Bonds Hospital #1 School 401 Ellensburg <b>Totals</b>	
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 \$229.98

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New levy Rate 7 \$1.2527 \$2.8197 \$0.0026 \$2.2998 \$2.3446

 Tax at old rate

 \$131.40

 \$295.87

 \$202.98

 \$229.98

 \$2234.46

 \$234.46

Old levy Rate \$1.3140 \$2.9587 \$0.0028 \$2.2998 \$2.3446

0,000 House in Tax Code Area 18 -- Ellensburg School District

Savings

Wild Horse Wind Power Project Tax Impacts

### CECD, Executive Director, Economic Development Group of Kittitas County Responses to Comments in Organization Letter 30 from Debbie Strand,

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 30-1. Thank you, your comment and further analysis of potential tax revenue and benefits to Kittitas County have been noted. As indicated on page 3.11-11 of the DEIS, it is anticipated that should the project be approved, a formal project valuation for tax purposes would be conducted by the Kittitas County Assessor's office.
- 30-2. Thank you, your comment has been noted. The actual increase in revenue or decreased levy rate resulting from the proposed project would be based on a number of factors to be considered by the County Assessor, including the portion of the project considered real verses personal property and "new construction".
- 30-3. Thank you, your comment has been noted.
- 30-4. Construction of other wind projects in Kittitas County is not certain and reference to other proposed projects has been clarified elsewhere in this FEIS, including Section 3.12.2.2. Please note that although the project would result in a benefit to tourism, the Applicant will provide a visitor information kiosk and parking off of the Vantage Highway, and provide informational and educational material regarding the wind project and wind energy in general. For additional mitigation measures to address potential impacts from increased tourism, see response to Comment 11-7.
- 30-5. Thank you, your comment has been noted.

	If you wish to đ Thank you and <sup>1</sup>	Sincerely, APLOUDU Camille Pleasan Tribal Historic F (509) 634-2654							Cc: Dr. Robert Mr. Chris T Mr. Joe Pak Mr. John Sii File Frile Chrono
e Wind PP mment- 31						31-1	31-2	ç 0	2
Wild Hors Draft EIS Co	ion 2654	otember 8, 2004		pact Statement		ion. However, of the Colville appendix. The	s referred to as ngton". This is Zilkha pointing nd. We sent a of 2004, which m Washington.	modern report ss, we find it not been taken Draft EIS.	ument meeting C. This will be ic Preservation is is especially ence with Irina
	ville Reservat (509) 634-7 FAX: (509) 634-7	4 2004 A 2004 COLLITY SITE NO COUNCIL		Environmental Im	ents:	yy the Yakama Nat nfederated Tribes pondence are in the d in March.	iville Reservation i Vortheastern Washi Ar. Chris Taylor of Ar. enever ceded la twe never ceded la tractor in February er than Northeaste	is in the process of the DEIS proce mmendations have be updated into the	vernment-to-gover authority at EFSE of the Tribal Histoi of the CCT. Th luring a teleconfer
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	federated Trib 0, Nespelem, WA 9	luation Council		ld Horse Wind Po office August 6, 20	ocument and have the	3, reference is mad tion of the partic n though copies of not have been upda	5, the Confederates 1 states that we "ce co en 4/16/2004 w acronym (CCT). I tories map to the a ancestral territories appears not to have	e efficiency of cut- ribal Consultation months of correspo EC's consultant, Jo	ist, we will requisiness Council and 1 see issues and to mage issues and to mage representation of role of the THPO role of the THPO February 18, 2004.
	The Cont P.O. Box 15	llen Fiksdal y Facility Site Eval ox 43172 oia WA ⊢3172	Mr. Fiksdal,	t you for the Wil ), received by this	we reviewed the do	In Section 1.7.1. there is no mer Reservation, even DEIS appears to	In Section 3.13- the "CTCR", and disappointing, sin out our proper 4 Traditional Terri shows that our 6 Again, the draft 8	we understand the ction, and that T rraging that after siy enough by EFS	se problems pers en the Colville Buu ary to resolve the (THPO) and its ointing since the ow of EFSEC on l
		Mr. A Energ PO B Olym 9850/	Dear	Than! (DEI!	Weh	1.	4	While produ discou seriou	If the betwe necess Office disapt Maka

iscuss this matter with me, please feel free to contact me at the number below.

we look forward to progress being made on these issues in the future.

L unts c Preservation Officer

Whitlam, Office of Archaeology and Historic Preservation [aylor, Zilkha Renewable Energy kootas, CCT Tribal Chair Moses, CCT Culture Committee Chair irois, CCT Cultural Preservation Administrator

# Responses to Comments in Tribal Letter 31 from Camille Pleasants, Tribal Historic Preservation Officer, Archaeology Program, The Confederated Tribes of the Colville Reservation

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 31-1. Revisions have been made to the DEIS and Section 1.7.13 has been updated in this Final EIS to reflect that the CCT has expressed concerns over potential impacts to traditional cultural properties (TCP) and that, since the DEIS was issued, the Applicant entered into a contract with the CCT to conduct a TCP study, and that the TCP Study has been completed.
- 31-2. Section 3.13.1.3 has been corrected in this Final EIS to reflect the proper acronym (CCT) for The Confederated Tribes of the Colville Reservation. All other sections of the Draft EIS had correctly cited the proper acronym. In addition, revisions have been made to the DEIS and appear in this Final EIS to reflect that the CCT has ancestral lands in Northeastern Washington.
- 31-3. Thank you, your comment has been noted. However, we disagree that the CCT's recommendations have not been taken seriously. Every effort has been made to reflect in the EIS, CCT's concerns, an accurate evaluation of potential impacts from the proposed project, and the efforts made by the Applicant on behalf of CCT's expressed concerns. In addition, consultation with representatives of the CCT has been documented in Section 2.11.4, Tribal Contacts, Subsection: Confederated Tribes of the Colville Reservation in the Draft EIS. In addition, Section 3.13.1.5 has been updated to reflect that, since the DEIS was issued in August 2004, the Applicant entered into a contract with the CCT to

conduct a TCP study, and that the TCP Study has been completed.

## Responses to Draft EIS Comments in Individual Letter 32 from Merle and Sharon Clemmo; Kittitas Valley Residents

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter.

- 32-1. See response to Comment 1-1. It is the Applicant's intent to allow homeowners access on Beacon Ridge Road to their private properties.
- 32-2. Thank you, your comment has been noted.
- 32-3. The Applicant has committed to developing and implementing a post-construction Rangeland Management and Grazing Plan (RMGP) in coordination with the TAC for the entire project area which is intended to improve residual grass cover and potential nesting, brood-rearing and habitat for sage grouse, other grassland/shrub-steppe nesting species, and big game. The RMGP will include provisions for the restoration of shrub-steppe lands, native seeding prescriptions, and management of livestock grazing on shrub-steppe rangelands. However, at the request of the WDFW, livestock grazing near the springs within the project area will be eliminated.

Page 4 recommendation to the Governor of Washington on whether to Impact Statement. EFSEC issued the EIS for public comment Page 5 Environmental Impact Statement but any comments that you whoever is elected in November, will be the one making the scoping meeting in Ellensburg on April 22, 2004. Many of comments will be used by EFSEC's independent consultant, be holding formal adjudicative hearings on the Wild Horse might have on the proposed project. Those comments will recommendation to the Governor whether he or she should also give you EFSEC's mailing address if you have further recommendation the Council will be considering all of the 1º receive advance notice of any hearings that are scheduled. Makarow, about getting on a mailing list to receive notice this year. A schedule for those hearings has not yet been hand it to our EFSEC staff person who is seated back at fairgrounds. The SEPA analysis performed by EFSEC's for the Council to receive oral comments on the specific there will be one evening hearing session that will again also be added to the official adjudicative record. If you If you have a written comment with you tonight, you can be considered your comments have to be postmarked by Wind proposal probably in early 2005 rather than later established. But if you are on the mailing list, you will EFSEC staff person here tonight, Allen Fiksdal or Irina EFSEC began this SEPA process by holding a again Jones & Stokes, to prepare the Final EIS, and the Now the Council is required by law to make a the sign-up table in the back, Irina Makarow. She can In addition to the SEPA process, EFSEC will be held in Kittitas County to receive public comments. The purpose of tonight's comment meeting is September 10, 2004 or brought to our attention tonight. resulted in the preparation of the Draft Environmental EFSEC is the lead agency for major energy facilities, approve or deny this project. The Governor, probably tonight. They can also be submitted by mail or email. As part of the formal adjudicative hearings you may have been there. It was held at the County independent consultant, Jones & Stokes Associates. have any questions about that, you can talk to either issues that are addressed in the Draft EIS. These Council will consider the Final EIS in making its decision on the Wild Horse Wind Power Project. Comments don't have to come in orally That won't necessarily be limited to the Draft comments that you want to send to Olympia. approve or deny this project. In making the earlier this month on August 4, 2004. of any future comment opportunities including projects of this nature. - 0 9 × 6 111 111 112 113 114 115 114 117 117 117 119 119 119 122 122 222 223 223 0 m 4 Page 2 Ellensburg, Washington on the campus of Central Washington represent the Department of Community, Trade and Economic Page 3 comments on again the Wild Horse Wind Power Project Draft Power Administration's Grand Coulee to Olympia or Columbia MR. SWEENEY: Good evening. My name is Tim Assistant Attorney General representing EFSEC in our work few minutes to give you some background information about JUDGE TOREM: Seated immediately to my right Washington State Environmental Policy Act known as SEPA CHAIR LUCE: My name is Jim Luce. I'm Chair nameplate capacity of up to 312 megawatts. The proposed MR. FRYHLING: I am Richard Fryhling, and I the members of the Council to introduce themselves, and alternative energy facility as defined by the Revised Code Partners and Zilkha Renewable Energy chose to receive a University. Before we proceed any further I want to ask LLC, requested to build a wind power generation facility project would be located along the ridge tops of Whiskey is not a Councilmember, but the Council's legal counsel. this particular wind power project. I know this is one of Wind Power Project, pursuant to RCW 80.50. Under the MS. TOWNE: I am Chris Towne representing process for tonight's meeting before we get to the public consisting of up to 158 wind generating turbines with a Sound Energy's Intermountain Power Line or Bonneville to Covington lines. EFSEC is responsible for siting and licensing the construction and operation of major energy of Washington Title 80, Chapter 50. Wind Ridge Power directly with one of two transmission lines, either Puget Dick Mountain. That's two miles north of the Vantage site certification from EFSEC for this, the Wild Horse It's hard to get those counsels right. Ann Essko is an three proposed here in this county, and I'll review the In March 2004, Wind Ridge Power Partners, MS. JOHNSON: I am Patti Johnson, and I Highway, and 11 miles east of the City of Kittitas all MR. IFIE: I am Tony Ifie, and I represent Before we go any further I want to take a Sweeney. I'm with the Washington Utilities and This project is an of the Washington State Energy Siting Council. The project proposes to interconnect the Department of Natural Resources. the Department of Fish and Wildlife. here in Kittitas County, Washington. we'll start with the chairperson. facilities in Washington State. Transportation Commission. represent Kittitas County. Development. EIS or DEIS. - 0 0 4 0 0 -Page 1

Public Comment Meeting We are ready to held in the presence of a court reporter on August 24, 2004, This is a public comment meeting for the the A public comment meeting in the above matter was Administrative Hearings, and I have been appointed by the of you for taking to come tonight and participate in this public It is a Tuesday and just after seven o'clock p.m. This public meeting is being conducted in Environmental Impact Statement, and today is August 24, proceedings tonight in this matter, and I will preside p.m., at 400 East University Way, in Ellensburg, Facility Site Evaluation Council to facilitate On behalf of the Energy Facility Site 48 Draft EIS I'm an Administrative Law Judge with the State Office of Wild Horse Wind Power Project regarding the Draft Washington, before Energy Facility Site Evaluation 1 SITE EVALUATION COUNCIL Pages 1 BEFORE THE STATE OF WASHINGTON Good evening. My name is Adam Torem. FLYGARE & ASSOCIATES, INC. 1-800-574-0414 over the public comment hearing tonight. Evaluation Council I want to thank all \* \* \* \* \* WIND RIDGE POWER PARTNERS, LLC, JUDGE TOREM: WIND POWER PROJECT ENERGY FACILITY Application No. 2004-01 on the record. comment meeting. In the matter of: Councilmembers. WILD HORSE the time Energy at 7:00 2004. go ч  $\sim$ С 4 ഹ 9 ω თ 10 11 12 13 14 15 16 17 18 19 21 21 22 23 24 25

FLYGARE & ASSOCIATES, INC. 1-800-574-0414

2 (Pages 2 to 5)

C2-1 C3-1 C3-2 Page 12 4 (Pages 10 to 13) bottom of the Skookumchuck Canyon which is fairly close by Following that will be Sharon Bacon and Desmond Knudson Supposing that my loving wife comes down to that gate, an entities, Boise Cascade, State of Washington Department of signatory to the green dot system, and we trusted you when /ou put your name on there that you keep that open. Three Page documentation included in the ASC, and I do appreciate the out, and she's got a key. Now, she could say, "Gentlemen, accuracy with which I think many of the comments are mad part of this documentation only encompass a one-year time with that. It has been maintained for seven years by the ten years -- or has not been maintained but used by these it's locked in the first week of November, and you've got We've had the argument with Greg Zempel, and probably the best thing for him to Natural Resources, and the Department of Wildlife, three just step aside" and let her unlock the gate and drive out to Irina here last week, and in there it's a 1905 case and the project site. I'm very concerned about the impact on and not these other 20 guys. It's just not going to work. entities, and the little lines on that green dot map given 20 irate unsuccessful elk hunters who are trying to get do is to prosecute the first of us who cuts that lock. Is Vatural Resources and Fish and Wildlife, you guys are Thank you for serving my state. Understand, that the big game surveys that were undertaken that are it says much. So let me look at my notes. I think I'm Avenue S.W., in Scattle, 98136. I own property at the like the test for adverse possession, if you're familiar county. It is a public road. It's been maintained for say roads open to motor vehicles. Yeah, we like that. for the first time when I was 13. Now I own property frame, and I suggest that's a bit weak for a project of I'll get it for you. No, I gave it to Irina. I mailed it personally been hiking, hunting, photographing, and enjoying this area for 40 years. I'm 53. I went there Getting us special permission won't work. in here. I first would like to point out too, however, There's a case Seattle vs. -- and I can't think of it. Hi, I'm Robert Kruse. I live at 8885 42nd wildlife that I believe the project will unfold. I've JUDGE TOREM: Next is Robert Kruse. My concerns are underscored by formal folks out here for ten years. It is a county road this magnitude and the impacts that it will have. And so I've used my four minutes. Thank you. COMMENTS BY ROBERT KRUSE I don't want special permission. there and have since 1980. just about done here. that an idle threat? 9 Page 10 Page 11 2104 Marina Drive in Moses Lake, 98837. Same objections needs to go into your record. Slim Rasmusson from Tacoma specifically Beacon Road. Beacon Road is the road you see group of people dialoguing to consensus. Consensus mean you're being conned, and you've taken leave of your senses Section 2. The turbines have been sited at locations more than 9,000 feet from the nearest residence, more than two the green dot map that closes the roads in the Wild Horse of their prospectus or whatever it is with the Parke Creek controlled access across private lands which limit access Department of Transportation. Tim, it's a transportation own house. If you've been here for 40 years, well, that's use Parke Creek Road which is the only road going into since '88, and in this town they say nobody lives in their COMMENTS BY HAROLD HOCHSTETTER miles from public roads. All project facilities will have that area, and it would be a disaster. Also I am against Beacon Road has been a public road in your green dot maps. And I would like to address myself to Tony and to Chris and to Tim because Tony is natural Road picture. The turbines have been -- this is Page 2, to quote to you that the test for keeping a road open is that would create a fire hazard if they do not graze on JUDGE TOREM: All right. Thank you, sir. relationships here. I've been here since '88 and using to the facility to persons aware of safety setbacks and area. Also I am against the grazing part of it because years and years. I'm a newcomer. I've been up there Thank you. My name is Harold Hochstetter. Bilcher's definition of a consensus process. This is a he says I've had a heap of SEPA/NEPA at his speech issue. It's a road that a lot of us have been using for I'm just burdened here with documents, and this is not the Draft EIS. But it says -- this is Page 2 Adam, let me beat you up with this is Dean Slim Rasmusson, here's another speech that corker, so I want to get it into the record. A diverse potential risks. On further in Section 3, it mentions I hate to squander some of my four minutes resources, Chris is Fish and Wildlife, and Tim is as Road 18, and it's the road that you see go right over a social issue in a facilitated meeting to a the Jones' place, and so very long, established predetermined conclusion. Isn't that a gas? delivered on the floor of the Senate. through the middle of the project. the land. That's all I have to say. to the closing of Beacon Road. Mr. Hochstetter that road since '88. 2 6 4 v 5 10 6 C1-2 C1-3 C2-1 C2-1

