

Desert Claim Wind Power Project

Final Supplemental Environmental Impact Statement

Lead Agency:

Energy Facility Site Evaluation Council

November 2009

FACT SHEET

Project Title	Desert Claim Wind Power Project
Project Sponsor	Desert Claim Wind Power LLC
Proposed Action	<p>The Proposed Action is development of a 190-megawatt (MW) wind energy facility on a 5,200-acre site in Kittitas County, Washington. The proposal includes 95 2.0 MW turbines, each a maximum of 410 feet in height (measured from the ground to the tip of the rotor blade when pointing up). The towers would be anchored to steel and concrete foundations. The power collection system would be primarily underground and located within road alignments. One electrical substation would be constructed adjacent to the interconnection point with the regional transmission system (lines operated by Bonneville Power Administration [BPA] or Puget Sound Energy [PSE]). Other Project elements include: approximately 27 miles of roads, providing access to all turbines for maintenance; a 5,000 square foot operation and maintenance (O&M) facility; and four meteorological towers. Construction would be completed over an approximate 10 month period</p>
Project Location	<p>The Project Area is located approximately 8 miles north of the City of Ellensburg and consists of contiguous property owned by the Washington State Department of Natural Resources (1,529 acres), four private landowners (2,551 acres), and an affiliate of the Applicant (1,120 acres). It consists of sections and portions of sections in Township 19N, Range 18E, Sections 9, 16, 17, 18, 19, 20, 21, 22, 27, 29, and 30 along with the NW corner of Township 19N, Range 17E, Section 25.</p>
Date of Implementation	Construction would begin as soon as all required approvals and permits are obtained.
Lead Agency, Responsible Official & Contact	<p>Energy Facility Site Evaluation Council (EFSEC) Allen Fiksdal, EFSEC Manager 905 Plum Street SE P.O. Box 43172 Olympia, WA 98504-3172 (360) 956-2152</p>
Required Permits, Approvals & Licenses	EFSEC's Site Certification Agreement for the Project will identify all required state approvals. No federal permits have been identified at this time.
EIS Authors & Principal Contributors	<p>The Final SEIS was prepared by Weinman Consulting, LLC and Tetra Tech EC. It summarizes and incorporates technical information that was prepared by the following firms: Associated Earth Sciences, Inc. (Geology and Water); Ecology & Environment (Wetlands & Streams); Jones & Jones (Aesthetics); Western Environmental Systems Inc. [WEST] (Wildlife and Vegetation); and Northwest Archaeological Associates (Cultural Resources).</p>

Environmental Document Being Supplemented

Desert Claim Final EIS (Kittitas County 2004)

Type/Timing of Subsequent Environmental Review

No subsequent environmental review would be required for the development addressed in the Final SEIS and the Revised Application for Site Certification (ASC) submitted by the Applicant. If the Applicant proposed to develop additional phases of Project facilities or to replace the turbines in the future, such proposals would be evaluated for consistency with the analysis and conclusions documented in this SEIS to determine if any supplemental environmental review would be necessary, pursuant to the SEPA Rules. If the Project were to connect to the BPA 230 kV transmission line that bisects the Project Area, BPA would comply with the requirements of the National Environmental Policy Act (NEPA).

Location of Background Information

The Desert Claim ASC, this Final SEIS, and other background information concerning the Project and EFSEC's procedures may be found on EFSEC's website: www.efsec.wa.gov. Copies of the ASC and this Final SEIS are also available for public review at the following locations:

Energy Facility Site Evaluation Council
905 Plum Street SE
Olympia, WA 98504
(360) 956-2121

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

Central Washington University Library
400 E University Ave
Ellensburg, WA 98926
(509) 963-1111

City of Cle Elum Library
302 Pennsylvania Ave
Cle Elum, WA 98922
(509) 674-2313

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

Date of Final SEIS Issuance

November 6, 2009

Availability of Final SEIS

CD and printed copies of the SEIS are available from EFSEC at the address listed previously, or may be viewed on EFSEC's website: www.efsec.wa.gov

TABLE OF CONTENTS

1.0	SUMMARY	1-1
1.1	INTRODUCTION.....	1-1
1.2	ENVIRONMENTAL REVIEW PROCESS	1-2
1.3	APPLICANT'S OBJECTIVES	1-2
1.4	PROPOSAL AND ALTERNATIVES.....	1-3
1.4.1	Revised Desert Claim Proposal	1-3
1.4.2	No Action	1-4
1.4.3	Off-Site Alternatives	1-4
1.4.4	Alternatives Considered But Not Carried Forward.....	1-4
1.5	SUMMARY COMPARISON OF ENVIRONMENTAL IMPACTS	1-4
1.6	CUMULATIVE IMPACTS	1-7
1.6.1	Water Resources	1-7
1.6.2	Plants and Animals	1-8
1.6.3	Historic Resources.....	1-8
1.6.4	Aesthetics	1-8
1.7	MITIGATION MEASURES.....	1-9
1.7.1	Water Resources	1-9
1.7.2	Plants and Animals	1-9
1.7.3	Wetlands	1-9
1.7.4	Wildlife.....	1-10
1.7.5	Historic Resources.....	1-10
1.7.6	Aesthetics	1-11
1.8	SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS	1-11
1.8.1	Water Resources	1-11
1.8.2	Plants and Animals	1-11
1.8.3	Historic Resources.....	1-12
1.8.4	Aesthetics	1-12
1.9	CONSULTATION AND COORDINATION.....	1-13
1.10	ISSUES TO BE RESOLVED.....	1-13
2.0	ALTERNATIVES INCLUDING THE PROPOSED ACTION	2-1
2.1	BACKGROUND	2-1
2.1.1	Proposal History and Process	2-1
2.1.2	Scope of SEIS.....	2-2
2.1.3	Draft SEIS, Public Review and Comment	2-3
2.1.4	Consultation, Stipulations, and Mitigation Agreements	2-3
2.2	PROPOSED ACTION.....	2-7
2.2.1	Existing Project Site Conditions.....	2-7
2.2.2	Project Facilities	2-13

2.2.3	Construction Process	2-24
2.2.4	Decommissioning	2-33
2.3	CHANGES TO THE PROPOSAL.....	2-33
2.4	ALTERNATIVES TO THE PROPOSAL	2-35
2.4.1	No Action Alternative	2-35
2.5	ALTERNATIVES NOT CONSIDERED IN DETAIL	2-36
3.0	AFFECTED ENVIRONMENT, SIGNIFICANT IMPACTS, MITIGATION MEASURES, AND SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS	3-1
3.1	WATER RESOURCES: STREAMS	3-1
3.1.1	Summary of Prior Environmental Analysis	3-1
3.1.2	Affected Environment	3-1
3.1.3	Significant Impacts	3-2
3.1.4	Cumulative Impacts.....	3-3
3.1.5	Mitigation Measures.....	3-3
3.1.6	Significant Unavoidable Adverse Impacts	3-3
3.2	PLANTS AND ANIMALS	3-3
3.2.1	Vegetation	3-3
3.2.2	Wetlands	3-11
3.2.3	Wildlife (Birds and Bats)	3-13
3.3	HISTORIC RESOURCES	3-28
3.3.1	Summary of Prior Environmental Analysis	3-28
3.3.2	Affected Environment	3-28
3.3.3	Significant Impacts	3-33
3.3.4	Cumulative Impacts.....	3-34
3.3.5	Mitigation Measures	3-35
3.4	AESTHETICS, LIGHT, AND GLARE	3-37
3.4.1	Summary of Prior Environmental Analysis	3-37
3.4.2	Affected Environment	3-38
3.4.3	Significant Impacts	3-45
3.4.4	Cumulative Impacts.....	3-62
3.4.5	Mitigation Measures	3-65
3.4.6	Significant Unavoidable Adverse Impacts	3-67
4.0	DRAFT SEIS COMMENTS AND RESPONSES	4-1
5.0	REFERENCES CITED	5-1
6.0	DISTRIBUTION LIST	6-1
 APPENDIX A GROUNDWATER SUPPLY REPORT		
APPENDIX B RARE PLANT SURVEY REPORT		

List of Tables

Table 1.5-1.	Summary of Environmental Impacts	1-5
Table 2.2-1.	Nearby Residences and Distances from Nearest Proposed Turbine	2-11
Table 2.2-2.	Estimated Area of Construction Disturbance and Permanent Facilities ¹	2-26
Table 2.3-1.	Comparison of Current and Prior Desert Claim Project Proposals.....	2-34
Table 3.2-1.	Vegetation Types in the Project Area	3-5
Table 3.2-2.	Approximate Acres of Impact by Facility and Habitat Type (before mitigation).....	3-8
Table 3.2-3.	Avian Use Estimates and Avian Fatality Estimates for Wind Power Projects in the Columbia Plateau Ecoregion.....	3-16
Table 3.2-4.	Percent Composition of Avian Fatalities by Species Group for Existing Columbia Plateau Ecoregion (WA, OR) Wind Energy Facilities.....	3-19
Table 3.2-5.	Number and Species Composition of Bat Fatalities Found at Wind Projects in the Columbia Plateau Region	3-20
Table 3.2-6.	Mean Bat Mortality Estimates Based on Fatalities Found at Wind Projects in the Columbia Plateau Region.....	3-21
Table 3.4-1.	Summary of Impacts by Visual Assessment Unit and Viewpoint.....	3-47
Table 3.4-1.	Summary of Impacts by Visual Assessment Unit and Viewpoint (continued) .	3-48
Table 4-1.	List of Draft SEIS Comments	4-1

