FACT SHEET

Kittitas Valley Wind Power Project
Addendum to Draft Environmental Impact Statement (EIS)

Lead Agency and Responsible Official: 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: Sagebrush Power Partners LLC (or Applicant) proposes to construct and operate up to 80 wind turbines that would generate up to 246 megawatts (MW) of wind power in Kittitas County, Washington. The proposed project would occupy between 93 and 118 acres of land on either side of US 97 roughly halfway between Ellensburg and Cle Elum, Washington.

The project also includes: (1) approximately 19 miles of new roads and improvements to roughly 7 miles of existing roads, (2) approximately 23 miles of underground and 2 miles of overhead 34.5-kilovolt (kV) electrical power lines, (3) two new substations, (4) an approximately 5,000-square-foot operations and maintenance facility, and (5) up to nine permanent meteorological towers.

EFSEC issued a Draft Environmental Impact Statement (EIS) in December 2003, and a Draft Supplemental EIS in August 2004. In October 2005 Sagebrush Power Partners LLC submitted a Development Activities Application (DAA) to Kittitas County to attempt to resolve the project's inconsistency with local land use plans and zoning regulations. In the DAA, the Applicant has revised the layout of wind generator turbine strings to reduce the impacts of the project.

The purpose of this Addendum to the Draft EIS is to: update the project description; to determine whether the significance of any identified unavoidable adverse impacts has changed from the assessment made in the Draft EIS or Draft Supplemental EIS; and to identify any new significant adverse environmental impacts that may be caused as a result of the project layout revision.

Proposal's Sponsor: Sagebrush Power Partners LLC, a subsidiary of Horizon Wind Energy, Houston, Texas.

Date of Implementation: The start of construction depends on the date the governor of Washington approves and executes the Site Certification Agreement for this project. Construction would begin no sooner than the late summer of 2006, and would last for approximately one year.

List of Possible Permits, Approvals, and Licenses: EFSEC is the sole non-federal agency authorized to permit the proposed project. For informational purposes, Table 1-2 of the December 2003 Draft EIS lists 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 the EIS: Shapiro and Associates, Inc., an independent consultant to EFSEC, was the principal author of the Draft EIS. EFSEC staff prepared the Draft Supplemental EIS and the Addendum to the Draft EIS.

Subsequent Environmental Review: Adjudicative Hearings (March 2006)
Final EIS (Summer 2006)

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 the summer of 2006). The governor has 60 days to accept or reject the recommendation or to remand the recommendation to EFSEC for further investigation.

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Location of Background Information: You may access this Draft EIS, Draft Supplemental EIS, and the Addendum to the Draft EIS and find additional information about the project on the EFSEC Web site at www.efsec.wa.gov. Copies of the Kittitas Valley Wind Power Project Application for Site Certification, EFSEC No. 2003-01, and the EIS documents are available for public review at the following locations:

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

Brooks Library
Central Washington University
400 E. University Way
Ellensburg, WA, 98926
(509) 963-1021
(800) 290-3327

Carpenter Memorial
(Cle Elum) Library
302 Pennsylvania Ave
Cle Elum, WA 98922-1196
(509) 674-2313

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

Energy Facility
Site Evaluation Council
925 Plum Street SE, Building 4
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(360) 956-2121

Cost of Addendum to the EIS Copy to the Public: There will be no cost for copies of the Addendum to the Draft EIS.

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CHAPTER 1: INTRODUCTION

1.1 What is the Kittitas Valley Wind Power Project?

The Kittitas Valley Wind Power Project (KVWPP) is a wind turbine generation facility being proposed in Kittitas County, Washington, by Sagebrush Power Partners LLC (the Applicant), a limited liability corporation wholly owned by Horizon Wind Energy[1]. In January 2003 the Applicant proposed a project consisting of between 82 and 150 wind turbine generators with a total nameplate capacity of between 181.5 to 246 megawatts (MW). The project would be located on open ridgetops on each side of US 97 roughly halfway between Ellensburg and Cle Elum, as shown in Addendum Figure 1-1.

The project would also include the following facilities:

- approximately 19 miles of new roads,
- improvements to roughly 7 miles of existing roads,
- approximately 23 miles of underground 34.5-kV electrical power lines,
- approximately 2 miles of overhead 34.5-kV electrical power lines,
- two substations,
- one 5,000-square-foot operations and maintenance facility with parking, and
- up to nine permanent meteorological towers.

The KVWPP would be constructed across a land area of approximately 7,000 acres, although the actual permanent facility footprint would comprise between 93 to 118 acres of land under the middle and lower end scenarios, respectively. The majority of the KVWPP site and the proposed interconnect points lie on privately owned lands; five parcels are owned by the Washington State Department of Natural Resources (DNR). The Applicant has obtained wind option agreements with landowners for all private lands within the project site boundary necessary for project installation. In June 2003, the Applicant executed a lease agreement for use of the DNR property in the project area.

1.2 Background – Where is EFSEC's Review Process?

On January 13, 2003, the Applicant filed Application for Site Certification (ASC) No. 2003-01 with the Washington State Energy Facility Site Evaluation Council (EFSEC). The Applicant chose to receive certification of the KVWPP according to the Revised Code of Washington (RCW) 80.50.060. EFSEC has jurisdiction over the evaluation of major energy facilities including the proposed project. As such, EFSEC will recommend approval or denial of the proposed wind facility to the governor of Washington after completing the environmental review.

Since January 2003, EFSEC has initiated and/or completed a number of review steps:

[1] In the summer of 2005, Zilkha Renewable Energy was purchased by the Goldman Sachs Group, and the Zilkha company name was subsequently changed to "Horizon Wind Energy" (Taylor 2005).

- EFSEC reviewed the Application for consistency with its requirements in Washington Administrative Code (WAC) 463-42;
- EFSEC began conducting an environmental review in accordance with the Washington State Environmental Policy Act (SEPA) and EFSEC's SEPA Rules (Chapter 463-47 WAC);
- EFSEC held an information and scoping meeting, and a land-use hearing on March 12, 2003.
- EFSEC issued a Draft Environmental Impact Statement (EIS) for public comment in December 2003 (Energy Facility Site Evaluation Council 2004a);
- EFSEC issued a Draft Supplemental EIS addressing the analysis of off-site alternatives (Energy Facility Site Evaluation Council 2004b);
- EFSEC held public hearings on both the Draft EIS and Draft Supplemental EIS;
- EFSEC began an adjudicative Process as required by its laws, with an adjudicative hearing scheduled for March 2006.

In February 2004, the Applicant filed a request for preemption of local land use plans and zoning ordinances with EFSEC. However, during the summer of 2005, the Applicant informed EFSEC that it would submit a new Development Activities Application (DAA) to Kittitas County, seeking a determination of consistency with local land-use plans and ordinances in accordance with WAC 463-28-020. The applicant submitted a DAA to the County in August 2005, and on October 27, 2005, Kittitas County initiated its own review process (Sagebrush Power Partners LLC 2005). In conjunction with the County review process, the Applicant withdrew its request for preemption before EFSEC.

1.3 Proposed 2005 KVWPP Layout Revisions – What is Different?

The Applicant presented revisions to the project description and turbine layout in the October 2005 DAA. The Applicant proposed the revisions to address concerns raised by the County and by the public through the SEPA review undertaken by EFSEC. EFSEC staff reviewed the DAA to determine whether additional information would be required to ensure a complete review under SEPA by the EFSEC. A detailed revised project description is given in Chapter 2 of this Addendum. The major changes to the project are also summarized below. It should be noted, that the revised turbine layout is <u>not</u> an alternative to the original layout proposed by the Applicant, but replaces the layout originally proposed.

The most probable scenario is now in the Middle to Lower End Scenario range.

The Applicant requested certification of a range of wind generation turbine sizes, within a specific turbine layout footprint. The Draft EIS identified three scenarios to capture the full range of potential impacts to the environment:

- Lower End Scenario: The lower end scenario represents the project configuration with the lowest number of turbines erected. For turbines with a nameplate capacity of 3 MW each, up to 82 turbines would be used for a total nameplate capacity of 246 MW.
- Middle Scenario: For turbines with a nameplate capacity of 1.5 MW each, 121 turbines would be used for a total nameplate capacity of 181.5 MW.

- Upper End Scenario: The upper end scenario represents the project configuration with the highest number of turbines erected. For turbines with a nameplate capacity of 1.3 MW each, up to 150 turbines would be used for a total nameplate capacity of 195 MW.

With their DAA, the Applicant now brings forward the range of the Middle to Lower End Scenario as that most probable to be constructed. It is unlikely that the Upper End Scenario (1.3 MW turbines) would be constructed. Regardless of whether the Middle or Lower End Scenario is chosen, the project would consist of no more than 80 turbines.

Changes have been made to certain turbine string corridors.

The Applicant has also moved or removed portions of the strings from the turbine corridors originally proposed. The revised KVWPP layout is shown in Addendum Figure 2-1. A comparison of Addendum Figure 2-1 with Figure 2-1 of the Draft EIS shows the following differences:

Addendum Table 1-1: Summary of Revisions to Turbine String Layout

Turbine String	Revision to Layout
A	The previous string A and the northern portion of the previous string D have been re-oriented into a revised string "A", located in the northwest corner of Township Section 16.
B	Turbine string B is in the same location; there will be fewer turbines sited along this string.
C	Turbine string C is in the same location; there will be fewer turbines sited along this string.
D	The north portion of string D has been re-oriented and incorporated into string A. The southern portion of string D has been eliminated.
E	Turbine string E is in the same location; there will be fewer turbines sited along this string.
F	Turbine string F is in the same location; there will be fewer turbines sited along this string.
G	The north portion of turbine string G has been eliminated; there will also be fewer turbines sited along this string.
H	The northern portion of turbine string H has been eliminated.
I	The northern portion of turbine string I has been extended.
J	Turbine string J is in the same location; there will be fewer turbines sited along this string.

Source: Sagebrush Power Partners LLC 2005.

The DAA also corrects the location of construction and permanent road access to turbine string "G" on the east side of US 97. The Applicant had previously agreed to relocate this acess to address concerns raised by the Washington State Department of Transportation (see Section 3.10.2 of the Draft EIS).

Setbacks from residences and property lines have been increased.

The Applicant incorporated minimum setbacks into the proposed project layout based on safety, avoidance of nuisance concerns, and industry standards. In the revised DAA, the Applicant has increased the setback from property lines of neighboring landowners without project agreements from 50 feet to 541 feet beyond the tip of the blade at its closest point to the property line. The complete list of setbacks is given in Section 2.2 of this Addendum.

1.4 What is the Purpose of this Addendum?

This document is a SEPA Addendum to the KVWPP Draft EIS. It is being issued by EFSEC according to WAC 197-11-625. The purpose of this Addendum is to update the project description. Chapter 3 of this Addendum documents the results of the analysis performed to:

1) confirm that impacts resulting from the revisions to the turbine layout were already analyzed and documented in the Draft EIS or Draft Supplemental EIS;
2) if the impacts were not analyzed, present new information about the impacts that was submitted by the Applicant to EFSEC in support of the revised KVWPP layout;
3) evaluate whether the changes to the KVWPP layout would have a probable significant adverse environmental impact on any element of the environment that could not be mitigated;
4) determine whether the significance of any identified unavoidable adverse impacts has changed from the assessment made in the Draft EIS or Draft Supplemental EIS.

The Addendum will not repeat information presented in the Draft and Supplemental Draft EIS that has not changed as a result of the revision to the turbine layout, unless such clarification is helpful for context. In order to assist the reader to identify the project elements that have changed, text relating to changes to the project has been underlined in sections that substantially repeat information originally presented in the Draft EIS.

The Addendum was prepared by EFSEC staff, based on review of the documents regarding the revised KVWPP layout submitted by the Applicant. Only new document references are listed in Chapter 4 of this Addendum. Documents previously referenced in the Draft EIS and Draft Supplemental EIS are not re-listed in Chapter 4 of the Addendum.

1.5 Does the Revised KVWPP Layout Cause or Change the Significance of Any Adverse Environmental Impact?

Section 1.10 of the Draft EIS identified two areas of the environment where a significant adverse environmental impact might occur: cultural resources and visual resources.

At the time the Draft EIS was published, the indirect visual impacts on potentially affected cultural resources in the immediate project vicinity were not yet determined. The determination depended upon receipt of requested information from the Washington State Office of Archaeology and Historic Preservation (OAHP) regarding the boundaries of the "area of

potential effect". In addition, clarification of the National Register of Historic Places (NRHP) eligibility status of the North Branch Canal tunnel had been requested from OAHP to determine indirect visual impacts on this resource.

In July 2004, Lithic Analysts prepared a report on behalf of the Applicant entitled *Cultural Landscapes Investigation and Impacts to Historical Inventory for the Kittitas Valley Wind Power Project* (Trautman 2004). This report outlined the potential impacts on the North Branch Canal tunnel and other eligible NRHP resources in the project area, including cultural landscapes. Lithic Analysts concluded that the project would not indirectly affect potentially significant cultural resources in the project area and that the section of the North Branch Canal in the project area is not eligible for inclusion in the NRHP. OAHP reviewed this report and concurred with the findings.

By reducing the number of turbines, and eliminating certain portions of turbine strings altogether, the Applicant has reduced the overall visual impact of the KVWPP (see the discussion in Section 3.9 of this Addendum). Therefore the conclusions made by Lithic Analysts remain valid.

Section 1.10.2 of the Draft EIS concluded that for many viewers, the presence of the wind turbines represents a significant unavoidable adverse impact because it significantly alters the appearance of the rural landscape over a large area of the Kittitas Valley. Flashing of lights on the tops of turbines would similarly be considered a significant unavoidable adverse impact. The level of adversity of these impacts depended on the viewer's location and sensitivity and the impact on view quality.

The revised KVWPP layout will not create additional significant adverse impacts to visual resources. With the proposed layout changes, the project will have less of an impact on visual resources particularly for viewpoints located near the north and northwestern portions of the project area. In addition, impacts from lighting of the turbines required by the Federal Aviation Administration (FAA) for aviation safety reasons will be significantly reduced (see Sections 2.3 and 3.9.2 of this Addendum). However, the adverse perception of the remaining impact on visual resources remains subjective.

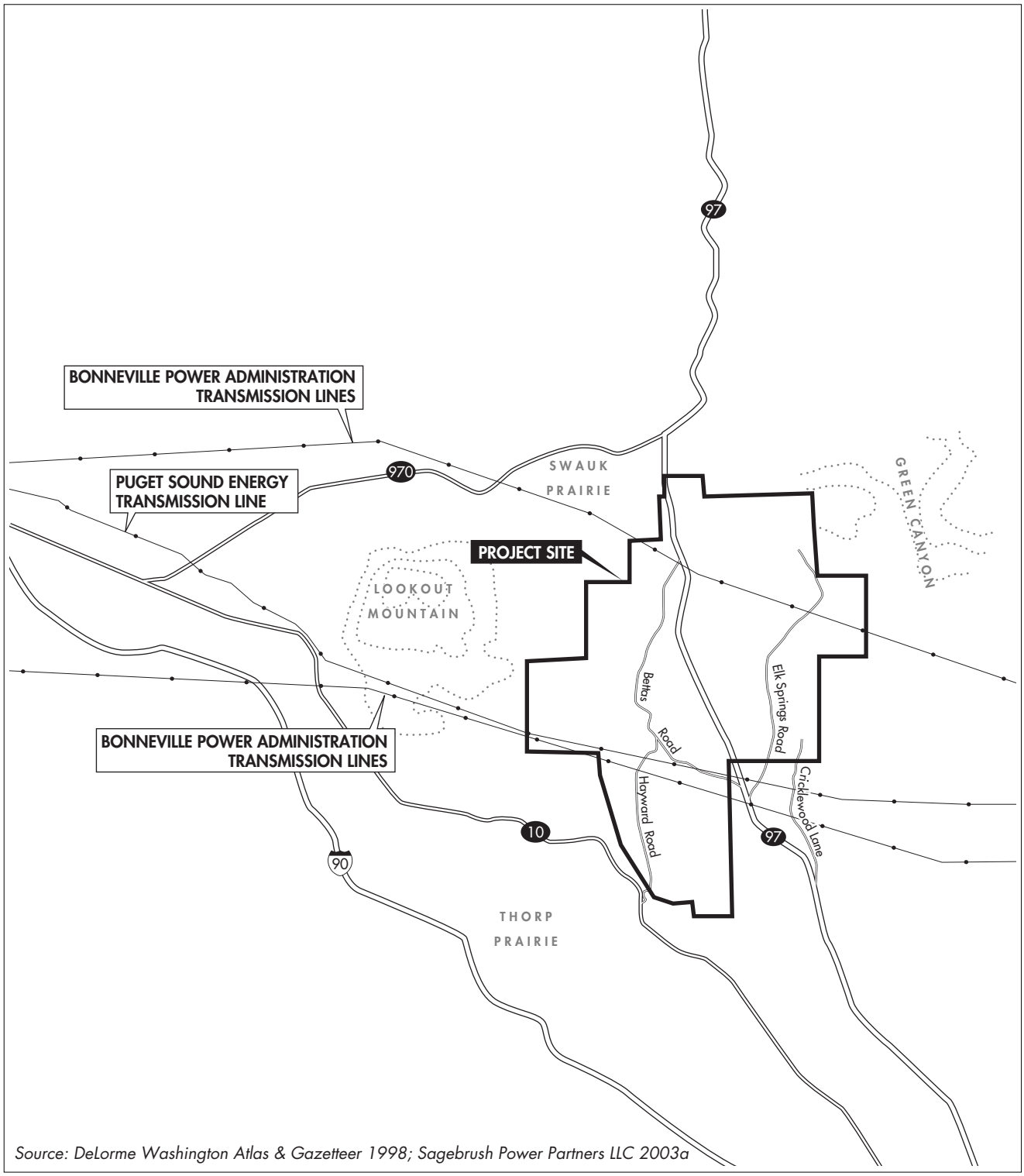
As discussed in Chapter 3 of this Addendum, the revised KVWPP layout does not cause significant adverse environmental impacts, nor does it change the significance of any environmental impacts that have been identified in the Draft EIS.