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C1-1 3 (Pages 6 to 9) Page 8 Page 9 the DEIS. We have right now 18 people signed up to speak and affirmation of what somebody else has said rather than do come forward please make sure you give your full name, Hochstetter, and Robert Kruse will be the first. When you drifting away from the subject of tonight's meeting, I may hear from everyone within a reasonable period of time, so something that's already been said, I would encourage you remember their name, and that way we can know what the comments as well. If you've brought any written materials against the road closure of Beacon Ridge. We have fought number, that would be helpful. If you inadvertently start just to state your agreement with the name of that person idea who is on the top of the list. Merle Clemno, Harold interrupt you and ask that you confine your comments to public feelings are on the project perhaps by acclamation say something after you leave tonight, you still have time tonight. It's not too many. We do want to make sure we Allen Fiksdal, he will take those and mark them as public during hunting season if they close that road, we have to Tonight I'm going to be reminding you again September 10 is the deadline, so there's still quite some come up and sit close to the microphone at the front and tongue tied at all up here or you feel that you wanted to will be miked as you go, and they will need to hear your this before with the County Commissioners. It has been you limit your comments that are verbal tonight to four Please speak clearly for the Council again and the court you want to turn in, if you will direct them to my left to Horse project. I am not against the project itself. I am or refer to them by the topic they spoke on if you can't reporter and for the other members of the public. You I'm going to ask that unless there's a very good reason minutes. I will let you know when you have about 30 Merle Clemno. I'm a landowner by the Wild seconds left, and if you can wrap it up, that would be time left until that deadline. If you signed up already, I will be calling you three at a time, and I'll ask you to considered equally in this process, so, again, if you're used since 1974 by myself, and there's quite a -- well, having to repeat things. Your written comments are spell your last name, and give your mailing address. Let me call the first three and give you an All right. I think, Council, we're ready to COMMENTS BY MERLE CLEMMO be ready to go as soon as that person finishes. hear oral public comments, so Mr. Clemno. If it turns out that you agree with comments received tonight FLYGARE & ASSOCIATES, INC. 1-800-574-0414 to send those in. fantastic. - C C 4 501000 10 Ξ 8621 12 14 15 17 18 20 21 3 22 23 23 Page 6 me. One other person you can contact is John Lane. He is Councilmembers can hear what he or she has to say and that Page the microphone tonight to give public comment, so that the coming up to comment, be as specific as possible regarding also talk to you about procedural questions and direct you to the appropriate source. But it's best not to talk to the Councilmembers. If it's about something else, they're review process, you can talk again with EFSEC staff or if Assistant Attorney General with the state. He's appointed reporter, Ms. Shaun Linse, taking down each word, so I'm evidence submitted into the record by parties and by the public through the SEPA process, as well as through the pertaining to an adjudicative proceeding and because the rules have similar requirements that might affect a juror talking to other folks, looking like they might be lobbied you have a question and you see me, you can direct it to public or other parties to talk to the Councilmembers or questions about procedure, talk to EFSEC staff. I could known as the Counsel for the Environment. John is an Council's SEPA process, again, the State Environmental adjudicative hearing process. So there's two different hearing processes, but the Council considers all of that stay unbiased and impartial, so they can't be seen to be adjudicative proceedings, so I will ask him now to stand Policy Act, and they are on the record. We have a court meeting, please do so as quietly as you can, but it seems which section of the Draft EIS you might be addressing. to myself about the substance of the case. If you have up and identify himself. There's Mr. Lane. If you need going to ask everyone to be quiet as a witness comes to the court reporter can take the testimony and transcribe to represent the public and its interest in protecting the He's participating again on behalf of the public in the to contact Mr. Lane directly, if you would like him to all friendly people. But on this project they need to quality of the environment. Mr. Lane is here tonight. public, you can get his contact information from him to receive comments on the Draft EIS. So if you are take up a particular issue for you as a member of the Tonight's comments will become part of the it accurately. If you need to come and go during the in a trial it's not appropriate for individuals of the If you have any questions about EFSEC's Again, the purpose of tonight's meeting is directly or from either of our staff people tonight. Because the project is subject to rules If there is a page number or a if there's a section the acoustics in this room are rather friendly. they make their recommendation. on an issue that they have to decide on. when 1 × 6 0 0 

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<ol> <li>box, but soap boxes are sometimes necessary, and if we are going to get clean energy, we need a lot of soap.</li> <li>JUDGE TOREM: Thank you, Ms. Wise.</li> <li>Bernice Best.</li> <li>Bernice Best.</li> <li>Bernice Best.</li> <li>Bernice Best.</li> <li>Bernice Best.</li> <li>Bernice Best.</li> <li>COMMENTS BY BERNICE BEST</li> <li>Bernice Best. 210 Tomahawk Lane, in</li> <li>Ellensburg. Helen has pretty well covered everything that</li> <li>Ihad to talk about other than 1 did want to say that it</li> <li>looks like on the decommissioning they've got everything</li> <li>in place there, if that comes to it.</li> <li>Dooks like on and we're not going to have fossil fuel</li> <li>and things like that to rely on forver. And it has a lot of fransportation and other things that are found out in</li> <li>the past adequate planning wasn't dome to cover for the</li> <li>future, and I think this is one step in the right</li> <li>TUDGE TOREM: Thank you, ma'am.</li> <li>Sonja Ling with Renewable Northwest Project,</li> <li>Sonja Ling with Renewable Northwest Project,</li> <li>Bords Ling with Renewable Northwest Project,</li> <li>sonja Ling with Renewable Northwest Project,</li> <li>Honprofit promoting properly sited solar, wind, and</li> <li>geothermal in the Pacific Northwest since 1994. We will</li> </ol>	Page 21 be submitting more detailed comments by the deadline, but Thava a couple of general comments I would like to share with the Council this evening. In general, we believe that the DEIS does a good job of evaluating all the potential impacts and proposed mitigation. We also believe that the aDEIS is complete, and so far we believe that the applicant has properly or has taken the necessary steps to properly site they have engaged state and federal fish and wildlife the project. For instance, as the DEIS also points out they have engaged state and federal fish and wildlife agencies, as well as the local community, and the auduhon more specifically have reviewed the wildlife section, and I would like to make a couple of general comments.	<ol> <li>consistent, is more than consistent with the DFW wind</li> <li>power guidelines. We also believe that the additional mitigation or the additional measures to minimize and a void potential impacts outlined in the DEIS we also</li> <li>support those measures outlined in the DEIS we also</li> <li>support those measures outlined in the DEIS wat avoid minimize potential impacts, along with we also support the nimimize potential impacts, along with we also support the number of a Technical Advisory Committee which is to monitor should unanticipated impacts occur the TAC would be givin recommendations to EFSEC.</li> <li>6 (Pages 18 to 21)</li> </ol>
Page 18 between. So my point there if we're not being told clearly abour? And then on recreation, Exhibit 5, Page 34, apparently they don't consider hunting and wildlife viewing as a recreation because they answer no to the question there about displacing anything, etc. So they say there worth be any impact, and I don't agree with them. Thank you. JUDGE TOREM: Thank you, ma'am. Desmond Knudson. COMMENTS BY DESMOND KNUDSON Desmond Knudson. COMMENTS BY DESMOND KNUDSON Desmond Knudson. ComMENTS BY DESMOND KNUDSON Desmond Knudson. If's really hard to follow Harold, but I'm going to try. I have whole support for this DEIS. I realize stome issues: Harold brought one up. Ms. Bacon has brought some up that definitely need to be looked at and gone back over by the company, and I'm sure that could be done. The whole support of this is the economical benefits to this county through jobs and tax dollars. We are a county drying up of money, and this will help industrial money count through jobs and tax dollars. We are a county drying up of money, and this will help industry is down to zero. This preeds that. Our logging industry is down to zero. This	Page 19 is a new industry to replace. The environmental side of this issue seems to be more of a visual than an air, water, or destroying of the land. That has to be looked at by the professionals, and most of you sitting on this board do this for a living. So think about it. Thank you. JUDGE TOREM: Thank you, it. Helen Wise. She will be followed by Bernice Best and then Sonja Ling. COMMENTS BY HELEN WISE I am Helen Wise, 1106 East Third Avenue, in Ellensburg, 98926. I will be sending you a letter, but I want to tell you that the DEIS looks very thorough to me. There is so much that has bene considered, and I know	there arent answers to everything. But there is a need for electricity to be generated in a clean way, and I think it will benefit our community to be a par of that clean way of energy generation. If's really something that the community can do for itself in the way of making that the community and to for itself in the way of making it better for our health, for our families, for our economic growth in the county. I am very proud to be a part of something pushing for a bettering of our earth, our county, our families, and our future. I don't want to be on a soap
<sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup> <sup>2</sup>	- 7 m 4 v 0 / 8 0 0 1 1 1 1 1 4 1 4 1 4 1 4 1 4 1 4 1 4	16 17 18 20 21 22 23 23 23 23
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Page 11 from Quilomene Canyon to Whiskey Dick Canyon, and that's severe. The not opposed to the wind power project; however, I think that even within the confines of this initial design there's hope for the project. I would submit that if these turbines are relocated to the opposite side of the ridge from Whiskey Dick Mountain where turbines are going to be visible anyway, and if they're placed near the upper portion of the ridge and then surrounding this part of the property as well, all of the same interested parties, Zilkha, the private property owners, and the Department of Fish and Wildlife could still participate in the project in the same ways that are being contemplated now. But by removing the turbines from this portion of the site over to lefts say this other side of the mountain which is already going to be visually impacted by virtue of the project, and Vildlife could still participate in the project, the ways put at are being contemplated now. But by removing the turbines from this gornton of the site over to lefts say this other side of the mountain which is already going to be visually impacted by virtue of the present design 1 think all parties could be statisfied. JUDGE TOREN. Thank you, Mr. Kruse. For the record, he was pointing to the west. For the record, he was pointing to the west. Delieve and the south part of the project, at least the region south and west of the project, at least the region south and west of the project, at least the region south and west of the project, at least the region south and west of the project, at least the region south and west of the project, at least the region south and west of the project, at least the region south and west of the project, at least the region south and west of the project, at least the region south and west of the project, at least the region south and west of the project, at least the region south and west of the project, at least the region south and west of the project, at least the region south and west of the project, at least the	Page 17 JUDGB TOREM: Mr. Kruse, given the graphic needs of your discussion tonight, il mivity you to please reduce some of that to writing before the September 10 deadline, so that we can actually have that for review and be accurate as to where you believe a shift in those turbines might not can are as amuel damage to the big game. MR. KRUSE: Thank you. I appreciate that JUDGE TOREM: Next is Sharon Bacon I believe. COMMENTS BY SHARON BACON Yees, Sharon Bacon. Address is 11823 Varlage Highway in Ellensburg, and some of my concerns have about on the maps that we have seen they all say not for construction. So I am wondering how much leeway will be	given between what we're told and shown on these maps versus actual constructon? versus actual constructon? and something else I'm wondering about. I don't object to the wind towers and such. That doesn't bother me a bit. Some things I think need clarified. In Exhibit 5, Page 31, they talk about visual impacts, and they say screening provided by intermittent forest cover. This was to the north. Well. I think that's very misleading because if any of you have ever been up there, those trees are pretty intermittent all right, few and far those trees are pretty intermittent all vight. few and far
ge 14         Page 1           1         from Quilomene Canyon to Whiskey Dick Canyon, and that's severe.         Page 1           2         severe.         and that's severe.           3         however, I think that even within the confines of this initial design there's hope for the project; I would a submit that if these turbines are relocated to the opposite side of the ridge from Whiskey Dick Mountain Where turbines are going to be visible anyway, and if they're placed near the upper portion of the ridge and then mind 11           3         10         between Vantage Highway and the top of the ridge and them wild 11           3         10         between Vantage Highway and the top of the ridge and them wild 11           3         10         between Vantage Highway and the top of the ridge and them the log start of the property as well, all of the sume interested parties, Zikha, the private property of the ridge in the same ways that are being contemplated now. But thy removing the turbines from 10           10         11         summit which is already going to be visually ody 18           11         11         parties could be satisfied.           12         1100GE TOREM: Thank you, Mr. Kruse.           13         1100GE TOREM: Thank you, Mr. Kruse.           14         23         regoing to the roject, at least the regoing to the wise the viscue of the project, and 1 appreciate you now showing that to the folks behind to the weise of the project, and 1 appreciate you not showing that to the folks behind you.	Page 17           1         JUDGE TOREM: Mr. Kruse, given the graphic           2         needs of your discussion nonight, linvie you polease           3         actuce some of that to writing before the September 10           4         deadline, so that we can actually have that for review and           5         be accurate as to where you believe a shift in those           6         turbines anight not cause as much damage to the big game.           7         JUDGE TOREM. Next is Sharon Bacon.1           9         believe.           10         COMMENTS BY SHARON BACON           11         Yes, Sharon Bacon.1           12         JUDGE TOREM. BACON Next is Sharon Bacon.1           13         9           14         believe.           13         already been covered. But wonderning that 1 monderning t	<ul> <li>16 given between what we're told and shown on these maps 117 versus actual construction?</li> <li>17 versus actual construction?</li> <li>18 And something else I'n wondering about. I</li> <li>19 don't object to the wind towers and such. That doesn't 20 bother me a bit. Some things I think need clarified. In 21 Exhibit 5, Page 31, they talk about visual impacts, and 22 they say streening provided by intermittent forest cover. 23 This was to hen orth. Well, I think that's very 24 misleading because if any of you have very been up there, 25 those trees are pretty intermittent all right, few and far</li> </ul>
Page 14         Page 14         Page 14           If set out further in here that the much on what the possible impacts are on there. It says the riparian corridors of Whiskey Dick Canyon, and that: the riparian corridors of Whiskey Dick Canyon on the right cover, and various developed and undeveloped springs the riparian corridors of Whiskey Dick Mountain provide a constant water source. Mule deer and clk historically and they have. I can certainly attest to historically and they have. I can certainly attest to historically and they have. I can certainly attest to historically and they have. I can certainly attest to project development and operation on wintering big game and other wildlife. Fish and Wildlife has repressed some concern over the potential effects of wind historically and they have. I can certainly attest to project development and operation on wintering big game and other wildlife or all kinds. There will be a huge inpact on that wintering big game and other wildlife or all kinds. There will be a huge inpact on that wintering situation. One of the causes for this is unnecessary energy expenditures which his recess rough at the rise over to left say this other side inpact on that wintering big game around by virtue of human contact which will certain be impact on that wintering situation. Do no of the causes of this is unnecessary energy expenditures which his recess rough at the rise over to left say this other side inpact on that wintering big game inpact on that wintering big game around by virtue of human contact which will certain be around by virtue of human contact which will certain bis precereas by the regin the survivability of not onlyby i	Page 17         Page 17           Page 17         Page 17           project in a well drilling situation elk showed no shifts         1         JUDGE TOREM: Mr. Kruse, given the graphic in home range betweever, elk shifted core use area out of view from the area in home range betweer, elk shifted core use area out of view from the area in the part and post-drilling periods.         2         needs of your disension nonight. Invive you to please to an array of 400-foot that this so that we can areally have that for review and be accurate as to where you believe a shift in those area array. It also states, and 1 fluth this is the most important, due to the lack of knowledge regarding the beacturate as to where you believe a shift in those to the big game.         9           potential impacts of energy development on big game is important, due to the lack of knowledge regarding the believe.         1/UDGE TORBM. Next is Sharon Bacon I           potential impacts of energy development on big game it is plot to brieg and efficient to predict with certainty the efficts of the lack of the precise of the lack of the lack of the lack of the precise of the lack of t	decisions about the suitability of a project like this and its impact and the magnitude that will have on big game in this area.     16     given between what we're told and shown on these maps result of the magnitude that will have on big game in this area.       1     Y wersus actual construction?     17     wersus actual construction?       1     I would add further that this is the project     19     don't object to the wind towers and such. That doesn't bother me a bit. Some things I think need clarified. In perhaps two-thirds larger than the project site. The project site encompasse this area, but the visual impacts, and project site encompasse this area, but the visual impact.       20     bother me a bit. Some things I think that's very and the human impact on the wild file surrounding this area in my estimation is going to have a grave effect on at least 50 percent of this entire cosystem that stretches       5 (Pages I4 to 17)
Page 14         Page 14         Page 14           1         If's set out further in here that the         1         1         Frame 14         1           2         Threfter y boundary of the project is one half mule from         2         1         1         1           3         the Colockum elk calving area. I don't have to go into         2         1         1         1           4         much on what the possible impacts are on there. It is sys         1         1         1         1         1           4         much on what the possible impacts area and elk         1         1         1         1         1         1         1           4         moch on what the possible impacts area and elk         1 <t< td=""><td>Page 17         Page 17           1         Project in a well drilling situation elk showed no shifts         1         JUDGE TOREM: Mr. Kruse, given the graphic           7         2         in home range between the pre- and post-drilling periods;         2         needs of your discussion noight. Invive you polease           3         howveer, elk shifted core use areas out of view from the so that we can areage between the pre- and post-drilling periods;         2         needs of your discussion noight. 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That doesn't bethaps two-thirds larger than the project site. The 20       20       bother me a bit. Some things I think need clarified. In 21       Exhibit 5, Page 31, they talk about visual impacts, and 23       and the human impact on the wild file. surrounding this area: 23       in my estimation is going to have a grave effect on at 24       in my estimation is going to have a grave effect on at 24       in my estimation is going to have a grave effect on at 25       those trees are pretty intermittent all right, few and far 26       5 (Pages 14 to 17)