List of Figures

Figure 2.2-1.	Project Area Vicinity Map	2-8
Figure 2.2-2.	Project Area	2-9
Figure 2.2-3.	Residences Located near Project Area.....	2-12
Figure 2.2-4.	REpower MM92 Wind Turbine.....	2-14
Figure 2.2-4a.	Comparison of 2004 FEIS Turbine and Currently Proposed Turbine	2-15
Figure 2.2-5.	Proposed Turbine Location and Project Power Collection System	2-18
Figure 2.2-6.	Project Access Road System.....	2-23
Figure 3.2-1.	Vegetation Mapping of the Revised Desert Claim Wind Power Project.....	3-6
Figure 3.2-2.	Relationship between Raptor Use and Mortality for 13 Wind Projects Studied Since 2002	3-17
Figure 3.3-1.	Project Overview during 2008 Field Survey, Vicinity of BPA Transmission Lines; View to the North.....	3-29
Figure 3.4-1.	Viewpoint 1B – Existing View with 35mm Lens (above) and 50mm Lens (below)	3-41
Figure 3.4-2.	Viewpoint 3C – Existing View with 35mm Lens (above) and 50mm Lens (below)	3-42
Figure 3.4-3.	Final EIS and SEIS Project Areas.....	3-43
Figure 3.4-4.	Project Area and Viewpoints	3-44
Figure 3.4-5.	View 1B – SEIS Existing View Looking NW across the Northeast Valley Visual Assessment Unit from Intersection of Hungry Junction Road and Lookabout Lane	3-68

Figure 3.4-6.	View 1B – SEIS Simulated View	3-68
Figure 3.4-7.	View 1C – SEIS Existing View Looking NE across the Northwest Valley Visual Assessment Unit along Smithson Road near Highway 97	3-69
Figure 3.4-8.	View 1C – SEIS Simulated View	3-69
Figure 3.4-9.	View 1D – SEIS Existing View Looking SW across the Northwest Valley Visual Assessment Unit from Immediately N of the Project Area	3-70
Figure 3.4-10.	View 1D – SEIS Simulated View	3-70
Figure 3.4-11.	View S1H – SEIS Existing View Looking W-by-SW across the Northwest Valley Visual Assessment Unit from Robbins Road, just N of North Branch Canal	3-71
Figure 3.4-12.	View S1H – SEIS Simulated View	3-71
Figure 3.4-13.	View S1I – SEIS Existing View Looking NE across the Northwest Valley Visual Assessment Unit from Reecer Creek Road, just N of North Branch Canal	3-72
Figure 3.4-14.	View S1I – SEIS Simulated View	3-72
Figure 3.4-15.	View S1J – SEIS Existing View Looking W-by-NE across the Northwest Valley Visual Assessment Unit from Smithson Road, just E of Green Canyon Road	3-73
Figure 3.4-16.	View S1J – SEIS Simulated View	3-73
Figure 3.4-17.	View S1K – SEIS Existing View Looking S-by-SW across the Northwest Valley Visual Assessment Unit from Reecer Creek Road, just N of the Project Boundary	3-74
Figure 3.4-18.	View S1K – SEIS Simulated View	3-74
Figure 3.4-19.	View S1L – SEIS Existing View Looking SE across Northwest Valley Visual Assessment Unit from Katie Ln., 1/8 Mile E of Green Canyon Rd., 1/8 Mile N of Project Limit	3-75
Figure 3.4-20.	View S1L – SEIS Simulated View	3-75
Figure 3.4-21.	View S1M – SEIS Existing View Looking NE across the Northwest Valley Visual Assessment Unit from Smithson Rd., ¼ Mile W of Howard Rd., just S of Project Area	3-76
Figure 3.4-22.	View S1M – SEIS Simulated View	3-76
Figure 3.4-23.	View 2A – SEIS Existing View Looking SW across Northwest Valley Visual Assessment Unit from Wilson Creek Road	3-77
Figure 3.4-24.	View 2B – SEIS Existing View Looking W across the Northeast Valley Visual Assessment Unit from Wilson Creek Road on Rabbit Hill	3-78
Figure 3.4-25.	View 2B – SEIS Simulated View	3-78
Figure 3.4-26.	View 2C – SEIS Existing View Looking NW across the Northwest Valley Visual Assessment Unit from the N end of Bowers Field at Hungry Junction Road	3-79
Figure 3.4-27.	View 2C – SEIS Simulated View	3-79
Figure 3.4-28.	View 3A – SEIS Existing View Looking N across the Greater Ellensburg Visual Assessment Unit over the Burlington Northern Railroad near Hwy 97 and Cascade Way	3-80
Figure 3.4-29.	View 3A – SEIS Simulated View	3-80
Figure 3.4-30.	View 3C – SEIS Existing View Looking NW across the Greater Ellensburg Visual Assessment Unit from Reed Park in Ellensburg	3-81

Figure 3.4-31. View 3C – SEIS Simulated View	3-81
Figure 3.4-32. View S5B – SEIS Existing View Looking N-by-NE from the Southwest Valley Visual Assessment Unit ½ mile N of the intersection of Killmore Rd. and Robinson Rd.	3-82
Figure 3.4-33. View S5B – SEIS Simulated View	3-82
Figure 3.4-34. View 6A – SEIS Existing View Looking NE from the Hayward Hill Visual Assessment Unit at the Top of the Hill	3-83
Figure 3.4-35. View 6A – SEIS Simulated View	3-83
Figure 3.4-36. View S6B – SEIS Existing View Looking N from above Highway 97 in the Hayward Hill Unit from a Group of Residences roughly 2 miles S of the Project Boundary	3-84
Figure 3.4-37. View S6B – SEIS Simulated View	3-84
Figure 3.4-38. View 7A – SEIS Existing View Looking NE from the Dry Creek Slope Visual Assessment Unit 1/3 mile N of Smithson Road, off Highway 97	3-85
Figure 3.4-39. View 7A – SEIS Simulated View	3-85
Figure 3.4-40. View S7B – SEIS Existing View Looking SW from the Dry Creek Slope Visual Assessment Unit from Hwy 97 at Driveway 16011, roughly ½ Mile W of the Project Area	3-86
Figure 3.4-41. View S7B – SEIS Simulated View	3-86
Figure 3.4-42. View S7C – SEIS Existing View Looking E-by-NE from a Hilltop in Dry Creek Slope Visual Assessment Unit, 1/3 mile W of Hwy 97, due W of Smithson Road	3-87
Figure 3.4-43. View S7C – SEIS Simulated View	3-87
Figure 3.4-44. View S8C – SEIS Existing View Looking S from the Table Mountain Slope Visual Assessment Unit over the Kittitas Basin, Slightly W of Final EIS Viewpoint 8A	3-88
Figure 3.4-45. View S8C – SEIS Simulated View	3-88
Figure 3.4-46. View S8D – SEIS Existing View Looking W from the Table Mountain Slope Visual Assessment Unit from Robbins Road	3-89
Figure 3.4-47. View S8D – SEIS Simulated View	3-89
Figure 3.4-48. View S8E – SEIS Existing View Looking S from the Table Mountain Slope Visual Assessment Unit toward the WDNR Property from Upper Green Canyon Road	3-90
Figure 3.4-49. View S8E – SEIS Simulated View	3-90
Figure 3.4-50. Visual Resource Cumulative Impact Study Area	3-91
Figure 3.4-51. Cumulative Impacts Viewpoints for Simulations of Desert Claim and Kittitas Valley Wind Power Projects	3-92
Figure 3.4-52. Cumulative Viewpoint 1 Simulation	3-93
Figure 3.4-53. Cumulative Viewpoint 2 Simulation	3-93
Figure 3.4-54. Cumulative Viewpoint 3 Simulation	3-94
Figure 3.4-55. Cumulative Viewpoint 4 Simulation	3-94

Acronyms

ASC	Application for Site Certification
AWEA	American Wind Energy Association
BBS	Breeding Bird Survey
BMPs	Best Management Practices
BPA	Bonneville Power Administration
BWEA	British Wind Energy Association
CFE	Counsel for the Environment
County	Kittitas County
DAHP	Department of Archaeology and Historic Preservation
dBA	A-weighted decibel
Desert Claim	Desert Claim Wind Power LLC
EFSEC	Energy Facility Site Evaluation Council
FAA	Federal Aviation Administration
kV	kilovolt
met	meteorological
mm	millimeter
MOA	Memorandum of Agreement
mph	miles per hour
MW	megawatt
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O&M	operation and maintenance
PSE	Puget Sound Energy
PUD	Public Utility District
SCADA	Supervisory Control and Data Acquisition
SEIS	Supplemental Environmental Impact Statement
SEPA	State Environmental Policy Act
SWPPP	Stormwater Pollution Prevention Plan
TCP	Traditional Cultural Properties
TESCP	Temporary Erosion and Sedimentation Control Plan
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources

1.0 SUMMARY

1.1 INTRODUCTION

Chapter 1 provides a summary of the Final Supplemental Environmental Impact Statement (Final SEIS) for the revised Desert Claim Wind Power Project, which is proposed by Desert Claim Wind Power LLC (Desert Claim). The summary briefly describes relevant background information, including the environmental review process and the Applicant's objectives. The major features of the Proposed Action, and alternatives to the proposal, are next described. The significant environmental impacts expected to occur as a result of the Proposed Action and alternative are summarized in a table. Cumulative impacts are also identified. Mitigation measures, which could avoid, minimize, reduce, or compensate for impacts are described. Finally, significant impacts that cannot be avoided if the proposal is implemented are identified.

Chapter 2 of the SEIS includes a complete description of the Proposed Action, including changes that have been made to the Project since it was first proposed to Kittitas County in 2003. The No Action Alternative is also described. A potential off-site alternative, in addition to those described in the 2004 Final EIS, is discussed but is not found to be reasonable; this alternative is not considered in detail in the SEIS. This chapter also describes the steps in the SEPA process, ongoing consultation, and stipulations and agreements that have resulted in additional commitments for mitigation.

Chapter 3 describes the affected environment, significant impacts, including the cumulative impacts of the Project and other approved wind power projects in the general vicinity, and mitigation measures. Significant impacts that cannot be avoided are identified. This chapter of the Final SEIS incorporates changes and clarifications to the analysis, and additions or clarifications of mitigation measures; these changes reflect comments received on the Draft SEIS and agreements with state agencies and tribes.

Chapter 4 includes comment letters and testimony that were provided on the Draft SEIS and provides responses to those comments.

Chapter 5 lists references used in the SEIS.

Chapter 6 lists the agencies, organizations, and individuals who received copies of the Final SEIS.