1.6 What Will Happen Next with the Environmental Impact Statement?

EFSEC rules require that the Final EIS be issued after the adjudicative hearings are concluded (WAC 463-47-060 (2)). EFSEC will prepare a Final EIS that incorporates: the Draft EIS; the Draft Supplemental EIS; this Addendum; comments received on the Draft and Draft Supplemental EIS, and responses to those comments; and relevant new information made available through the Adjudicative Hearing process. The Final EIS will also include updated information regarding public involvement, consultation and coordination, and reflecting the remainder of the review process that will have been completed in 2006. The Final EIS will be

issued after the March 2006 hearings, and prior to EFSEC making a recommendation to the Governor of Washington State.

If the Governor approves the proposed project, EFSEC would specify the conditions of construction and operation, issue a Site Certification Agreement in stead of any individual state or local permitting authority, and would manage the environmental and safety oversight program of project operations. EFSEC's Site Certification Agreement would act as an umbrella authorization that incorporates the requirements of all state laws and regulations.



0 2
Approximate Scale in Miles

Addendum Fig. 1-1
PROJECT SITE MAP

KITTITAS VALLEY WIND POWER PROJECT EIS

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CHAPTER 2: PROJECT DESCRIPTION

In order to assist the reader to identify the project elements that have changed, text relating to changes to the project has been underlined in sections that substantially repeat information originally presented in the Draft EIS.

2.1 Project Overview

This section of the Addendum updates the project overview presented in Section 2.2.1 of the Draft EIS.

Sagebrush Power Partners LLC proposes to construct and operate a series of wind turbines that would harness the natural wind at the proposed KVWPP site in Kittitas County, Washington. The project would install three-bladed wind turbines on tubular steel towers ranging in size from 1.8 MW to 3 MW (generator nameplate capacity) in the project area. Energy from the spinning turbines will be turned into up to 246 megawatts of power. Elements of the project include wind turbine generators, roads, foundations, underground and overhead electrical lines, grid interconnection facilities, one or two substations, an operations and maintenance (O&M) facility, and associated supporting infrastructure and facilities.

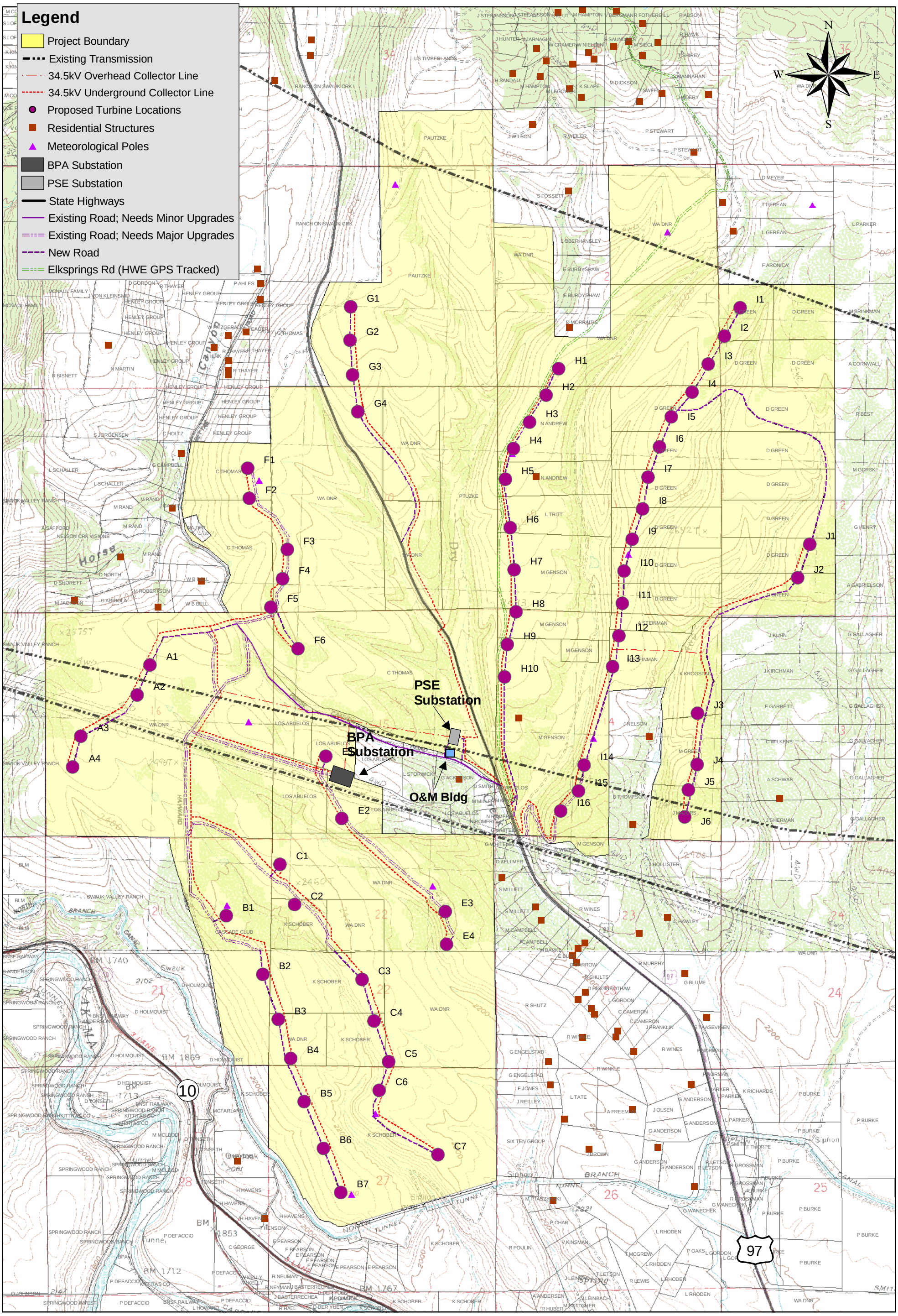
To capture a "reasonable range" of potential project impacts, the Draft EIS defined and evaluated the following three project scenarios:

- Lower End Scenario: The lower end scenario represents the project configuration with the lowest number of turbines erected. For turbines with a nameplate capacity of 3 MW, up to 82 turbines would be used, resulting in nameplate capacity of 246 MW.
- Middle Scenario: For turbines with a nameplate capacity of 1.5 MW each, 121 turbines would be used for a total for a total of 181.5 MW. This scenario is illustrated in Figure 2-1.
- Upper End Scenario: The upper end scenario represents the project configuration with the highest number of turbines erected. For turbines with a nameplate capacity of 1.3 MW each, up to 150 turbines would be used, resulting in a project total nameplate capacity of 195 MW.

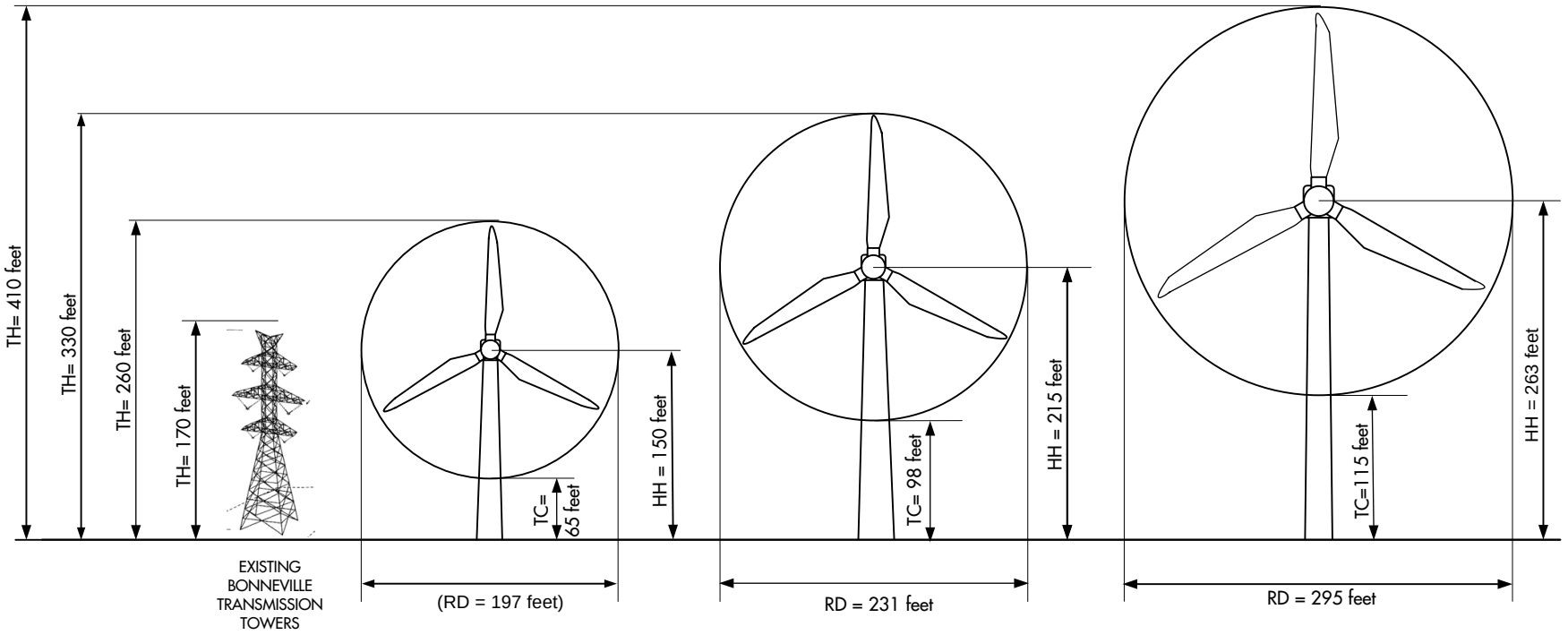
With its submittal of the Development Activities Application (DAA) to Kittitas County, Sagebrush Power Partners has indicated that the project would most likely implement turbines ranging in size from 1.8 MW to 3 MW, i.e. a configuration in the Middle to Lower End Scenario range. In the DAA Sagebrush requests to construct a maximum of 80 turbines with a maximum project nameplate capacity up to 246 MW.

Addendum Figure 2-1 illustrates the general site layout of these key elements as revised in the October 2005 DAA. Addendum Figure 2-2 illustrates the maximum dimensions not be exceeded of the three project scenarios.

Tables 2-1 and 2-2 of the Draft EIS summarized the proposed project facilities and the total area that would be permanently and temporarily occupied, respectively, by each project element for the three defined project scenarios. The data presented for the Middle and Lower End Scenarios does not change with the revised turbine layout. The permanent project footprint (for the life of



Addendum Figure 2-1:
Kittitas Valley Wind Power Project
Revised Site Layout
Source: Schafer 2005i



Source: Sagebrush Power Partners LLC 2003a, 2005a

HH hub height
RD rotor diameter
TC tip clearance
TH tip height

Addendum Figure 2-2:
TYPICAL WIND TURBINE DIMENSIONS

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the project) would occupy between 93 and 118 acres for wind turbines, access roads, substations, and other facilities. Between approximately 231 and 371 acres would be temporarily occupied during construction by facilities such as staging areas and equipment laydown areas. The only features that would vary in size between the project scenarios would be the temporary laydown areas at each wind turbine during construction and the permanent roadway and turbine and transformer pad footprints; under the lower end scenario, roads would be wider to accommodate larger construction cranes. The amount of land disturbance required for the operations and maintenance facility, substations, and meteorological towers would not change under the three scenarios.

Up to 80 turbines would be arranged in numerous "strings" labeled A through J throughout the project site, for a maximum of 23 total miles of turbine strings (Addendum Figure 2-1). The length of the 9 turbine strings would remain constant under the three project scenarios; only the density of turbines sited within each string would change. The height of the turbines (referred to as the "tip height") would range from about 260 feet to 410 feet from the ground to the blade tip in its highest position, depending on the turbine size selected (see Addendum Figure 2-2). In any scenario chosen by the Applicant only a single size of turbines would be used; different sizes of turbines would not be mixed.

The Draft EIS reported that up to 7 miles of existing private roads would be improved, and up to 19 miles of new access roads would be constructed to access and service the wind turbines and other facilities at the site. With the project layout revisions, the miles of new road would be reduced to approximately 13. One O&M facility, approximately 5,000 square feet on a 2-acre site, also would be constructed. Electrical lines would be installed to connect the turbines and strings (see Addendum Figure 2-1). Lines connecting individual turbines in each string would be located underground, and lines connecting the strings primarily would be underground with some overhead.

2.2 Project Location and Project Site

This section of the Addendum updates the description of project location and project site presented in Section 2.2.2 of the Draft EIS.

The project is located on open ridgetops between Ellensburg and Cle Elum, about 12 miles northwest of the City of Ellensburg in Kittitas County, Washington. The estimated 90-acre project site lies within an area covering approximately 3.5 miles (east-west) by 5 miles (north-south). For purposes of this EIS, the terms "project site" and "project area" are defined as follows:

- Project site: Actual locations within the project area where construction and operation activities would occur. As explained in more detail below, the project site will change with the revised KVWPP layout.
- Project area: The general area that surrounds the project site; this includes the tax parcels where all project facilities are proposed. The project area has not changed as a result of the October 2005 revised KVWPP layout.

Project site ridges rise as high as 1,300 feet above the surrounding valley floor. Strong northwest winds in the project area are compressed as they pass by Lookout Mountain and are further accelerated as they pass over the site's ridgetops. The center of the site is located approximately at the intersection of the main Bonneville Power Administration (Bonneville) and the Puget Sound Energy (PSE) east-west transmission line corridors with US 97.

Under the Lower End Scenario, wind turbines would be installed along roadways as shown in Addendum Figure 2-1. The layout design is based on wind turbines with a rotor diameter of approximately 295 feet. Because of possible variances that may be discovered during the final site survey, some flexibility in determining the exact facility locations is required. Generally, it will not be necessary to relocate roads significantly from their proposed locations; however, the exact location of the turbines along the planned roadways may need to be altered from the plan shown in Addendum Figure 2-1 because of a number of factors including:

- The results of geotechnical investigations to be conducted at each surveyed turbine location may reveal underground voids or fractures. In this case, the turbine location may need to be altered or eliminated.
- The final onsite field survey with the meteorologists may dictate that turbines be spaced slightly closer together in some areas and farther apart in other areas.
- Turbine spacing may be adjusted based on the final rotor diameter selected.
- The final field measurement test surveys of communication microwave paths may require that some turbine locations be adjusted slightly to avoid line-of-sight interference.

Given that rotor diameters proposed for the wind turbines would range from approximately 200 feet under the upper end scenario to 295 feet under the lower end scenario, turbines would not vary from their proposed locations by more than 350 feet. Adjustments to final turbine tower locations would not bring them closer to public roads, power lines, property lines of non-participating landowners, or residences; the setbacks currently shown in Addendum Figure 2-1 would be not be reduced.

Addendum Figure 2-1 also shows property ownership at the time the DAA was submitted to Kittitas County.

Project Setbacks

The minimum setbacks incorporated into the proposed project layout are based on several factors, including safety and avoidance of nuisance concerns, industry standards, and on the Applicant's experience in operating wind power projects. Some are fixed distances (i.e., 1,000 feet) that are based on estimates or modeling of potential nuisance impacts such as noise and shadow-flicker. Others, such as tip height, are related 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; see Addendum Figure 2-2.) 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). The proposed setbacks for the project's proposed turbine towers are as

follows (Sagebrush Power Partners LLC 2003c, Section 2.3.12; Sagebrush Power Partners LLC 2005):

- Setback from residences of neighboring landowners (i.e., those without signed agreements with the Applicant): 1,000 feet.
- Setback from property lines of neighboring landowners: this setback has been increased to 541 feet beyond the tip of the blade at its closest point to the property line.
- Setback from residences with signed agreements with the Applicant: At least blade tip height. However, it may be greater based on the property owner's approval. Some landowners want to have turbines closer than 1,000 feet to their residence in exchange for more turbines on their land and the revenue generated by them.
- Setback from property lines of landowners with signed agreements with the Applicant: None. All property owners with signed agreements with the Applicant have agreed to a zero setback from property lines, as this allows the most efficient and lowest impact of wind turbines on various landowners' property.
- Setback from Bonneville/PSE transmission lines: Blade tip height.
- Distance from county/state roads: Turbine tip height.

Minor adjustments would be made to the proposed project layout such as moving the turbine tower foundations to maintain the setbacks described above. The proposed setback for the meteorological towers from public roads and residences is tip height. There are no designated setbacks for the other project components such as the O&M facility, substations, and gravel access roads.

2.3 Facilities

This section of the Addendum updates the description of project facilities presented in Section 2.2.3 of the Draft EIS.

The project would be located on privately-owned open rangeland and rangeland owned by DNR pursuant to leases negotiated between the landowners and the Applicant. These leases would allow construction and operation of wind facilities for a negotiated term. In exchange, each landowner leasing property would receive financial compensation.

The project would consist of wind turbines, associated electrical systems (including an electrical collector system, substations, and interconnection facilities), meteorological towers, access roads, and an operation and maintenance building (see Addendum Figure 2-1). Each of these features is described in more detail below.

Wind Turbines

Wind turbines consist of three main components—the turbine tower, nacelle, and rotor blades.

The design features for the 1.3- to 3-MW wind turbines considered in the Draft EIS (see Draft EIS Table 2-4 below) still represent the boundaries for the project description range, and as a result, only the Tower hub height for the Lower End Scenario has increased by 1 foot.