	C12-2 cont.		C12-3	C12-4	C13-1	C13-2	
Page 28 1 migrate, hunt, and recreation.	The 2004 Washington State Audubon Washington 3 State Bird Report says the item most responsible for 4 affecting bird species is a loss of habitat, and I find 5 that reasonable to ask this question. If agencies and 6 organizations would use air space encompassed by the win 7 farm projects instead of birdt habitat, would this loss of 8 bird habitat and the potential impacts to bird species be 9 more than presently stated in the DEIS?	<ol> <li>Under cumulative effects, the cumulative</li> <li>Isso of bird habitat at the three Kittias Valley Wind</li> <li>Farms is simple math, area times height. If you use this</li> <li>analogy with just the Wild Horse Wind Farm, which is</li> <li>analogy with just the Wild Horse Wind Farm, which is</li> <li>analogy with just the Wild Horse Wind Farm, which is</li> <li>approximately 8,000 acres, and the turbines are 400-foot</li> <li>tall, you've got 3.2 million acre feet of bird and bat</li> <li>habitat gone.</li> <li>Four take the Kittias Valley and the</li> <li>Desert Claim, it skyrockets to more than 6.8 million acre</li> <li>feet. Than take the worst-case construction scenario for</li> <li>the DES, eight months for three projects equal major bird</li> </ol>	<ol> <li>and bat habitat loss in a short period of time.</li> <li>22 Rittias Valley has a uniqueness from other</li> <li>23 seisting wind farms, and the proposed three wind farm</li> <li>24 projects along the north side of the valley from the west</li> <li>5 end to the east end should not be approached with haste.</li> </ol>	Page 29 1 With the increased emphasis on wind power in Washingtol 2 State and across the U.S. repressed organizations, 3 governments, and agencies that will be making the 4 decisions for sting wind fams in Krittas Valley need to 5 address this bird and bat habitat loss and the cumulative 6 effects of the project density issue before allowing 7 siting for the three projects. Thank you, sit. UDGE TOREM: Thank you, sit.	<ul> <li>COMMENTS OF STEVE VERHEY</li> <li>COMMENTS OF STEVE VERHEY</li> <li>That's a perfectly acceptable</li> <li>mispromuciation. Pin Steve Verhey. I'm an Ellensburg</li> <li>mispromuciation. Pin Steve Verhey. I'm an Ellensburg</li> <li>a resident, and, first of all, I would like to agree with my</li> <li>d difficient Harold Hochstetter about the starus of Beacon</li> <li>Road. That was a concern that I mentioned maybe it was in</li> <li>a minformal convestion at the last meeting.</li> </ul>	8 favor of wind power. Thin favor of the other two 9 projects that have been proposed. I might even be in favor of this one. My primary concern is the visual 10 favor fullis one. My primary concern is the visual 11 inpact. I happen to teach college biology, although I'm 2 not here in any professional capacity. But I take my 3 students, my introductory biology students in the first 4 week of class on a field trip up Beacon Road, and the reason we go there is because it's a place close to town	8 (Pages 26 to 29) 3, INC: 1-800-574-0414
Page 26 Process should not proceed further.	The visual impact of the turbines. The 410-foot high turbines in Section 3.10 are too high. They will impact the scenic view. Now I retired here for the scenic view of the valley. I do not want to see these 410-foot turbines with flashing lights all hours of the day. The people on I-90 and Vantage Highway will see these 410-foot turbines. These turbines should not be located anywhere near I-90. The wind farms are not	<ul> <li>0 scente. Do not give me tfs m the eyes of the beholder.</li> <li>1 They may be interesting at first, but just that soon it fades. They may be interesting at first, but just that soon it fades.</li> <li>1 and Palm Springs, so I know what fm talking about. I do 1 not want to see 410-foot turbines out in the country where 1 drive to relax.</li> <li>1 UDGE TOREM: About 30 seconds, Mr. Bates. MR. BATES: The only reason that you want to 1 destroy the scenery with turbines is the federal</li> <li>9 subsidies. Paying turbine grade will not help. I do not want to see turbines at all.</li> <li>9 want to see turbines at all.</li> </ul>	1     JUDJE LUKIM: Inank you, str.     2       2     Keith Johnson     2       3     COMMEVTS BY KEITH JOHNSON     2       4     Hi, J'm Keith Johnson. I live at 3050     2       5     Airport Road in Cle Elum. I'm representing myself and my     2	<ul> <li>rage 2/1</li> <li>wife, Karen.</li> <li>I've been corning to Kittitas County and Cle</li> <li>Elum and Eltensburg since 1941. We've been paying</li> <li>Kittitas County taxes from 1975 and permanent residents</li> <li>Seconficiently and financially justified without adequate</li> <li>Consideration to the birds' and hars' richts of habitist</li> </ul>	For this reason we are not in favor of the three proposed 11 wind power projects in Krittias County. 12 To make our case we will address two primary 12 issues of our concens of the DEIS. Section 3.5.1.1 says 13 issues of our concens of the DEIS. Section 3.5.1.1 says 14 primary habitat for birds is stated as grassland, shruh 14 steppe and riparian communities. Section 3.16.6.5, 15 steppe and riparian communities. Section 3.16.6.5, 15 of their close movimity. 14	Conclusion of the priority of the priority in any conclusion of the DEISs. I make this observation by first looking at 2010 of the DEISs. I make this observation by first looking at 2010 the definition of habitat. Habitat is a place where an animal or plant naturally lives or grows. Where do birds 223 and bats naturally live? On the ground, in the trees, and in the air. That's what differentiates birds and bats. They use air space to travel, 254 from other animals. They use air space to travel, 254 from other animals.	FLÝGARE & ASSOCIATES
	C11-5	C11-6		C12-1		C12-2 22	
14				2-1-5 2		C11-4	2)
Page 2 I want to make it clear that the prior	2 meetings there has not been another meeting on this Draft Environmental Impact Statement. Any prior meetings held by this body were on the Kittiats Valley Wind Power Project which covered a different area further to the west and apparently has a lot more other comments on it as you pointed out, sir. So just to disfinguish that to folks, if you missed a meeting, this is the first meeting on this Draft Environmental Impact Statement for the Wild Horse	<ul> <li>Project.</li> <li>Next is going to be Lee Bates. He will be Next is going to be Lee Bates. He will be followed by Keith Johnson, Steve Verhey. I remember I go fallowed by Keith Johnson, Steve Verhey. I remember I go Mrt. Bates.</li> <li>Mrt. Bates.<td><ol> <li>25 and Pages 1-72 and 73 shows the research for this DEIS is incomplete. Study in other studies gives a range of information but does not substitute for doing an actual two-year study at the turbine sites for the Wild Horse project. The species listed in Section 3.5 offers a</li> </ol></td><td>Page 2 reason for a thorough two-year study and future monitoring. On birds and bat kill mitigation, mitigation methods in Table 1-2, Pages 1-20, and Section 3.5 to reduce bird and bat kills is not satisfactory. The real problem is the 20 rpm blades cause bird kills. The estimated number of kills in Altamont Pass, California is 44,000 birds in 20 years. The only mitigation is not to build turbines period.</td><td><ul> <li>dated before even writing this Draft Environmental Impact Statement. We should halt this process until the two-year study is done. Section 3.5 shows a complete two-year study needs to be done. For passerine bird kills the estimated kills of birds and bats on Pages 3.5-24 and 25 and 1-72 and 73 is unacceptable for the minor amount of electricity generated by these bird and bat killing minime.</li> </ul></td><td>For fire, the fire mitigation on Pages 3.15 and 16 and 17 and Pages 1-78 are not good enough. Fires famed by the wind have occurred in the area in the past. I live downwind, and I'm concerned about fires in the area. A quick response plan by the Department of Natural Resources is needed. It goes without saying that a fire prevention and suppression plan is needed. Without this plan which should have been submitted in a DEIS this</td><td>7 (Pages 22 to 2: , INC: 1-800-574-0414</td></li></ul>	<ol> <li>25 and Pages 1-72 and 73 shows the research for this DEIS is incomplete. Study in other studies gives a range of information but does not substitute for doing an actual two-year study at the turbine sites for the Wild Horse project. The species listed in Section 3.5 offers a</li> </ol>	Page 2 reason for a thorough two-year study and future monitoring. On birds and bat kill mitigation, mitigation methods in Table 1-2, Pages 1-20, and Section 3.5 to reduce bird and bat kills is not satisfactory. The real problem is the 20 rpm blades cause bird kills. The estimated number of kills in Altamont Pass, California is 44,000 birds in 20 years. The only mitigation is not to build turbines period.	<ul> <li>dated before even writing this Draft Environmental Impact Statement. We should halt this process until the two-year study is done. Section 3.5 shows a complete two-year study needs to be done. For passerine bird kills the estimated kills of birds and bats on Pages 3.5-24 and 25 and 1-72 and 73 is unacceptable for the minor amount of electricity generated by these bird and bat killing minime.</li> </ul>	For fire, the fire mitigation on Pages 3.15 and 16 and 17 and Pages 1-78 are not good enough. Fires famed by the wind have occurred in the area in the past. I live downwind, and I'm concerned about fires in the area. A quick response plan by the Department of Natural Resources is needed. It goes without saying that a fire prevention and suppression plan is needed. Without this plan which should have been submitted in a DEIS this	7 (Pages 22 to 2: , INC: 1-800-574-0414
Page 22 comment. We also would concur with	antigation no significant unavoidable 2 be anticipated for birds and 3 auted to emphasize that. Thank you 4 nonments. 8 5 8 REM: Thank you, Ms. Ling. 6 ree speakers are Dean Duby, 8 wrYS BY DEAN DUBY 9 9	by, 751 Klocke Road, Ellensburg, As 10 ccess to some of these lands, you 11 in that these people that don't want 12 an what to do with their land that 12 arespass for seven years, and now it 14 i. I don't see that much of an impact 15 m. You know, it's not in my back yard, 16 ou put it somebody doesn't want it there. 17 ou put it somebody doesn't want it there. 17 ou put it somebody doesn't want it there. 19 out that cut fences, leave garbage, 19 ot that cut fences, leave garbage, 10 ot the road signs, so I have no	<ul> <li>sude of it.</li> <li>sude of it.</li> <li>the impact on the wildlife in that</li> <li>the impact on the wildlife in that</li> <li>22</li> <li>24 bety year</li> <li>25</li> <li>25 between the west side, and they come</li> <li>25 between the west side, and they come</li> </ul>	rage 23           ad of impact is that having on this area         1           R         2           POREM: Thank you, sir.         2           Booth.         3           Genth.         3           Genth.         3           MENTS BY NELSON BOOTH         5           Booth.         7111 Iowa, Ellensburg. My           booth.         1711 Iowa, Ellensburg. My           here for several years, and two specific. If's         7           there for several years, and there abeen         8	like me who is not real technically 10 ed me to continue supporting this 11 a citizzen who is not real technically 11 a part of the process 1 like to know 11 as well as the beneficial impacts of 14 e. And I appreciate having it put in 15 an all understand, whether were 10 for or subscience whether were 10 for or subscience and 10 like the 10 like 1	aust or systematics in markets of the first order of the previous meetings 19, and at some of the previous meetings 19, and doubt challenging the IBS 20, are not hearing now, and 1 think that's 21 are the statements are accurate. So 1 23 them, and 1 think that it shows that we 23 our work is leading to. Thanks. 24 to CREM: Thank you, Mr. Booth. 25	FLYGARE & ASSOCIATES,
One last o	the DEIS that with n adverse impacts will wildlife, and 1 just w for listening to my o UDGE TC The next th Nelson Booth, and I COMME	Dean Du far as cutting off a know, I find it iron anybody to tell like they're willing to t becomes their land from this wind far No matter where y You know, I've sa It's that two percent shoot livestock, sh	sympathy for that As far at area what impact you get these peo over here and lear	horses. What kin over a wind farm JUDGB Nelson COMD Nelson Nelson intar Ive beer just that Ive beer followine this a	clear to some body minded it has help project because as as a landowner or what the adverse, it these things will by these things will by	and the second s	

	10 (Pages 34 to 37)				9 (Pages 30 to 33)	1 SHTATYOOSA & HAASTYIH	
C16-2	these is that the project is lograd within the cascade migratory pathway for both passerine and reptor migration. The U.S. Fisth and Wildlife Service has a responsibility of enforcing both the Migratory Bird Act and the Endangerd Species Act. In their interim voluntary guidelines of July of 2003 which are designed to protect birds and bats especially, they state avoid locating turbines in known bird migration pathways. This has been ignored. A two-year study, including night studies as has been	P.O. Box 50346, Bellevue, Washington 98015. I oppose the 17 proposed Wild Horse Wind Power Project due to the location. I garger with what Robert Kruse has stated. A 19 different location for this project is needed. The 20 proposed project area lies within the largest remaining 21 block of shrub steppe lands in Washington. The private and of the proposed project, the private land of 23 Skookumchuck Canyon, and the surrounding state-owned 24 wildlife areas combined make this some of the most unique 25	C15-1 19 20 21 22 23 23 23 23 23 23 23 23	C14-2	accompanies are on most of my likes. Being able to look out at that vastness of open space without anything else but natural beauty is important, especially in raising our young offidren. The second thing I would like to address tonight is very specific, and it's Section 3.4, vegetation. I have some very, very big concerns about one in particular habitat type, the lithosol habitat which is found mostly on the south slope of Whiskey Dick. These	citations to the actual page numbers that look at those? 17 You cited to Section 3.10 and some subsections. Do you 18 happen to have any page numbers? 117 MR. VERHEY: Well, my wife wouldn't let me have the DEIS long enough. She had to prepare her 22 JUDGE TOREM: Fair enough. If you would submit those with page numbers in written comments, would appreciate it. You have about ten seconds left. 25	11 11 11 11 11 11 11 11 11 11 11 11 11
0 6	Page 37 JUDGE TOREM: Thank you, Mr. Duleba. COMMENTS FROM JANET NELSON My name is Janet Nelson, and I ivea t Lake Kachess, P.O. Box 203 Easton, Washington. 1 am representing myself here. I've been a resident of Lake Kachess, P.O. Box 203 Easton, Washington. 1 am representing myself here. I've been a resident of Lake Kachess for 18 years. The Wild Horse Wind Farm Project location is in a different area from the other two proposed projects, the Kittitas Valley and the Desert Claim, being primarily in sagebrush and habitat. Ironically while it represents an area of endangered habitat, it also represents a project that could protect that habitat, also represents a project that could protect that habitat, also represents a project that could protect that habitat, also represents a project that could protect in such as housing. There are still some of the same concerns to	Page 35 in your summary is that you admit that out of these habitat this particular habitat type is essentially weed free. It's an intact community. If's a type of community that cannot be replaced easily if ever, and this project will as I said destroy 61 acres or ten percent of the project is on this particular habitat. So what I would like to see addressed is to let the Natural Herizage Program finish their review of not only this type of habitat, the lithosol community, but also the bedge hog cactus and let them determine the status of bub eforey you undertake a project like this that could destroy perhage one of the best sites in the county for this particular platt and habitat. Thank you. JUDGE TOREM: Evin DULEBA	C142 C142 C142 C142 C142 C12 C12 C12 C12 C12 C12 C12 C12 C12 C1	C14-1	Page 33 JUDGE TOREM: It's going to be a lively evening at your home. MS. HORTON: Every evening is lively. I have some real specific concerns, and I have to say that the long view is also one of my concerns. I see the long view from a different place. Thise to his to po of Whiskey Dick, and I like to look out to the west, and I whiskey Dick, and I like to look out to the west, and I see Mount Adams, and I see Mount Rainier, and I do not see the Kittitas Valley. It is down. It's a Valley. I look over the valley, and I see an incredibly long view, and I can look to the north, and I see an anthropogenic interruption other than cell phone towers which seem to be popping up everywhere, which have trouble with too, and mat nowers which are popping up everywhere as well. I do think that view is psychologically very	Page 31         So I think Robert Kruse had a good         suggestion. Move the turbines to the southern and eastern         face of Whiskey Dick Mountain. Put them actually where         people can see them from here. I think if's important for         people to see where their energy comes from to realize         that it's not free, that it does have impacts. But the         that it's not free, that it does have impacts. But the         that it's not free square miles out into Grant County are         that it's not the viewpoints that I've taked about. They're long views.         They're beyond the ten-mile limit that is considered in         They're beyond the ten-mile limit that is considered in         They DEIS as anything to worry about.         But because of the intactness of this view from the         Colockum all the way to beyond Sentinal Gap this is an         important thing to think about.	1334 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
C15-2 C15-3	appropriate sufficient funds to purchase and protect the privately owned Whiskey Dick Mountain and Stookumchue Canyon area from any and all development. There is also great recreational activities that would be lost forever. If this project continues, these activities include outdoo photography, hiking, camping, wildlife viewing, hunting, listening to utter silence, and viewing miles of scenic landscape. If the proposed project is allowed, these recreational opportunities will forever be altered for you, me, and our children. I again urge the State of Washington to appropriate sufficient funds to purchase and protect the privately owned Whiskey Disk Mountain and Stookumchuck Canyon areas from any and all development. Thank you.	12         12       In reviewing the DELS is obvious that a       12         12       acres or ten percent of the site is of this particular       13         13       acres or ten percent of the site is of this particular       14         14       acres or ten percent of the site is of this particular       14         15       figured out how to do it yet, and 1 don't assume it will       16         16       figured out how to do it yet, and 1 don't assume it will       16         17       that the unique characteristics of this habitat are both       18         18       statistic to disturbance and difficult to replace. If       19         19       statistic to disturbance and difficult to replace. If       23         19       and then taken back to the site. That is not possible.       21         17       There are many places where people have stolen these       23         18       have survived being moved.       24         19       one of the other things that's interesting       25	22 11 11 11 11 11 11 11 11 11 11 11 11 1		<ul> <li>COMMEN'IS BY DENISE HORTON</li> <li>Yes. My name is Denise Horton, 1801 North</li> <li>B. Street, Ellensburg. 1 do have the DEIS in front of me, and my husband's specific citation. That would be Chapter</li> <li>3.10.2.2.</li> <li>J.UDGE TOREM: What was the page number that you're looking at?</li> <li>MS. HORTON: On Page 3.10-3.</li> <li>JUDGE TOREM: Thank you very much.</li> <li>MS. HORTON: I was hoping 1 could agree with everything he staid on record, but I can't. I'm going to disagree again.</li> </ul>	list any specific scenic resources in this area. DOT has 112 recognized some scenic resources in this area. There are 132 at least two viewpoints on 1-90, one eastbound and one westbound. The westbound viewpoint is specifically 115 oriented toward the view that were taking about looking 116 across the river up toward Whisey Dick Mountain, and from 117 that area to drive all the way from about Gorge on down 118 until you drop into the Columbia Gorge, you have a view of 192 an entire geographical province from the Colockum end 202 north to south side of 1-90 is the Yakima fring range with 223 right in the center of it is the project that we're 231 right in the center of it is the project that we're 231 right in the center of it is the project that we're 241 withing about.	133.33 1411 1511 1511 1511 1511 1511 1511 15
C15-2	proposed project area threatens this combined habitat. The proposed project area threatens this combined habitat visual and audible disturbances to wildlife during construction and during operations and the maintenance not only in the project area but also to wildlife in adjacent state owned wildlife areas. I urge the State of Washington to appropriate sufficient funds to purchases and protect the appropriate sufficient funds to purchase and protect the privately owned Whiskey Dick Mountain and Skookumchuc Caryon area from any and all development. There is also great recreational activities that would be lost forever.	left in the state. The plant association with this habitat there is a main component which is the hedge hog cactus. This is also in review in the Heritage Program of the state. I can say from experience that I think Roniztally this is one of the most incredible sites in the state for this particular plant and this particular habitat. In reviewing the DEIS it's obvious that a lot of this will be destroyed. They're saying up to 61 acres or ten percent of the site is of this particular habitat. This cannot be restored. At least no one has 15	C14-2 6 6 7 7 7 8 9 9 9 9 10 11 11 11 11 11 11 11 11 11 11 11 11		<ul> <li>on the far side of Whiskey Dick. Thank you, Mr. Verhey.</li> <li>DubGE TOREM: Thank you, Mr. Verhey.</li> <li>Dubus Janet Nelson, James Whitmire, and then Clay White is the last one we have signed up. And well take</li> <li>additional names if there are additional comments that come up.</li> <li>COMMENTS BY DENISE HORTON</li> <li>Yes. My name is Denise Horton, 1801 North B. Street, Ellenburg. 1 do have the DEIS in front of me, and my husband's specific citation. That would be Chapter</li> </ul>	the built environment and the presence of really long views. So I sort of grieve for the loss of that opportunity for myself and my students. But Tru more worried about the overall intractness of the project area. DEIS Section 3.10.2.1 and 2 talk about the level of intactness as a scenic 2 talk about the level of intactness as a scenic criterion, and they also mention that DNR and DFW do not 11 list any specific scenic resources in this area. DOT has t coordinced some scenic resources in this area. There are at least two viewpoints on 1-90, one eatbound and one westbound. The westbound viewpoint is specifically	13-3 15 15 15 15 15 15 15
C15-1 cont.	Page 36 habitat in Washington due to its combined size and for the fact that deer and elk can move from summer to winter range without any more more new lopment or obstructions The development of the private lands of the proposed project area threatens this combined habitat.	Page 34           are what they call lithic soils, very shallow soils, very         1           specific plant communities there. The Washington Natural         2           Heritage Program lists this particular habitat as possibly         3           endangered. If's in review. There are very few of them         4	0 m 4 m	C13-5	Page 32 MR. VERHEY: Well, you know, I'm done. I think it's possible to mitigate the project in terms of the visual characteristics. I am willing to give up my field tim acress but I'm really trubines of the fisticat of Whiskev Dick. Thank you.	Page 30         that we can get away from most of the built environment         and have access to really long views. And for a lot of         our students who come from subtrike around the Paget Sound         this is their very first experience with being away from         the built environment and the necessor of really long	13-2 1 2 2 2 5 5