1.2 ENVIRONMENTAL REVIEW PROCESS

This SEIS has been prepared for and at the direction of the Washington State Energy Facility Site Evaluation Council (EFSEC), consistent with the State Environmental Policy Act (SEPA, RCW 43.21C) and rules adopted by EFSEC to implement SEPA (Washington Administrative Code [WAC] 463-47). It supplements the information contained in the Final EIS published by Kittitas County in 2004 for a larger (120 turbine) but similar Desert Claim wind power project. Desert Claim submitted an Application for Site Certification (ASC) to EFSEC in November 2006. After reviewing the ASC and the Final EIS, EFSEC determined that an SEIS was appropriate for the revised proposal. EFSEC published a Notice of Adoption and Determination of Significance on March 19, 2007, and established the scope of the SEIS, which is limited to the following environmental issues: Wetlands, streams, wildlife, cultural resources, and aesthetics/visual impacts. A revised Application was submitted in February 2009. A Draft SEIS was published on April 2, 2009, and written comments on the Draft SEIS were received until May 4, 2009. EFSEC also held a public meeting in Ellensburg on April 23, 2009, to receive public comments on the Draft SEIS.

Following publication of the Draft SEIS, the Applicant consulted with the Yakama Nation, the Counsel for the Environment (CFE), and the Washington Department of Fish & Wildlife (WDFW). These consultations resulted in agreements regarding additional studies, mitigation measures and plans that will be implemented regarding habitat, wildlife, and historic and cultural resources.

1.3 APPLICANT'S OBJECTIVES

enXco, the owner of Desert Claim Wind Power LLC, is a privately held company based in California that develops, builds, operates, and manages commercial scale wind energy projects throughout the United States and other countries. The company currently has approximately 1,375 megawatts (MW) of wind power projects in operation, and projects totaling another 4,200 MW under development.

The primary objective of the Desert Claim proposal is to develop a commercially viable wind energy facility with a total nameplate capacity of at least 190 MW and a maximum of 95 wind turbines, plus necessary support facilities. Site-specific criteria needed to support this objective include sufficient wind resource to achieve the desired goal for generation; access to sufficient available capacity on an existing electrical transmission system; lack of significant constraints posed by environmentally sensitive resources or recreational areas; and relatively large tracts of open land that are available for sale or lease.

1.4 PROPOSAL AND ALTERNATIVES

1.4.1 Revised Desert Claim Proposal

Wind energy production requires five basic functions, including electricity generation, energy transfer, power collection, an electrical substation, and transmission facilities. The facilities proposed to accomplish these functions, and to meet the Applicant's objectives, are described below.

Project Area. The Project Area is comprised of 5,200 acres of land: 2,551 acres to be leased from four private landowners, 1,529 acres to be leased from the Department of Natural Resources, and 1,120 acres to be owned by an affiliate of the Applicant. The contiguous Project Area is located approximately 8 miles northwest of Ellensburg.

Wind Turbines. Desert Claim would include a maximum of 95 wind turbines, each with a nameplate generating capacity of 2 MW. Total height of the turbine with the tip pointing up is 410 feet. Total generating capacity of the Project would be 190 MW, which is sufficient to serve between 42,750 and 57,000 homes. The proposed turbine layout incorporates safety setbacks from buildings, public roads, utility corridors, and project boundaries, and a minimum 1,640-foot separation from residences outside the Project Area.

Power Collection System. Power generated by turbines would be collected by approximately 27 miles of cables located primarily underground. The collection system would generally be placed within roads and would avoid, bridge or tunnel beneath wetlands and streams.

Substation. One substation, occupying approximately 2 acres, would be constructed to step-up the power collected from turbines. The preferred location is adjacent to the Puget Sound Energy (PSE) Rocky Reach transmission line. An alternative location is identified adjacent to the Bonneville Power Administration (BPA) transmission line. The substation area would be gravel covered and fenced.

Meteorological (Met) Towers. Four permanent towers would be constructed to measure wind speed and collect other met data. The met towers would be freestanding, 212-foot tall open steel structures set on concrete foundations

Access Roads. A system of single-lane gravel roads, 27 miles in length, would be constructed to provide access to all turbines for maintenance. Roads would bridge or span wetlands and streams where they cannot be avoided.

Operations. An approximate 5,000 square foot operations facility would be constructed. It would include offices for operating and monitoring the Project, enclosed space for equipment storage and maintenance, and parking for employees and visitors. The facility would occupy a 2-acre site.

Construction. Construction of the Project is estimated to require approximately 10 months and would employ a workforce of 120 to 180 workers.

1.4.2 No Action

Under the No Action Alternative the proposed Desert Claim Wind Power Project and all associated features including the turbines, access roads, utility trenches, and substations would not be constructed. There would be no adverse environmental impacts from development of the wind power facility within the Desert Claim Project Area. However, on-site agricultural and rural residential activities would continue for the foreseeable future under current zoning. The potential for residential development in the Project Area, to the extent permitted by existing zoning, and the potential for conflicts with existing agricultural activities, would continue. Conversion of some privately-owned lands to rural residential uses could displace existing uses and affect rural character over time.

1.4.3 Off-Site Alternatives

Two off-site alternatives were evaluated in the Desert Claim Final EIS. These alternatives have not changed and are not repeated in the SEIS.

1.4.4 Alternatives Considered But Not Carried Forward

Kittitas County's Pre-Identified Wind Farm Area, identified in Kittitas County Code 17.61A.035, was evaluated as the site of a potential alternative. While the area is large (approximately 285,120 acres), much of the area is in federal ownership (Yakima Firing Center 92,160 acres), managed by the State of Washington for wildlife and habitat conservation (136,746 acres), or approved for the Wild Horse and Vantage wind power projects (14,630 acres). The remaining lands are contiguous to the I-90 corridor, in fragmented/non-contiguous parcels, or in locations where wind resources are unsatisfactory. Moreover, the Applicant has no leases or property rights in this area. On balance, these constraints are considered to be substantial and would severely limit the potential to site a wind power project. As a result, this area is not considered to be a reasonable off-site alternative and is not evaluated in detail in the SEIS.

1.5 SUMMARY COMPARISON OF ENVIRONMENTAL IMPACTS

Table 1.5-1 below briefly and generally compares the expected impacts of the Desert Claim proposal to the No Action alternative. The table is a general summary and is based on the detailed discussion in Chapter 3 of the SEIS. Interested readers should consult the detailed discussion for more information.

Table 1.5-1. Summary of Environmental Impacts

Element of the Environment	Revised Desert Claim Project	No Action Alternative
Water Resources		
Streams	No temporary or permanent impacts are anticipated to occur. Project access roads or the power collection system would cross on-site streams or irrigation ditches by bridging, boring underneath, bridging or using power poles, as appropriate.	While a wind power facility would not be constructed, impacts to streams in conjunction with rural residential development or ongoing agricultural activities could occur and could result in direct and indirect impacts to streams.
Plants and Animals		
Vegetation	<p>Approximately 86.4 acres of vegetation in the Project Area would be permanently disturbed by proposed facilities, and 230.8 acres would be temporarily disturbed. An additional 19.5 acres would be disturbed by construction staging and storage; these areas have not been located at this time. Total disturbance (temporary and permanent) would be 317.2 acres. Disturbance would be less than for the original Desert Claim proposal.</p> <p>Most disturbances would occur in grassland and shrub-steppe habitat types; small areas of agricultural land, riparian forest, riparian shrub, open water and wet meadow would also be disturbed. If unmitigated, this loss of habitat could affect some species of wildlife. The Applicant has proposed to mitigate these impacts according to the WDFW guidelines and an agreement with the agency.</p> <p>A formal survey for federally-listed rare plants (Ute-ladies tresses) was conducted in July 2009 and did not identify the presence of rare plants. State-listed species are not expected to be present because habitat requirements of these plants are not present and the site has been extensively disturbed. Additional survey work and consultation with the Yakama Nation will be conducted in conjunction with micro-siting to identify traditional and medicinal plants.</p>	While a wind power facility would not be constructed, residential development or ongoing agricultural activities could result in direct and indirect impacts to vegetation.

Table 1.5-1. Summary of Environmental Impacts (continued)

Element of the Environment	Revised Desert Claim Project	No Action Alternative
Wetlands	No impacts to wetlands or buffers would occur. Impacts would be avoided through placement and micro-siting of turbines, or by spanning wetlands	While a wind power facility would not be constructed, impacts to wetlands in conjunction with rural residential development or ongoing agricultural activities could occur and could result in direct and indirect impacts to wetlands.
Wildlife	<p>Most impacts to wildlife from construction and operation would be as described in the 2004 Final EIS and the 2006 ASC for the project. These would include loss of some existing habitat, primarily grassland and shrub-steppe; some mortality, disturbance, and displacement of wildlife during construction; and limited, intermittent disturbance of wildlife as a result of ongoing maintenance activity. As noted in the Final EIS, these effects would be minor.</p> <p>Mortality estimates for birds and bats are based on recent studies of existing wind facilities in the Columbia Plateau eco-region and the size of the Project in MW. Total avian mortality (raptors, passerine and waterfowl) is estimated to be between 171 and 608 birds per year, with passerines comprising the largest percentage. These mortalities are not expected to have a significant effect on the populations of the species evaluated, either for Desert Claim alone or in combination with other approved wind power facilities.</p> <p>Impacts to resident and non-migratory species of bats would be minor, assuming that Desert Claim results in mortality rates similar to other Columbia Plateau wind power projects. Using a per MW estimate, bat mortality is estimated to range from 76 to 475 bats per year.</p>	No impacts to existing wildlife populations would occur as a result of wind energy development on the Project site. Existing wildlife conditions on the Project site would be unchanged, subject to ongoing local changes from ongoing agricultural activities, rural residential development, and broader regional trends affecting wildlife.