Revised Draft EIS Table 2-4: Wind Turbine Features, Kittitas Valley Wind Power Project

Design Feature	Description		
	(Upper End Scenario) [1]	Middle Scenario	Lower End Scenario
Rated output of turbine	(1.3 MW)	1.5 MW	3 MW
Number of turbines	(150)	80	80
Axis	(Horizontal)	Horizontal	Horizontal
Rotor orientation	(Upwind)	Upwind	Upwind
Minimum wind speed for turbines to begin operating	(7-10 miles per hour[2])	7-10 miles per hour[2]	7-10 miles per hour[2]
Number of blades	(Three)	Three	Three
Rotor (blade) diameter	(197 feet)	231 feet	295 feet
Tower type	(Tubular steel)	Tubular steel	Tubular steel
Tower hub (nacelle) height	(150 feet)	215 feet	263 feet
Total (tip) height (to top of vertical rotor)	(260 feet)	330 feet	410 feet
Rotational speed	(10-23 rotations per minute)	10-23 rotations per minute	10-23 rotations per minute
Nacelle	(Fully enclosed steel or steel or reinforced fiberglass)	Fully enclosed steel or steel reinforced fiberglass	Fully enclosed steel or steel reinforced fiberglass
Color	(Neutral gray)	Neutral gray	Neutral gray

Source: Sagebrush Power Partners LLC 2003a; Sagebrush Power Partners LLC 2005.

1 With the Revised Development Activities Application, the Applicant no longer proposes the Lower End Scenario as a likely project configuration.

2 Wind turbines rotate in winds as low as 2-3 mph, but generator cut-in occurs at 7-10 mph.

Towers

Towers would be approximately 150 to 263 feet tall at the turbine hub (referred to as the "hub height") under the upper and lower end scenarios, respectively. With the nacelle and blades mounted, the total height of the wind turbine ("tip height") would be approximately 260 to 410 feet with a blade in the vertical position. The towers would be a tubular conical steel structure manufactured in multiple sections depending on the tower height and approximately 12 to 16 feet in diameter at the base. The towers would be painted a neutral gray color to be visually less obtrusive. A service platform at the top of each section would allow for access to the tower's connecting bolts for routine inspection. A ladder inside the structure would ascend to the nacelle to provide access for turbine maintenance. The tower would be equipped with interior lighting and a safety glide cable alongside the ladder.

The towers would be fabricated and erected in two to four sections. Turbine tower sections would be transported to the site on trailers that could each carry one tower section per truck. Tower sections would be delivered by truck to a staging area and then to each tower location. They would be erected using a large construction crane.

Nacelle

The nacelle houses the main mechanical components of the wind turbine generator—the drive train, gearbox, and generator. The nacelle would be equipped with an anemometer and a wind

vane that signals wind speed and direction information to an electronic controller. A mechanism would use electric motors to rotate (yaw) the nacelle and rotor to keep the turbine pointed into the wind to maximize energy capture. An enclosed steel-reinforced fiberglass shell houses the nacelle to protect internal machinery from the elements.

Rotor Blades

Modern wind turbines have three-bladed rotors. The diameter of the circle swept by the blades would range from approximately 200 to 300 feet under the upper and lower end scenarios, respectively (that is, each blade would be approximately 100 to 150 feet long). The blades would turn at about 10 to 23 rotations per minute (RPM). Newer turbines representative of those considered for the Lower End Scenario range turn at about 17 to 20 RPM. Generally, larger wind turbine generators have slower rotating blades, but the specific RPM values depend on aerodynamic design and vary across machines. The rotor blades would be typically made from glass-reinforced polyester composite.

Electrical System

The project's electrical system would have two key elements: (1) a collector system, which would collect energy at between 575 and 690 volts (V) from each wind turbine (depending on the type of turbine used), increase it to 34.5 kilovolts (kV) through a pad-mounted transformer, and connect to the project substations; and (2) the substations and interconnection facilities, which would transform energy from the collection lines (at 34.5 kV) to the transmission level (230 kV for the PSE line and Bonneville's Columbia to Covington line or 287 kV for Bonneville's Grand Coulee to Olympia line). A schematic of the electrical collection system and interconnection facilities was shown in Draft EIS Figure 2-5.

Collector System

Power from the wind turbines would be generated at 575 V to 690 V depending on the type of wind turbine used for the project. A set of heavy gauge, armored, flexible drop cables would connect to the generator terminals in the nacelle and would pass from the nacelle into the tower where they would drop down to a cable support saddle located about 20 to 30 feet below the top tower platform. From the support saddle, the cables would be directed along the inside of the tower, along the internal ladder in cable trays, or they would be hung straight down to the base bus cabinet and breaker panel inside the base of the tower. The drop cables would terminate inside the bus cabinet. Another set of cables would run from the bus cabinet through conduits in the foundation to the pad transformer, ranging in size from 50 to 120 square feet in area; the pad transformer would step up the voltage to 34.5 kV. Some wind turbine generators, such as the Vestas V-80, have the transformer in the nacelle. For the V-80, the drop cables would be at 34.5 kV, and the base bus cabinet would be a switchgear breaker panel. Some generator models may require that the transformer be mounted on an adjacent outdoor concrete pad. (Sagebrush Power Partners LLC 2003c, Section 2.3.4; Sagebrush Power Partners LLC 2005).

From the transformer, power from the turbine would be transmitted by underground 34.5 kV electrical cables installed in a trench typically 3 to 4 feet deep, depending on the underlying soil

and rock conditions, and up to 5 feet wide. Underground collection cables would be used in most areas; overhead collectors on wood structures would be used where there are steep slopes or canyons to cross (see Addendum Figure 2-1). Approximately 23 miles of underground and 2 miles of overhead 34.5 kV electrical power lines would be used to collect power from the turbines and terminate at the main substation.

An estimated 1.2-mile section of the overhead system would be along Bettas Road parallel to two existing sets of overhead transmission lines and the access road that serves them. Another overhead section is proposed to link turbine strings B and C. In the original site layout (Addendum Figure 2-1), this connection was shown as either underground or overhead. Based on subsequent input from the Washington Department of Fish and Wildlife, the Applicant proposes to build this as part of the overhead system to minimize impacts on the riparian habitat between the two ridgetops. For these short overhead portions of the electrical collection system, wooden poles, non-reflective conductors, and non-refractive insulators would be used (Sagebrush Power Partners LLC 2003d). Overhead poles typically would be approximately 60 feet tall and positioned so that poles and electrical conductors are spaced at least 200 feet apart. The poles would be buried 8 to 10 feet deep. Pole insulators would be spaced four feet apart. Anti-perching devices would be installed on the poles to limit potential raptor use.

The electrical collection system would include junction boxes and pad-mounted switchgear panels that would be installed to connect cables coming from different directions and to allow for the isolation of particular turbine strings. In total, it is estimated that 15 junction boxes and 10 switch panels would be required for the electrical collection system (Sagebrush Power Partners LLC 2003c, Section 2.3.4).

Junction Boxes

The junction boxes would be either steel-clad or fiberglass panels mounted on pad foundations roughly 4 feet wide, 6 feet long, and 6 feet high. The pad foundation would have an underground vault about 3 feet deep where the underground cables come in. The junction boxes also would have a buried grounding ring with grounding rods tied to the collection system and a common neutral.

Switch Panels

The switch panels would be steel-clad enclosures mounted on pad foundations roughly 7 feet wide, 7 feet long, and 5 feet high. Switches would allow particular collector lines and turbines strings to be turned off or isolated. This isolation would allow maintenance and repair to take place without shutting down the entire project. The pad foundation would have an underground vault about 3 feet deep where the underground cables come in. Switch panels also would have a buried grounding ring with grounding rods tied to the collection system and a common neutral.

<u>Substations and Interconnection Facilities</u>

The Applicant is seeking a permit for and is designing the project so that it could interconnect with either the PSE or Bonneville electrical transmission lines traversing the site or possibly both. If connected to Bonneville's system, the project would interconnect directly with either the

Grand Coulee to Olympia 287-kV line or the Columbia to Covington 230-kV line. If connected to PSE's system, the project would interconnect directly with PSE's Rocky Reach to White River 230-kV line. There is the possibility that power would be fed to both the PSE and Bonneville systems; therefore, this analysis evaluates the need to construct two substations since the lines have different voltages.

The Applicant would build and maintain up to two fenced substation sites, each occupying approximately 3 acres. The proposed PSE substation would be in the northwest corner of the intersection of US 97 and Bettas Road, and the Bonneville substation would be approximately 2,200 feet southwest of the PSE substation, south of Bettas Road near the Bonneville transmission lines. The main function of the substations and interconnection facilities would be to step up the voltage from the collection lines (at 34.5 kV) to the transmission level (230 or 287 kV) to interconnect to the appropriate utility grid. The basic elements of the substation and interconnection facilities are a control house, two main transformers, outdoor breakers, relaying equipment, steel support structures, and overhead lightning suppression conductors. All of the elements would be installed on concrete foundations designed for site-specific soil conditions.

Meteorological Towers

Meteorological towers are used to measure wind conditions, including wind speed, direction, and temperature. The Applicant proposes to erect up to nine permanent meteorological towers in the project area, although it is likely that only four would be constructed. The potential location of the nine proposed permanent meteorological towers is shown in Figure 2-1. The permanent meteorological towers installed for the project would be approximately as tall as the turbine tower hub height (i.e., 150 to 262 feet) and would consist of a central lattice structure supported by three to four sets of guy wires that extend up to 100 to 210 feet from the base of each tower, on a 16-foot-by-16-foot base. The towers may alternatively be of a free-standing design. The meteorological towers would be constructed upwind of turbine strings or groups of turbine strings to monitor wind strength and to confirm turbine performance. Meteorological towers greater than 200 feet in height would require lighting in compliance with the Federal Aviation Administrations' (FAA) aviation safety lighting requirements (see the lighting discussion below for further detail).

Meteorological towers would be installed with a grounding system that protects the meteorological sensors and loggers from electrostatic discharge and lightning. Lightning dissipaters or rods would be installed at the tops of the towers to provide an umbrella of protection for the upper sensors (Sagebrush Power Partners LLC 2003c, Section 2.3.8).

Access Roads

Access to the various rows of turbines would be achieved by graveled access roads branching from US 97 and two county roads - Bettas and Hayward Roads. The project would improve some existing private roads and construct new gravel roads to provide access for construction vehicles and equipment. Up to approximately 7 miles of existing private roads would need to be improved and up to 19 miles of new roads would be constructed. Under the revised KVWPP layout, the length of new roads would be decreased from 19 miles to approximately 13 miles

(Schafer 2005f). The roads would be 24 feet wide including shoulders for small wind turbine generators (i.e., under the middle and upper end scenarios) and 34 feet wide including shoulders for larger wind turbine generators (i.e., under the lower end scenario) with a compacted gravel surface. In areas of steeper grades, a cut and fill design would be implemented to keep grades below 15% and to prevent erosion. After the project is constructed, use of the improved and new access roads on private lands would be limited to the landowner and to project maintenance staff.

Operation and Maintenance Facility

A permanent O&M facility would be constructed near the northwest corner of US 97 and Bettas Road. It would consist of approximately 5,000 square feet of enclosed space, including offices, spare parts storage, kitchen, restrooms, and a shop area. Water for the bathroom and kitchen would be obtained from a new domestic well; anticipated water use would be less than 1,000 gallons a day. Wastewater from the facility would be discharged to an onsite domestic septic system. There also would be graveled outdoor parking, a turnaround area for larger vehicles, outdoor lighting, and gated access with either partial or full perimeter fencing. The overall area of the building and parking would be approximately 2 acres. Vehicle access to the O&M facility would occur from Bettas Road.

Information Kiosk

An information kiosk and public viewing area near the proposed O&M facility off Bettas Road would be constructed. Signs would be provided to direct tourists to this site (Sagebrush Power Partners LLC 2003c, Section 5.3). Vehicle access to the information kiosk and public viewing area would occur from Bettas Road at the same location as the access to the O&M facility.

Safety Features and Control Systems

Turbine Control Systems

Wind turbines would be equipped with sophisticated computer control systems that would constantly monitor variables such as wind speed and direction, air and machine temperatures, electrical voltages, currents, vibrations, blade pitch, and yaw angles. The main function of the control system would be nacelle and power operations. Generally, nacelle functions include yawing the nacelle into the wind, pitching the blades, and applying the brakes if necessary. Power operations controlled at the bus cabinet inside the base of the tower include operation of the main breakers to engage the generator with the grid as well as control of ancillary breakers and systems. The control system would always run to ensure that the machines operate efficiently and safely.

Each turbine would be connected to a central Supervisory Control and Data Acquisition (SCADA) system. The SCADA system would allow for remotely controlling and monitoring individual turbines and the wind plant as a whole from both the central host computer or from a remote personal computer. In the event of faults, the SCADA system can also send signals to a fax, pager, or cell phone to alert operations staff. The turbine towers and foundations would be designed to survive a gust of wind more than 90 miles per hour (mph) with the blades pitched in

their most vulnerable position, a speed which exceeds the 100-year expected peak gust of 73 mph in the project area and the recent maximum recorded gust of 56 mph.

Braking Systems

The turbines would be equipped with two fully independent braking systems that can stop the rotor either acting together or independently. The braking system is designed to be fail-safe, allowing the rotor to be brought to a halt under all foreseeable conditions. The system would consist of aerodynamic braking by the rotor blades and by a separate hydraulic disc brake system. Both braking systems would operate independently such that if there is a fault with one, the other can still bring the turbine to a halt. Brake pads on the disc brake system would be spring loaded against the disc, and power would be required to keep the pads away from the disc. If power is lost, the brakes would be mechanically activated immediately. The aerodynamic braking system also would be configured such that if power is lost it would be activated immediately using back-up battery power or the nitrogen accumulators on the hydraulic system, depending on the turbine's design.

After an emergency stop is executed, remote restarting is not possible. The turbine must be inspected in person and the stop-fault must be reset manually before operation could be reactivated. The turbines also would be equipped with a parking brake used to keep the rotor stationary while maintenance or inspection is performed.

Built-in Fire Safety

Each turbine's nacelle would be equipped with an internal fire detection system with sensors located in the nacelle as well as at the tower base. The fire detection system would be connected to the main controller and the central SCADA system. In the event of a fire, the turbine would be immediately halted and an alarm activated in the control system that can send a page or message to a cell phone of the on-call operators and/or the local fire district as required.

Climbing Safety

Normal access to the nacelle would be accomplished with a ladder inside the tower. Standard tower hardware would include equipment for safe ladder climbing including lanyards and safety belts for service personnel. Internal ladders and maintenance areas inside the tower and nacelle would be equipped with safety provisions for securing lifelines and safety belts.

Lightning Protection

The turbines would be equipped with an engineered lightning protection system that connects the blades, nacelle, and tower to a grounding system at the base of the tower. The grounding system would include a copper ring conductor connected to grounding rods driven down into the ground at diametrically opposed points outside the tower foundation. The system would provide a firm grounding path to divert harmful stray surge voltages away from the turbine. The blades would be constructed with an internal copper conductor and an additional lightning rod that extends

above the wind vane and anemometer at the rear of the nacelle; both would have conductive paths to the nacelle bed frame, which in turn would connect to the tower.

Lighting

The Draft EIS explained that to comply with the Federal Aviation Administration's (FAA) aviation safety lighting requirements, the project turbines and met towers greater than 200 feet tall must be marked with lights. The Draft EIS anticipated that white lights would be required during the day, and red lights at night. The lights would be designed to concentrate the beam in the horizontal plane, minimizing light diffusion downward toward the ground and upward toward the sky.

Under recently released guidelines, the FAA would no longer require daytime lighting of the turbines if turbines are painted a light color. Nighttime lighting would be limited to the first and last turbine of every string, and to turbines located every 1000 to 1400 feet between the ends of the strings (Patterson 2005). As a result of these FAA changes, the KVWPP would no longer install white daytime aviation warning lights, and the number of red nighttime aviation warning lights would be significantly reduced. For example as shown in Addendum Figure 3.9-6, only 16 nighttime warning lights would be required.

The substations and O&M facility would be equipped with nighttime and motion-sensor lights for safety and security. Sensors and switches would be used to keep lights turned off when not required. Emergency lighting with back-up power is included to allow personnel to perform manual operations during an outage of normal power sources.

2.4 Construction Activities; Operation and Maintenance Activities; Decommissioning

The October 2005 revision to the KVWPP layout does not affect the description given in the Draft EIS of Construction Activities (Section 2.2.4 of the Draft EIS), Operation and Maintenance Activities (Section 2.2.5 of the draft EIS), and Decommissioning (Section 2.2.6 of the Draft EIS).

2.5 Analysis of off-site alternatives in the Draft Supplemental EIS

The description of the KVWPP given in the Supplemental Draft EIS was included to give context to the description of the affected environment and impacts of potential wind power projects on other hypothetical sites. Revisions to the KVWPP layout do not affect the analysis of off-site alternatives.

CHAPTER 3: IMPACTS TO THE ENVIRONMENT

In order to assist the reader to identify the project elements that have changed, text relating to changes to the project has been underlined in sections that substantially repeat information originally presented in the Draft EIS.

3.1 EARTH RESOURCES

3.1.1 Affected Environment

Because the description of the affected environment is based on the geological resources of the project area as a whole, it is not influenced by the shortening, elimination and repositioning of turbine strings. Soils maps presented in the Draft EIS and in Attachment 7 of the *Responses to Initial Completeness Report* assessed the geological features of the project site in all turbine strings and locations proposed in the revised KVWPP layout (Sagebrush Power Partners 2003a; 2003c).

3.1.2 Impacts of Proposed Action

The discussion of impacts in the Draft EIS to earth resources of the Proposed Action continues to adequately capture the full range of potential impacts that may result from construction, operation and decommissioning of the KVWPP in its revised layout. Geologic hazards different from those on the remainder of the site have not been identified at the new turbine locations. The total lineal feet of turbine strings, roads and electrical collection systems will be lower overall under this revised layout, as will the acreage of earth resources impacted both temporarily and permanently. Therefore, the analysis in the Draft EIS remains conservative, and does not underestimate any of the potential impacts.