Page 45 Page 44 developed was private groups bringing the actions to have There's also questions if it's to access the DNR land what Environmental Impact Statement is September 10. See the that there's various opinions as to what the County's role Thank you all very much for coming tonight and issues. The Commissioners have not indicated that they General's Office be the one pursuing this? The Attorney aware, Mr. Hurson, of any filing in court of a petition of date. The deadline for submitting comments on this Draft meetings. Thank you. Good night. We are off the record. Ц purpose is to access state land, then should the Attorney taken away from family, employment, and, of course, the see this as fiscal priority, and there is the option for the members of the public as a group to pursue that. In fact, most of the case law that I researched on it -- this matters declared as public roads, not the public entities General's Office as I understand it has thus far declined public process. A final reminder to everybody again, we will be holding one or more additional comment sessions regarding this project, the Wild Horse Project, during the frankly lacks unlimited resources to pursue all various JUDGE TOREM: Thank you. I think that will being a good audience to all the people that commented. JUDGE TOREM: I appreciate that. Are you there's actually this is an issue that various people have Summer Olympics to participate in this very important adjudicative hearings. That will be scheduled at a later should be and the prosecutor's office role should be. should DNR's role be? If it's the purpose of this, if was involved in maybe five years ago, so thank you. any sort to have prescriptive rights to that road made The Council does appreciate the time you've MR. HURSON: No, not as to that one, and was years ago when I did it -- most of the case law Frankly, what I'm talking about is things I Is there anyone else that needs to comment staff, either Allen or Irina, in the back if you need to the status as I understand it now is that our office get on the mailing list to get notice of any additional be helpful for the Council if there is such a petition So that's kind of where it is, and I know somebody is trying to say it's a public road, if its All right. Then that will conclude our on the Wild Horse Project tonight on the Draft raised regarding different areas in the county. filed that it be brought to their attention. to take that sort of an action too. Environmental Impact Statement? official or unofficial? bringing the action. evening. -0.04 5 6 11 11 11 11 9 10 Page 42 and continuously for more than 20 years use could not have Page 43 County Commissioners have taken a position that unless you been permissive. It became a public road by prescription Seattle vs. Smithers, 1905, 37.119, 79, Page 615. Thank JUDGE TOREM: I use to do that kind of work, definitive position tonight, would you please let us know if you can submit one to us before September 10 on this case law. There's a large dispute among it. The Board of MR. HURSON: Jim Hurson, Deputy Prosecutor. 36.75.3680, and they were switched around at the prosecutor's office have a position on this particular issue that's been going on locally regarding some various area brought an action. They got a decision, and then the Mr. Hurson, I know you didn't sign up. Does set of roads that you're prepared to speak to tonight? I possible public roadways, and there is a large number of County's position was we would abide by the decision of traveled by residents and the public at large adversely MR. HOCHSTETTER: You got me, Adam. public road that they do not want the County to take the individuals and groups can pursue that sort of course of acquired through prescriptive rights and meeting all the It just reads where a county road had been generally active position to have that to be declared a public road conduct themselves in their own action, and that's been MR. HURSON: As an official prosecutor's dedicated or an easement of record that indicates it's a through some sort of a quiet title action or an action in in the Liberty area in the county where a group in that hate to catch you at a loss for words. It's a first for Mr. Hurson, and if you're not prepared to give us a group want to bring an action to have a road declared the court if that action occurred. And that's basically JUDGE TOREM: I'm familiar with that. expressed to members of the public; that if they as a That actually occurred several decades ago regardless of the work there at the public expense. JUDGE TOREM: Come on up, please, I can't give a definitive position. This has been an can find say a plaque that shows the road has been That's the road vacation statute; is that right? The cases do indicate that private requirements, that they are free to do so. court to prescriptive right. the turn of the century. so we can look at it. office position, I particular issue. you. me. 3 2 - $\begin{smallmatrix} 6 & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & &$ 

12 (Pages 42 to 45)

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C17-1 cont. Page 40 11 (Pages 38 to 41) from one Councilmember, and it's a good one because I have Page 41 MR. HOCHSTETTER: The green dot map is a map people. People from the west side come out and dump their MR. HOCHSTETTER: I thought you'd never ask. Mr. Hochstetter, for a limited question can you come back that was put together by Boise Cascade, Fish and Wildlife, do not understand the concept that just because the owner four minutes. What I do want to know, I have a question out there is because of an absentee owner and the local would like to comment tonight that aren't already on the MR. HOCHSTETTER: It's used by all kinds of JUDGE TOREM: Right. Mr. Kruse is bringing garbage and do whatever they want to on this property. Natural Resources, and the State of Washington. It's an whatever recreational activities they care to do on this JUDGE TOREM: I'm not giving you another paragraph from Smithers vs. Seattle that I would like to does not live there that these people can come and do in that there's an area where up on top where the green So when you see those that you know you're within the absconded from somebody else, but it's donated. We'll sign-up sheet? Because we are done with the sign-up JUDGE TOREM: Is there anyone else that very, very helpful. It's used by all kinds of folks, and dot area is there's stakes put with a green dot on them. one to our attention. Is that one that can be submitted read. This answers that question about are we in fact respassers? It says this, and the statute is 36.75.070. -- the paper is lousy, but other than that, the scale is mark that as a written comment and append it to the I'm paid for restricted access out there. I JUDGE TOREM: The scale is quite large. as a comment itself and become part of the record, MR. HOCHSTETTER: I have this small record, so we can all see what a green dot map is. JUDGE TOREM: All right. It's been JUDGE TOREM: Thank you, sir. excellent map. It's two inches per mile. I hesitate then to do this, but, no answer. What is a green dot map? MR. WHITE: I decline. Mr. White is declining. I have notes this time, Adam. MR. KRUSE: Yes. property. Thank you. Clay White. FLYGARE & ASSOCIATES, INC. 1-800-574-0414 to the microphone. green dot map. sheets, folks. Mr. Kruse? - 9 6 4 59100 10 16 18 20 25 23 23 23 10 6 Ξ 22 23 25 Page 38 been well studied. The Washington Department of Fish and Page 39 Vantage Highway. I'm representing myself and my ex-wife, suggested for both migratory birds and bats were not done. farms that are being used to compare such as Stateline and Christine Whitmire. We both live and reside within a half habitats and regions that have not been well studied. The It's the Parke Creek Ranch. The reason we have problems Instead the use of data from other projects is being used to predict their use and mortality and a determination of approach in making recommendations and assessing the site if problems are found after construction. And I feel that they should be changed and strengthened. The applicable to each other. Each site proposes its own set The Washington Fish and Wildlife, Department of Fish and Wildlife Guidelines are not strong, and they service therefore suggests a precautionary approach to Guidelines of 2003, data on wildlife use and mortality for changing of the site, I should say modification of a wildlife studies should have been done up front for the mile east of Beacon Hill Road. That's very close to the private road by the prosecuting attorney here of Kittitas speak about are done on trespass. It's private property. Nine Mile, and this is one of those areas that have not require only a seasonal of study, and they do not allow potential impact on birds and bats. It could have been The green dot road is approximately two miles east of Beacon Hill. Beacon Hill has been determined to be a County. You go through the gate of Beacon Hill Road addition, the wind industry is rapidly expanding into Wildlife has not done studies of migratory birds and site selection and development and will employ this This is a different area from the other wind project. I originally was just going to come here and tell you folks I was in favor of it, but a couple things JUDGE TOREM: Thank you, Ms. Nelson. The site is surrounded basically by private property. To again quote the U.S. Fish and Wildlife of possibilities for negative effects on wildlife. In Hello, my name is James Whitmire, 28001 collected at one energy facility are not necessarily COMMENTS BY JAMES WHITMIRE One, Beacon Hill is not a green dot road. The recreational activities these people impact of wind energy development. dealt with at that time. Thank you. raptors in this general area have come up this evening. you're on private property. James Whitmire. impact made 0a 
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 C16-2 C17-1 C16-3 cont.

#### Responses to Public Comment #1 Submitted by Merle Clemmo; Kittitas Valley Resident

Note: The responses listed below are numbered to correspond to the numbers shown in the righthand margin of the preceding comment letter. (This applies to all comments in the public transcript.)

- C1-3. See response to Comment 32-3. See response to Comment 1-1. It is the Applicant's intent to allow homeowners access on Beacon Ridge Road to their private properties. C1-1.
- C1-2. Thank you, your comment has been noted.

Responses to Public Comment #2 Submitted by Harold Hochstetter (Exhibit in Comment Letter #3: Green Dot Map); Kittitas Valley Resident

C2-1. See response to Comment 1-1 regarding the status of Beacon Ridge Road

#### Responses to Public Comment #3 Submitted by Robert Kruse; Kittitas Valley Resident

Traffic on roads within the project area will be limited since the Applicant will control access to the site. The Applicant

C3-6.

will use an Adaptive Management Approach to controlled access, which is addressed in the Development Agreement

between Kittitas County and the Applicant.

- C3-1. Thank you, your comment has been noted.
- C3-2. Wildlife surveys conducted for the WHWPP are consistent with the WDFW Wind Power Guidelines.
- C3-3. See response to Comment 28-5.

- C3-4. See Section 3.5.4 of the DEIS, and revisions to this section presented in this FEIS, which specify that sensitive areas such as streams and riparian areas will be avoided and that springs in the project area will be protected.
- C3-5. As stated in Section 3.5.4 of the DEIS, the Applicant has agreed to limit construction activities during winter months in order to minimize impacts on wintering big game. Impacts to wintering big game from operation and maintenance are described in Section 3.5.2.2 of the DEIS.
- C3-7. Thank you, your comment has been noted.
- C3-8. See response to Comment 13-10.
- C3-9. Thank you, your comment has been noted. See response to Comment 18-1. In addition, due to FAA concerns, nine turbine locations originally proposed in the DEIS (affected strings A, B, and D) have been removed from the proposal. These nine locations were originally proposed along the upper ridgetops of Whiskey Dick Mountain.

#### Responses to Public Comment #4 Submitted by Sharon Bacon; Kittitas Valley Resident

- C4-1. After issuance of this Final EIS, EFSEC will make a recommendation to the governor to approve or deny the WHWPP. If the Governor of Washington State approves the sitting of the WHWPP, EFSEC will issue a Site Certification Agreement (SCA) that will specify the conditions of construction, operation, and decommissioning and will act as an "umbrella" authorization that incorporates the requirements of all state laws and regulations. The conditions specified by EFSEC, under SEPA substantive authority, are based on the environmental analysis and the Application under consideration.
- C4-2. The Draft EIS acknowledges that views from the north (SV 3) provide "a broad panorama of ridgetops covered with grass, shrubs, and some groupings of trees" (Section 3.10.2.5) and that "views from the north of the project site, where there is some forest cover, may be partially screened" (Section 3.10.2.4).
- C4-3. Refer to the revisions in Section 3.12.2.2 that describe how the Applicant will implement an adaptive management approach to allow access to and through the Project Area and recreational use of the site. The Applicant will also prepare a hunting plan for the Project Area in consultation with WDFW as described in Section 3.5.2.2.

#### Responses to Public Comment #5 Submitted by Desmond Knudson; Kittitas Valley Resident

C5-1. Thank you, your comment has been noted. Refer to Section 3.10 of the FEIS for analysis associated with Visual Resources and aesthetic impacts.

#### Responses to Public Comment #6 Submitted by Helen Wise; Kittitas Valley Resident

C6-1. Thank you, your comment has been noted.

#### Responses to Public Comment #7 Submitted by Bernice Best; Kittitas Valley Resident

C7-1. Thank you, your comment has been noted.

C7-2. Thank you, your comment has been noted.

#### Responses to Public Comment #8 Submitted by Sonja Ling; Renewable Northwest Project

C8-1. Thank you, your comment has been noted.

C8-3 Thank you, your comment has been noted.

C8-2. Thank you, your comment has been noted.

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#### Responses to Public Comment #9 Submitted by Dean Duby; Kittitas Valley Resident

C9-1. See response to Comment 1-1.

C9-2. As described in the Development Agreement between Kittitas County and the Applicant, and noted in Section 3.5.4 of the FEIS, the Applicant will work with the WDFW to develop a hunting plan for the Project Area, thus limiting access to the area.

#### Responses to Public Comment #10 Submitted by Nelson Booth; Kittitas Valley Resident

C10-1. Thank you, your comment has been noted.

#### Responses to Public Comment #11 Submitted by Lee Bates; Kittitas Valley Resident

- C11-1. The one-year study conducted for the WHWPP meets the requirements of the WDFW Wind Power Guidelines.
- C11-2. It is widely recognized that conditions at Altamont Pass are conducive to high numbers of bird kills, and comparable numbers have not been recorded at other wind power facilities. Based upon the information obtained during wildlife studies for the WHWPP, mortality comparable to that observed at Altamont Pass is not expected for the WHWPP. Postconstruction monitoring will be conducted to establish mortality levels for the WHWPP, as described in Section 3.5.4 of the DEIS.
- C11-3. See response to public Comment C11-1 above.
- C11-4. The Applicant has entered into a Fire Service Agreement with Fire District #2, which is appended to the Development Agreement between the Applicant and Kittitas County to provide expanded protection services for the project site.
- C11-5. Thank you, your comment has been noted.
- C11-6. Thank you, your comment has been noted.