Table 1.5-1. Summary of Environmental Impacts (continued)

Element of the Environment	Revised Desert Claim Project	No Action Alternative
Historic Resources	Thirty sites and 103 isolates were identified within the revised Desert Claim site area. If the Project were constructed according to the current layout, without any effort to avoid these resources during the final design and micro-siting, 26 sites and isolates would be impacted by the Project. However, the Applicant proposes to avoid significant cultural resources during final design and micro-siting, where practical, and implement other measures to mitigate impacts when complete avoidance is not practical. Additional survey work and consultation with the Yakama Nation will be conducted in conjunction with micro-siting to identify Traditional Cultural Properties and sites associated with culturally important events and people.	Although the proposed wind power facility would not be constructed and no Project-related impacts to cultural resources would occur, past and current effects to cultural resources, such as from ongoing surface erosion and weathering and agricultural activities, would continue for the foreseeable future. Conversion of land for low density rural residential uses could occur over the long term and could result in direct and indirect impacts to cultural resources.
Aesthetics	The location of impacts has changed in some instances as a result of revisions to the Project Area, the reduced number of turbines, and the greater separation between turbines and adjacent residences. Twenty-four simulations – showing visual characteristics with and without the proposed wind facility – were created, compared to 19 for the Final EIS proposal. The greatest impact would be experienced by observers closest to turbines. Overall, changes to the Project (e.g., contiguous Project Area, reduced number of turbines, increased separation from residences) would reduce Project impacts for most viewer groups compared to the original Project proposal considered in the Final EIS.	Visual quality of the surrounding area would not change directly, but would continue to be influenced by existing land uses and potential changes to land use.

1.6 CUMULATIVE IMPACTS

The cumulative impact analysis considers the impacts of the three previously approved wind power facilities and the Desert Claim Project. Projects considered include the proposed Desert Claim Project, and the approved Kittitas Valley, Wild Horse, and Vantage projects.

1.6.1 Water Resources

1.6.1.1 Streams

No impacts are identified for the Desert Claim, Kittitas Valley, or Wild Horse projects. The Vantage Wind Power Project could entail a small but un-quantified amount of fill in one seasonal drainage. Each project would implement mitigation measures in the form of

construction Best Management Practices (BMPs) to minimize sedimentation and potential water quality impacts. Cumulative impacts are not expected to be significant.

1.6.2 Plants and Animals

1.6.2.1 Vegetation

Wetlands

No temporary or permanent wetland impacts are expected to occur as a result of the revised Desert Claim proposal. Impacts identified for the Kittitas Valley Project (DEIS Addendum 2005) would be limited to 165 square feet (.00375 acre) of intrusion in two small wetlands in conjunction with road construction. No wetlands were identified on the Wild Horse site and no impacts would occur. Similarly, no wetland impacts were identified for the Vantage Wind Power Project.

1.6.2.2 Wildlife

For the entire Columbia Plateau Ecoregion, there are 47 existing and proposed wind energy facilities with a combined capacity of 6,700 MW. If all of these facilities were constructed, cumulative avian mortality estimates are as follows: raptors – 469 annually; all other birds – 14,070 annually; and bats – 7,907 annually. Local populations of these species are abundant and would not be significantly affected. Cumulative impacts to the bald eagle, golden eagle, loggerhead shrike, and sage thrasher are not expected.

1.6.3 Historic Resources

In general, impacts to cultural resources have been or would be avoided by each of the approved or proposed wind power projects through site planning and micro-siting of individual turbines, or would be mitigated through approved data recovery programs. With mitigation, no significant impacts to cultural resources are expected to occur as a result of the revised Desert Claim proposal. Likewise, with mitigation, no significant impacts to cultural resources were identified for the Kittitas Valley Wind Power Project (Final EIS 2005), the Wild Horse Wind Power Project (originally approved and expanded), or the Vantage Wind Power Project.

1.6.4 Aesthetics

Three approved or constructed wind power projects are located in Kittitas County: Kittitas Valley, approximately 0.5 mile from the Desert Claim site; Wild Horse, approximately 16 miles to the east; and Vantage, approximately 19 miles to the east. Turbines from the Wild Horse and Vantage projects could be barely discernible from the Desert Claim site and would have little or no effect on views.

Visitors and residents will be aware that there are numerous wind turbines in the greater Kittitas Valley area; some will likely be tourist attractions. There would be a change in the baseline visual conditions of areas in which turbines are visible. Perceptions of the rural and agricultural character of the area may change to some degree. There may be a few locations where all four wind power projects could be visible in the distance.

Visual simulations were created from four viewpoints where both the Desert Claim and Kittitas Valley projects could be seen. The simulations indicate that cumulative visual impacts of both projects would not be significantly greater than those of Desert Claim alone.

1.7 MITIGATION MEASURES

1.7.1 Water Resources

1.7.1.1 Streams

Mitigation measures – such as bridging or boring – have been incorporated into the proposal so that no significant impacts to streams would occur. As identified in the Desert Claim Final EIS, these include developing and implementing construction BMPs, a Temporary Erosion and Sedimentation Control Plan (TESCP), and a Stormwater Pollution Prevention Plan (SWPPP) to minimize erosion, sedimentation and impacts to water quality. No additional mitigation measures are required.

1.7.2 Plants and Animals

1.7.2.1 Vegetation

Mitigation measures described in the Desert Claim Final EIS are generally sufficient to address impacts to vegetation. These include or involve use of BMPs during construction to minimize the disturbance footprint; timing construction activities to reduce impacts; plans and standards for site reclamation and restoration; use of standard measures to control the spread of noxious weeds; and acquisition of new habitat to replace permanent shrub steppe and grassland habitat impacts, based on WDFW mitigation ratios. Subsequent to the publication of the Draft SEIS, the Applicant executed an Agreement with WDFW and a Stipulation with the CFE. Collectively, these documents specify additional measures, and provide more detailed specification of measures originally proposed, to mitigate potential impacts to vegetation and habitat.

1.7.3 Wetlands

Mitigation measures have been incorporated into the proposal so that no wetland impacts would occur. No additional mitigation measures are required. Any work adjacent to wetlands would adhere to applicable federal, state and local regulations and would be addressed in the

Department of Ecology Stormwater Discharge Permit, SWPPP, and TЕСP. The Agreement with WDFW and the Stipulation with the CFE, as discussed above, also incorporate measures to mitigate potential impacts to wetlands.

1.7.4 Wildlife

Mitigation measures identified in the Desert Claim Final EIS are generally adequate to address identified impacts. The Agreement with WDFW and the Stipulation with the CFE, as discussed above, also incorporate additional measures to mitigate potential impacts to wildlife. Agreed-upon measures include use of BMPs during construction to minimize potential disturbance; timing construction to reduce impacts; use of standard design measures to minimize wildlife interactions; additional pre-construction or pre-operation surveys for bats and specified bird species; post-construction monitoring programs focused on birds and bats; and formation of a Technical Advisory Committee (TAC) to review studies and monitoring data and recommend appropriate actions to EFSEC.

1.7.5 Historic Resources

Direct impacts to most identified sites and resources could be avoided by micro-siting turbines or modifying the alignments of roads or electrical collection system components in specific locations. The boundaries of identified resources should be staked in the field and flagged as no disturbance areas. The site markings should be removed following construction to avoid disclosure of resource locations. The Applicant engaged in additional consultation with the Yakama Nation regarding identification of Traditional Cultural Properties (TCPs) and sites associated with culturally important events and people. The Applicant and the Yakama Nation have reached agreement on a Memorandum of Understanding (MOU) addressing these topics.

If avoidance is not practical because another resource (e.g., wetland, stream) would be impacted, or there are other constraints on siting, the Applicant will prepare an Archaeological Resources Protection, Treatment, Mitigation and Monitoring Plan in consultation with Department of Archaeology and Historic Preservation (DAHP). The plan could include data recovery excavations, research and/or recording of scientific and historic information.

Based on consultation with DAHP, potential impacts to the historic character of the surrounding landscape could be mitigated by documenting the existing cultural landscape and developing a landscape history prior to commencement of construction. The Applicant should execute a Memorandum of Agreement (MOA) with DAHP to identify the scope of this documentation and analysis.

Additional management efforts should be undertaken to address potential impacts to archaeological resources. Appropriate measures could include relocating resources out of the

direct impact area, and updating of inventory forms to reflect the moves. Where resources cannot be moved (e.g., an irrigation ditch and stock pond), additional documentation of physical characteristics should occur.

An unanticipated discovery plan should be developed prior to construction. This would include protocols for notification, evaluation and treatment of any archaeological or human remains that might be discovered during construction.

1.7.6 Aesthetics

A number of mitigation measures have been incorporated into the revised Desert Claim Project and have reduced impacts compared to the Final EIS proposal. These include: a contiguous, slightly smaller project area, located further from the Ellensburg population center; reduction in the number of turbines (from 120 to 95) and lower turbine density; an evenly spaced turbine array, without significant gaps or isolated groupings; use of turbines of a consistent type and height; a minimum separation between turbines and adjacent residences of at least 4 times the tip height (there are only 7 residences outside the Project Area that are less than 2,500 feet from a turbine, and the closest is 1,687 feet from the nearest turbine); elimination of daytime strobes; and reduction in the number of turbines required to be lit at night.

Numerous additional mitigation measures are identified related to *visual integration* (e.g., using local materials and native landscaping for Project facilities, using low reflectivity, neutral colors for Project facilities to help them blend in); *ecological restoration* (e.g., replacing native vegetation in disturbed areas); *equipment maintenance* (e.g., promptly removing or repairing non-functioning turbines); and *information and education* (e.g., notify the local community of timing and duration of construction).

1.8 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

1.8.1 Water Resources

1.8.1.1 Streams

Potential temporary and permanent impacts to streams would be avoided. Therefore, no significant unavoidable adverse impacts to streams would occur as a result of the proposal.

1.8.2 Plants and Animals

1.8.2.1 Vegetation

There would be approximately 86 acres (less than 2 percent of the Project Area) of unavoidable displacement of existing vegetation with development of the Project. These impacts are not considered significant because they would not result in elimination of an entire vegetation type in

the Project Area, loss of 10 percent or more of a priority habitat in the Project Area, or a decrease in species richness resulting from the loss of a plant population in the Project Area. No significant unavoidable adverse impacts to rare plants from construction, operation or decommissioning of the proposed Project are expected. Similarly, the Project is not expected to result in significant unavoidable adverse impacts related to potential introduction or spread of noxious weeds.