3.1.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.

3.1.4 Mitigation Measures

Because new impacts have not been identified, additional mitigation measures are not warranted.

3.1.5 Significant Unavoidable Adverse Impacts

The Draft EIS concluded that no significant unavoidable adverse impacts on earth resources are identified. No additional unavoidable adverse impacts on earth resources as a result of the project layout revisions are identified. Project design and implementation of the mitigation measures described in the Draft EIS would continue to minimize impacts from erosion or natural hazards such as earthquakes and volcanic eruption.

3.2 VEGETATION, WETLANDS, WILDLIFE AND HABITAT, FISHERIES, AND THREATENED AND ENDANGERED SPECIES

3.2.1 Background

Section 3.2.1 of the Draft EIS contained information on the vegetation and wildlife survey methods employed, and the pertinent Federal and State Laws and Regulations regarding impacts to habitat, fish and wildlife. The surveys completed for the project included the entire project area. Therefore the information regarding the affected environment and impacts of construction, operation and decommissioning of the KVWPP is unchanged as a result of the turbine layout revision, with the exception of the discussions below regarding vegetation and the white-margined knotweed.

3.2.2 Affected Environment

Vegetation

Overall, the information in the Draft EIS continues to represent the vegetation communities in the project area, and on the revised project site. As indicated in Figure 3.2-1 of the Draft EIS, areas with new turbine locations, namely the northward extension of String I and the new String A were already surveyed and documented. Vegetation in the northward extension of String I is the same as described in Table 3.2-1. Table 3.2-1 can however be revised to include a description of the new String A, as follows, with the previous A and D strings being deleted.

Revised Table 3.2-1: Summary of Habitats Associated with the Proposed Turbine Strings of the Project

Facility	Habitat Description
Turbine String A	In this string shallow-soiled lithosol alternates with deeper-soiled shrub-steppe habitat. Habitat quality is generally good: native species dominate the shallow soils, and native shrubs and forbs combine with native and non-native grasses to dominate the deeper soils.
Turbine String B	The north half of this string is located on a mosaic of shallow-soiled rocky areas and deeper-soiled shrub-steppe habitat. Habitat quality is generally good: native species dominate the shallow soils, and native shrubs and forbs combine with native and non-native grasses to dominate the deeper soils. Various limited ground and vegetation disturbance has occurred here from recreational activities (gun club). One noxious weed population was observed along a jeep trail that runs along this section of the proposed string. The south half of this string contains the same mosaic of shallow and deeper soils, however, a fire within the last 10 years has removed most of the shrubs, and the habitat now consists of a mix of native and non-native grasses and forbs, with widely scattered small shrubs. Habitat quality is generally fair. Weedy species are more common in the deeper-soiled areas, and several populations of noxious weeds are present.
Turbine String C	Shallow-soiled grassland and lithosol alternates with deeper-soiled shrub-steppe habitat. Habitat quality is generally good: native species dominate the shallow soils, and native shrubs and forbs combine with native and non-native grasses to dominate the deeper soils.

Revised Table 3.2-1 (continued): Summary of Habitats Associated with the Proposed Turbine Strings of the Project

Facility	Habitat Description
Turbine String E	This string consists mainly of deeper-soiled shrub-steppe habitat, with inclusions of shallow-soiled lithosol in the north half, and small patches of non-native species throughout. Much of the habitat in the string is in fair to good condition (i.e., dominated by native shrubs and forbs, and a mix of native and non-native grasses), although some areas have been burned recently, and one noxious weed population is present along the jeep trail, which runs the length of the ridgetop.
Turbine String F	This string contains mainly shallow-soiled lithosols, with some areas of deeper-soiled shrub-steppe in the south half. Habitat quality is generally good: native species dominate the shallow soils, and native shrubs and forbs combine with native and non-native grasses to dominate the deeper soils. However, a large gravel pit operation at the north end of this string has completely displaced the lithosol habitat in that area. A rough jeep trail runs the length of this proposed string.
Turbine String G	This string consists almost entirely of shallow-soiled lithosol habitat, with small areas of deeper-soiled shrub-steppe and deciduous thicket habitats in the north half and at the south end. Habitat quality is generally good: native species dominate the shallow soils, and native shrubs and forbs combine with native and non-native grasses to dominate the deeper soils. Two noxious weed populations were observed, one along a road at the north end of the string, and another in a small draw near the south end of the string. A well-developed jeep trail is present along the north half of the corridor.
Turbine String H	This string also consists almost entirely of shallow-soiled lithosol habitat, with areas of deeper-soiled shrub-steppe habitat at the north end, midpoint, and the south end. Habitat quality is generally good: native species dominate the shallow soils, and native shrubs and forbs combine with native and non-native grasses to dominate the deeper soils. However, there are two areas of major soil disturbance (blading) near the midpoint of the string, where the lithosol species have been largely replaced by non-native forbs and grasses. In addition, three populations of noxious weeds were observed along this string, near roads. Finally, one portion of the lithosol in the south end shows signs of heavy livestock use, although native plants continue to dominate. A well-developed two-lane gravel access road runs the length of this ridgetop, providing access for local landowners.
Turbine String I	This string consists primarily of shallow-soiled lithosol habitat, although portions of the middle section, and the entire southern tip, contain deeper-soiled shrub-steppe habitat, as well as small inclusions of grassland. Habitat quality is generally good: native species dominate the shallow soils, and native shrubs and forbs combine with native and non-native grasses to dominate the deeper soils. However, the areas of grassland are only of fair quality; they are dominated by non-native grasses and forbs, and one noxious weed population was observed at the south end of the string.
Turbine String J	The south half of the string is located mainly on deeper-soiled shrub-steppe habitat, with one area of shallow-soiled lithosol. Habitat quality is generally good: native species dominate the shallow soils, and native shrubs and forbs combine with native and non-native grasses to dominate the deeper soils. However, the south tip of the string consists of fair quality, shallow-soiled grassland dominated by non-native grasses and forbs. Two populations of noxious weeds were observed in this half of the string. The north half of this string contains the same general pattern of shallow and deeper soils; however, a fire within the last 5-10 years removed most of the shrubs, and the deeper-soiled habitat now consists of a mix of native and non-native grasses and forbs, with widely scattered small shrubs. Although overall habitat quality is fair, several small inclusions of generally good quality lithosol are present in this half of the string.

Revised Table 3.2-1 (continued): Summary of Habitats Associated with the Proposed Turbine Strings of the Project

Facility	Habitat Description
Intervening Facilities (access roads, electric lines, O&M facility, etc., located between turbine strings)	More than 40% of the potential project impact corridors are located off of the ridgetops, between the turbine strings. Primarily, these are connecting facilities such as access roads and electrical lines, but this percentage includes O&M areas also. These non-ridgetop habitats are typically deeper-soiled, and are generally more degraded from past disturbance than the ridgetop habitats. This is especially true in the valley bottoms, where cattle grazing and road impacts have created large areas dominated by non-native invader species. Overall, the non-ridgetop habitats within the impact corridors are in fair condition. However, habitat quality ranges from poor in many of the valley bottoms, to good on some of the canyon slopes.

Source: Sagebrush Power Partners LLC 2003a; Schafer 2005e.

3.2.3 Impacts of Proposed Action

With the exception of impacts to the white-margined knotweed and potential stream crossings discussed below, the discussion in the Draft EIS of impacts to Wetlands, Wildlife, Habitat, Fisheries, and other Threatened and Endangered Species is representative of the entire project area and remains applicable to the Project in its revised layout.

Impacts to fixed terrestrial species depends on disturbance of habitat. Habitats where revised turbine locations are being proposed have been analyzed, and no species has been identified that would bear a significant adverse environmental impact. The acreage disturbed under the Middle and Lower End Scenarios has not changed; therefore, no new impacts are expected to fixed terrestrial species.

Impacts to fisheries depend on direct impacts to wetlands or streams due to siting of project facilities, and potentially indirect impacts due to migration of pollutants form the project site to fish bearing waters located outside the project area. The discussion ion the Draft EIS regarding indirect impacts remains applicable; with the mitigation measures proposed, fish bearing waters and streams would not be impacted by construction and project operation in the project area.

The Applicant has reviewed aerial photography and site notes form previous surveys for the "A" string (Schafer 2005h). A previous memorandum had identified a potential stream crossing in the vicinity of the "A" string. (Sagebrush Power Partners LLC 2003c; Attachment 3 to Kittitas Valley Wind Power Project Responses to Initial Completeness Report). The Applicant's proposal for mitigating the crossing was in accordance with the requirements of The U.S. Army Corps of Engineers' (Corps) applicable Nationwide Permit 12, and the Corps issued a permit allowing the crossing at this location.

The revised "A" turbine string would cross the same stream at a location approximately 0.3 miles above the location previously identified. Both the stream's characteristics and the method of crossing are substantially similar to that described in the Applicant's request for coverage under the Nationwide Permit granted by the Corps. No other wetland or potentially sensitive areas have

been identified near this new crossing. Once mitigated by the proper crossing construction methods it is unlikely that the crossing would have a significant adverse environmental impact. However, the Applicant would be required to seek amendment of the coverage received from the Corps under Nationwide Permit 12 to include this new crossing.

Impacts to avian species were a function of the total number of turbines, and turbine dimensions. The effect of turbine dimensions, and the Lower End Scenario in particular, was analyzed by the Applicant and documented in the Draft EIS. With the revised layout, it is likely that fewer turbines would be built. Therefore impacts to avian species will not increase as a result of the layout revision. Impacts for the Middle Scenario are therefore conservatively higher, and impacts for the Lower End Scenario are about the same as presented in the Draft EIS.

Although potential impacts to large wildlife (Elk and Mule Deer) were identified and discussed in the Draft EIS, these impacts were not specific to unique turbine locations. It is therefore also unlikely that the revised layout would increase impacts to these species.

Threatened and Endangered Species

The location of new turbines in strings I and A is not incompatible with any use of the project area by Threatened or Endangered Species, either because no use is made, or because use by the species is sufficiently removed in distance.

Plant Species

The Draft EIS indicated that one species that was recently removed from the Washington State review list was found within, or immediately adjacent to, the project area. The species, white-margined knotweed (*Polygonum polygaloides* ssp. *kelloggii*), was found in the project area in vernally moist draws and swales. However, since the original 2002 rare plant surveys were conducted, white-margined knotweed has been dropped from the Washington Natural Heritage Program list.

Based on the delineation of white-margined knotweed populations presented in the Application for Site Certification (Sagebrush Power Partners LLC 2003a, Attachment 8), the re-orientation of strings previously labeled A and D into the new A string could impact a greater proportion of the knotweed population identified in the project area. However, given that this plant has been dropped from the Washington State "review" list, and that the Application survey identified additional nearby populations (with plant numbers approximately 25 times more numerous than in the project area), a significant adverse impact to this species is neither probable nor expected.

3.2.4 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.

3.2.5 Mitigation Measures

Because new impacts have not been identified, additional mitigation measures are not warranted.

3.2.6 Significant Unavoidable Adverse Impacts

The Draft EIS concluded that with implementation of the recommended mitigation measures and avoidance, when possible, of sensitive areas such as stream and riparian corridors, no significant, unavoidable adverse impacts on wetlands, wildlife and habitat, fish, and threatened and endangered species are identified. Fish-bearing aquatic resources are not located within about 0.5 mile of the project area. Breeding and foraging habitat typically associated with federally listed threatened and endangered species would not be disturbed under the proposed project. While potential bald eagle fatalities associated with operation of the project are possible, the likelihood is considered remote because there have been no documented bald eagle fatalities at other wind power projects in the United States.

Total temporary upland vegetation habitat disturbance would range from 231 acres under the lower end scenario to 370 acres under the upper end scenario. Total permanent habitat disturbance would range from 92.5 acres under the middle scenario to 118 acres under the lower end scenario. The temporary and permanent disturbance of upland vegetation habitat would be compensated for by the mitigation proposal to purchase and protect an approximately 550-acre parcel with equal or better functional habitat characteristics as the project area.

No additional unavoidable adverse impacts on wildlife resources as a result of the KVWPP layout revisions are identified. Project design and implementation of the mitigation measures described in the Draft EIS would continue to minimize impacts to wetlands, wildlife and habitat, fish, and threatened and endangered species.

3.3 WATER RESOURCES

3.3.1 Affected Environment

The description of the affected environment is based on the water resources of the project area as a whole, and is not influenced by the shortening, elimination and repositioning of turbine strings. As discussed above in Section 3.2.3, the Applicant has confirmed that new turbine locations along string A would displace the crossing of a an ephemeral stream (Shafer 2005h). Jurisdictional waters were also identified in the vicinity of string I, and these have been described in the Draft EIS.

3.3.2 Impacts of Proposed Action

The discussion of impacts to water resources of the Proposed Action continues to adequately capture the full range of potential impacts that may result from construction, operation and decommissioning of the KVWPP in its revised layout. New turbine locations will not be sited in or near jurisdictional waters. Stream crossings will employ crossing construction methods

approvable under the U.S. Army Corps of Engineer's Nationwide Permit 12. Revision of turbine locations does not entail changes in water use or discharge either during construction or operation.

3.3.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.

3.3.4 Mitigation Measures

Because new impacts have not been identified, additional mitigation measures are not warranted.

3.3.5 Significant Unavoidable Adverse Impacts

The Draft EIS concluded that with implementation of the mitigation measures described in Section 3.3 of the Draft EIS, significant unavoidable adverse impacts on surface water and groundwater resources resulting from project operation are not anticipated.

No additional unavoidable adverse impacts on water resources as a result of the KVWPP layout revisions are identified.

3.4 HEALTH AND SAFETY

3.4.1 Affected Environment

Because the description of the affected environment is based on the resources of the project area as a whole, it is not influenced by the shortening, elimination and repositioning of turbine strings.

3.4.2 Impacts of Proposed Action

Several of the health and safety impacts described in the Draft EIS are directly associated with the turbine layout in the project area. The following construction and operation impacts could occur regardless of turbine locations, and do not depend on turbine layout: risk of fire and explosion; releases or potential releases of hazardous materials to the environment; dust hazards; vandalism; electric and magnetic fields; and electrical shock hazards. The impacts and risk of such hazards would not increase as a result of the revisions to the KVWPP layout. Some of these hazards may decrease if fewer turbines, miles of interconnection facilities, and project roads are constructed.

The Draft EIS identified the following health and safety risks that could cause impacts that may depend on turbine layout: risk of ice throw from turbine blades; risk of turbine tower collapse; risk of turbine blade throw; and shadow flicker effects.

Impacts associated with ice throw, tower collapse and blade throw are mitigated both by intrinsic design of the turbine towers, blades and other components, and setbacks incorporated into the layout to separate the turbines from sensitive areas. The Draft EIS determined that the setbacks proposed in the Application for Site Certification were adequate for the protection of the public from such impacts. Furthermore, as indicated in Section 2.2 above, the Applicant proposes to increase the setback from property lines of neighboring landowners from 50 feet to 541 feet.

Impacts of shadow flicker effects depend on turbine layout. The Applicant has modeled the shadow flicker impacts of the revised turbine layout (Nielsen 2005). Addendum Appendix A contains:

- Contour maps of the expected number of hours of shadow flicker for some residences in and around the project area for the revised KVWPP layout;
- Contour maps for the layout presented in the ASC for the Lower End and Middle scenarios. (Young, June-October 2003)

Table 3.4-2 of the Draft EIS has also been revised as shown below to compare the shadow flicker data from the revised layout and the layout presented in the Application for Site Certification (Witherspoon 2005). Review of these contour maps and the Revised Table 3.4-2 indicates the following:

- 12 of the 20 receptors evaluated in Revised Table 3.2-4 would experience the same or less time of shadow flicker with the revised KVWPP layout;
- 8 of the 20 receptors evaluated in Table 3.2-4 would experience more shadow flicker with the revised KVWPP layout, with receptors Zellmer, Gaskill, Taylor, Schwab and Andrew experiencing the greatest increases.

Based on comparison of shadow flicker contour maps that appeared in Appendix B of the Draft EIS, and new contour maps presented by the Applicant for the revised KVWPP Layout (Addendum Appendix A), the distribution of shadow flicker effects from the turbine strings would change as follows:

- Turbine string A (previously strings A and D) would decrease;
- Turbine string G would have no impact in the north portion of the KVWPP where turbines have been removed, and would remain approximately the same (west side of string) or decrease (east side of string) in the south portion;
- Turbine string H would have no impact in the north portion where turbines have been removed, and would remain approximately the same in the south portion;
- Turbine string I would increase in the northern portion where turbines have been added (Green property) , and would remain the same in the southern portion;
- Turbine strings B, C, E, F, J would remain approximately the same.

However, as shown in Revised Table 3.4-2, impacts to individual receptors may differ from the more general geographical distribution of effects.

Revised Draft EIS Table 3.4-2: Kittitas Valley Wind Power Project Wind Turbine Shadow-Flicker Analysis for Selected Receptors

Residence	Residence Number and Primary Direction to Turbine(s) [1]	Expected shadow hours per year [hours:minutes / year]			Maximum days per year shadow could be experienced [days / year]			Maximum shadow hours per day [2] [hours:minutes / day]		
Project Layout		2003 Application		Revised Layout [4]	2003 Application		Revised Layout [4]	2003 Application		Revised Layout [4]
Rotor Diameter		235 ft	295 ft	295 ft	235 ft	295 ft	295 ft	235 ft	295 ft	295 ft
N Andrew	050 E	34:30	24:36		310	192		0:28	0:32	
(Participating)	050 W	38:30	68:02		252	222		0:56	1:06	
	total for residence [3]	app 45:00	app 75:00	84:07	app 350	app 280	297	app 1:14	app 1:30	1:44
Archambeau	042 E	36:03	40:35		312	303		0:48	1:00	
	042 S	21:44	27:55		187	207		0:48	1:00	
	total for residence [3]	app 38:00	app 42:00	16:32	app 320	app 310	140	app 0:50	app 1:00	0:24
Anthony	043 E	44:27	36:06	29:42	335	254	247	0:48	0:50	0:40
Burt	084 SW	14:42	10:18	15:25	139	122	198	0:24	0:20	0:22
M Campbell	082 SW	17:01	11:57	22:29	178	155	233	0:30	0:26	0:42
Darrow	086 SW	16:39	12:58	16:00	118	112	183	0:26	0:22	0:22
Gaskill	044 E	16:57	16:57	28:55	137	137	247	0:28	0:28	0:38
Genson	049 E	47:34	54:01		251	252		0:40	0:52	
(Particpating)	049 W	46:07	68:12		95	113		1:12	1:28	
	total for residence [3]	app 50:00	app 70:00	30:54	app 260	app 260	257	app 1:40	app 2:20	1:06
L Gerean	059 W	39:24	15:05	0:08	171	62	16	0:42	0:44	0:04

Sources: Witherspoon 2005; Schafe. 2005b.