#### Responses to Public Comment #12 Submitted by Keith Johnson; Kittitas Valley Resident

- C12-1. Mitigation measures have been proposed for the Wild Horse project in consultation with WDFW, and have been updated in the DEIS and are presented in Section 3.5.4 of this FEIS.
- may be able to safely utilize this air space during periods when Furthermore, the actual footprint of the turbine footings is only the analysis of potential impacts. While the wind turbines and other project features would occupy air space, the rotor-sweep calculating habitat impacts commonly accepted by WDFW or habitat loss occur as a result of loss of habitat that is available C12-2. The approach presented by the commentor is not a method of the DEIS. In general, impacts to species or populations from project components, which is described in Section 3.5.2.2 of the US Fish and Wildlife Service, and has not been used for would be an increased risk of mortality from collisions with area is not necessarily permanently "lost" as birds and bats in limited quantity, such as nesting habitat for species with the rotors are not turning, and may navigate this air space 9.4 acres, 0.01 percent of the 8600 acre Project area. The primary impact of the proposed project on birds and bats when the rotors are turning without colliding with them. specialized habitat needs.
- C12-3. See response to Comment 2-5.
- C12-4. Cumulative impacts on wildlife habitat have been evaluated in the DEIS. Mitigation measures have been proposed in consultation with WDFW. Since the DEIS was issued in August 2004, additional mitigation measures have been proposed by the Applicant in consultation with WDFW (WDFW 2005). See Sections 3.4.4 and 3.5.4 of this FEIS for mitigation measures for habitat and wildlife species, respectively.
# Responses to Public Comment #13 Submitted by Steve Verhey; Kittitas Valley Resident

- C13-1. See response to Comment 1-1 regarding the status of Beacon Ridge Road.
- C13-2. Thank you, your comment has been noted.
- C13-3. The EIS acknowledges that the proposed project falls within the cone of vision of westbound travelers along the I-90 route; however the potential visual impact of the proposed project is considered "low" since the viewpoint along I-90 on the east side of the Columbia River gorge is approximately 10 miles from the proposed project site.
- C13-4. See response to public Comment C13-3. Visual sensitivity in Grant County is considered to be "low" due to the distance of Grant County from the proposed project site. In addition, due to FAA concerns, nine turbine locations originally proposed along the uppermost ridges of Whiskey Dick Mountain are no longer proposed.
- C13-5. Thank you, your comment has been noted.

# Responses to Public Comment #14 Submitted by Denise Horton; Kittitas Valley Resident

- C14-1. See response to public Comment C13-5.
- C14-2. To clarify, a loss of approximately 61 acres of lithosolic habitat represents less than 1% of the overall project area. The 356 acres of temporary disturbance to vegetation represents an additional 4% of the total project area. It is 10% of the hedgehog cactus population that is estimated to be vulnerable to impacts associated with the project. The EIS acknowledges that lithic soils, once disturbed, are difficult to restore (Section 3.4.2.1). Both lithosol habitats and hedgehog cactus scattered throughout it were observed during surveys to be common in the general project vicinity. The EIS acknowledges that collection of hedgehog cactus for gardens has been cited as a reason for its decline. The EIS does not propose that individuals of hedgehog cactus be collected, transplanted, and later used to restore a site; nor that such a procedure would be a successful restoration effort.
- C14-3. It is anticipated that the Natural Heritage Program (WNHP) would conduct their studies in accordance with their own schedule and priorities, and as such, their research is beyond the scope of this EIS. WNHP's "Review" designation for hedgehog cactus carries no legal requirement for protection.

## Responses to Public Comment #15 Submitted by Erin Duleba; Bellevue, WA

- C15-3. Thank you, your comment has been noted. C15-1. Thank you, your comment has been noted. See responses to Comment 7-4, Comment 18-1, and Comment 21-3.
- C15-2. Thank you, your comment has been noted. Appropriation of funds by the State of Washington to purchase and protect lands is beyond the scope of this EIS.

# Responses to Public Comment #16 Submitted by Janet Nelson; Kittitas Valley Resident

- C16-1. Thank you, your comment has been noted.
- C16-2. The one-year study conducted for the WHWPP meets the requirements of the WDFW Wind Power Guidelines. Data on bird mortality is provided as an index to potential impacts from the WHWPP and post-construction monitoring studies will be conducted to determine the actual level of mortality in the project area.
- C16-3. Revision to the WDFW siting guidelines is beyond the scope of this EIS. As noted in Section 3.5.4.4 of the DEIS, the Applicant intends to convene a Technical Advisory Committee (TAC) to evaluate the mitigation and monitoring program and determine the need for further studies or mitigation measures. This adaptive management approach includes monitoring habitat (e.g. shrub-steppe) conditions for wildlife use.

# Responses to Public Comment #17 Submitted by James Whitmire; Kittitas Valley Resident

C17-1. See response to Comment 1-1 regarding the status of Beacon Ridge Road. Washington Department of Fish and Wildlife (WDFW) has indicated that Beacon Ridge Road is not under Green Dot Management (pers comm. Stream, 2005).

#### Chapter 5 REFERENCES

References included in this section include only those presented in the Draft EIS that require revisions and/or corrections, along with any new citations supporting text revisions presented in this FEIS. Where reference in this FEIS is made to a source already presented in the Draft EIS, that reference has not been repeated here.

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Chapter 6 Acronyms and Abbreviations

### Chapter 6 ACRONYMS AND ABBREVIATIONS

ACI	American Concrete Institute
ADT	Average Daily Traffic
ALE	Arid Lands Ecology Reserve
AMSL	Average Mean Sea Level
aMW	Average Megawatt
ANSI	American National Standards Institute
APE	Area of Potential Effect
ASC	Application for Site Certification
ASCE	American Society of Civil Engineers
AWEA	American Wind Energy Association
BA	Biological Assessment
BACT	Best Available Control Technology
BLM	Bureau of Land Management
BLS	Basic Life Support
BMPs	Best Management Practices
BOP	Balance of Plant
BPA	Bonneville Power Administration
C M.&St.P	Chicago Milwaukee and St. Paul Railroad
CFR	Code of Federal Regulations
C&D	construction and demolition
ССТ	Confederated Tribes of the Colville Reservation
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act

CDS	Community Development Services
CNEL	Community noise equivalent level
County	Kittitas County
CRP	Conservation Reserve Program
CSR	Construction Standards Institute
CSZ	Cascadia Subduction Zone
DBA	Decibels
DEIS	Draft Environmental Impact Statement
DCWPP	Desert Claim Wind Power Project
DEWI	German Wind Energy Institute
DNH	Determination of No Hazard
DNL	Day-night noise level
DNR	Washington State Department of Natural Resources
DNV	Det Norske Veritas
DOE	U.S. Department of Energy
Ecology	Washington State Department of Ecology
EDNA	environmental designation for noise abatement
EFSEC	Washington Energy Facility Site Evaluation Council
EIS	Environmental Impact Statement
EMF	Electromagnetic Field
EMS	Emergency Medical Services
EPC	Engineering, Procurement, and Construction
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Act
FHWA	Federal Highway Administration
GPR	ground-penetrating radar
НН	Hub height

HPA	Hydraulic Project Approval
IBA	important bird area
IFR	Instrument Flight Rules
IRP	Intergrated Resource Plans
IBC	International Building Code
LCP	Least Cost Plans
LOS	Level of Service
MW	megawatts
met	meteorological
mvm	million vehicle miles
MTCA	Model Toxics Control Act
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NRCS	Natural Resource Conservation Service
NOx	nitrogen oxides
NWPCC	Northwest Power and Conservation Council
NOI	Notice of Intent
NSR	Noise Sensitive Receiver
O&M	Operations and Maintenance
OAHP	Washington State Office of Archaeology and Historic Preservation
PGA	peak ground acceleration
PHS	Priority Habitat and Species
POD	point of delivery
POI	point of intersection
PPA	Power Purchase Agreement
PSE	Puget Sound Energy
PT Anchors	Post Tension Anchors
QA/QC	Quality Assurance/Quality Control

RCW	Revised Code of Washington
RD	rotor diameter
REPP	Renewable Energy Policy Project
RFPs	Requests for Proposals
RPMs	revolutions per minute
RSA	rotor-swept area
RTU	remote terminal unit
SARA	Superfund Amendments and Reauthorization Act
SCA	Site Certification Agreement
SCADA	Supervisory control and Data Acquisition
SEPA	[Washington] State Environmental Policy Act
SIS	Transmission System Impact Studies
SPCC	Spill Prevention Control and Countermeasure
SV	Simulation Viewpoint
SWMM-EW	Department of Ecology's Stormwater Management Manual
SWPPP	Stormwater Pollution and Prevention Plan
TAC	Technical Advisory Committee
TCPs	traditional cultural properties
TESC	Temporary Erosion and Sedimentation Control
UBC	Uniform Building Code
UG cable	underground cable
UPS	Uninterruptible Power Supply
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VAWT	vertical axis wind turbine
VFR	Visual Flight Rules

WAC	Washington Administrative Code
WDFW	Washington State Department of Fish and Wildlife
WDGER	Washington Division of Geology and Earth Resources
WECC	Western Electricity Coordinating Council
WECO Study	Wind Energy in Cold Climates Study
WEST	Western Ecosystems Technology, Inc.
WHWPP	Wild Horse Wind Power Project
WNHP	Washington Natural Heritage Program
WRPP	Wind Ridge Power Partners
WSDOT	Washington State Department of Transportation
WTGs	Wind Turbine Generators
WUTC	Washington Utilities and Transportation Commission
YTC	Yakima Training Center

### Chapter 7 Distribution List

### Chapter 7 DISTRIBUTION LIST

#### 7.1 Federal Agencies

Bambrick, Dale	U.S. National Marine Fisheries Service
Boynton, Jim	U.S. Forest Service, Wenatchee National Forest
Cantwell, Maria	U.S. Senate
Iani, L. John	U.S. EPA Region 10
Kurz, Gregg	U.S. Fish and Wildlife Service
Miller, Mark	U.S. Fish and Wildlife Service
Murray, Patty	U.S. Senate
Rogalski, Floyd	U.S. Forest Service, Cle Elum Ranger District
Wittpen, Nancy	Bonneville Power Administration

#### 7.2 Tribal Government

Abrahamson, Randy	Spokane Tribe of Indians – Tribal Historic Preservation Officer
Meninick, Johnson	Yakama Indian nation – Cultural Resources
Pakootas, Joseph A. Hon	Confederated Tribes of the Colville Reservation – Tribal Chair
Palmer, Caroll	Yakama Indian Nation - Natural Resources
Pleasants, Camille	Confederated Tribes of the Colville Reservation - History/Archaeology Program
Seelatsee, Lenora	Wanapum Tribe

Seyler, Warren Hon.	Spokane Tribal Business Council – Chair
Shannon, Donald	Confederated Tribes of the Colville Reservation - History/Archaeology Program
Sockzehigh, Ross Hon.	Yakama Indian Nation – Tribal Chair

#### 7.3 State Agencies

Burkell, Tom	Gingko State Park
Clausing, Ted	Washington Department of Fish and Wildlife
Clear, Gwen	Washington State Department of Ecology, Central Regional Office
Dean, Brigid	Washington State Parks and Recreation Commission
External SEPA Coordinator	Washington Department of Natural Resources
Hinkle, Bill, Rep.	Washington State House of Representatives
Holmquist, Janea Rep.	Washington State House of Representatives
Holmstrom, Rick	Washington State Department of Transportation, South Central Region
Johnston, Milt	Washington Department of Natural Resources
Kramer, Stephenie	Washington Office of Archaeology and Historic Preservation
Lane, John	Attorney General's Office, Counsel for the Environment
Lindley, Deborah	Washington Department of Natural Resources
Mulliken, Joyce Sen.	Washington State Senate
Powers, Boyd	Washington Department of Natural Resources
Pratt, Cynthia	Washington Department of Fish and Wildlife
Renfrow, Brent	Washington Department of Fish and Wildlife
Riley, Peter	Washington Department of Community, Trade and Economic Development
Ritchie, Barbara	Washington State Department of Ecology, SEPA Unit

Sandison, Derek	Washington State Department of Ecology, Central Regional Office
Swope Moody, Sandy	Washington Department of Natural Resources
Tayor, Jeff	Washington Department of Fish and Wildlife
Usibelli, Tony	Washington Department of Community, Trade and Economic Development
Vigue, Lauri	Washington Department of Fish and Wildlife
White, Bill	Washington State Department of Health, Environmental Health Programs

#### 7.4 EFSEC Council Members

Adelsman, Hedia	Washington Department of Ecology
Fryhling, Dick	Washington Department of Community, Trade, and Economic Development
Ifie, Tony	Washington Department of Natural Resources
Johnson, Patti	Kittitas County
Luce, Jim	Chair
Smith Towne, Chris	Washington Department of Fish and Wildlife
Sweeney, Tim	Washington Utilities and Transportation Commission

#### 7.5 Local Government

Baker, Stan	Kittitas County Fire District No.2, Chief
Barkley, Ted	City of Ellensburg
Bennett, Paul	Kittitas County Public Works Department
Bowen, David	Kittitas County Board of Commissioners
Cousart, Robert	Mayor, City of Kittitas
Crankovich, Alan	Kittitas County Board of Commissioners
Davis, Todd	Kittitas County Noxious Weed Control Board
Gaidos, Darold	Kittitas County Fire Marshall

Hurson, Jim	Kittitas County Prosecutors Office
Huston, Perry	Kittitas County Board of Commissioners
Kjelland, Mark	Kittitas County Public Utilities District
Lael, Anna	Kittitas County Conservation District
Piercy, Darryl	Kittitas County Development Services

#### 7.6 Libraries and Educational Institutions

Central Washington University – J.E. Brooks Library Cle Elum Public Library Ellensburg Public Library Kittitas Public Library Washington State Library, Joel M. Pritchard Branch

#### 7.7 Businesses, Individuals and Organizations

Bacon, Sharon and Harry	
Bain, Don	Aeropwer Services Inc.
Bastasch, Mark	CH2M Hill
Bates, Dwight Lee	
Best, Bernice	
Bevis, Kenneth	
Booth, Nelson	
Bricklin, David	Bricklin Newman Dold LLP
Carter, Nina	Audubon of Washington
Clemmo, Merle and Sharon	
Crane, David	
Daul, Greg	GD & Associates
Duby, Dean	

Duleba, Erin	
Essman, W.R.	Kitttias County Field and Stream
Diaz, Jennifer	Zilkha Renewable Energy
Erickson, Wally	WEST Inc.
Forster, David	
Freeborn, Phelps	Washington Native Plant Society, Central WA
Gagliano, Troy	Renewable Northwest Project
Garrett, Ed	Residents Opposed to Kittitas Turbines
Hillis, Judith	Jones & Stokes
Hochstatter, Harold	
Horton, Denise	
Huckabay, James	
Johnson, Keith	
Johnson, Keith	Kittitas Audubon Society
Kahn, Robert	Robert D. Kahn & Company
Knudson, Desmond	DPK Consultants
Kruse, Robert	Friends of Wildlife and Wind Power
Lasha, Paul	
Lindstrom, Gloria and Hal	
Luebbe, Lorna	Puget Sound Energy
Mahre, Lynne	
Marsh, Michael	Washington Native Plant Society
Mattson, Larry	Washington State Department of Transportation, South Central Region
McGaffey, Karen	Perkins Coie LLP
McMahan, Tim	Stoel Rives, LLP
Nelson, Janet	Kittitas Audubon Society

Pappalardo, Mike	CH2M Hill
Peeples, Darrel	Counsel for Wind Ridge Power Partners LLC
Pennington, Patty	Zilkha Renewable Energy
Priestley, Tom	CH2M Hill
	Residents Opposed to Kittitas Turbines
Roberts, Don	
Robertson, Mike	Phoenix Economic Development Group
Rogers, Beth	
Rybock, James T.	Geo Engineers, Inc.
Strand, Debbie	Phoenix Economic Development Group
Sutherland, Diana	Adolphson Associates
Taylor, Chris	Zilkha Renewable Energy
Trautman, Pam	Lithic Analysts
Verhey, Steven	
Whitmire, James	
Wise, Helen	
Williams, Scott	Puget Sound Energy
	Zilkha Renewable Energy

## Chapter 8 List of Preparers

### Chapter 8 LIST OF PREPARERS

The lead agency for the Wild Horse Wind Power Project Draft EIS and abbreviated FEIS is EFSEC. The Draft EIS was written with the technical assistance of Jones & Stokes, with HDR Engineering, Inc. and GeoEngineers, Inc. contributing. Individuals responsible for preparing the DEIS and updating the FEIS are listed below. All authors contributed to the cumulative impacts section of the EIS for their respective resources.

**Jan Aarts**—Project Director, Jones & Stokes. Responsible for preparation of offsite alternatives analysis. Twenty years of experience in project management, NEPA/SEPA compliance, and environmental planning. Education: B.A. and M.A Urban Planning.

**Jeannie Brush**—Planner, Jones & Stokes. Responsible for preparation of the land use, population, and public services sections of the EIS. Five years of experience in environmental planning and policy analysis with an emphasis on land use, and historic architecture. Education: B.A. History, M.S. Historic Preservation.

**Jason Cooper**—Cultural Resource Specialist, Jones & Stokes. Responsible for preparation of the cultural resources section of EIS. Fourteen years of experience in archaeology and cultural resource inventory and permitting. Education: B.A. History; M.A. Anthropology/Archaeology.

**Brian Higgins**—Restoration Specialist, Jones & Stokes. Responsible for preparation of the visual section of the EIS. Four years experience in restoration with expertise in landscape architecture, open space and recreational planning, and watershed management. Education: B.S. Sociology, M.A. Landscape Architecture.

**Judith Hillis**—Botanist/Ecologist, Jones & Stokes. Responsible for EIS management, and preparation of the vegetation and wetlands, off-site alternatives analysis, and summary sections of the EIS. Five years of experience in EIS documentation and NEPA/SEPA compliance with expertise in plant and wetland ecology. Education: B.S. Botany; B.S. Ecology, Evolution, and Conservation Biology.