1.8.2.2 Wetlands

All potential temporary and permanent wetland impacts would be avoided, and no significant unavoidable adverse impacts to wetlands would occur as a result of the proposal.

1.8.2.3 Wildlife

There would be unavoidable adverse impacts to several types of wildlife as a result of the Project. These would include temporary displacement of wildlife as a result of construction disturbance, loss of some individuals from immobile species during construction, loss of existing habitat within the construction footprint of the Project, and collision-related mortality of birds and bats during Project operation. These impacts are not considered significant based on consideration of the impact context, because the impacts would be temporary, limited in extent or intensity, and/or would be mitigated. With respect to bird and bat mortality, the analysis determined that the mortality levels estimated for the Project would not represent significant population-level impacts for the respective species affected. With the mitigation measures identified, no significant unavoidable adverse impacts to birds or other wildlife are expected.

1.8.3 Historic Resources

Construction and operation of the proposal could result in significant adverse impacts to historic and cultural resources. The Applicant has proposed to implement mitigation measures that would avoid such impacts and/or reduce them to a level of non-significance. Such measures include avoidance by relocation of Project facilities in specific locations, or implementing approved data recovery programs. With the identified mitigation, no significant unavoidable adverse impacts would occur.

1.8.4 Aesthetics

Some degree of visibility is inherent in a wind power facility; wind turbines are large objects and cannot be made invisible from all locations. Residents living closest to proposed turbines may experience the changes in the visual environment to be adverse and significant. Wind turbines would be visible in varying degrees, and with a lower degree of impact, from other locations more distant from the Project site.

1.9 CONSULTATION AND COORDINATION

The Desert Claim Final EIS identifies the public involvement and coordination activities that occurred in connection with the original Desert Claim proposal. Since that time, as the Project has been revised, the Applicant has continued to coordinate with EFSEC and agencies in connection with revising technical studies and addressing expressed concerns. EFSEC held several meetings in 2007 in connection with the revised ASC and issues relating to land use consistency. EFSEC also engaged a consultant to review the Desert Claim Final EIS and to provide an opinion on how to proceed with environmental review for the revised application (Golder Report). On March 19, 2007, EFSEC issued a notice of adoption and scoping notice, identifying that an SEIS would be prepared to address changes to the proposal and requesting comments. Consultation with the Yakama Nation has resulted in an agreement to execute an MOU to conduct additional surveys and evaluations of TCPs. Consultation with the CFE and WDFW has resulted in agreements and commitments to mitigation relating to wildlife resources and habitat impacts.

1.10 ISSUES TO BE RESOLVED

The issues identified for evaluation and resolution in the SEIS include wetlands, streams, plants and animals, historic resources, and aesthetics. This SEIS addresses how changes to the proposal affect the previous analysis of these potential impacts. Information contained in the Desert Claim Final EIS, which has been adopted for purposes of environmental review, adequately addresses other environmental concerns.

1.0 SUMMARY

1.1 INTRODUCTION

Chapter 1 provides a summary of the Final Supplemental Environmental Impact Statement (Final SEIS) for the revised Desert Claim Wind Power Project, which is proposed by Desert Claim Wind Power LLC (Desert Claim). The summary briefly describes relevant background information, including the environmental review process and the Applicant's objectives. The major features of the Proposed Action, and alternatives to the proposal, are next described. The significant environmental impacts expected to occur as a result of the Proposed Action and alternative are summarized in a table. Cumulative impacts are also identified. Mitigation measures, which could avoid, minimize, reduce, or compensate for impacts are described. Finally, significant impacts that cannot be avoided if the proposal is implemented are identified.

Chapter 2 of the SEIS includes a complete description of the Proposed Action, including changes that have been made to the Project since it was first proposed to Kittitas County in 2003. The No Action Alternative is also described. A potential off-site alternative, in addition to those described in the 2004 Final EIS, is discussed but is not found to be reasonable; this alternative is not considered in detail in the SEIS. This chapter also describes the steps in the SEPA process, ongoing consultation, and stipulations and agreements that have resulted in additional commitments for mitigation.

Chapter 3 describes the affected environment, significant impacts, including the cumulative impacts of the Project and other approved wind power projects in the general vicinity, and mitigation measures. Significant impacts that cannot be avoided are identified. This chapter of the Final SEIS incorporates changes and clarifications to the analysis, and additions or clarifications of mitigation measures; these changes reflect comments received on the Draft SEIS and agreements with state agencies and tribes.

Chapter 4 includes comment letters and testimony that were provided on the Draft SEIS and provides responses to those comments.

Chapter 5 lists references used in the SEIS.

Chapter 6 lists the agencies, organizations, and individuals who received copies of the Final SEIS.

1.2 ENVIRONMENTAL REVIEW PROCESS

This SEIS has been prepared for and at the direction of the Washington State Energy Facility Site Evaluation Council (EFSEC), consistent with the State Environmental Policy Act (SEPA, RCW 43.21C) and rules adopted by EFSEC to implement SEPA (Washington Administrative Code [WAC] 463-47). It supplements the information contained in the Final EIS published by Kittitas County in 2004 for a larger (120 turbine) but similar Desert Claim wind power project. Desert Claim submitted an Application for Site Certification (ASC) to EFSEC in November 2006. After reviewing the ASC and the Final EIS, EFSEC determined that an SEIS was appropriate for the revised proposal. EFSEC published a Notice of Adoption and Determination of Significance on March 19, 2007, and established the scope of the SEIS, which is limited to the following environmental issues: Wetlands, streams, wildlife, cultural resources, and aesthetics/visual impacts. A revised Application was submitted in February 2009. A Draft SEIS was published on April 2, 2009, and written comments on the Draft SEIS were received until May 4, 2009. EFSEC also held a public meeting in Ellensburg on April 23, 2009, to receive public comments on the Draft SEIS.

Following publication of the Draft SEIS, the Applicant consulted with the Yakama Nation, the Counsel for the Environment (CFE), and the Washington Department of Fish & Wildlife (WDFW). These consultations resulted in agreements regarding additional studies, mitigation measures and plans that will be implemented regarding habitat, wildlife, and historic and cultural resources.

1.3 APPLICANT'S OBJECTIVES

enXco, the owner of Desert Claim Wind Power LLC, is a privately held company based in California that develops, builds, operates, and manages commercial scale wind energy projects throughout the United States and other countries. The company currently has approximately 1,375 megawatts (MW) of wind power projects in operation, and projects totaling another 4,200 MW under development.

The primary objective of the Desert Claim proposal is to develop a commercially viable wind energy facility with a total nameplate capacity of at least 190 MW and a maximum of 95 wind turbines, plus necessary support facilities. Site-specific criteria needed to support this objective include sufficient wind resource to achieve the desired goal for generation; access to sufficient available capacity on an existing electrical transmission system; lack of significant constraints posed by environmentally sensitive resources or recreational areas; and relatively large tracts of open land that are available for sale or lease.

1.4 PROPOSAL AND ALTERNATIVES

1.4.1 Revised Desert Claim Proposal

Wind energy production requires five basic functions, including electricity generation, energy transfer, power collection, an electrical substation, and transmission facilities. The facilities proposed to accomplish these functions, and to meet the Applicant's objectives, are described below.

Project Area. The Project Area is comprised of 5,200 acres of land: 2,551 acres to be leased from four private landowners, 1,529 acres to be leased from the Department of Natural Resources, and 1,120 acres to be owned by an affiliate of the Applicant. The contiguous Project Area is located approximately 8 miles northwest of Ellensburg.

Wind Turbines. Desert Claim would include a maximum of 95 wind turbines, each with a nameplate generating capacity of 2 MW. Total height of the turbine with the tip pointing up is 410 feet. Total generating capacity of the Project would be 190 MW, which is sufficient to serve between 42,750 and 57,000 homes. The proposed turbine layout incorporates safety setbacks from buildings, public roads, utility corridors, and project boundaries, and a minimum 1,640-foot separation from residences outside the Project Area.

Power Collection System. Power generated by turbines would be collected by approximately 27 miles of cables located primarily underground. The collection system would generally be placed within roads and would avoid, bridge or tunnel beneath wetlands and streams.

Substation. One substation, occupying approximately 2 acres, would be constructed to step-up the power collected from turbines. The preferred location is adjacent to the Puget Sound Energy (PSE) Rocky Reach transmission line. An alternative location is identified adjacent to the Bonneville Power Administration (BPA) transmission line. The substation area would be gravel covered and fenced.

Meteorological (Met) Towers. Four permanent towers would be constructed to measure wind speed and collect other met data. The met towers would be freestanding, 212-foot tall open steel structures set on concrete foundations

Access Roads. A system of single-lane gravel roads, 27 miles in length, would be constructed to provide access to all turbines for maintenance. Roads would bridge or span wetlands and streams where they cannot be avoided.

Operations. An approximate 5,000 square foot operations facility would be constructed. It would include offices for operating and monitoring the Project, enclosed space for equipment storage and maintenance, and parking for employees and visitors. The facility would occupy a 2-acre site.

Construction. Construction of the Project is estimated to require approximately 10 months and would employ a workforce of 120 to 180 workers.

1.4.2 No Action

Under the No Action Alternative the proposed Desert Claim Wind Power Project and all associated features including the turbines, access roads, utility trenches, and substations would not be constructed. There would be no adverse environmental impacts from development of the wind power facility within the Desert Claim Project Area. However, on-site agricultural and rural residential activities would continue for the foreseeable future under current zoning. The potential for residential development in the Project Area, to the extent permitted by existing zoning, and the potential for conflicts with existing agricultural activities, would continue. Conversion of some privately-owned lands to rural residential uses could displace existing uses and affect rural character over time.

1.4.3 Off-Site Alternatives

Two off-site alternatives were evaluated in the Desert Claim Final EIS. These alternatives have not changed and are not repeated in the SEIS.