1 Residence number refers to labels on shadow flicker contour maps in Appendix A. A residence may experience shadow flicker from different turbines.

2 Maximum hours per day is most conservative estimate and does not take into account weather conditions that would decrease duration of shadow flicker.

3 "app" indicates approximate. Shadow flicker from different directions may be experienced by the residence at the same time, thereby reducing total time the residence experiences flicker.

4 Updated version of software used for assessment of revised turbine layout calculates exact duration of shadow flicker experienced by a residence from multiple turbine directions.

Revised Draft EIS Table 3.4-2 (Continued): Kittitas Valley Wind Power Project Wind Turbine Shadow-Flicker Analysis for Selected Receptors

Residence	Residence Number and Primary Direction to Turbine(s) [1]	Expected shadow hours per year [hours:minutes / year]			Maximum days per year shadow could be experienced [days / year]			Maximum shadow hours per day [2] [hours:minutes / day]		
Project Layout		2003 Application		Revised Layout [4]	2003 Application		Revised Layout [4]	2003 Application		Revised Layout [4]
Rotor Diameter		235 ft	295 ft	295 ft	235 ft	295 ft	295 ft	235 ft	295 ft	295 ft
T Gerean	058 W	82:58	83:45	0:00	295	199	0	1:08	1:20	0:00
Nelson	417 E	45:06	45:12		237	222		0:42	0:54	
	417 W	38:58	25:12		240	186		0:42	0:48	
	total for residence [3]	app 60:00	app 70:00	41:10	app 290	app 240	220	app 1:20	app 1:40	1:30
Pearson North	047 E	19:16	20:49	21:38	201	170	160	0:30	0:34	0:34
Pearson South	118 E	8:32	18:28	8:46	92	126	75	0:34	0:32	0:28
Price	080 N	0:00	0:00	0:00	0	0	0	0:00	0:00	0:00
Rainbow Valley	041 E	22:53	22:23		267	234		0:22	0:26	
Ranch	041 S	14:28	14:34		185	174		0:22	0:26	
	total for residence [3]	app 24:00	app 25:00	12:18	app 270	app 240	134	app 0:25	app 0:30	0:28
Robertson	555 E	26:06	25:38	17:06	208	144	149	0:42	0:50	0:26
Schwab	215 W	21:27	21:27	35:52	166	166	192	0:30	0:30	0:42
Bell (was Taylor)	045 E	22:38	25:41		177	202		0:30	1:00	
	045 S	10:47	6:32		90	92		0:30	1:00	
	total for residence [3]	app 23:00	app 28:00	39:44	app 180	app 202	240	app 0:30	app 1:00	0:40
Thompson (was Geisick)	117 E	42:31	36:46		177	128		0:48	1:00	
	117 W	12:22	11:54		63	56		0:34	0:38	
	total for residence [3]	app 43:00	app 47:00	56:40	app 180	app 130	162	app 1:10	app 1:40	1:30
Zellmer	048 SW	13:54	10:04	25:24	179	150	273	0:34	0:30	0:50

Sources: Witherspoo. 2005; Schafe. 2005b.

1 Residence number refers to labels on shadow flicker contour maps in Appendix A. A residence may experience shadow flicker from different turbines.

2 Maximum hours per day is most conservative estimate and does not take into account weather conditions that would decrease duration of shadow flicker.

3 "app" indicates approximate. Shadow flicker from different directions may be experienced by the residence at the same time, thereby reducing total time the residence experiences flicker.

4 Updated version of software used for assessment of revised turbine layout calculates exact duration of shadow flicker experienced by a residence from multiple turbine directions.

Section 3.4.2 of the Draft EIS explained that shadow-flicker effects can in some cases be annoying to local residences. However, no threshold has been identified to quantify the level of annoyance.

3.4.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.

3.4.4 Mitigation Measures

Because new impacts have not been identified, additional mitigation measures are not warranted.

3.4.5 Significant Unavoidable Adverse Impacts

No additional unavoidable adverse impacts on health and safety are expected as a result of the KVWPP layout revisions. Project design, implementation of the mitigation measures described in the Draft EIS, and the greater setback from property lines of neighboring landowners would continue to minimize health and safety impacts.

3.5 ENERGY AND NATURAL RESOURCES

3.5.1 Affected Environment

Because the description of the affected environment is based on the energy and natural resources of the project area and Kittitas County as a whole, it is not influenced by the shortening, elimination and repositioning of turbine strings as a result of revisions to the KVWPP layout.

3.5.2 Impacts of Proposed Action

The analysis in the Draft EIS of impacts to Energy and Natural Resources of the Proposed Action continues to adequately capture the full range of potential impacts that may result from construction, operation and decommissioning of the KVWPP in its revised layout. The total lineal feet of turbine strings, roads and electrical collection systems will be lower under this revised layout, as will the number of turbines ultimately constructed. Therefore fewer natural resources will be consumed in the construction of the project. The analysis in the EIS remains conservative, and does not underestimate any of the potential impacts.

3.5.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.

3.5.4 Mitigation Measures

Because new impacts have not been identified, additional mitigation measures are not warranted.

3.5.5 Significant Unavoidable Adverse Impacts

No additional unavoidable adverse impacts on natural and energy resources as a result of the KVWPP layout revisions are identified. Project design and implementation of the mitigation measures described in the Draft EIS would continue to minimize impacts for energy and natural resources.

3.6 LAND USE AND RECREATION

3.6.1 Affected Environment

Because the description of the affected environment is based on existing land use policies and recreational resources of the project area and Kittitas County as a whole, it is not influenced by the shortening, elimination and repositioning of turbine strings resulting from revision of the KVWPP layout.

3.6.2 Impacts of Proposed Action

The Draft EIS Action continues to adequately capture the full range of potential impacts to Land Use and Recreation that may result from construction, operation and decommissioning of the KVWPP in its revised layout. The total lineal feet of turbine strings, roads and electrical collection systems will be lower overall under this revised layout, as will the acreage of land impacted both temporarily and permanently. Therefore, the analysis in the EIS regarding changes to land use on the project area remains conservative, and does not underestimate any of the potential impacts. Since the project area is not being modified, nor are the number of workers associated with construction and operation of the KVWPP, there are no new impacts to recreational resources in the County.

3.6.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.

3.6.4 Consistency with Plans and Policies

Based on information submitted in the DAA, the two following sections warrant additions or updates to the information in the Draft EIS: Consistency Discussion regarding the Kittitas County Comprehensive Plan, and the Consistency Discussion regarding the Kittitas County Zoning Code.

Kittitas County Comprehensive Plan

Consistency Discussion

As indicated in the Draft EIS, the proposed KVWPP remains inconsistent with the Kittitas County Comprehensive Plan until such time that Kittitas County submits to EFSEC a certificate of Land Use Consistency in accordance with EFSEC's rules. The Applicant has added to the analysis of the KVWPP's consistency with the County Goals, Policies and Objectives (GPOs) as indicated below. The discussion for the remainder of the GPO's in the Draft EIS remains applicable and is unchanged.

- "GPO 6.8 Additions to and improvements of utilities facilities will be allowed to occur at a time and in a manner sufficient to serve growth."

As discussed with respect to GPO 6.7, the KVWPP would be desirable to the public convenience to serve electrical power load growth of a number of regional utilities.

- "GPO 6.9. Process permits and approvals for all utility facilities in a fair and timely manner, and in accordance with development regulations that ensure predictability and project concurrency."

The proposed KVWPP would be developed in accordance with all local, regional, and state wind power development regulations and would therefore be consistent with this policy.

- "GPO 6.18. Decisions made regarding utility facilities should be consistent with and complementary to regional demand and resources and should reinforce an interconnected regional distribution network."

This policy is similar to GPO 6.7. The above section discusses how the KVWPP is desirable to the public convenience to serve electrical power load growth of a number of regional utilities. The proposed KVWPP would significantly reinforce an interconnected regional power transmission and distribution network by connecting to Puget Sound Energy's (PSE) and/or Bonneville Power Administration's (BPA) electric power grid. Therefore, the KVWPP is consistent with this policy.

- "GPO 6.34. 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."

This policy requires that the area where the KVWPP is proposed be designated a Wind Farm Resource overlay district. Such a designation requires the Applicant to seek a sub-area comprehensive plan amendment. A docketing application for a comprehensive plan amendment was submitted on October 17, 2005 along with this request for rezone. It is anticipated that the County will process both requests concurrently, pursuant to the requirements of Kittitas County Code Chapter 17.61A.040.

- "GPO 8.5 Kittitas County recognizes and agrees with the need for continued diversity in densities and uses on Rural Lands."

The KVWPP will not change densities on Rural Lands. It will not change or preclude the existing open space and agricultural uses. It will, however, introduce a natural resource-based land use in a rural location. By the introduction of this use in this area of the County, the KVWPP will help to diversify the County's rural economy.

- "GPO 8.9 Projects or developments, which result in the significant conservation of rural lands or rural character, will be encouraged."

The KVWPP is compatible with traditional rural land uses and is an alternative to the development of residential subdivisions or other uses which do not preserve open space or encourage rural land conservation.

- "GPO 8.11 Existing and traditional uses should be protected and supported while allowing as much as possible for diversity, progress, experimentation, development, and choice in keeping with the retention of Rural Lands."

Traditionally, the project area and surrounding land have been used for cattle grazing and recreation which are compatible with the KVWPP. Generation of electricity using wind power is a relatively new, rural land use which generates revenues to landowners and the public through taxes and royalty payments to state agencies from whom lands are being leased. In an area such as the project area, this use is compatible with the traditional land uses that retain their rural character, as opposed to residential development.

Kittitas County Zoning Code

Consistency Discussion

Neither the Agricultural-20 nor Forest and Range zones allow for wind power projects either as a permitted or conditional use. For the project to be considered consistent with the current County Zoning Code, a site-specific rezone of the zoning map to Wind Farm Resource overlay zone pursuant to KCC 17.98 would be required (Kittitas County 2002b).

On May 1, 2003, 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 project is not consistent with nor is it in compliance with Kittitas County land use plans or zoning ordinances, and (2) the Applicant shall make all reasonable efforts to resolve the noncompliance (EFSEC 2003).

In June 2003 the Applicant submitted an application to Kittitas County to rezone the project area from Agriculture-20 and Forest and Range to Wind Farm Resource overlay zone. County approval of this rezone application would result in project consistency with the County Zoning

Code. On February 7, 2004, the Applicant filed with EFSEC a request for preemption of local zoning ordinances. The request for preemption was withdrawn by the Applicant on October 14, 2005, concurrently with the Applicant's filing of a Development Activities Application with Kittitas County.

The Kittitas County Board of County Commissioners will review the proposed Comprehensive Plan amendment and rezone and approve them if they satisfy the following criteria: (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).

3.6.5 Mitigation Measures

Because new impacts have not been identified, additional mitigation measures are not warranted.

3.6.6 Significant Unavoidable Adverse Impacts

The Draft EIS concluded that the permanent conversion of approximately 93 to 118 acres of rangeland to commercial utility use (i.e., wind energy production) would be an unavoidable impact of the project. However, this reduction would have an overall negligible impact on cattle operations given the county's abundance of pasture and unimproved grazing lands. Therefore, no significant unavoidable adverse impacts are expected for land use as a result of the proposed project construction, operations and maintenance, and decommissioning.

No additional unavoidable adverse impacts on land use are expected as a result of the KVWPP layout revisions. Project design and implementation of the mitigation measures proposed by the Applicant would continue to minimize impacts to land use for the project area.

3.7 SOCIOECONOMICS

3.7.1 Affected Environment

Because the description of the affected environment is based on the Socioeconomics of the Kittitas County as a whole, it is not influenced by the shortening, elimination and repositioning of turbine strings resulting from revision of the KVWPP layout.

3.7.2 Impacts of Proposed Action

The discussion of impacts to socioeconomics of the Proposed Action continue to adequately capture the full range of potential impacts that may result from construction, operation and decommissioning of the KVWPP in its revised layout.

3.7.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.

3.7.4 Mitigation Measures

Because new impacts to socioeconomic resources have not been identified, additional mitigation measures are not warranted.

3.7.5 Significant Unavoidable Adverse Impacts

The Draft EIS stated that the proposed action would have no significant unavoidable adverse impacts to the socioeconomic health of the project region. Although the specific employment, income, and tax revenue effects under the lower and upper end scenarios during construction and operations have yet to be quantified, they would likely be beneficial to the local economy. Furthermore, while the potential induced economic effects of tourism are uncertain, impacts from employment induced through a potential increase in local tourism are not considered significant or adverse.

No additional unavoidable adverse impacts on socioeconomics as a result of the KVWPP layout revisions have been identified.

3.8 CULTURAL RESOURCES

3.8.1 Affected Environment

Because the description of the affected environment is based on archeological and historical resources of the project area as a whole, it is not influenced by the shortening, elimination and repositioning of turbine strings.

3.8.2 Impacts of Proposed Action

In November 2005 the Applicant commissioned surveys of those new areas on strings I and A to be impacted by construction and operation of the KVWPP. No new archeological resources were identified by these surveys (Flenniken and Trautman 2005). The survey did identify one potential historic resource: a narrow shallow ditch located near turbine A1. The source or reason for the ditch could not, however, be confirmed after consultation with the landowner, and the ditch is recommended not eligible for the national Register of Historic Places. No Historic properties would therefore be affected by the revised layout of the KVWPP. With this addition, the discussion of impacts in the Draft EIS remains up-to-date.

3.8.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative presented in the Draft EIS.

3.8.4 Mitigation Measures

Because new impacts have not been identified, additional mitigation measures are not warranted.

3.8.5 Significant Unavoidable Adverse Impacts

No additional unavoidable adverse impacts on cultural resources as a result of the KVWPP layout revisions are identified. Project design and implementation of the mitigation measures described in the Draft EIS would continue to minimize impacts to these resources.

3.9 VISUAL RESOURCES

3.9.1 Affected Environment

Because the description of the affected environment is based on the visual resources of the project area as a whole, it is not influenced by the shortening, elimination and repositioning of turbine strings.

3.9.2 Impacts of Proposed Action

In developing the revised project layout, the Applicant specifically attempted to reduce the visual impact of the KVWPP (Priestley 2005). The Applicant used the same visual analysis methods as described in Section 3.9.2 of the Draft EIS. The Applicant analyzed the number of viewers, viewing conditions and viewer sensitivity for eleven viewpoints. Visual sensitivity for these view points was then identified. These descriptions have not changed as a result of the project layout changes. The Applicant also prepared computer-generated simulations to evaluate the changes to visual impacts as a result of the KVWPP. With the revision to the project layout, some of these impacts have changed, as described below.

Viewpoint 1: US 97 at Ellensburg Ranches Road Looking North

To evaluate the changes in this viewpoint, the reader should compare the photo simulations presented in Draft EIS Figures 3.9-14, 3.9-15, and 3.9-16 to Addendum Figure 3.9-1.

From Viewpoint 1, approximately 30 turbines from strings I and J would be visible on the ridgetops at distances of 0.8 to 3 or more miles. The analysis performed in the Draft EIS showed that the visual impact would be slightly higher under the upper end scenario (moderate) than for the lower end scenario (low). At the distance depicted in the Draft EIS photos, the visual clutter of more turbines has more impact than the considerable scale of the larger turbines. Also, about half the turbines would be less noticeable where there is less contrast with the hillside

background. The remaining half, however, would be silhouetted against the sky, increasing their visual impact. The presence of the turbines would reduce the scene's degree of intactness by introducing a large number of highly visible engineered vertical elements.

The potential visual impact from Viewpoint 1 has not changed significantly from the analysis presented in the Draft EIS, and would range from low to moderate under the lower end and upper end scenarios, respectively.

Viewpoint 2: US 97 North of Gravel Pit Looking North

To evaluate the changes in this viewpoint, the reader should compare the photo simulations presented in Draft EIS Figures 3.9-17, and 3.9-18 to Addendum Figure 3.9-2.

In the original layout, nine turbines in turbine string G would have been visible from Viewpoint 2 on top of the ridge at distances ranging from 0.4 to 1 mile. The potential visual impact from Viewpoint 2 would have been moderate to high. These nine turbines have been removed in the revised KVWPP layout. The project would therefore no longer have any visual impact from this view point.

Viewpoint 3: US 97 at Northern End of Bettas Road Looking South

To evaluate the changes in this viewpoint, the reader should compare the photo simulation presented in Draft EIS Figures 3.9-19 to Addendum Figure 3.9-3.

Three turbines in turbine string G would be prominently visible from Viewpoint 3 in the driver's cone of vision along the east side of the US 97. These turbines would be located on ridgetops at distances ranging from 0.9 to 1.2 miles from this viewpoint. Because the turbines would be seen against the sky at relatively close range, they would be highly visible in this view and would reduce the visual unity to a degree that would substantially alter the scene's existing character.