**Jonathan Ives**—Project Director, Jones & Stokes. Responsible for preparation of the off-site alternatives analysis and the project description and alternatives, and cumulative impact sections of the EIS. Thirty years of experience in the management of environmental studies for public works infrastructure projects, energy and wastewater projects, and NEPA/SEPA documents. Education: B.A. Wildlife Management; M.S. Wildlife Biology.

**Kai Ling Kuo**—Transportation Planner, Jones & Stokes. Assisted with preparation of traffic section in the EIS. Three years of experience in transportation planning, traffic modeling and

analysis, and signal design and analysis. Education: B.S. Civil Engineering; M.S. Civil and Environmental Engineering.

**Ron Loewen**—Traffic Engineer, Jones & Stokes. Responsible for preparation of the traffic section of the EIS. Thirty-five years of experience in project management, design of road projects, traffic engineering, and capital facilities plans. Education: B.S. Civil Engineering.

**Michael McNabb**—Fisheries Biologist, Jones & Stokes. Responsible for preparation of the water resources, fisheries, and energy sections of EIS. Ten years of experience in salmonid ecology and water quality, stream characterization, and construction monitoring. Education: B.S. Fisheries.

**Herbert "Bert" Pschunder**—Senior Geotechnical Engineer, GeoEngineers, Inc. Responsible for preparation of the earth resources and groundwater sections of the EIS. Twenty-five years experience in geotechnical engineering. Education: B.S.E. Geological Engineering, M.E. Engineering.

**Ann Rennick** – Planner, Jones & Stokes. Assisted preparation of the land use, population, and public services sections of the FEIS. Nine years experience in urban and regional planning. Education: B.S. Applied Behavioral Sciences, M.A. Urban Planning

**Mike Stimac**—Manager, Licensing and Environmental Services, HDR Engineering, Inc. Responsible for preparation of the health and safety section of EIS. More than 30 years of experience in energy facility siting and licensing, environmental program design, NEPA/SEPA EIS preparation, and regulatory compliance. Education: B.S. Electrical Engineering; M.S. Fisheries. Licensed Nuclear Engineer.

**Heidi Tate**—Wildlife Biologist, Jones & Stokes. Responsible for preparation of the wildlife section of the EIS and assisted with preparation of the off-site alternatives sections of the EIS. Twelve years of experience in NEPA/SEPA wildlife analysis, threatened and endangered species, and habitat evaluation. Education: B.S. Wildlife Biology.

**James Wilder**—Air/Noise Specialist, Jones & Stokes. Responsible for preparation of air quality and noise sections of the EIS. Twenty-five years of experience in air quality and noise control engineering, facility design, preconstruction permitting, environmental impact assessments, and operational compliance monitoring. Education: B.S. Civil Engineering; M.S. Air Resources Engineering.

### **Appendix A:**

Development Agreement Between Kittitas County, Washington and Wind Ridge Power Partners, LLC (Does not include its appendices)

#### **DEVELOPMENT AGREEMENT**

#### Between

#### **KITTITAS COUNTY, WASHINGTON**

#### and

#### WIND RIDGE POWER PARTNERS, LLC

Wild Horse Development Agreement March 4, 2005

#### DEVELOPMENT AGREEMENT WILD HORSE WIND POWER PROJECT

THIS DEVELOPMENT AGREEMENT ("Agreement") is entered into and effective this 4th day of March, 2005 by and between Kittitas County, a Washington municipal corporation ("County") and Wind Ridge Power Partners, LLC, a Delaware limited liability company authorized to do business in the state of Washington ("Applicant"). This Agreement is made pursuant to Revised Code of Washington ("RCW") 36.70B.170, Kittitas County Code ("KCC") Chapter 15A.11, and KCC Chapter 17.61A, and relates to the Wild Horse Wind Power Project.

#### RECITALS

A. RCW Chapter 36.70B (the "Development Agreement Statute"), and Chapter 15A.11 Kittitas County Code ("Code") authorize the County to enter into an agreement regarding development of real property located within the County's jurisdiction with any person having an ownership interest in or control of such real property. Chapter 17.16A requires execution of a development agreement as part of the approval process for wind farm projects.

B. The Applicant desires and intends to develop a wind farm in eastern Kittitas County known as the Wild Horse Wind Power Project (the "Project") located along the ridge tops of Whiskey Dick Mountain, approximately 2 miles north of the Vantage Highway and 11 miles east of the City of Kittitas. A full Project description is contained in Exhibit A.

Wild Horse Development Agreement March 4, 2005 3

deemed complete by the County on June 26, 2004. On March 9, 2004, the Applicant filed an application for site certification with Washington State Energy Facility Site Evaluation Council ("EFSEC"). As the State Environmental Policy Act ("SEPA") Lead Agency, EFSEC issued a Draft Environmental Impact Statement ("DEIS") for the Project in August 2004. Applicant agrees to abide by the Proposed SEPA Mitigation Measures contained in Exhibit D as a minimum as well as the Development Standards set forth in this Agreement to mitigate impacts to the environment including but not limited to: Earth Resources, Air Quality, Water Resources, Vegetation, Wildlife, Fisheries, Energy and Natural Resources, Noise, Land Use, Visual Resources, Population, Housing, Economics, Public Services, Utilities, Recreation, Cultural Resources, Traffic and Transportation, and Health and Safety.

H. This Agreement specifies the commitments made by the County and the Applicant for the purpose of ensuring that the Project is consistent with the Kittitas County Comprehensive Plan and Zoning Code, and to ensure that all final permit approvals will be in the best interests of the citizens of Kittitas County, and will reflect the land use planning considerations of Kittitas County.

I. This Agreement establishes that the proposed Project with the Development Standards and proposed SEPA mitigation measures contained herein is consistent with the County's Comprehensive Plan, zoning and development regulations, and is compatible with surrounding land uses.

J. This Agreement was the subject of a 30-day comment period and a hearing before the Kittitas County Planning Commission as required by KCC Title 15A.

K. This Agreement does not represent a final action on the proposal. Construction and operation will be authorized only upon approval of an EFSEC site certificate for the Project signed by the Governor of Washington.

NOW, THEREFORE, in consideration of the recitals (which are incorporated into the Agreement by this reference) and for other good and valuable consideration, the and the use of any gender shall be applicable to all genders whenever the sense requires. The words "shall" and "will" are mandatory and the word "may" is permissive. References to governmental entities (whether persons or entities) refer to those entities or their successors in authority. If specific provisions of law referred to herein are renumbered, then the reference shall be read to refer to the renumbered provision. References to laws, ordinances or regulations shall be interpreted broadly to cover government actions, however nominated, and include laws, ordinances and regulations now in force or hereinafter enacted or amended.

- 2.1. <u>Agreement</u>. "Agreement" means this *Development Agreement between Kittitas County, Washington and Wind Ridge Power Partners, LLC*, approved by the Board of County Commissioners.
- 2.2. <u>Applicant.</u> "Applicant" means Wind Ridge Power Partners, LLC or any of its Transferee(s) as provided in Section 10.1 below.

2.3. <u>BOCC</u>. "BOCC" means the Board of County Commissioners of Kittitas County, Washington.

2.4. <u>County</u>. "County" means Kittitas County, Washington.

2.5. <u>Construction Buildout Period.</u> "Construction Buildout Period" has the meaning set forth in Section 5.16 of this Agreement.

2.6. <u>Development Standards</u>. "Development Standards" means the requirements stated in Section 5.

2.7. <u>Director</u>. "Director" means the Director of the County Department of Community Development Services.

2.8. <u>Draft EIS</u>. "Draft EIS" means the Draft Environmental Impact Statement issued by EFSEC in August, 2004 for the Project.

2.9. Effective Date. "Effective Date has the meaning set forth in Section 1.1 of this Agreement.

Wild Horse Development Agreement March 4, 2005 consistent with the Development Standards contained herein and the proposed SEPA mitigation measures contained in Exhibit D.

2.17. <u>SEPA</u>. "SEPA" means State Environmental Policy Act.

2.18. <u>Substantial Completion</u>. "Substantial Completion" means the Project is generating and delivering energy to the electric power grid.

2.19. <u>Technical Advisory Committee ("TAC").</u> "TAC" means a committee composed of representatives from Washington Department of Fish and Wildlife, EFSEC, Kittitas County, local interest groups, project landowners and Applicant, which Applicant shall convene to evaluate the mitigation and monitoring program and determine the need for further studies or mitigation measures for the Project.

2.20. <u>Transferee</u>. A party to which the Project is transferred or assigned in part or in whole under the provisions contained in Section 10.1 of this Agreement.

2.21. <u>Turbine</u>. "Turbine" means the entire structure that produces electricity. Each Turbine consists of a tower structure anchored to a foundation, a three bladed rotor, and a nacelle (the housing for the generator and other machinery), all of which are described in further detail in Exhibit A.

#### 3. Project Description

The Wild Horse Wind Power Project ("Project") generally consists of up to 158 Turbines, each with a nameplate capacity up to 3 Megawatts (MW), for a total project nameplate capacity of up to 312 MW, and other associated and necessary Project Facilities as described in Exhibit A, modified as necessary to comply with and to be consistent with the Development Standards contained herein and the proposed SEPA DEIS mitigation measures in Exhibit D.

5.5. <u>FAA Review.</u> Exhibit H contains letters confirming that the FAA Determination of Non Hazard certificates released for the Project in August, 2004 confirm that the Project does not interfere with any of the current IFR flight approaches for the Bowers Field Airport which were approved on June 10, 2004. Exhibit H also contains a sample determination of non hazard certificate for one of the proposed Project turbine locations. Due to the bulk of the additional certificates, Applicant shall provide Determination of Non Hazard certificates issued by the Federal Aviation Administration (FAA) and related information to the Director, which demonstrates that the Project will not impact approved flight approaches, flight communications, or operations at the Bowers Field Airport in Ellensburg prior to construction.

5.6. <u>Emergency Plans</u>. Emergency plans shall be prepared and submitted to the County prior to construction as set forth in Exhibit D under "Health and Safety" in Section 3.15.4.

5.7. <u>Project Access Roads.</u> The main Project access road entrance from Vantage Highway shall be aligned so as to be located on the north side of Vantage Highway directly across from the County's Landfill Site existing driveway and shall be constructed to commercial access standards as contained in the WSDOT Design Manual. Project site roads shall be designed in accordance with Table 12-1 of the Kittitas County Road Standards for Private Roads with Low Density Traffic. In areas where Project roads exceed a 12% grade, the roads shall be designed to ensure that fire vehicles can gain access to the site as necessary to provide emergency services. If variances from the above referenced standards are required, they shall be reviewed for approval by the Public Works Director and the Fire Marshall prior to construction, which approval shall not be unreasonably withheld. In the event of denial of a variance request, Applicant may seek review and approval by the Road Variance Committee pursuant to Chapter 12.01.130 of the County Road Standards.

5.8. <u>Road Degradation Monitoring and Mitigation</u>. County and City of Kittitas highway and shoulder pavement shall be video monitored before and after construction of the Project. If construction of the Project results in the degradation of the existing

through the site, as long it does not interfere with or introduce adverse impacts on Project operations or personnel. At a minimum, Project site access during operation shall be allowed as follows:

- Property owners who wish to access their property from Project Access Road will be allowed to do so as necessary under a formal access license and a key to a gated entrance
- Officials of the Washington State Departments of Natural Resources and Fish Wildlife are currently allowed to access the site and will continue to be allowed access by key.
- The Applicant will allow others to access the Project site on a case-by-case basis.

Active recreation activities such as camping, off-road vehicle usage will not be allowed on the Project site in order to avoid and minimize potential impacts to habitat and wildlife from such activities. Access to the site for hunting activities will be allowed in accordance with the Hunting Plan below.

5.15. <u>Hunting Plan for Project Area.</u> In order to minimize impacts on recreation and potential impacts on neighboring property owners from big game damage resulting from the proposed project, the Applicant will prepare a hunting plan for the Project area in consultation with WDFW and the Technical Advisory Committee (TAC). At a minimum, said plan will include the following:

- In order to minimize potential conflicts and risks to both workers and hunters, no hunting will be allowed on the property during construction
- After construction is complete, controlled hunting will be allowed. Possible measures to control hunting may include, without limitation: access control, limiting hunting to those individuals who have completed the WDFW Advanced Hunter Education program, and/or hunting by permit.
- The Applicant will take measures to inform the hunting public of the changes in hunting practices on the site. Said measures may include a combination of advertisement in hunting periodicals and WDFW publications, signage, and outreach through sporting organizations.
- 5.16 <u>Construction Buildout Period</u>. Applicant shall be allowed to construct the Project such that Substantial Completion is achieved no later than 5 years from the date that all permits necessary to construct the Project are obtained, but in

earlier of either: (a) the date of termination of this Agreement, in accordance with Section 1.2 above; or (b) at the written request of the County, the Applicant demonstrates that the energy generated by the Project for the past 12 month period is less than 10% of the Historical Energy Production defined below and no exemptions apply. The Applicant will be exempted from the decommissioning requirement if the twelve (12) month reduced energy output period described above is the result of (i) a repair, restoration or improvement to an integral part of the Project that affects the generation of electricity that is being diligently pursued by the Applicant, or (ii) a Force Majeure Event, including, but not limited to, an extended low wind period. For these purposes, the Historical Energy Production shall be the sum of all energy generated by the Project divided by the number of months since the beginning of commercial operation multiplied by twelve, starting twelve months after commercial operation commences.

The twelve (12) month period to perform the decommissioning may be extended if there is a delay caused by sources beyond the control of the Applicant including, but not limited to inclement weather conditions, equipment failure, wildlife considerations or the availability of cranes or equipment to support decommissioning. The County shall be granted reasonable access to the Project site during decommissioning of the Project for purposes of inspecting any decommissioning work or to perform decommissioning County personnel on the Project site shall observe all worker safety evaluations. requirements enforced and observed by the Applicant and its contractors. If requested by the County, Applicant will provide monthly status reports until this decommissioning work Decommissioning the Project shall involve removal of the Turbines; is completed. removal of foundations to a depth of 3 feet below grade; re-grading the areas around the Project Facilities; removal of Project access roads and overhead cables (except for any roads and/or power cables that Project Area landowners wish to retain); and final reseeding of disturbed lands (all of which shall comprise "Decommissioning"). Decommissioning shall occur in the order of removing the Turbines as the first priority and performing the remaining elements immediately thereafter.

6.3 <u>Decommissioning Funding and Surety.</u> Except as provided in Section 6.4 below, Applicant or any Transferee, as the case may be, shall post funds sufficient for
obligations through a letter of credit issued by a bank whose long-term debt is rated "A" or better by a Rating Service. The letter of credit shall be in an amount equal to the Decommissioning Funds. The letter of credit shall be for a term of 1 year, shall be continuously renewed, extended, or replaced so that it remains in effect for the remaining term of this Development Agreement or until the secured decommissioning obligations are satisfied, whichever occurs sooner. The State of Washington, by and through EFSEC or its successor or designees shall be authorized under the letter of credit to make one or more sight drawings thereon upon certification to the issuing bank of the Applicant's or Transferee's (as the case may be) failure to perform its decommissioning obligations when due.

6.4. <u>Financial Security and Utility Project Ownership</u>. Applicant or any Transferee, as the case may be, shall obtain and provide proof of financial security for the performance of its Decommissioning obligations arising hereunder unless if, at the time the duty to provide Decommissioning security arises under Section 6.3 above, the owner of the Project is an entity, such as Puget Sound Energy, which is an investor-owned electric utility regulated by the FERC and the Washington Utilities and Transportation Commission (WUTC), in which case the obligation to fully decommission the Project when due shall be a general obligation of the investor-owned electric utility owner.

### 7. Consistency with Local Regulations.

The County hereby acknowledges that if the Project is developed consistent with this Agreement and any Amendments thereto, the public health, safety, and welfare will be adequately protected within the bounds of the law; the Project will be considered essential and desirable to the public convenience; the Project will not be detrimental or injurious to the public health, peace, or safety, or to the character of the surrounding neighborhood; the Project will not be unreasonably detrimental to the economic welfare of the County; and the Project will not create excessive public cost for public facilities and services.

The Turbines are located on adjacent and contiguous tax parcels which are zoned as Forest and Range, and Commercial Agriculture. All Turbines are located more than

### 9. Termination.

Applicant shall have the option, in its sole discretion, to terminate this Agreement prior to commencing any construction including any site grading and excavation work for installation of the Project or its support facilities. If it elects to terminate this Agreement, Applicant shall submit a Notice to this effect to the County and must concurrently terminate any EFSEC site certification related to the project in order for termination of this development agreement to become effective.

### 10. General Provisions.

10.1 <u>Assignment.</u> The County and Applicant acknowledge that development of the Project likely will involve the sale and/or assignment of all or substantially all of the assets or all or substantially all of the membership interests to third parties. In addition the County and Applicant acknowledge that Applicant and its permitted Transferees may obtain financing for all or a portion of the costs of the Project. Applicant shall have the right to assign or transfer all or any portion of its interest in the Project at any time, including rights, obligations and responsibilities arising hereunder, including financial assurance for decommissioning as set forth in Section 6 above, to third parties acquiring all or substantially all the assets of the Project or all or substantially all the membership interests in Applicant (each such third party, a "Transferee"), provided such assignments or transfers are made in accordance with the following:

### 10.1.1 Assignments or Transfers Requiring the Consent of the County.

Applicant may at any time enter into a written agreement with a Transferee other than those described in Sections 10.1.2 and 10.1.3 to transfer all or substantially all the assets of the Project or all or substantially all the membership interests in Applicant, including rights, obligations and responsibilities arising hereunder (such agreement, a

Notwithstanding anything herein to the contrary, Applicant or any Transferee shall be permitted to collaterally assign its interest in the Project to a lender providing financing for the Project without the consent of the County, provided that Applicant or any Transferee delivers written notice to the County at least thirty (30) days prior to the date of such collateral assignment and identifies such lender, and maintains financial assurances for decommissioning as set forth in Section 6 above.