1.4.4 Alternatives Considered But Not Carried Forward

Kittitas County's Pre-Identified Wind Farm Area, identified in Kittitas County Code 17.61A.035, was evaluated as the site of a potential alternative. While the area is large (approximately 285,120 acres), much of the area is in federal ownership (Yakima Firing Center 92,160 acres), managed by the State of Washington for wildlife and habitat conservation (136,746 acres), or approved for the Wild Horse and Vantage wind power projects (14,630 acres). The remaining lands are contiguous to the I-90 corridor, in fragmented/non-contiguous parcels, or in locations where wind resources are unsatisfactory. Moreover, the Applicant has no leases or property rights in this area. On balance, these constraints are considered to be substantial and would severely limit the potential to site a wind power project. As a result, this area is not considered to be a reasonable off-site alternative and is not evaluated in detail in the SEIS.

1.5 SUMMARY COMPARISON OF ENVIRONMENTAL IMPACTS

Table 1.5-1 below briefly and generally compares the expected impacts of the Desert Claim proposal to the No Action alternative. The table is a general summary and is based on the detailed discussion in Chapter 3 of the SEIS. Interested readers should consult the detailed discussion for more information.

Table 1.5-1. Summary of Environmental Impacts

Element of the Environment	Revised Desert Claim Project	No Action Alternative
Water Resources		
Streams	No temporary or permanent impacts are anticipated to occur. Project access roads or the power collection system would cross on-site streams or irrigation ditches by bridging, boring underneath, bridging or using power poles, as appropriate.	While a wind power facility would not be constructed, impacts to streams in conjunction with rural residential development or ongoing agricultural activities could occur and could result in direct and indirect impacts to streams.
Plants and Animals		
Vegetation	<p>Approximately 86.4 acres of vegetation in the Project Area would be permanently disturbed by proposed facilities, and 230.8 acres would be temporarily disturbed. An additional 19.5 acres would be disturbed by construction staging and storage; these areas have not been located at this time. Total disturbance (temporary and permanent) would be 317.2 acres. Disturbance would be less than for the original Desert Claim proposal.</p> <p>Most disturbances would occur in grassland and shrub-steppe habitat types; small areas of agricultural land, riparian forest, riparian shrub, open water and wet meadow would also be disturbed. If unmitigated, this loss of habitat could affect some species of wildlife. The Applicant has proposed to mitigate these impacts according to the WDFW guidelines and an agreement with the agency.</p> <p>A formal survey for federally-listed rare plants (Ute-ladies tresses) was conducted in July 2009 and did not identify the presence of rare plants. State-listed species are not expected to be present because habitat requirements of these plants are not present and the site has been extensively disturbed. Additional survey work and consultation with the Yakama Nation will be conducted in conjunction with micro-siting to identify traditional and medicinal plants.</p>	While a wind power facility would not be constructed, residential development or ongoing agricultural activities could result in direct and indirect impacts to vegetation.

Table 1.5-1. Summary of Environmental Impacts (continued)

Element of the Environment	Revised Desert Claim Project	No Action Alternative
Wetlands	No impacts to wetlands or buffers would occur. Impacts would be avoided through placement and micro-siting of turbines, or by spanning wetlands	While a wind power facility would not be constructed, impacts to wetlands in conjunction with rural residential development or ongoing agricultural activities could occur and could result in direct and indirect impacts to wetlands.
Wildlife	<p>Most impacts to wildlife from construction and operation would be as described in the 2004 Final EIS and the 2006 ASC for the project. These would include loss of some existing habitat, primarily grassland and shrub-steppe; some mortality, disturbance, and displacement of wildlife during construction; and limited, intermittent disturbance of wildlife as a result of ongoing maintenance activity. As noted in the Final EIS, these effects would be minor.</p> <p>Mortality estimates for birds and bats are based on recent studies of existing wind facilities in the Columbia Plateau eco-region and the size of the Project in MW. Total avian mortality (raptors, passerine and waterfowl) is estimated to be between 171 and 608 birds per year, with passerines comprising the largest percentage. These mortalities are not expected to have a significant effect on the populations of the species evaluated, either for Desert Claim alone or in combination with other approved wind power facilities.</p> <p>Impacts to resident and non-migratory species of bats would be minor, assuming that Desert Claim results in mortality rates similar to other Columbia Plateau wind power projects. Using a per MW estimate, bat mortality is estimated to range from 76 to 475 bats per year.</p>	No impacts to existing wildlife populations would occur as a result of wind energy development on the Project site. Existing wildlife conditions on the Project site would be unchanged, subject to ongoing local changes from ongoing agricultural activities, rural residential development, and broader regional trends affecting wildlife.

Table 1.5-1. Summary of Environmental Impacts (continued)

Element of the Environment	Revised Desert Claim Project	No Action Alternative
Historic Resources	Thirty sites and 103 isolates were identified within the revised Desert Claim site area. If the Project were constructed according to the current layout, without any effort to avoid these resources during the final design and micro-siting, 26 sites and isolates would be impacted by the Project. However, the Applicant proposes to avoid significant cultural resources during final design and micro-siting, where practical, and implement other measures to mitigate impacts when complete avoidance is not practical. Additional survey work and consultation with the Yakama Nation will be conducted in conjunction with micro-siting to identify Traditional Cultural Properties and sites associated with culturally important events and people.	Although the proposed wind power facility would not be constructed and no Project-related impacts to cultural resources would occur, past and current effects to cultural resources, such as from ongoing surface erosion and weathering and agricultural activities, would continue for the foreseeable future. Conversion of land for low density rural residential uses could occur over the long term and could result in direct and indirect impacts to cultural resources.
Aesthetics	The location of impacts has changed in some instances as a result of revisions to the Project Area, the reduced number of turbines, and the greater separation between turbines and adjacent residences. Twenty-four simulations – showing visual characteristics with and without the proposed wind facility – were created, compared to 19 for the Final EIS proposal. The greatest impact would be experienced by observers closest to turbines. Overall, changes to the Project (e.g., contiguous Project Area, reduced number of turbines, increased separation from residences) would reduce Project impacts for most viewer groups compared to the original Project proposal considered in the Final EIS.	Visual quality of the surrounding area would not change directly, but would continue to be influenced by existing land uses and potential changes to land use.

1.6 CUMULATIVE IMPACTS

The cumulative impact analysis considers the impacts of the three previously approved wind power facilities and the Desert Claim Project. Projects considered include the proposed Desert Claim Project, and the approved Kittitas Valley, Wild Horse, and Vantage projects.

1.6.1 Water Resources

1.6.1.1 Streams

No impacts are identified for the Desert Claim, Kittitas Valley, or Wild Horse projects. The Vantage Wind Power Project could entail a small but un-quantified amount of fill in one seasonal drainage. Each project would implement mitigation measures in the form of

construction Best Management Practices (BMPs) to minimize sedimentation and potential water quality impacts. Cumulative impacts are not expected to be significant.

1.6.2 Plants and Animals

1.6.2.1 Vegetation

Wetlands

No temporary or permanent wetland impacts are expected to occur as a result of the revised Desert Claim proposal. Impacts identified for the Kittitas Valley Project (DEIS Addendum 2005) would be limited to 165 square feet (.00375 acre) of intrusion in two small wetlands in conjunction with road construction. No wetlands were identified on the Wild Horse site and no impacts would occur. Similarly, no wetland impacts were identified for the Vantage Wind Power Project.

1.6.2.2 Wildlife

For the entire Columbia Plateau Ecoregion, there are 47 existing and proposed wind energy facilities with a combined capacity of 6,700 MW. If all of these facilities were constructed, cumulative avian mortality estimates are as follows: raptors – 469 annually; all other birds – 14,070 annually; and bats – 7,907 annually. Local populations of these species are abundant and would not be significantly affected. Cumulative impacts to the bald eagle, golden eagle, loggerhead shrike, and sage thrasher are not expected.

1.6.3 Historic Resources

In general, impacts to cultural resources have been or would be avoided by each of the approved or proposed wind power projects through site planning and micro-siting of individual turbines, or would be mitigated through approved data recovery programs. With mitigation, no significant impacts to cultural resources are expected to occur as a result of the revised Desert Claim proposal. Likewise, with mitigation, no significant impacts to cultural resources were identified for the Kittitas Valley Wind Power Project (Final EIS 2005), the Wild Horse Wind Power Project (originally approved and expanded), or the Vantage Wind Power Project.

1.6.4 Aesthetics

Three approved or constructed wind power projects are located in Kittitas County: Kittitas Valley, approximately 0.5 mile from the Desert Claim site; Wild Horse, approximately 16 miles to the east; and Vantage, approximately 19 miles to the east. Turbines from the Wild Horse and Vantage projects could be barely discernible from the Desert Claim site and would have little or no effect on views.

Visitors and residents will be aware that there are numerous wind turbines in the greater Kittitas Valley area; some will likely be tourist attractions. There would be a change in the baseline visual conditions of areas in which turbines are visible. Perceptions of the rural and agricultural character of the area may change to some degree. There may be a few locations where all four wind power projects could be visible in the distance.

Visual simulations were created from four viewpoints where both the Desert Claim and Kittitas Valley projects could be seen. The simulations indicate that cumulative visual impacts of both projects would not be significantly greater than those of Desert Claim alone.

1.7 MITIGATION MEASURES

1.7.1 Water Resources

1.7.1.1 Streams

Mitigation measures – such as bridging or boring – have been incorporated into the proposal so that no significant impacts to streams would occur. As identified in the Desert Claim Final EIS, these include developing and implementing construction BMPs, a Temporary Erosion and Sedimentation Control Plan (TESCP), and a Stormwater Pollution Prevention Plan (SWPPP) to minimize erosion, sedimentation and impacts to water quality. No additional mitigation measures are required.

1.7.2 Plants and Animals

1.7.2.1 Vegetation

Mitigation measures described in the Desert Claim Final EIS are generally sufficient to address impacts to vegetation. These include or involve use of BMPs during construction to minimize the disturbance footprint; timing construction activities to reduce impacts; plans and standards for site reclamation and restoration; use of standard measures to control the spread of noxious weeds; and acquisition of new habitat to replace permanent shrub steppe and grassland habitat impacts, based on WDFW mitigation ratios. Subsequent to the publication of the Draft SEIS, the Applicant executed an Agreement with WDFW and a Stipulation with the CFE. Collectively, these documents specify additional measures, and provide more detailed specification of measures originally proposed, to mitigate potential impacts to vegetation and habitat.