Because fewer turbines would be visible from this viewpoint, and because the turbines are located further away from the Viewpoint, the potential visual impact from Viewpoint 3 has decreased to low.

Viewpoint 4: Ridges East of US 97

To evaluate the changes in this viewpoint, the reader should compare the photo simulation presented in Draft EIS Figures 3.9-20 to Addendum Figure 3.9-4.

Approximately 15 turbines would be visible from Viewpoint 4 looking south from a residence in Section 35 at the upper end of Elk Springs Road. Three strings of turbines would be visible in the middle ground, and two additional strings would be visible in the far middle ground. Because of the elevated viewing position, these turbines would be seen against the ground surface backdrop. The contrast between the light color of the turbines and the darker color of the ground would create a moderate visual contrast, increasing the visibility of the turbines. Because of the elevated position of this viewpoint and its distance from the turbines, the turbines' apparent scale would

be consistent with that of other features in the setting. The presence of the turbines would likely have a moderate effect on the vividness of this view, but would reduce its overall sense of unity and intactness.

The potential visual impact from Viewpoint 4 has not changed significantly from the analysis in the Draft EIS, and would be moderate to high.

Viewpoint 5: Bettas Road

The Draft EIS indicated that ten turbines in turbine string G would be prominently visible in the driver's cone of vision along the east side of Bettas Road. (Draft EIS Figure 3.9-21 shows the simulated view from Viewpoint 5 in the northern portion of Bettas Road, looking north.) These turbines would be located on the ridgetops at distances ranging from 0.5 to 1 mile from this viewpoint. Because the turbines would be seen against the sky at relatively close range, they would be highly visible and would reduce the visual unity to a degree that would substantially alter the scene's existing character. The wind turbines would be arrayed uniformly along the ridgeline and would not necessarily create a substantial change in the setting's moderate visual quality.

Because fewer turbines would be constructed in the revised KVWPP layout, the potential visual impact from Viewpoint 5 would not exceed "moderate".

Viewpoint 6: SR 10 Corridor

The Draft EIS indicated that fourteen turbines in turbine strings B and C would be visible on the ridgeline located 1.5 miles or more from Viewpoint 6 along SR 10 between Morrison Canyon and Swauk Creek. (Draft EIS Figure 3.9-22 shows the simulated view from Viewpoint 6 on SR 10 between Morrison Canyon and Swauk Creek, looking east.) The turbines would be seen against the sky. The presence of the long line of turbines may create a slight increase in the vividness of this view, may have a small adverse effect on the view's unity, and would have a more substantial effect on the view's intactness.

Because fewer turbines would be constructed in the revised KVWPP layout, the potential visual impact from Viewpoint 6 would not exceed "moderate".

Viewpoint 7: John Wayne Trail

The Draft EIS indicated that over 30 turbines in turbine strings A, B, and C and from strings on ridges farther to the north would be visible on the ridgelines located 2 miles and farther from Viewpoint 7 looking north along the Iron Horse/John Wayne Trail at Taneum Road. (Draft EIS Figure 3.9-23 shows the simulated view from Viewpoint 7 on the John Wayne Trail at Taneum Road, looking north.) The closer turbines would be seen against the sky. The more distant turbines would be seen against the slopes of distant hills, and under some lighting conditions, would contrast with the backdrop, increasing the visual impact. The visible turbines would have little effect on this view's vividness, but would reduce its unity and intactness to a slightly greater extent.

Addendum Figure 3.9-1: Viewpoint 1 – US 97 at Ellensburg Ranches Road Looking North

Source: Priestley 2005

Viewpoint 1: Existing view from US 97 at Ellensburg Ranches Road looking north

Source: Priestley 2005

Viewpoint 1: Simulated view from US 97 at Ellensburg Ranches Road looking north

Addendum Figure 3.9-2: Viewpoint 2 – US 97 North of Gravel Pit Looking North

Source: Priestley 2005

Viewpoint 2: Existing view from US 97 north of gravel pit, looking north. With the project layout revisions no turbines will be visible in this view.

Addendum Figure 3.9-3: Viewpoint 3 –
US 97 at Northern End of Bettas Road Looking South

Source: Priestley 2005

Viewpoint 3: Existing view looking south from US97 at northern intersection with Bettas Road

Source: Priestley 2005

Viewpoint 3: Simulated view looking south from US97 at northern intersection with Bettas Road

Addendum Figure 3.9-4: Viewpoint 4 – Ridges East of US 97

Source: Priestley 2005

Viewpoint 4: Existing view looking south from Section 35 at upper end of Elk Springs Road

Source: Priestley 2005

Viewpoint 4: Simulated view looking south from Section 35 at upper end of Elk Springs Road

Because fewer turbines would be constructed in the revised KVWPP layout, the potential visual impact from Viewpoint 7 would remain low.

Viewpoint 8: Thorp

The Draft EIS indicated that over 20 turbines in turbine strings A, B, and C and from strings on ridges farther to the north would be visible on the ridgelines located 3 miles and farther from Viewpoint 8 looking north from the Thorp Highway in the center of the community of Thorp. (Draft EIS Figure 3.9-24 shows the simulated view from Viewpoint 8 on Thorp Highway, looking north.) Most of the turbines would be seen against the sky. However, at this distance, they would have a relatively low visual impact. Some of the turbines would be seen in front of the Stuart Range. However, because of their relatively small size at this viewing distance, they would not likely detract from views toward the Stuarts. The visible turbines would have little effect on this view's vividness, unity, and intactness.

Because fewer turbines would be constructed in the revised KVWPP layout, the potential visual impact from Viewpoint 8 would remain low.

Viewpoint 9: I-90

The Draft EIS provided two simulations, one with gray turbines and the other with light brown turbines, for comparison from Viewpoint 9 along I-90 looking northeast at Springwood Ranch. (Draft EIS Figures 3.9-25 and 3.9-26 show simulated views from Viewpoint 9 on I-90 at Springwood Ranch, looking northeast, with gray and brown turbines, respectively.) At this distance, the brown turbines have less contrast with the hilly background. However, as shown from Viewpoint 2 (Figure 3.9-18), the brown turbines have greater contrast with the sky when viewed at a closer distance. In addition, the brown color would have a significantly greater contrast when snow is on the ground.

The Draft EIS indicated that over 20 turbines in turbine strings A, B, C, and E and from strings on ridges farther to the north and east would be visible on the ridgelines located 2.5 miles and farther from this viewpoint. Some of the turbines would be seen against the sky although the more distant turbines would be seen against the hillsides and under some lighting conditions would contrast with their backdrop, thereby increasing their visual impact. The visible turbines would have a minor effect on the vividness of this view but would decrease the apparent unity and intactness.

Because fewer turbines would be constructed in the revised KVWPP layout, the potential visual impact from Viewpoint 9, would remain low to moderately low.

Viewpoint 10: Lower Green Canyon Road

The Draft EIS indicated that almost all of the project's turbines would be visible on the ridgelines in the background of Viewpoint 10, 5 miles or more from Lower Green Canyon Road. (Draft EIS Figure 3.9-27 shows the simulated view from Viewpoint 10 along Lower Green

Canyon Road, looking northwest.) Most of the turbines would be seen against the slopes of the ridges and more distant hills and under some lighting conditions would contrast with the background. At a distance of 5 miles or more, however, this contrast would have little effect on the overall visual impact. Consequently, because the prominence of the turbines in the view would be low, the turbines would have a minor effect on the vividness, unity, and intactness.

Because fewer turbines would be constructed in the revised KVWPP layout, the potential visual impact from this viewpoint would remain low.

Viewpoint 11: National Forest Lands

To evaluate the changes in this viewpoint, the reader should compare the photo simulation presented in Draft EIS Figure 3.9-28 to Addendum Figure 3.9-5.

Viewpoint 11 illustrates views of the project area from the southern portion of the Wenatchee National Forest on Forest Route 35. As this road switches back and forth up the west slope of Table Mountain, the project site becomes increasingly visible. Because of the steep slopes, increasing elevation, and many pullouts on the forest access road, the project site is frequently visible against the broad rural landscape of the valley below. In the plateau areas to the north where recreation areas are located, trees generally screen views to the southwest toward the project site, making the project less visible to recreational visitors.

With the KVWPP layout revisions much of the project would still be seen from Reecer Creek Road and areas of the National Forest used for recreation. However, turbine spacing in the background would be less dense. Given the moderately high to high scenic quality of this view, the impacts of the project on recreational users of forestlands would remain moderately high.

Scenic Views of Regional Importance – The Stuart Range

The Draft EIS described several situations where the project and the Stuart range have the potential to be seen in the same view: in the Thorp vicinity; and from residences on the tops of the ridges southwest of the turbines, and some residences along Sagebrush Road and Ellensburg Ranches Road west of US 97. In the revised KVWPP layout some turbines would remain in these lines of sight; however, fewer turbines would be visible because fewer would be constructed.

Addendum Figure 3.9-5: Viewpoint 11 – National Forest Lands

Source: Priestley 2005

Viewpoint 11: Existing view toward project from Forest Road 35

Source: Priestley 2005

Viewpoint 11: Simulated view toward project from Forest Road 35

Light and Glare

Light

The Draft EIS explained that to comply with the Federal Aviation Administration's (FAA) aviation safety lighting requirements, the project turbines must be marked with lights. The Draft EIS anticipated that white lights would be required during the day, and red lights at night. Under recently released guidelines, the FAA would no longer require daytime lighting of the turbines if turbines are painted a light color. The applicant is proposing to paint the turbines a light color. Nighttime lighting would be limited to the first and last turbine of every string, and to turbines located every 1000 to 1400 feet between the ends of the strings (Patterson 2005).

As a result of these FAA changes, the KVWPP would no longer install white daytime aviation warning lights, and the number of red nighttime aviation warning lights would be significantly reduced. For example, only 16 nighttime warning lights would be required as shown in Addendum Figure 3.9-6.

The FAA has already concluded that the project would not interfere with aviation operations (FAA 2002). After reviewing final project plans, the FAA would determine the exact number of turbines that would require lights.

The lighting of other project facilities (the Operations and Maintenance facility, and the substations) does not depend on turbine layout, and neither the lighting nor its impacts would change from the description given in the Draft EIS.

Glare

The revisions to the KVWPP layout will not affect project glare.

3.9.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.

3.9.4 Mitigation Measures

The mitigation measures presented in the Draft EIS for visual impacts remain appropriate. However, mitigation of the exterior lighting of turbines required by FAA will be revised as follows:

- The only exterior lighting on the turbines will be the nighttime aviation warning lighting required by the FAA. This lighting will conform to the FAA's new standards for marking of wind turbines, required intensity and synchronization. It is anticipated that according to the FAA's new guidance daytime lighting of the turbines will not be required.

3.9.5 Significant Unavoidable Adverse Impacts

The Draft EIS concluded that for many viewers, the presence of the wind turbines represents a significant unavoidable adverse impact because it significantly alters the appearance of the rural landscape over a large area of the Kittitas Valley. However, the degree of adversity depends on the viewer's location and sensitivity and the impact on view quality.

The revised KVWPP layout will not create additional significant adverse impacts to visual resources. With the proposed layout changes, the KVWPP will have less of an impact on visual resources particularly for viewpoints located at the north and northwestern portions of the project area. In addition, impacts from FAA required lighting of the turbines will be significantly reduced.

3.10 TRANSPORTATION

3.10.1 Affected Environment

Because the description of the affected environment is based on the local and regional transportation resources surrounding the project area, it is not influenced by the shortening, elimination and repositioning of turbine strings.

3.10.2 Impacts of Proposed Action

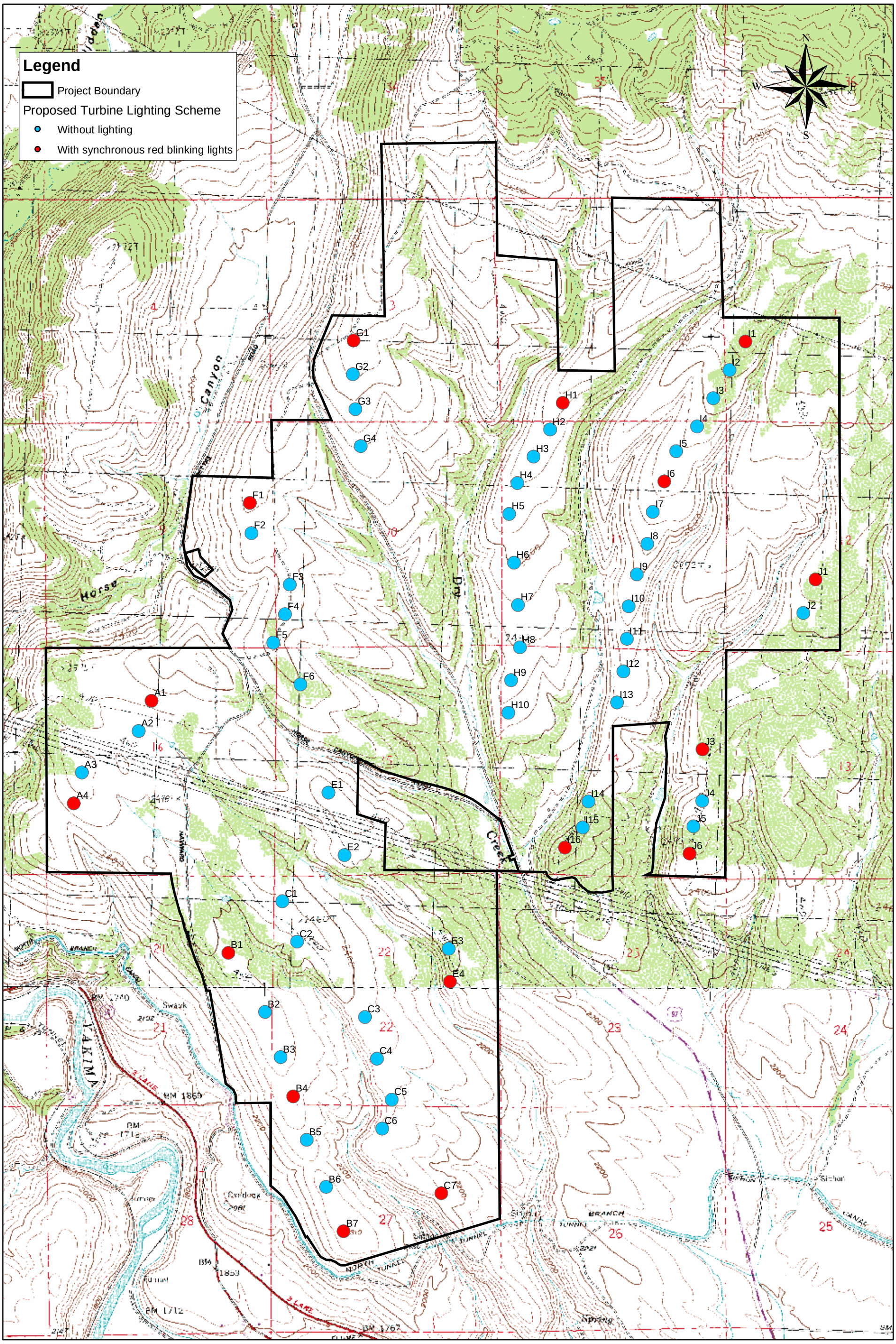
The discussion of impacts to transportation resources of the Proposed Action continues to adequately capture the full range of potential impacts that may result from construction, operation and decommissioning of the KVWPP in its revised layout. Because fewer turbines would be constructed under the Middle Scenario (up to 80 versus 121 indicated in the Draft EIS), impacts for the middle scenario are now conservative.

Addendum Figure 2-1 now accurately indicates project area accesses on the east side of US 97: construction and permanent Access to turbine string "G" will occur at milepost (MP) 145.9. Access to turbine strings H, I and J during construction will occur at MP 144.57. Once the project has been constructed, permanent access to turbine strings H, I and J will occur in the vicinity of Elk Springs Road, approximately 300 feet to the north of MP 144.57. As indicated in the Draft EIS, Washington State Department of Transportation staff have reviewed and approved these accesses. Figure 2-1 of the Draft EIS also showed access on the east side of US 97 in the vicinity of the Thomas Gravel Pit. This access point has been eliminated for safety reasons because of poor sight distance.

As a result, the KVWPP layout revisions will not cause any additional significant adverse impacts to US 97.

3.10.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.



Addendum Figure 3.9-6:

3.10.4 Mitigation Measures

Because new impacts have not been identified, additional mitigation measures are not warranted.

3.10.5 Significant Unavoidable Adverse Impacts

The Draft EIS found that no significant unavoidable adverse impacts are associated with the transportation element of the proposed project. The Applicant has proposed several mitigation measures to minimize traffic impacts along all project area roadways.

No additional unavoidable adverse impacts on local or regional transportation resources are expected as a result of the KVWPP layout revisions. Project design and implementation of the mitigation measures described in the Draft EIS would continue to address transportation impacts.

3.11 AIR QUALITY

3.11.1 Affected Environment

Because the description of the affected environment is based on the ambient air quality of the project area and Kittitas County as a whole, it is not influenced by the shortening, elimination and repositioning of turbine strings.

3.11.2 Impacts of Proposed Action

The discussion of impacts to air quality of the Proposed Action continues to adequately capture the full range of potential impacts that may result from construction, operation and decommissioning of the project in its revised layout. Potential impacts were related to construction activity in general, and did not depend on the layout of the turbines specifically.

3.11.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.

3.11.4 Mitigation Measures

Because new impacts have not been identified, additional mitigation measures are not warranted.

3.11.5 Significant Unavoidable Adverse Impacts

As stated in the Draft EIS, no significant unavoidable adverse impacts on air quality are identified. Air quality impacts from the project include low levels of combustion pollutants and dust from vehicles during project construction, operation and maintenance, and decommissioning. Operation of the proposed wind turbine project would not emit air pollutants

into the atmosphere except from operational vehicle exhaust. Without substantial emissions from wind turbine operation, it is anticipated that there would be no observable changes in ambient air quality levels locally or within the United States.