### 10.1.3 Assignments or Transfers without the Consent of the County.

Applicant may transfer or assign all or any portion of its interest in the Project at any time, including rights, obligations and responsibilities arising hereunder, to third parties acquiring all or substantially all the assets of the Project or all or substantially all the membership interests in Applicant without the consent of the County provided that:

(i) Transferee is (a) an investor-owned electric utility, such as Puget Sound Energy, regulated by the Federal Regulatory Energy Commission ("FERC") and the Washington Utilities and Transportation Commission ("WUTC") or a wholly owned subsidiary of such an investor-owned electric utility, or; (b) an entity having, at the time of transfer or assignment, a senior unsecured long term debt rating ("Credit Rating") of (1) if such entity has a Credit Rating from Standard and Poor's but not from Moody's, BBB- or better from Standard and Poor's or (2) if such entity has a Credit Rating from Moody's but not from Standard and Poor's, Baa3 or better from Moody's or (3) if such entity has a Credit Rating from both Standard and Poor's and Moody's, BBB- or better from Standard and Poor's and Baa3 or better from Moody's; and

(ii) Transferee agrees to be bound by the rights, obligations and responsibilities of Applicant hereunder, including financial assurance for

10.7 <u>Duty to Act Reasonably and in Good Faith</u>. Unless otherwise expressly provided, each party shall act reasonably in giving consent, approval, or taking any other action under this Agreement. The Parties agree that each of them shall at all times act in good faith in order to carry out the terms of this Agreement and each of them covenants that it will not at any time voluntarily engage in any actions which frustrate the purpose and intent of the Parties to develop the Project in conformity with the terms and conditions specified in this Agreement. The Parties understand and agree that the process described in this Agreement depends upon timely and open communication and cooperation between the Parties. The Parties agree to use best efforts to communicate regarding issues, changes, or problems that arise in the performance of the rights, duties and obligations hereunder as early as possible in the process, and not wait for explicit due dates or deadlines. Each party agrees to work cooperatively and in good faith toward resolution of any such issues.

10.8 <u>Time of Essence</u>. Time is of the essence in the performance of each and every obligation to be performed by the Parties hereto.

10.9 <u>Staffing Agreement for County Project Costs.</u> The Applicant will pay for County costs, including 3<sup>rd</sup> party consultant costs, if necessary, incurred to support plan review and inspection of the Project during construction, in accordance with K.C.C. 14.04 et. al., under a County Staffing Agreement. Such Staffing agreement shall be substantially similar in form to the existing Staffing Agreement in place for the Project, dated August 3, 2004, including the hourly costs for County staff and consultant resources. The Staffing Agreement shall be approved by the County prior to construction, and such approval shall not be unreasonably withheld.

### 11. Notices.

11.1 <u>Written Notice</u>. Any notice, demand, or other communication ("Notice") given under this Agreement shall be in writing and given personally or by registered or certified mail (return receipt requested). A courtesy copy of the Notice may be sent by facsimile transmission.

12.1.1. In the event of any dispute relating to this Agreement, each Party, upon the request of the other Party, shall meet within seven (7) calendar days to confer and seek to resolve the dispute ("Conference"). The Conference shall be attended by the following parties: (a) the County shall send department director(s) and County employees and contractors with information relating to the dispute, and (b) Applicant shall send an Applicant's representative and any Applicant's consultant with technical information or expertise related to the dispute. The parties shall, in good faith, endeavor to resolve their disputes through the Conference.

12.1.2. <u>Mediation</u>. "If this Conference process does not resolve the dispute within the 7 day Conference period, the Parties shall in good faith submit the matter to mediation. The Parties shall send the same types of representatives to mediation as specified for the "Conference" process. Additionally the Parties shall have representatives present at the mediation with full authority to make a settlement within the range of terms being discussed, should settlement be deemed prudent. The mediation shall take place within 45 days of the parties submitting the dispute to mediation.

In order to expedite the mediation, during the Conference process the Parties shall select the mediator. The mediator must be a neutral professional full time mediator with time available to meet with the parties within the 45 day mediation period following the 7 day Conference period.

To prepare for mediation, during the 7 day Conference period, the County will select three qualified mediators, as specified above, who are available in the following 45 days. At the end of the 7 day Conference period, if the matter has not been resolved, the Project Owner shall, within the 24 hours of being given the three names select one of the three. The parties will in good faith attempt to resolve the dispute in the 45 day mediation period."

If the dispute is not able to be resolved through the mediation process in the 45 day period, the parties may pursue their legal remedies in accordance with Washington law.

### 13. Indemnity.

### 14. Entire Agreement.

This Agreement, together with all exhibits hereto, constitutes the entire agreement between the Parties with respect to the subject matter of this Agreement. This Agreement is specifically intended by the Parties to supersede all prior agreements, whether written or oral.

APPROVED this 4th day of March, 2005.

BOARD OF COUNTY COMMISSIONERS Kittitas County, Washington

Very D Husto

Chairman, Perry Huston

nil B. Baure

Vice Chairman, David B. Bowen

SHALL

Clerk of the Board, Julie Kjorsvik

Commissioner, Alan A. Crankovich

Approved by:

Kittitas County Prosecuting Attorney, Deputy

James Hurson

Wild Horse Development Agreement March 4, 2005

27

# **Appendix B:**

Settlement Agreement Between Washington State Department of Fish and Wildlife and Applicant



WDFW STIPULATION

Page 1

p.01

1 wind energy development and associated activities and facilities, pursuant to the commitments 2 and conditions set forth in this stipulation, the EPSEC Application for Site Certification and the 3 EFSEC Site Certification. The conservation easement will allow grazing on the land, subject to the terms and conditions contained in Exhibit A as set forth on page 3. The conservation 5 easement shall also allow public access and recreational uses as set out in the EFSEC Site 6 Certification Agreement and this Stipulation.

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#### <u>C</u>. Resolution Of Issues

The Applicant has undertaken site impact assessments to identify the wildlife and wildlife 9 habitat impacts expected from construction and operation of the Project facility. The anticipated 10 impacts and proposed mitigation measures are consistent with the Wind Project Habitat 11 12 Mitigation Guidance Document (WDFW 2003a). WDFW has reviewed and commented on 13 these assessments and the Parties have agreed that the following commitments for mitigation 14 measures will resolve all WDFW's issues raised by its Regional Wildlife Biologist, Leray 15 Stream in testimony that it provided in this proceeding.

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#### II. APPLICANT'S COMMITMENTS

17 Applicant agrees that the mitigation measures identified in this Settlement Agreement 18 shall be implemented if construction of the proposed electrical generation project proceeds 19 pursuant to an SCA. The parties agree that the Applicant will comply with any SCA 20 requirements that set stricter standards regarding protection of fish, wildlife or their habitat, than 21 those contained in this agreement. In addition the Applicant commits to conditions set out in 22 Exhibit A, attached hereto and incorporated by reference herein as if fully set out.

### **III.** Withdrawal of Objections

24 Based upon Applicant's commitments herein, and upon compliance with mitigation measures proposed in the DEIS, WDFW agrees that Applicant's compliance with the terms of 25

WDFW STIPULATION

Page 2

p.03

1	this Agreement will mitigate impacts to fish and wildlife resources, including habitat, to a level	
2	of non-significance. Therefore, based on this Agreement, WDFW stipulates that this Project is	
3	consistent with the Wind Project Habitat Mitigation Guidance Document (WDFW 2003a) and	
4	addresses and fully satisfies all WDFW's concerns raised in the testimony provided by WDFW	
5	through its Regional Wildlife Biologist in this proceeding. WDFW stipulates it is has no issues	
6	related to the project subject to this adjudicative hearing unless there is a substantial change in	
7	the proposed project.	
8	DATED: February $18, 2005.$	
9	$\square$	
10		
11	By the gent	
12	Attorney for Applicant	
13	WASHINGTON ATTORNEY GENERAL	
14	main Andra-	
15	By Many Jour Port	
16	Assistant Attorney General Attorney for Washington Department of	
17	Fish and Wildlife	
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	WDFW STIPULATION Page 3	

.

Exhibit A

# **Appendix C:**

Cascade Land Conservancy Letter

Federal Aviation Administration Determination of No Hazard to Air Navigation (WTG E2)

> Applicant Response Letter to Kittitas County Department of Public Works



State of Washington Department of Fish and Wildlife 1701 South 24<sup>th</sup> Avenue, Yakima, *WA* 98926 Phone: (509) 575-2740. Fax (509) 575-2474

February 8, 2005

Allen J. Fiksdal, Manager Energy Facility Site Evaluation Council P.O. Box 43172 Olympia, Washington 98504-3172

## Subject: Wild Horse Wind Power Project – Supplemental information on the Draft Environmental Impact Statement (DEIS)

Mr. Fiksdal:

This letter is intended to provide supplemental information related to the DEIS for the Wild Horse Wind Power Project. Since our initial comments on the DEIS were submitted to you on September 10, 2004, Brent Renfrow and I have had several discussions regarding the DEIS with staff from Zilkha Renewal Energy (Zilkha).

These supplemental comments are submitted pursuant to our contract with EFSEC to provide technical expertise on the Wild Horse project. The views expressed in this letter shall not be deemed to represent the official position of WDFW For purposes of this letter, "WDFW" means WDFW staff who are not acting in their capacity as contractors to EFSEC to provide technical expertise on the Wild Horse Wind Power Project.

Our understanding of the current Zilkha proposal is presented under the same outline as our original comments on the DEIS, wherever specific responses are available. The original headings and excerpts from our DEIS comment letter are provided first, followed by responses from Zilkha. Other, more general statements from Zilkha, related to fish and wildlife impacts are provided on Pages 6-8.

### Shrub Steppe Plant Communities and Associated Wildlife – Impacts and Mitigation

• **Construction timing:** Comment: Section 3.4.4 should include construction timing as a mitigation measure to avoid and minimize impacts to soils and vegetation. To the greatest extent possible, construction activities <u>outside of the hardened footprint of the project</u> (i.e. "temporary disturbance areas") should be done during the late spring, summer and fall when soil moisture is very low.

Zilkha has agreed to avoid, to the greatest extent possible, construction activities outside permanently disturbed areas except for during the months of May through October when soil moisture is low. Trenching of underground electric collection cables may be performed outside this time window, as the soil cover in those areas will be disturbed regardless of the season and will need to be restored and reseeded.

• Post-Construction Restoration of Temporary Disturbed Areas - Standards for site restoration: Comment: The DEIS should identify a reference standard (or a process to establish one) for evaluation of site restoration success.

Zilkha will develop a restoration plan and conduct habitat reseeding programs when optimal germination and establishment conditions are present, as determined in consultation with the Technical Advisory Committee (TAC) and WDFW, and not necessarily immediately following the disruption. Zilkha will cover temporarily disturbed areas in accordance with erosion control measures set forth in the EIS at such time as site conditions are deemed favorable.

Zilkha agrees to work with WDFW and the TAC to evaluate the success of restoration efforts using an agreed-upon reference site in order to gain insights which might inform future restoration efforts at other projects. Zilkha shall ensure effective erosion and weed control and commits to a good-faith effort to restore habitat, but does not agree to additional mitigation measures beyond what has been proposed should restored habitat differ in quality from the reference standard.

• **Proposed Acquisition of Habitat Mitigation Site and Clarification of proposed mitigation ratios:** *Comment: The proposed habitat mitigation site is suitable, strategically located and should achieve the mitigation goals for which it is to be acquired. This site would address direct footprint impacts from roads, towers and construction.* 

Zilkha has proposed to mitigate for all permanent and temporary impacts to habitat caused by the Project in accordance with the ratios outlined in the WDFW Wind Power Guidelines. The area designated for mitigation is estimated at approximately 600 acres and is located in Section 27, T18N, R21E in Kittitas County, WA. Since Zilkha has an option to purchase the property if the Project goes forward, Zilkha can provide legal protection and protection from degradation for the life of the Project. Improved management of habitat throughout the mitigation parcel offers an opportunity for long-term protection of habitat for many shrub steppe species.

Zilkha has agreed to fence this parcel to exclude livestock grazing, if grazing practices continue on adjacent properties at the time the project goes into operation.

Use of Section 27 as a mitigation parcel would result in protection of an approximately 1mile segment of Whiskey Dick Creek near its headwaters. Protection of waterways and their adjacent riparian habitat provide additional benefits beyond replacement of in-kind habitat at agreed upon ratios. Protection of this segment of Whiskey Dick Creek provides benefits for water quality, wildlife, and species diversity. In addition, Section 27 is adjacent to state-owned lands. Washington Department of Natural Resources (WDNR) administers Section 34 to the south and WDFW administers Section 26 to the east. Use of Section 27 for mitigation will provide continuity of habitat with these adjacent stateowned sections. Finally, a variety of habitat types that occur in the general project area are found in Section 27, so a diversity of habitat types would be preserved. These include shrub-steppe (moderate and dense), herbaceous, herbaceous/rock outcrop, and woody riparian.

• **Domestic Stock Grazing:** Comment: If grazing is to be continued on project lands, we recommend specific management of this activity, to minimize or eliminate associated impacts. Such management would include fencing of sensitive areas, rest rotations, limited numbers and timing of stock, and other techniques. Domestic sheep pose a significant risk to the re-established bighorn sheep herd in the area, and we recommend that they not be allowed on the project area if grazing is to occur.

Zilkha has committed to developing and implementing a post-construction Rangeland Management and Grazing Plan, in coordination with the TAC, for the entire project area, which is intended to improve residual grass cover and potential nesting, brood-rearing and habitat for sage grouse, other shrub-steppe nesting species, and big game on the project. The Plan shall include provisions for the restoration of shrub steppe lands, native seeding prescriptions and management of livestock grazing on shrub steppe rangelands. The implementation of a Rangeland Management Plan will improve the quality of overall habitat throughout the project area.

Livestock grazing near the springs within the project area will be eliminated. If fences are needed to protect these springs, they will be constructed using fence designs conducive to passage by wildlife, as outlined below.

**Big Game:** Comment: The WHWPP area is correctly identified in the DEIS as winter habitat for deer and elk. We would like to continue working with the project proponent for the use of hunting and other means on the site to achieve big game management objectives.

Zilkha will prepare a hunting plan for the project area in consultation with WDFW and the TAC. At a minimum, said plan will include the following:

To promote the safety of big game animals, Zilkha agrees that any permanent fencing located within the Project site boundary will not exceed 42 inches in height to prevent the top wire from being broken when big game animals jump over the fence. The top

wire will be at least 10 inches above the next wire. The bottom wire will be at least 16 inches above the ground to allow fawns and small animals to crawl under the fence.

Posted and enforced driving speed limits of 25 miles per hour within the Project area will minimize potential collisions with wildlife during both construction and operation. Vehicle trips on the Project roads will be minimal during operations. During Project operations, it is expected that turbines will require scheduled maintenance to be performed for approximately 2 to 3 days on each unit approximately every 6 months. There will be a team of 2 technicians, traveling from turbine to turbine in a service vehicle, to perform the scheduled maintenance and repairs. The main site access road will be driven daily (Monday through Friday). Other turbine string roads with few turbines may not be driven for over a week.

### Wildlife - Direct Impacts and Mitigation

**Meteorological Towers – Guyed Towers verses Free Standing** Comment: The projects five meteorological towers should be free-standing towers, which are demonstrably less likely to result in bird mortality than guyed towers.

Zilkha has agreed to use free standing towers on permanent met towers.

Sage Grouse – New Information Available and Expanded Discussion Needed in DEIS: Comment: New information relevant to sage grouse occurrence within the project and potential impacts of wind power facilities on sage grouse has become available since the Application for Site Certification was submitted and the scoping of the EIS. The discussion in the DEIS should be expanded to include this information. We noted that sage grouse have been observed in recent years in and around the WHWPP project site, including sightings of hens with broods (Lee Stream, WDFW data). Although no active leks were located during surveys for this project, the presence of broods indicates reproductive populations occur in the area.

Zilkha has agreed that during the Sage Grouse lekking season, no routine maintenance of the substation area or facilities within ¼ mile of an active lek will be conducted between the hours of sunset and 9:00 am, and recreational use will be restricted to the extent feasible.

Zilkha further agreed that strategic planning for the location of rock sources and the operation of the concrete batch plant will consider the historic presence of grouse at the project site. The temporary nature of these impacts will reduce the likelihood of long term conflicts with any breeding, nesting and rearing of broods by grouse species that may occur on the site.

Zilkha notes it has made significant efforts to avoid areas considered to be sensitive habitat for sage grouse or otherwise sensitive for wildlife. Several turbines were initially proposed in the northwest portion of the project area along the existing north-south road. The collisions risks associated with these turbines are likely similar to most of the turbines within the project area. However, they are located in areas that have had historic sage grouse use. This entire string was dropped, increasing the lands within the project area that are absent of wind turbines and creating additional potential movement corridors for grouse and other wildlife. Avoidance of placing wind turbines in this prominent saddle may also reduce the overall potential risk of raptor mortality for the Project.

• Micro-siting of Turbines to Reduce Turbine Mortality: Comment: Mitigation for direct mortality from turbines should include close attention to micro-site locations of towers. Towers should not be placed in locations of raptor concentrations, such as along steep ridgelines or at the top of cliff faces.

The latest turbine layout avoids prominent saddles and potential crossing routes along the ridge associated with Whiskey Dick Mountain. Turbines were not sited within the saddles along Whiskey Mountain to avoid potential areas birds use to cross the ridge.