1.7.3 Wetlands

Mitigation measures have been incorporated into the proposal so that no wetland impacts would occur. No additional mitigation measures are required. Any work adjacent to wetlands would adhere to applicable federal, state and local regulations and would be addressed in the

Department of Ecology Stormwater Discharge Permit, SWPPP, and TЕСP. The Agreement with WDFW and the Stipulation with the CFE, as discussed above, also incorporate measures to mitigate potential impacts to wetlands.

1.7.4 Wildlife

Mitigation measures identified in the Desert Claim Final EIS are generally adequate to address identified impacts. The Agreement with WDFW and the Stipulation with the CFE, as discussed above, also incorporate additional measures to mitigate potential impacts to wildlife. Agreed-upon measures include use of BMPs during construction to minimize potential disturbance; timing construction to reduce impacts; use of standard design measures to minimize wildlife interactions; additional pre-construction or pre-operation surveys for bats and specified bird species; post-construction monitoring programs focused on birds and bats; and formation of a Technical Advisory Committee (TAC) to review studies and monitoring data and recommend appropriate actions to EFSEC.

1.7.5 Historic Resources

Direct impacts to most identified sites and resources could be avoided by micro-siting turbines or modifying the alignments of roads or electrical collection system components in specific locations. The boundaries of identified resources should be staked in the field and flagged as no disturbance areas. The site markings should be removed following construction to avoid disclosure of resource locations. The Applicant engaged in additional consultation with the Yakama Nation regarding identification of Traditional Cultural Properties (TCPs) and sites associated with culturally important events and people. The Applicant and the Yakama Nation have reached agreement on a Memorandum of Understanding (MOU) addressing these topics.

If avoidance is not practical because another resource (e.g., wetland, stream) would be impacted, or there are other constraints on siting, the Applicant will prepare an Archaeological Resources Protection, Treatment, Mitigation and Monitoring Plan in consultation with Department of Archaeology and Historic Preservation (DAHP). The plan could include data recovery excavations, research and/or recording of scientific and historic information.

Based on consultation with DAHP, potential impacts to the historic character of the surrounding landscape could be mitigated by documenting the existing cultural landscape and developing a landscape history prior to commencement of construction. The Applicant should execute a Memorandum of Agreement (MOA) with DAHP to identify the scope of this documentation and analysis.

Additional management efforts should be undertaken to address potential impacts to archaeological resources. Appropriate measures could include relocating resources out of the

direct impact area, and updating of inventory forms to reflect the moves. Where resources cannot be moved (e.g., an irrigation ditch and stock pond), additional documentation of physical characteristics should occur.

An unanticipated discovery plan should be developed prior to construction. This would include protocols for notification, evaluation and treatment of any archaeological or human remains that might be discovered during construction.

1.7.6 Aesthetics

A number of mitigation measures have been incorporated into the revised Desert Claim Project and have reduced impacts compared to the Final EIS proposal. These include: a contiguous, slightly smaller project area, located further from the Ellensburg population center; reduction in the number of turbines (from 120 to 95) and lower turbine density; an evenly spaced turbine array, without significant gaps or isolated groupings; use of turbines of a consistent type and height; a minimum separation between turbines and adjacent residences of at least 4 times the tip height (there are only 7 residences outside the Project Area that are less than 2,500 feet from a turbine, and the closest is 1,687 feet from the nearest turbine); elimination of daytime strobes; and reduction in the number of turbines required to be lit at night.

Numerous additional mitigation measures are identified related to *visual integration* (e.g., using local materials and native landscaping for Project facilities, using low reflectivity, neutral colors for Project facilities to help them blend in); *ecological restoration* (e.g., replacing native vegetation in disturbed areas); *equipment maintenance* (e.g., promptly removing or repairing non-functioning turbines); and *information and education* (e.g., notify the local community of timing and duration of construction).

1.8 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

1.8.1 Water Resources

1.8.1.1 Streams

Potential temporary and permanent impacts to streams would be avoided. Therefore, no significant unavoidable adverse impacts to streams would occur as a result of the proposal.

1.8.2 Plants and Animals

1.8.2.1 Vegetation

There would be approximately 86 acres (less than 2 percent of the Project Area) of unavoidable displacement of existing vegetation with development of the Project. These impacts are not considered significant because they would not result in elimination of an entire vegetation type in

the Project Area, loss of 10 percent or more of a priority habitat in the Project Area, or a decrease in species richness resulting from the loss of a plant population in the Project Area. No significant unavoidable adverse impacts to rare plants from construction, operation or decommissioning of the proposed Project are expected. Similarly, the Project is not expected to result in significant unavoidable adverse impacts related to potential introduction or spread of noxious weeds.

1.8.2.2 Wetlands

All potential temporary and permanent wetland impacts would be avoided, and no significant unavoidable adverse impacts to wetlands would occur as a result of the proposal.

1.8.2.3 Wildlife

There would be unavoidable adverse impacts to several types of wildlife as a result of the Project. These would include temporary displacement of wildlife as a result of construction disturbance, loss of some individuals from immobile species during construction, loss of existing habitat within the construction footprint of the Project, and collision-related mortality of birds and bats during Project operation. These impacts are not considered significant based on consideration of the impact context, because the impacts would be temporary, limited in extent or intensity, and/or would be mitigated. With respect to bird and bat mortality, the analysis determined that the mortality levels estimated for the Project would not represent significant population-level impacts for the respective species affected. With the mitigation measures identified, no significant unavoidable adverse impacts to birds or other wildlife are expected.

1.8.3 Historic Resources

Construction and operation of the proposal could result in significant adverse impacts to historic and cultural resources. The Applicant has proposed to implement mitigation measures that would avoid such impacts and/or reduce them to a level of non-significance. Such measures include avoidance by relocation of Project facilities in specific locations, or implementing approved data recovery programs. With the identified mitigation, no significant unavoidable adverse impacts would occur.

1.8.4 Aesthetics

Some degree of visibility is inherent in a wind power facility; wind turbines are large objects and cannot be made invisible from all locations. Residents living closest to proposed turbines may experience the changes in the visual environment to be adverse and significant. Wind turbines would be visible in varying degrees, and with a lower degree of impact, from other locations more distant from the Project site.

1.9 CONSULTATION AND COORDINATION

The Desert Claim Final EIS identifies the public involvement and coordination activities that occurred in connection with the original Desert Claim proposal. Since that time, as the Project has been revised, the Applicant has continued to coordinate with EFSEC and agencies in connection with revising technical studies and addressing expressed concerns. EFSEC held several meetings in 2007 in connection with the revised ASC and issues relating to land use consistency. EFSEC also engaged a consultant to review the Desert Claim Final EIS and to provide an opinion on how to proceed with environmental review for the revised application (Golder Report). On March 19, 2007, EFSEC issued a notice of adoption and scoping notice, identifying that an SEIS would be prepared to address changes to the proposal and requesting comments. Consultation with the Yakama Nation has resulted in an agreement to execute an MOU to conduct additional surveys and evaluations of TCPs. Consultation with the CFE and WDFW has resulted in agreements and commitments to mitigation relating to wildlife resources and habitat impacts.

1.10 ISSUES TO BE RESOLVED

The issues identified for evaluation and resolution in the SEIS include wetlands, streams, plants and animals, historic resources, and aesthetics. This SEIS addresses how changes to the proposal affect the previous analysis of these potential impacts. Information contained in the Desert Claim Final EIS, which has been adopted for purposes of environmental review, adequately addresses other environmental concerns.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This chapter of the SEIS describes the proposed action and the alternatives to the proposed action that are being considered. Section 2.1 provides an updated summary of the Project background and procedural information, consultation with tribes and agencies, and stipulations and agreements that commit the Applicant to specific mitigation measures. Section 2.2 describes the proposed action, as currently defined by the Applicant in the Revised ASC (January 2009). It addresses the existing site conditions, the proposed Project facilities, the construction process, operation and maintenance (O&M) considerations, and decommissioning. Section 2.3 identifies the elements of the proposed Project that have changed, relative to the Project evaluated in the 2004 Final EIS published by Kittitas County, Washington. Section 2.4 describes the alternatives to the proposed action, including no action, that are evaluated in the SEIS. Section 2.5 identifies an alternative that was considered but not evaluated in detail.

2.1 BACKGROUND

2.1.1 Proposal History and Process

2.1.1.1 Original Proposal to Kittitas County

enXco, Inc., a wind power developer and operator, began identifying and evaluating potential sites for a wind power project in Kittitas County in 2001. Desert Claim Wind Power LLC, a Washington limited liability company owned by enXco, submitted a Development Activities application to Kittitas County in January 2003. At the time the application was submitted, wind farms were not a permitted use anywhere in the County. Land use procedures required approval of a comprehensive plan amendment, a rezone, and a development agreement for a proposal to be considered to be in compliance with local land use and zoning requirements.

Kittitas County was the lead SEPA agency for the Development Activities application. It published a Draft and Final EIS for the proposal in December 2003 and August 2004, respectively. The County's Final EIS was not appealed. The Kittitas County Board of County Commissioners denied the Desert Claim application in April 2005.

2.1.1.2 Energy Site Evaluation Council Application and Process

Desert Claim submitted an ASC to the EFSEC on November 3, 2006. A revised application was filed in February 2009. The major differences between the current proposal and the proposal considered in the County Final EIS include the following:

- reconfiguration of the area proposed for development in contiguous parcels; the Project Area is now 5,200 acres, which is 37 acres smaller than the prior proposal;

- reduction in the number of wind turbines, from 120 to 95. Total power output of the Project would increase by 10 MW more than the prior proposal (190 MW versus 180 MW), due to use of a different turbine model (REpower MM92). This turbine has a longer blade length and is taller than the prior turbines proposed (410 feet with the blade pointing straight up). An illustration of the prior and currently proposed turbines is shown in Figure 2.2-4a; and
- relocation of turbines to increase the distance between them and nearby residences.