No additional unavoidable adverse impacts on air quality as a result of the KVWPP layout revisions are identified. Project design and implementation of the mitigation measures described in the Draft EIS would continue to minimize impacts on local air quality.

3.12 NOISE

3.12.1 Affected Environment

Because the description of the affected environment is based on the noise environment of the project area, it is not influenced by the shortening, elimination and repositioning of turbine strings.

3.12.2 Impacts of Proposed Action

The Applicant has submitted new modeling for noise impacts resulting from the revised project layout (Baker and Bastach 2005). Because some turbine strings have been shortened, distances from residences and property lines to turbines located in the northern portion of the project area have increased. Overall, as shown in Revised Table 3.12-5, distances to the closest wind turbine now range from approximately 538 to 5080 feet.

The Applicant determined the noise levels of the revised project layout using a procedure identical to that described in the Draft EIS. However, noise modeling was based on a slightly higher turbine sound pressure than presented in the Draft EIS. The sound power level used as input to the noise model for each wind turbine in the revised layout was based on the G90 – 2 MW turbine by Gamesa Eolica. Noise modeling was based on a turbine sound pressure level of approximately 105.3 dBA, and a wind turbine hub height of 67 meters was used for all turbines.

Table 3.12-5 of the Draft EIS identified properties in the project area located within 3,000 feet of a proposed turbine, the distance between structures (if any) to the closest wind turbine, the distance between property lines and the closest wind turbine, and the predicted noise level at structures and property lines. The information presented in Table 3.12-5 has been revised to reflect this new modeling. Addendum Figure 3.12-1 also illustrates the new predicted noise contours in the project area in relation to existing structures and property lines.

State noise regulations (173-60 WAC) require that daytime noise levels for residential structures (Class A EDNA) not exceed 60 dBA, while nighttime levels not exceed 50 dBA. As summarized in Revised Table 3.12-5, the Lower End Scenario is anticipated to result in noise levels ranging from less than 30 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.

Revised Draft EIS Table 3.12-5: Predicted Noise Levels in KVWPP Area

Parcel owner	Township-Range-Section of closest property line	Approx. Distance from Structure to Turbine (feet)	Nearest Turbine to Structure	Estimated Noise Level at Structure (dBA) EDNA Class A [3]	Approx. Distance from Property Line to Turbine (feet)	Estimated Noise Level at Property Line (dBA) EDNA Class C [4, 5]	Nearest Turbine to Property Line
ACKERSON	19-17-15	2489	I16	42	1959	40-45	I16
AHLES	19-17-04	2178	G1	38	2157	35-40	G1
ANDERSON	19-17-26		C7	33		<35	C7
ANDREW	19-17-11	723	H5	49	PARTICIPATING LANDOWNER		
ARONICA	19-17-01	No Structure			546	45-50	I1
ARRIOLA	19-17-09	No Structure			1273	40-45	A1
ASSESSOR #19-17-26000-0016	19-17-26	No Structure			2891	35-40	C7
BARKL	19-17-23	No Structure			1254	40-45	E4
BASTERRECHEA	19-17-27	No Structure			2179	35-40	B7
BELL	19-17-09	1740	F5	43	1079	40-45	F5
BERGMAN	20-17-35		I1	29		<35	I1
BEST	19-17-12	4946	I1	35	2469	35-40	J1
BISNETT	19-17-09	No Structure			3864	35-40	F1
BLM	19-17-20	No Structure			750	35-40	A4
BLUME	19-17-23	3673	J6	36	3230	35-40	J6
BORSVOLD	20-17-35		G1	26		<35	G1
BNSF RAILWAY	19-17-28	No Structure			2675	35-40	B5
BRINKMAN	19-17-01	4691	I1	34	2184	35-40	I1
BROWN	19-17-26	3549	C7	36	2712	35-40	C7
BURDYSHAW	19-17-02	No Structure			1437	40-45	H1

Source: Baker and Bastach 2005; Schafer 2005g.

1 Property owners in the KVWPP area where turbines are proposed but no structure is present that have not been included in this table include: L. Tritt, Pautzke Bait Co., C. Thomas, D. and M. Green, J. Majors, Cascade Field & Stream, K. Krogstad, Los Abuelos, Inc., and A. Steinman.

2 "No Structure" indicates that aerial photography does not show a structure on the property.

3 The EDNA classification for noise levels at structures is Class A. The maximum permissible daytime noise level at a Class A receptor is an Leq of 60 dBA, and the maximum permissible nighttime noise level at a Class A receptor is an Leq of 50 dBA. Approximate noise levels are presented at a predicted specific level (as opposed to a range) for those parcel owners that approach the 50 dBA nighttime noise threshold.

4 The EDNA classification for noise levels at property lines is Class C. The maximum permissible noise level (daytime or nighttime) at a Class C receptor is an Leq of 70 dBA.

5 In general, noise levels at property lines were not estimated for property owners with signed wind option agreements with the Applicant.

Revised Draft EIS Table 3.12-5 (Continued): Predicted Noise Levels in KVWPP Area

Parcel owner	Township-Range-Section of closest property line	Approx. Distance from Structure to Turbine (feet)	Nearest Turbine to Structure	Estimated Noise Level at Structure (dBA) EDNA Class A 3	Approx. Distance from Property Line to Turbine (feet)	Estimated Noise Level at Property Line (dBA) EDNA Class C 4, 5	Nearest Turbine to Property Line
	19-17-23	3146	I16	39			
BURT	19-17-23	3112	E4	39	2350	35-40	E4
	19-17-23	2979	E4	39			
BURKE	19-17-03	No Structure				<35	G1
CAMERON	19-17-23	4485	E4	36	3903	35-40	J6
	19-17-23	4567	E4	36			
CAMPBELL, G	19-17-09	1595	F1	40	1476	40-45	F1
CAMPBELL, J	19-17-23	No Structure			1114	40-45	E4
CAMPBELL, M	19-17-23	2244	E3	41	1114	40-45	E4
CHAR	19-17-26	No Structure			2717	35-40	C7
COE			G1	32		<35	G1
CORNWALL	19-17-01	No Structure			2331	35-40	I1
CRAMER	20-17-35		G1	32		<35	G1
DARROW	19-17-23	3138	E4	38	2762	35-40	E4
DE FACCIO	19-17-28	No Structure			2753	35-40	B5
DER YUEN	19-17-34	No Structure			2323	35-40	B7
DNR		No Structure			PARTICIPATING LANDOWNER		
DOT	19-17-09	No Structure			1275	40-45	F2
ENGELSTAD	19-17-26	3391	C7	38	2180	40-45	C7
FOTHERGILL	20-17-35		I1	29		<35	I1
FITZGERALD	19-17-04	2858	G2	37	2442	35-40	G2
FOSSETT	19-17-02	4172	H1	36	3331	35-40	H1
FRANKLIN	19-17-23	5080	E4	36	4299	35-40	J6

Source: Baker and Bastach 2005; Schafer 2005g.

1 Property owners in the KVWPP area where turbines are proposed but no structure is present that have not been included in this table include: L. Tritt, Pautzke Bait Co., C. Thomas, D. and M. Green, J. Majors, Cascade Field & Stream, K. Krogstad, Los Abuelos, Inc., and A. Steinman.

2 "No Structure" indicates that aerial photography does not show a structure on the property.

3 The EDNA classification for noise levels at structures is Class A. The maximum permissible daytime noise level at a Class A receptor is an Leq of 60 dBA, and the maximum permissible nighttime noise level at a Class A receptor is an Leq of 50 dBA. Approximate noise levels are presented at a predicted specific level (as opposed to a range) for those parcel owners that approach the 50 dBA nighttime noise threshold.

4 The EDNA classification for noise levels at property lines is Class C. The maximum permissible noise level (daytime or nighttime) at a Class C receptor is an Leq of 70 dBA.

5 In general, noise levels at property lines were not estimated for property owners with signed wind option agreements with the Applicant.

Revised Draft EIS Table 3.12-5 (Continued): Predicted Noise Levels in KVWPP Area

Parcel owner	Township-Range-Section of closest property line	Approx. Distance from Structure to Turbine (feet)	Nearest Turbine to Structure	Estimated Noise Level at Structure (dBA) EDNA Class A 3	Approx. Distance from Property Line to Turbine (feet)	Estimated Noise Level at Property Line (dBA) EDNA Class C 4, 5	Nearest Turbine to Property Line
FREEMAN	19-17-26	4680	C7	35	3727	35-40	C7
GABRIELSON	19-17-12	No Structure			631	45-50	J1
GALLAGHER	19-17-13	No Structure			1260	40-45	J2
GARRETT	19-17-13	No Structure			538	45-50	J3
GASKILL	19-17-09	1816	F2	41	1678	40-45	F2
GENSON		1026	H10	45	PARTICIPATING LANDOWNER		
GEORGE	19-17-28	No Structure			2239	35-40	B7
GEREAN, L	19-17-01	1800	I1	39	1426	40-45	I1
GEREAN, T	19-17-01	2503	I1	38	2094	40-45	I1
GORDON	19-17-23	No Structure			3539	35-40	E4
GORSKI	19-17-12	No Structure			1114	40-45	J1
HAMPTON	20-17-35		G1	32		<35	G1
HARRIGAN	20-17-35		I1	28		<35	I1
HAVENS	19-17-27	1994	B6	41	985	40-45	B7
HAWLEY	19-17-23	2386	J6	39	1824	40-45	J6
HENLEY GROUP	19-17-04	2121	G1	37	1905	35-40	G1
HENRY	19-17-12	3060	J1	36	594	45-50	J1
HENSON	19-17-27	1884	B7	39	1480	35-40	B7
HIGGINBOTHAM	19-17-23 19-17-23	3724 3845	E4 E4	37 37	3582	35-40	E4
HILL			G1	21		<35	G1

Source: Baker and Bastach 2005; Schafer 2005g.

1 Property owners in the KVWPP area where turbines are proposed but no structure is present that have not been included in this table include: L. Tritt, Pautzke Bait Co., C. Thomas, D. and M. Green, J. Majors, Cascade Field & Stream, K. Krogstad, Los Abuelos, Inc., and A. Steinman.

2 "No Structure" indicates that aerial photography does not show a structure on the property.

3 The EDNA classification for noise levels at structures is Class A. The maximum permissible daytime noise level at a Class A receptor is an Leq of 60 dBA, and the maximum permissible nighttime noise level at a Class A receptor is an Leq of 50 dBA. Approximate noise levels are presented at a predicted specific level (as opposed to a range) for those parcel owners that approach the 50 dBA nighttime noise threshold.

4 The EDNA classification for noise levels at property lines is Class C. The maximum permissible noise level (daytime or nighttime) at a Class C receptor is an Leq of 70 dBA.

5 In general, noise levels at property lines were not estimated for property owners with signed wind option agreements with the Applicant.

Revised Draft EIS Table 3.12-5 (Continued): Predicted Noise Levels in KVWPP Area

Parcel owner	Township-Range-Section of closest property line	Approx. Distance from Structure to Turbine (feet)	Nearest Turbine to Structure	Estimated Noise Level at Structure (dBA) EDNA Class A 3	Approx. Distance from Property Line to Turbine (feet)	Estimated Noise Level at Property Line (dBA) EDNA Class C 4, 5	Nearest Turbine to Property Line
HINK	19-17-04	2935	F1	37	2270	35-40	F1
HOLLISTER	19-17-23	No Structure			557	45-50	J6
HOLMQUIST	19-17-21	No Structure			984	40-45	B1
HOLTZ	19-17-09	No Structure			1497	35-40	F1
JACKSON, MARK S.	19-17-09	2326	A1	37	1823	35-40	A1
JARNAGIN	201-17-35		I1	31		<35	I1
JONES	19-17-26	3102	C7	38	1917	40-45	C7
JORGENSON	19-17-09	No Structure			2203	35-40	F1
KELLY	19-17-28	No Structure			2837	35-40	B7
KIRCHMAN	19-17-13	No Structure			775	45-50	J3
KITTITAS CO TAX DEED	19-17-28	No Structure			3256	35-40	B4
KITTITAS RECLAMATION DISTRICT	19-17-26	No Structure			713	40-45	B7
KUHN	19-17-13	No Structure			910	40-45	J2
LEGOWSKI	20-17-35		G1	33		<35	G1
LOS ABUELOS		No Structure			PARTICIPATING LANDOWNER		
MARTIN	19-17-04	4360	F1	35	2757	35-40	F1
MCFARLAND	19-17-28	No Structure			1462	40-45	B4
MCLEOD	19-17-28	No Structure			3150	35-40	B5
MILLETT	19-17-23	2098	E3	41	1155	40-45	E4
MEYER	19-17-01	No Structure			2740	40-45	I1

Source: Baker and Bastach 2005; Schafer 2005g.

1 Property owners in the KVWPP area where turbines are proposed but no structure is present that have not been included in this table include: L. Tritt, Pautzke Bait Co., C. Thomas, D. and M. Green, J. Majors, Cascade Field & Stream, K. Krogstad, Los Abuelos, Inc., and A. Steinman.

2 "No Structure" indicates that aerial photography does not show a structure on the property.

3 The EDNA classification for noise levels at structures is Class A. The maximum permissible daytime noise level at a Class A receptor is an Leq of 60 dBA, and the maximum permissible nighttime noise level at a Class A receptor is an Leq of 50 dBA. Approximate noise levels are presented at a predicted specific level (as opposed to a range) for those parcel owners that approach the 50 dBA nighttime noise threshold.

4 The EDNA classification for noise levels at property lines is Class C. The maximum permissible noise level (daytime or nighttime) at a Class C receptor is an Leq of 70 dBA.

5 In general, noise levels at property lines were not estimated for property owners with signed wind option agreements with the Applicant.

Revised Draft EIS Table 3.12-5 (Continued): Predicted Noise Levels in KVWPP Area

Parcel owner	Township-Range-Section of closest property line	Approx. Distance from Structure to Turbine (feet)	Nearest Turbine to Structure	Estimated Noise Level at Structure (dBA) EDNA Class A 3	Approx. Distance from Property Line to Turbine (feet)	Estimated Noise Level at Property Line (dBA) EDNA Class C 4, 5	Nearest Turbine to Property Line
MILLER	19-17-15	No Structure			1284	40-45	I16
MORRAITIS	19-17-02	1000	H1	48	758	45-50	H1
MOERY	20-17-35		I1	33		<35	I1
MORSE	19-18-07	No Structure			3560	35-40	J1
MURPHY	19-17-23	No Structure			3271	35-40	J6
NIELSEN	20-17-35		I1	32		<35	
NELSON CREEK VISIONS	19-17-09	No Structure			3514	35-40	F2
NELSON	19-17-14	1253	J3	46	538	45-50	I13
NEUMAN	19-17-27	No Structure			2158	35-40	B7
NORTH	19-17-09	2622	A1	38	1955	35-40	A1
OBERHANSLEY	19-17-02	No Structure			2662	45-50	H1
PARKER	19-17-01	No Structure			2277	35-40	I1
PEARSON	19-17-27	No Structure			1232	35-40	B7
PENTZ	19-18-07	No Structure			3196	35-40	J1
POLLOCK	19-17-34	No Structure			2320	35-40	B7
POULIN	19-17-26	No Structure			1642	35-40	C7
PTASZYNSKI	19-17-26	2904	C7	36	2159	35-40	C7
RAINBOW VALLEY RANCH LLC	19-17-04	2352	G1	37	2039	35-40	G1
RANCH ON SWAUK CREEK LLC, THE	19-17-03	6322	G1	29			
	19-17-03	5959	G1	29	580	45-50	G1
	19-17-03	5583	G1	30			
RAND	19-17-09	No Structure			1412	40-45	F4

Source: Baker and Bastach 2005; Schafer 2005g.

1 Property owners in the KVWPP area where turbines are proposed but no structure is present that have not been included in this table include: L. Tritt, Pautzke Bait Co., C. Thomas, D. and M. Green, J. Majors, Cascade Field & Stream, K. Krogstad, Los Abuelos, Inc., and A. Steinman.

2 "No Structure" indicates that aerial photography does not show a structure on the property.

3 The EDNA classification for noise levels at structures is Class A. The maximum permissible daytime noise level at a Class A receptor is an Leq of 60 dBA, and the maximum permissible nighttime noise level at a Class A receptor is an Leq of 50 dBA. Approximate noise levels are presented at a predicted specific level (as opposed to a range) for those parcel owners that approach the 50 dBA nighttime noise threshold.

4 The EDNA classification for noise levels at property lines is Class C. The maximum permissible noise level (daytime or nighttime) at a Class C receptor is an Leq of 70 dBA.

5 In general, noise levels at property lines were not estimated for property owners with signed wind option agreements with the Applicant.

Revised Draft EIS Table 3.12-5 (Continued): Predicted Noise Levels in KVWPP Area

Parcel owner	Township-Range-Section of closest property line	Approx. Distance from Structure to Turbine (feet)	Nearest Turbine to Structure	Estimated Noise Level at Structure (dBA) EDNA Class A 3	Approx. Distance from Property Line to Turbine (feet)	Estimated Noise Level at Property Line (dBA) EDNA Class C 4, 5	Nearest Turbine to Property Line
REILLEY	19-17-26	No Structure			1716	40-45	C7
ROBERTSON	19-17-09	1373	A1	42	1239	40-45	A1
ROMERO	19-17-15	No Structure			1195	40-45	I16
SAFFORD	19-17-09	No Structure			4325	35-40	F2
SANDALL	20-17-35		G1	32		<35	G1
SAUNDERS	20-17-35		I1	30		<35	I1
SCHALLER	19-17-09	No Structure			2306	35-40	F1
SCHOBER		No Structure			PARTICIPATING LANDOWNER		
SCHWAB	19-17-13	2098	J4	41	575	45-50	J4
SIEGL	20-17-35		I1	31		<35	I1
SHERMAN	19-17-13	No Structure			854	45-50	J6
SHORETT	19-17-09	No Structure			2118	35-40	A1
SHULTS	19-17-23	3359	E4	38	1262	40-45	E4
		3448	E4	38			
SIX TEN INVESTMENTS	19-17-26	No Structure			1355	40-45	C7
SLAPE	20-17-35		I1	33		<35	I1
SMITH	19-17-15	No Structure			1492	40-45	I16
SPRINGWOOD RANCH	19-17-28	No Structure			3281	35-40	B4
STEWART	20-17-35	3804	I1	35	3321	35-40	I1
STORWICK	19-17-15	No Structure			1509	40-45	E2
SWAUK VALLEY RANCH	19-17-17	No Structure			612	45-50	A4

Source: Baker and Bastach 2005; Schafer 2005g.