Turbines are not located adjacent to the springs, which were identified during habitat mapping. Turbine locations are at least 150 m from the nearest identified springs (Wild Horse, Skookumchuck Heights, Dorse, Reynolds, Thorn, Government, Pine, Seabrock, unnamed) and in most cases, are more than 300 m from the springs. These water sources may be important for bird and big game species, but have historically been impacted and degraded by livestock use. Mitigation for the proposed project includes the exclusion of livestock from the springs, which should greatly increase the habitat quality of these areas. Fencing will be designed so big game and other wildlife will still be able to access water sources.

Turbines are located on the ridges away from the riparian areas of the drainages that likely contain a higher diversity of bird species. Turbines are located at least 140 m from the Pines located in the central portion of the project area. Higher mortality of songbirds and other species associated with these riparian corridors and near these trees might be expected if turbines were sited closer to these features.

### **Recreation – Impacts and Mitigation**

• **Public Access to Public and Private Lands:** Comment: The DEIS discussion on impacts of the project on recreation is conflicting. Hunting specifically would be the subject of a management plan developed by WDFW and the Applicant. But elsewhere the document notes that the project area would be closed to the public during construction and section 3.12.2.2 (Parks and Other Recreational Facilities) notes that access to the project site will be controlled.

In order to minimize potential conflicts and risks to both workers and hunters, no hunting will be allowed on the property during construction (estimated to last less than one year.)

After construction is complete, controlled hunting will be allowed. Possible measures to control hunting may include access control, limiting hunting to those individuals who have completed the Advanced Hunter Education program, and/or hunting by access permit.

Zilkha will take measures to inform the hunting public of the change in hunting practices on the site. Measures may include a combination of advertisement in WDFW hunting regulations and publications, signage, and outreach through sporting organizations.

# In addition to the specific responses above, the following information was provided by Zilkha to address various monitoring, compliance, construction and operational practices related to environmental issues.

### Post-Construction Monitoring:

1. Zilkha commits to the formation of a TAC to coordinate appropriate mitigation measures, monitor impacts on wildlife and habitat, and address issues that arise regarding wildlife impacts during construction and operation of the wind power project. A post-construction monitoring plan will be developed in coordination with the TAC and approved by EFSEC. The TAC will evaluate the mitigation and monitoring program and determine the need for further studies and mitigation measures in accordance with the WDFW Wind Power Guidelines.

2. Zilkha has proposed two years of monitoring studies to evaluate impacts to avian species, with incidental monitoring during the life of the project. This study will include at a minimum, standardized casualty searches on a 28-day interval throughout the year combined with searcher efficiency trials and carcass removal trials to estimate the direct impacts to avian species from the project. The post-construction monitoring plan for the project will follow a detailed written protocol which will document the monitoring measures being conducted. The TAC shall reconvene if unanticipated circumstances arise during incidental monitoring.

3. Zilkha agrees that a wildlife casualty reporting and handling system be implemented by wind project personnel (O&M staff) for the life of the project following a detailed written protocol developed for the project and similar to other wind projects in the region.

4. TAC members shall be approved by EFSEC. Members proposed by Zilkha include representatives from WDFW, USFWS, Kittitas County government, project landowners, the applicant and the community. The community representative will not be anyone party to a turbine lease agreement, or any other contractual obligation with Zilkha, and shall be a person mutually agreeable to the other participants on the TAC.

Allen Fiksdal February 8, 2005 Page 7 of 8

### Environmental Compliance during Construction:

1. An Environmental Compliance program by Zilkha will ensure that construction activities meet the conditions, limits and specifications set in environmental standards established in this agreement, the Site Certification Agreement, and all other environmental regulations.

2. Copies of all applicable construction permits will be kept on-site. The lead Project construction personnel and construction Project Managers will be required to read, follow and be responsible for all required compliance activities. A Project Environmental Monitor will be responsible for ensuring that all construction permit requirements are adhered to, and that any deficiencies are promptly corrected.

3. The Environmental Monitor will ultimately report to the Project Manager and will provide weekly reports on environmental problems reported or discovered as well as corrective actions taken to resolve these problems. The Environmental Compliance Program will cover avoidance of sensitive areas during construction, waste handling and storage, stormwater management, spill prevention and control and other components required by state and county regulation. Upon identification of an environmental noncompliance issue, the Environmental Monitor will work with the responsible subcontractor or direct hire workers to correct the violation; if not corrected in a reasonable period of time a "stop work" order can be issued for that portion of the work not in compliance with the Project environmental requirements.

4. <u>Unique Plant Species</u> - The only unique plant species that may be impacted by the project is the hedgehog cactus, a Washington State Review List species. Access to the site will be controlled during both construction and operations, which should provide greater protection than is currently afforded to this species. As collection of this species for gardens has been cited as a reason for its decline, if such collection becomes a problem at the Project site, Zilkha will post a sign at the visitors' kiosk indicating that collection of any plants in the Project area is prohibited.

5. <u>Wetlands, Streams and Riparian Areas -</u> There are a few Class 3 wetlands in the form of seeps and springs within the Project area, however, all Project facilities will be located a considerable distance from them to prevent any impacts to these wetlands. Roads, underground cables, turbine foundations, transmission poles and other associated infrastructure will not be located within any riparian areas or streams and will not involve the use of any heavy equipment in stream beds or riparian areas. BMPs will be implemented to retain sediment from disturbed areas and minimize areas of disturbance.

6. <u>Construction</u> - Zilkha proposes the use of construction techniques and Best Management Practices (BMPs) to minimize potential impacts to habitat and wildlife. These include the following:

- Use of BMPs to minimize construction-related surface water runoff and soil erosion
- Use of certified "weed free" straw bales during construction to avoid introduction of noxious or invasive weeds;
- Flagging of any sensitive habitat areas (e.g. springs, raptor nests, wetlands, etc.) near

proposed areas of construction activity and designation of such areas as "off limits" to all construction personnel;

- Proper storage and management of all wastes generated during construction;
- Require construction personnel to avoid driving over or otherwise disturbing areas outside the designated construction areas.

7. <u>Operations -</u> During Project operations, appropriate operational BMPs will be implemented to minimize impacts to plants and animals. These include the following:

- Implementation of a fire control plan, in coordination with local fire districts, to avoid accidental wildfires and respond effectively to any fire that might occur;
- Zilkha has entered into an agreement with Kittitas County Rural Fire District #2 to provide fire protection services during the construction and operation of the Project;
- Operational BMPs to minimize storm water runoff and soil erosion;
- Implementation of an effective noxious weed control program, in coordination with the Kittitas County Noxious Weed Control Board, to control the spread and prevent the introduction of noxious weeds;
- Identification and removal of all carcasses of livestock, big game, etc. from within the Project that may attract foraging raptors;

Thank you for the opportunity to provide additional comments related to the DEIS. If you have questions or need additional information, please contact me (509-457-9314) or Brent Renfrow (509-925-1013).

Sincerely,

Ted a. Clausing

Ted A. Clausing Regional Habitat Program Manager

cc: Chris Taylor, Zilkha Lauri Vigue, WDFW Brent Renfrow, WDFW Sonia Wolfman, AAG



March 11, 2005

Energy Facility Site Evaluation Council 925 Plum Street, SE Building 4 VIA Electronic Mail To: <u>efsec@ep.cted.wa.gov</u> P.O. Box 43172 Olympia, WA 98504-3172

RE: Wild Horse Wind Power Project

Dear Council Members:

Thank you for this opportunity to provide comments on the proposed Wild Horse Wind Power Project. We are writing to express the Cascade Land Conservancy's (CLC) great appreciation and strong support for Zilkha Renewable Energy and Puget Sound Energy's decision and commitment to place the project area in a conservation easement and to support long term stewardship of the project area and surrounding lands.

As a non-profit land conservation organization, CLC's mission is to protect our region's wild and open lands to sustain the natural beauty and health of the environment, now and for generations to come. CLC is active in Kittitas, King, Pierce and Snohomish counties and has helped conserve over 130,000 acres in the region. Unique among land conservation groups, CLC has a Stewardship Program to implement the land management responsibilities we have assumed over protected lands.

In Kittitas County, we recognize that the Wild Horse Wind Power Project is situated in and is surrounded by some of the last remaining intact shrub steppe habitat in the State of Washington and is a unique ecosystem with numerous conservation values including: vital habitat for sage grouse, the Colockum Elk Herd, mule deer and numerous other species; public recreation; wildlife viewing; and other land uses enjoyed by the community such as hunting and grazing.

While CLC, as a non-advocacy organization, cannot comment directly on the wind project, CLC can and does wholly support conservation efforts and the long term stewardship benefits to the project area and surrounding landscape that may result from the permitting of the Wild Horse Wind Power Project, and by the project being owned and managed by Puget Sound Energy.

EFSEC Wild Horse Letter March 11, 2005 Page 2

We appreciate the opportunity to support the conservation and long term land management and stewardship benefits associated with the proposed Wild Horse Wind Power Project.

Sincerely,

Anne Watanabe Kittitas County Conservation Director Cascade Land Conservancy 222 E. 4<sup>th</sup> Avenue, P.O. Box 463 Ellensburg, WA 98926 (509) 962-1654

Cc: Chris Taylor, Zilkha Renewable Energy Roger Garratt, Puget Sound Energy Brian Lenz, Puget Sound Energy Jeff Tayer, Washington Dept. of Fish and Wildlife Bob Betcone, Trust for Public Land



Federal Aviation Administration Northwest Mountain Regional Office 1601 Lind Avenue SW-ANM-520 Renton, WA 98055-4056 Aeronautical Study No. 2004-ANM-906-OE Prior Study No. 2003-ANM-1991-OE

Issued Date: 8/20/2004

CHRIS TAYLOR WIND RIDGE POWER PARTNERS LLC 210 SW MORRISON STREET STE 310 PORTLAND, OR 97204

### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has completed an aeronautical study under the provisions of 49 U.S.C., Section 44718 and, if applicable, Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure Type:	WIND TURBINE E2
Location:	KITTITAS, WA
Latitude:	47-0-14.02 NAD 83
Longitude:	120-12-23.96
Heights:	410 feet above ground level (AGL)
	3579 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure should be marked and/or lighted in accordance with FAA Advisory Circular 70/7460-1 AC70/7460-1K, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

It is required that the enclosed FAA Form 7460-2, Notice of Actual Construction or Alteration, be completed and returned to this office any time the project is abandoned or:

- \_\_\_\_ At least 10 days prior to start of construction (7460-2, Part I)
- \_X\_\_ Within 5 days after the construction reaches its greatest height (7460-2, Part II)

As a result of this structure being critical to flight safety, it is required that the FAA be kept appraised as to the status of the project. Failure to respond to periodic FAA inquiries could invalidate this determination.

This determination expires on 2/20/2006 unless:

- (a) extended, revised or terminated by the issuing office.
- (b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission if the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (425)227-2538. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2004-ANM-906-OE.

### Signature Control No: 388610-303728

(DNE)

James D Lambert Specialist

7460-2 Attached



www.zilkha.com

<u>Ellensburg Offices</u> 222 Fourth Street Ellensburg, WA 98926 Phone: 509-962-1122 Fax: 509-962-1123 Northwestern Regional Office 210 SW Morrison Suite 310 Portland, OR 97204 Phone: 503-222-9400 Fax: 503-222-9404

Paul Bennett, Director Kittitas County Department of Public Works 411 North Ruby Street, Suite 1 Ellensburg, WA 98926 October 05, 2004

RE: Comments for the Wild Horse Wind Power Project DEIS

Dear Mr. Bennett:

Wind Ridge Power Partners, LLC would like to take this opportunity to address some of the concerns you raised in your comments on the Wild Horse Wind Power Project Draft Environmental Impact Statement (DEIS) which you submitted to EFSEC on September 10, 2004. We hope we will be able to work together to resolve any concerns you may have regarding the impacts of the proposed Project.

1. Regarding your comments on Section 4.14.1.1 'Existing Road Network', we wish to clarify that <u>no overweight or oversized trucks will be routed through the City of Kittitas</u>. As outlined in the Application for Site Certification, Section 3.15.1.1 'Road Network', Transporter Route 1 will only be used for light duty traffic such as passenger vehicles, light-load delivery trucks, and single-unit construction materials and equipment trucks. All overweight and oversized trucks will be routed through the town of Vantage (Transporter Route 2) via Interstate and County highways. Transporter Route 2 is better suited for larger vehicles, therefore, oversize and over length delivery vehicles will use Transporter Route 2.

2. Regarding your comments on Section 3.14.1.2 'Traffic Volumes', we wish to clarify that the Project site entrance lies west of the existing access gate, across Vantage Hwy from the entrance to the Kittitas County Ryegrass Landfill, so the Project site entrance will <u>not</u> be on the crest of the vertical curve, thus resolving any sight distance issues. The graveled shoulder in this area is already widened for several hundred feet and will allow construction traffic to veer off of Vantage Hwy to allow other traffic to pass safely. It would seem intuitive that if the County's own access way to the Ryegrass Landfill has safe sight distances, that an entryway at the same location on the other side of the road would also have the same site distances.

Wind Ridge Power Partners' consultant, CH2M Hill, has performed analyses for both existing and future traffic volumes along Vantage Highway. These analyses indicate that traffic volumes along Vantage Highway are very low. Based on a 1% growth rate over 30 years, traffic on Vantage Hwy (to the east and west of the site entrance) should not affect the level of service. The estimated levels of service in 2004 and 2034 are classified as level "C" in both locations. Therefore it is extremely unlikely that a full build out of an intersection would need to occur at the site entrance. However, in the extremely unlikely event that LOS were to drop to level E,

Wind Ridge Power Partners proposes to implement the following mitigation measures as appropriate: Possible construction of passing lanes near the Project site entrance.

3. Regarding your comments on Section 3.14.2 'Impacts of the Proposed Action', you raise concerns regarding Project impacts to aviation. The nearest turbine structure is approximately 12 nautical miles from the end of Runway 25 at the Bowers Field Airport in Ellensburg, WA. The distance of the Project from the Ellensburg Airport precludes any impact on VFR Traffic Pattern operations.

Wind Ridge Power Partners contracted Aviation Systems, Inc to conduct a study of the instrument approaches. There are two instrument approaches to Bowers Field that currently have initial approach altitudes of 5,000 feet above mean sea level (AMSL). They are the RNAV(GPS) RWY 25 and the VOR /DME -A Procedures. Aviation Systems independently evaluated this airspace and determined a structure height restriction for present procedures of 4000 feet AMSL. Therefore, as long as the turbine structures in the project remain below 4000 feet AMSL, they will not adversely affect Bowers Field Instrument Approaches. Please see the attached letter from Aviation Systems regarding these issues.

4. Regarding your comments on 'Land Ownership and Use', you request that Wind Ridge Power Partners identify all existing rights-of-way and public easements across the Project property. In short, there are no public rights-of-way or easements across the Project property. The Project will be built across privately-owned land which has <u>no</u> public access. The Washington Department of Natural Resources (WDNR) has a management access easement at the Project entrance for the sole purpose of accessing one of their parcels which is within the Project area. However, this easement does not grant access to the general public. For additional information on the status of the WDNR's management access easements, please contact Milt Johnson, WDNR's Eastern Washington Regional Manager, at (509) 925-8510.

Additionally, you request that we review public easements around Wilson Creek and Charlton roads. These roads are located approximately 10 miles to the west of the Project area and they will not be impacted by Project activities. Therefore, Wind Ridge Power Partners has not researched ownership or easements in these areas.

5. Regarding your comments on 'Schedule and General Sequence', as part of the EFSEC process, prior to the issuance of a FEIS, Wind Ridge Power Partners will be required to enter into a Development Agreement with Kittitas County. Wind Ridge Power Partners will propose to include the specific mitigation actions which are identified in the DEIS (summarized on pages 1-37 through 1-39 and Section 3.14.4) and will work with Kittitas County to create an agreement acceptable to both parties.

6. Regarding your comments on 'Operation', you raise concerns regarding possible impacts of increased tourism in the area. As noted under #4 above, there is no public access to the Project property and there are no public roads which go through the Project. Wind Ridge Power Partners proposes to construct a visitor's kiosk, with sufficient signage directing interested visitors to it, near the Project site entrance to provide the public with information. There will be adequate parking at this site.

If appropriate, tourist traffic to the Project site may be monitored by installing tube counters at the driveway to the visitor's kiosk near the Project entrance. The existing and future estimated average daily traffic volumes are very low on Vantage Hwy. Although monitoring for tourist-only traffic can be conducted, it is unlikely that existing or future road conditions would be adversely affected.

Although highly unlikely, should any monitored tourist traffic at the Project site cause an increase in traffic such that the total volume of vehicles in the peak hour exceed 400 vehicles (the traffic threshold at which LOS category for Vantage Highway would drop from level of service C to level of service D), Wind Ridge Power Partners proposes to implement the following mitigations measures as appropriate: Wider shoulders and turn pockets for vehicles to turn into visitor kiosk. In the even more unlikely case that an increase in monitored tourist traffic cause peak hour volumes to exceed 1250 vehicles during the peak hour (the traffic threshold at which LOS category for Vantage Highway would drop from level of service C to level of service E), Wind Ridge Power Partners proposes to implement the following mitigation measures as appropriate: Possible construction of passing lanes near the Project site entrance.

We hope the above information addresses your concerns regarding the possible impacts of the Wild Horse Wind Power Project. We look forward to working with the Department of Public Works on the successful implementation of this Project.

Sincerely,

Andrew Young Northwest Development Director