1 Property owners in the KVWPP area where turbines are proposed but no structure is present that have not been included in this table include: L. Tritt, Pautzke Bait Co., C. Thomas, D. and M. Green, J. Majors, Cascade Field & Stream, K. Krogstad, Los Abuelos, Inc., and A. Steinman.

2 "No Structure" indicates that aerial photography does not show a structure on the property.

3 The EDNA classification for noise levels at structures is Class A. The maximum permissible daytime noise level at a Class A receptor is an Leq of 60 dBA, and the maximum permissible nighttime noise level at a Class A receptor is an Leq of 50 dBA. Approximate noise levels are presented at a predicted specific level (as opposed to a range) for those parcel owners that approach the 50 dBA nighttime noise threshold.

4 The EDNA classification for noise levels at property lines is Class C. The maximum permissible noise level (daytime or nighttime) at a Class C receptor is an Leq of 70 dBA.

5 In general, noise levels at property lines were not estimated for property owners with signed wind option agreements with the Applicant.

Revised Draft EIS Table 3.12-5 (Continued): Predicted Noise Levels in KVWPP Area

Parcel owner	Township-Range-Section of closest property line	Approx. Distance from Structure to Turbine (feet)	Nearest Turbine to Structure	Estimated Noise Level at Structure (dBA) EDNA Class A 3	Approx. Distance from Property Line to Turbine (feet)	Estimated Noise Level at Property Line (dBA) EDNA Class C 4, 5	Nearest Turbine to Property Line
SWEEN	20-17-35		I1	23		<35	I1
SZUBA	19-18-07	No Structure			3215	35-40	J1
TAASEVIGEN	19-17-23		J6	35		<35	J6
TATE	19-17-26	3081	C7	37	2958	35-40	C7
	19-17-04	2555	F1	36			
THAYER		2339	F1	37	1880	35-40	G2
		2227	F1	37			
THOMAS		No Structure			PARTICIPATING LANDOWNER		
THOMPSON, B	19-17-14	1226	J6	45	575	45-50	I14
THOMPSON, C	19-18-07	No Structure			3156	35-40	J1
TONSETH	19-17-28	No Structure			2195	35-40	B5
US TIMBERLANDS YAKIMA LLC			G1	25			
WEILER	20-17-35	No Structure			4607	35-40	I1
WHITELEY	19-17-15	No Structure			1185	40-45	I16
WILKENS	19-17-13	No Structure			580	45-50	J4
WILSON	20-17-35	5759	H1	34	4769	35-40	H1
WINES	19-17-23	No Structure			704	45-50	I16
WINES/SNOVER	19-17-23	2921	J6	39	996	40-45	I16
WINKLE	19-17-23	3869	E4	37	3300	35-40	E4
YEAGER	19-17-04	2442	G2	36	1894	35-40	G2
ZELLMER	19-17-23	1547	E3	43	1220	40-45	I16

Source: Baker and Bastach 2005; Schafer 2005g.

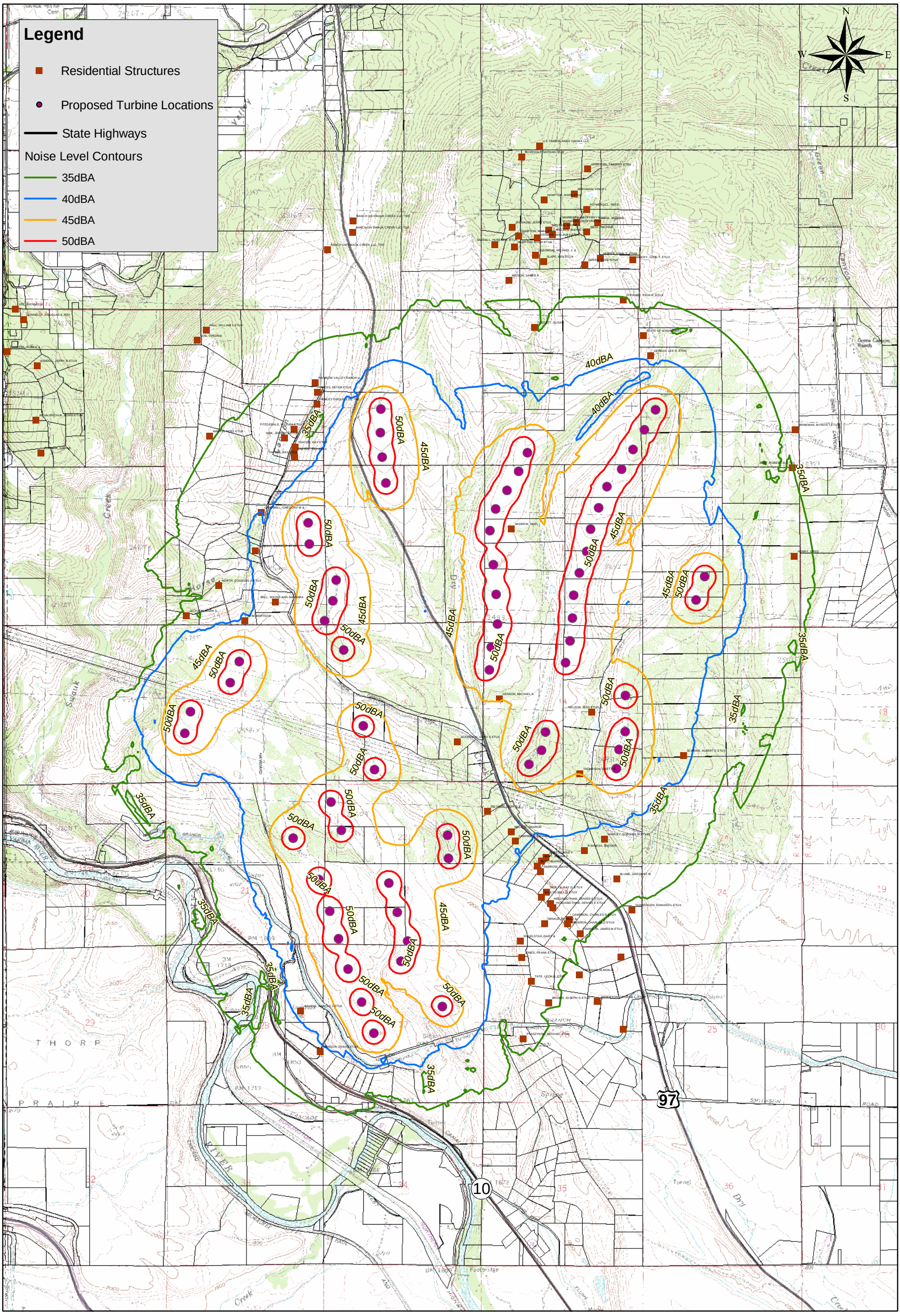
1 Property owners in the KVWPP area where turbines are proposed but no structure is present that have not been included in this table include: L. Tritt, Pautzke Bait Co., C. Thomas, D. and M. Green, J. Majors, Cascade Field & Stream, K. Krogstad, Los Abuelos, Inc., and A. Steinman.

2 "No Structure" indicates that aerial photography does not show a structure on the property.

3 The EDNA classification for noise levels at structures is Class A. The maximum permissible daytime noise level at a Class A receptor is an Leq of 60 dBA, and the maximum permissible nighttime noise level at a Class A receptor is an Leq of 50 dBA. Approximate noise levels are presented at a predicted specific level (as opposed to a range) for those parcel owners that approach the 50 dBA nighttime noise threshold.

4 The EDNA classification for noise levels at property lines is Class C. The maximum permissible noise level (daytime or nighttime) at a Class C receptor is an Leq of 70 dBA.

5 In general, noise levels at property lines were not estimated for property owners with signed wind option agreements with the Applicant.



Addendum Figure 3.12-1:
Noise Contours for Revised Layout

Source: Schafer 2005 j

Miles
0 0.10.2 0.4 0.6 0.8 1 1.2

Regulatory thresholds might be exceeded if the sound pressure level for the turbine ultimately selected for construction is greater than the modeled scenario. The Draft EIS identified that if the sound pressure level increases by 5 dBA the shape of the sound pressure level contours shown in Addendum Figure 3.12-1 would not change. However, the value of the contours would increase by 5 dBA. A sound pressure level up to 108 dBA remains representative of the Lower End Scenario of turbine noise test data for the turbines under consideration for the proposed project (see Draft EIS, Sagebrush Power Partners LLC 2003f).

Therefore, if the turbine selected has a sound pressure level greater than 105.3 dBA used for the modeling here, noise levels at three residences (one participating in the project and two not) might exceed the regulatory threshold. Nevertheless, the project is required to comply with the most stringent state noise regulations, Class A EDNA with nighttime levels not to exceed 50 dBA. The draft EIS recommended that an acoustical analysis of the final turbine layout be prepared prior to construction, using noise level data for the final turbine type selected. If compliance with the state requirement (WAC 173-60) is not demonstrated, turbines should be relocated or removed, to the extent necessary. This recommendation remains valid, and would ensure that noise levels at residences do not exceed regulatory thresholds.

Noise levels for Class C EDNA (industrial/agricultural) are not to exceed 70 dBA at property lines. 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 50 dBA (see revised Table 3.12-5) for the Lower End scenario. Because the predicted noise level is below the threshold established for Class C properties by the WAC, no significant noise impacts are anticipated.

The Draft EIS also assessed the potential increase in ambient background noise levels as a result of operation of the project. Section 3.12.2, of the Draft EIS (Affected Environment – Increases in Ambient Noise Levels) discussed that ambient background noise levels were measured over several days at three locations within the project area. The measured noise levels were then assessed against the predicted noise levels for the Middle Scenario. Addendum Table 3.12-1 below performs the same assessment for the predicted noise levels for the revised KVWPP layout. The conclusions regarding whether the change in noise levels might be perceived have not changed.

Addendum Table 3.12-1: Perception of changes in Noise Level of the Revised KVWPP Layout

Noise measurement location and nearest property owners	Ambient average noise level L_{eq} dBA	Predicted noise levels due to turbine operation (Draft EIS) dBA	Revised predicted noise levels due to turbine operation dBA	Would change in noise levels be perceived?
A - Anthony, Gaskill	Mid-40's	40-45	40-41	Would not be perceived as a noticeable increase
B - Zellmer, Genson	Low to mid-50's	40-48	43-45	Would not be perceived as a noticeable increase
C - Nelson, Thompson	Mid- to upper 30's	46-48	45-46	Could still be subjectively heard as approximately a doubling in loudness

Source: Energy Facility Site Evaluation Council 2004a.

3.12.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.

3.12.4 Mitigation Measures

Because new impacts have not been identified, additional mitigation measures are not warranted.

3.12.5 Significant Unavoidable Adverse Impacts

The Draft EIS concluded that with implementation of the proposed and recommended mitigation measures outlined in the Draft EIS, no significant unavoidable adverse impacts from noise associated with constructing, operating, or decommissioning the proposed project would be anticipated.

No additional significant unavoidable adverse noise impacts are expected as a result of the project layout revisions. The revised project layout decreases noise impacts to receptors near the project area.

3.13 PUBLIC SERVICES AND UTILITIES

3.13.1 Affected Environment

Because the description of the affected environment is based on the availability of public services and utilities for Kittitas County as a whole, it is not influenced by the shortening, elimination and repositioning of turbine strings.

3.13.2 Impacts of Proposed Action

The discussion of impacts to public services and utilities of the Proposed Action continues to adequately capture the full range of potential impacts that may result from construction, operation and decommissioning of the KVWPP in its revised layout.

3.13.3 Impacts of No Action Alternative

Revision of the turbine layout does not affect the discussion of Impacts of the No Action Alternative Presented in the Draft EIS.

3.13.4 Mitigation Measures

Because new impacts have not been identified, additional mitigation measures are not warranted.

3.13.5 Significant Unavoidable Adverse Impacts

The Draft EIS concluded that with implementation of the mitigation measures proposed by the Applicant and other agencies involved in the review of this project, no significant unavoidable adverse impacts to public services and utilities would be anticipated.

No additional unavoidable adverse impacts on public services and utilities would occur as a result of the KVWPP layout revisions.

3.14 CUMULATIVE IMPACTS

Since issuance of the Draft EIS, the status of two other projects proposed in Kittitas County has changed. First, the Governor of Washington State approved the Wild Horse Wind Power Project in July of 2005, and the Wild Horse project has proceeded to construction (Energy Facility Site Evaluation Council 2005a.) As for enXco's Desert Claim Wind Power project, the Development Activities Application submitted to Kittitas County was denied in April 2005. However, enXco representatives have indicated on the record their intent to submit an Application for Site Certification for the Desert Claim Project to EFSEC (Energy Facility Site Evaluation Council. 2005b). Therefore, analysis of the cumulative impacts of these three projects is still merited.

As indicated in the previous sections of this Addendum, revision of the turbine layout does not create any new significant adverse environmental impacts as a result of the construction or

operation of the KVWPP. Changes in impacts have been identified in the following areas: shadow flicker, noise, and visual impacts. Changes in impacts have not been identified in other areas of the environment. Therefore a change in cumulative impacts would not be expected in areas other than shadow flicker, noise and visual impacts.

Shadow flicker impacts described in Section 3.4 above are limited to those residences in the direct vicinity of the KVWPP turbines. As explained in Section 3.14.8 of the Draft EIS the effects of shadow flicker are limited to discrete locations and this prevents cumulative impacts from shadow flicker.

Noise impacts described in Section 3.12 above are also limited to the vicinity of the KVWPP. As explained in Section 3.14.16 of the Draft EIS, the three projects are sufficiently far apart to prevent cumulative impacts from noise.

Section 3.14 of the Draft EIS identified three types of cumulative visual impacts that would be possible if all three projects were constructed and operated.

First, the Desert Claim and KVWPP projects would be visible in proximity to each other from certain viewpoints. Figures 3.14-3 through 3.14-8 of the Draft EIS described such views from Reecer Creek Road and from outside the national Forest Boundary to the north of the KVWPP sites. In both of these views the Kittitas Valley would be in the background of the view. With fewer turbines being installed, the actual impact to these views would be lessened. Therefore Figures 3.14-3 through 3.14-8 of the Draft EIS and the accompanying analysis overestimate the actual cumulative impact of the revised KVWPP layout with the Desert Claim project.

The second type of cumulative visual impact described in the Draft EIS was the overall effect of multiple wind energy projects on the regional landscape, and the experience of viewers traveling through the Kittitas Valley viewing the turbines at multiple locations and multiple times. Although the revised KVWPP layout would decrease the visual impact in the vicinity of the KVWPP, it would not impact the cumulative effect of repetitive views of multiple wind projects. The Draft EIS therefore continues to adequately describe this potential impact.

Finally, the Draft EIS also addressed the cumulative impact of the projects on nighttime lighting in the Kittitas Valley, especially that of the KVWPP and Desert Claim projects. With fewer turbines requiring nighttime lighting, this impact would be lessened, but not eliminated altogether.

In conclusion, the impacts identified from revision of the KVWPP layout that have been noted in this Addendum would not change the analysis of cumulative impacts in the Draft EIS when this project is considered jointly with the Wild Horse Wind Power Project and the Desert Claim Project.

CHAPTER 4: NEW REFERENCES

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CHAPTER 5: ADDENDUM DISTRIBUTION LIST

Federal Agencies

Boynton, Jim	Wenatchee National Forest
Cantwell, Maria Hon.	U.S. Senate
Custer, Cindy	Bonneville Power Administration
Bogert, L. Michael	U.S. EPA Region 10
Kurz, Gregg	U.S. Fish and Wildlife Service
Miller, Mark	U.S. Fish and Wildlife Service
Murray, Patty Hon.	U.S. Senator
Peck, Nick	BPA Transmission
Rogalski, Floyd	U.S. Forest Service, Cle Elum Ranger District
Yarde, Rick	Bonneville Power Administration

Tribal Government

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Meninick, Johnson	Yakama Indian Nation
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Pleasants, Camille	Confederated Tribes of the Colville Reservation
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State Agencies

Anderson, Mark	Washington Department of Community, Trade, and Economic Development
Bracken, Edd	Washington Department of Fish and Wildlife
Clausing, Ted	Washington Department of Fish and Wildlife
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Dirkx, J. Mark	Washington Department of Ecology
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External SEPA Coordinator	Washington Department of Natural Resources
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Holmquist, Janea Rep.	Washington State House of Representatives
Holmstrom, Rick	Washington State Department of Transportation, South Central Region
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Mulliken, Joyce Sen.	Washington State Senate
Renfrow, Brent	Washington Department of Fish and Wildlife
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Davis, Todd	Kittitas County Noxious Weed Control Board
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Hurson, James	Kittitas County Prosecutors Office
Johnson, Keith	Kittitas Audubon Society
Kjelland, Mark	Kittitas County Public Utilities District
Lael, Anna	Kittitas County Conservation District
Piercy, Darryl	Kittitas County Community Development Services
Polck, Darrell	Grant County PUD
White, Joe	Grant County PUD

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Williams, John	Rebound
Zuelsdorff, Kathleen	Public Service Commission of Wisconsin
R.O.K.T	Residents Opposed to Kittitas Turbines