2.1.2 Scope of SEIS

2.1.2.1 EFSEC Scoping Determination

This SEIS supplements the Desert Claim Wind Power Project Final EIS published by Kittitas County in August 2004. It has been prepared consistent with the requirements of the SEPA (43.21C), the state SEPA Rules (WAC 197-11), and EFSEC's SEPA Rules (WAC 463-47-020, which adopt the state rules by reference). An SEIS is used to add information to an existing EIS when there are changes to, or new information about, a proposal and its probable significant environmental impacts. To avoid redundancy, the SEIS should not include analysis of actions, alternatives, or impacts contained in the previously prepared EIS (WAC 197-11-620).

The scope of the SEIS was determined through a scoping process conducted by EFSEC, in compliance with the requirements of the SEPA (WAC 197-11-360). On March 19, 2007, EFSEC published a combined notice of adoption—adopting the Desert Claim EIS—and determination of significance/initiation of scoping. The scoping notice identified the following elements of the environment for consideration in the SEIS: plants and animals/fisheries, cultural resources, and aesthetics/design. One comment letter was received from DAHP.

2.1.2.2 Golder Report

EFSEC's decision to prepare an SEIS, and the elements of the environment requiring further evaluation, was based on an evaluation of the revised ASC and the prior EIS. EFSEC retained Golder Associates to analyze changes to the proposal, potential impacts, and options for SEPA compliance (Golder Associates, Analysis in Support of a Threshold Determination for the Desert Claim Wind Power Project, February 2007, referred to hereafter as the "Golder report"). This analysis discussed elements of the environment that could possibly experience new significant adverse impacts as a result of the revised proposal. The Golder report identified plants and animals/fisheries (primarily bat and bird mortality), views/aesthetics, cultural resources, and cumulative impacts as the issues to be addressed in the SEIS. As noted, the report helped guide EFSEC's determination of the scope of the SEIS. These issues are the focus of this SEIS.

The Golder report also identified land use as a "possible" or "unknown" environmental issue, based on two considerations. First, the report concluded that the proposal would be inconsistent

with the County's land use plans and zoning regulations if it were to be sited without obtaining a comprehensive plan amendment, rezone, and approval of a development agreement. This inconsistency is acknowledged in EFSEC Council Order No. 825. As indicated in the Golder report, the prior Desert Claim EIS did not find the proposal to be inconsistent with substantive Kittitas County Comprehensive Plan policies or zoning regulations.

Second, the Golder report pointed out a statement in the 2006 application that suggested a 4,000-foot transmission interconnection line would be required if the Project was connected to the BPA transmission line within the Project Area. This line had not been analyzed. This statement has been clarified in the revised ASC. No new transmission line corridor option is being considered. While an alternative substation (switchyard) location is identified in the revised ASC, it would connect the Project to regional transmission facilities on the Project site and would not create a new aboveground transmission corridor; electric cables would be entirely underground, except for a distance of approximately 200 feet from the Project's switchyard to the utility transmission line. Therefore, since neither of the factors mentioned in the Golder report as giving rise to a possible significant land use impact is currently germane to the proposal, land use was not included as an element of the environment for discussion in the SEIS.

Based on its analysis, the Golder report concluded that the following elements of the environment would not experience new significant adverse impacts as a result of the revised proposal: earth, air, water, wetlands, natural resources, health and safety, noise, light and glare, transportation, air traffic, public services and utilities, population/housing/employment, and economics. Impacts would be the same as or similar to those identified in the existing Desert Claim Final EIS. These issues, therefore, are not included in the scope of this SEIS.

2.1.3 Draft SEIS, Public Review and Comment

EFSEC published a Draft SEIS on April 2, 2009. Comments on the Draft EIS were received from the public until May 4, 2009. A public meeting was also held in Ellensburg on April 23, 2009, to receive verbal comments on the Draft SEIS. All comments received are reproduced in Chapter 4 of this document; responses to comments are also provided in Chapter 4.

2.1.4 Consultation, Stipulations, and Mitigation Agreements

Following publication of the Draft SEIS, the Applicant initiated or continued consultation with some governmental entities and agencies to clarify the intent of particular comments and requests for additional information. Consulted parties included the Yakama Nation, the CFE, and the WDFW. The understandings and agreements that resulted from these meetings have been incorporated into SEIS mitigation measures and commitments expressed in the Final EIS. These are briefly summarized below.

Yakama Nation

The Applicant has reached agreement with the Yakama Nation to enter into an MOU, in which the Applicant has committed to conduct a number of additional studies. These include a survey for medicinal and traditional plants, analyses of TCPs, and an evaluation of archeological sites to assess their significance in light of Native American history and Yakama Nation cultural values. These surveys and analyses will be conducted prior to construction, in consultation with Yakama Nation biologists, cultural specialists, and archaeologists, and would provide a basis for final micro-siting of facilities. The Applicant will also work with the Yakama Nation to develop a Traditional Cultural Resources Mitigation Plan to address any sites that cannot be avoided through micro-siting.

Counsel for the Environment

The Applicant and CFE entered into a stipulation that will be incorporated as conditions of any Site Certification Agreement (SCA) that sets forth various mitigation conditions. Under the stipulation, the Applicant has agreed to:

- Form a TAC, as outlined in the WDFW Wind Power Guidelines, to consider wildlife monitoring data and make recommendations to EFSEC based on that data;
- Conduct a survey for Townsend's ground squirrel prior to construction, and develop a mitigation plan if the survey indicates that the project would result in significant diverse impacts to the species population;
- Schedule construction activities to minimize risks to loggerhead shrike, sage thrasher, and long-billed curlews to the extent that it is reasonable and feasible to do so;
- Develop an avian monitoring plan, including 2 years of fatality monitoring;
- Implement mitigation measures to address risks to bald eagle associated with livestock calving operations; develop a plan to study bald eagle behavior during calving and identify additional mitigation if necessary;
- Conduct a pre-operation bat monitoring survey and develop a post-construction bat monitoring plan including two years of fatality monitoring;
- Conduct a rare plant survey (note that this survey has been completed and the results are discussed in Section 3.2.1);
- Develop a Habitat Restoration and Revegetation Plan prior to construction; maximize use of existing roads; and develop a Habitat Mitigation Plan to provide compensatory mitigation for habitat lost due to project construction;

- Prepare the following plans prior to construction to identify best management practices (BMPs) and other measures to avoid or minimize environmental impacts: Construction Site Management Plan; Temporary Erosion and Sediment Control Plan; Construction SWPPP; Construction Spill Prevention, Control and Countermeasures Plan; Construction Soil Management and Vegetation Plan; Noxious Weed Control Plan; Construction Emergency Plan; Construction Fire Control and Protection Plan; Construction Traffic Management Plan; Cultural and Archaeological Resources Plan. Each of these plans will be submitted to EFSEC for review and approval;
- Employ specific, environmentally safe dust control measures; and
- Retain an independent, full-time, on-site environmental monitor to ensure compliance with the stipulations and all conditions imposed by the SCA.

All of the plans required above would be developed in consultation with WDFW and subject to EFSEC approval.

Washington Department of Fish and Wildlife

In July 2009, the Applicant executed an agreement with WDFW committing to implement numerous mitigation measures recommended by WDFW. WDFW agreed that the mitigation measures, in combination with those identified in the ASC, were consistent with the 2009 WDFW Wind Power Guidelines, would prevent significant impacts to habitat, and fully addressed WDFW's concerns about the Desert Claim Project. A number of identified mitigation measures overlap with those included in the CFE's stipulations, above.

Habitat Mitigation Plan. The Applicant will prepare a Habitat Mitigation Plan to provide compensatory mitigation for habitat impacts consistent with the mitigation ratios in the 2009 Wind Power Guidelines.

Project Design. The Applicant will minimize road construction to the extent practical; avoid above-ground collector lines where practical; install motion sensitive, downward-pointing security lighting at ground level; and construct free-standing, un-guyed permanent met towers.

Construction Related Plans. The Applicant will prepare a Construction Site Management Plan; Habitat Restoration and Revegetation Plan; a Temporary Erosion and Sediment Control Plan; a Construction SWPPP; a Construction Spill Prevention, Control and Countermeasures Plan; a Construction Soil Management and Vegetation Plan; a Noxious Weed Control Plan; a Fire Control and Protection Plan; and construction plans and specifications for ground disturbing work (roads, staging areas, tower pads, transmission lines, electrical collector system, quarry sites and substation laydown areas). WDFW will have an opportunity to consult in the

development or comment upon these plans, and all plans will be submitted to EFSEC for approval.

Project Construction. The Applicant will hire an independent environmental monitor, working under EFSEC's supervision, to monitor construction. The project team will include qualified person(s) with experience in sensitive arid environments. Work and clearing limits will be staked prior to clearing or construction. Disturbance to wetlands will be avoided; a restoration plan will be prepared for any unanticipated impacts. The Applicant will attempt to sequence construction activities to minimize disturbance during the wet season where practical.

Operations Related Plans. Prior to beginning commercial operations, the Applicant will develop an Operations SWPPP; an Operations Spill Prevention, Control and Countermeasures Plan; and an Operations Fire Control and Prevention Plan. These plans will be developed in consultation with WDFW and submitted to EFSEC for approval.

Raptor, Bald Eagle, and Avian Mitigation Measures. The Applicant will maintain a 25 mph speed limit on Project roads; promptly remove livestock and big game carcasses and livestock afterbirths; prohibit calving on property in the Project Area owned by the Applicant; and avoid use of rodenticides around towers as much as possible.

Avian Monitoring. The Applicant will conduct a raptor nest survey during the breeding season just prior to the start of construction; and develop an avian monitoring plan, prior to the start of commercial operations.

Bat Surveys. The Applicant will conduct a bat survey during the bat migration season prior to beginning commercial operation.

Technical Advisory Committee. The Applicant will form a TAC to make recommendations to EFSEC regarding monitoring data, impacts and mitigation programs.

Big Game. The Applicant will cooperate with WDFW efforts to manage deer and elk in the Project vicinity. The Applicant will not prohibit hunting unless it would jeopardize personnel, property or equipment; other private and public property owners may decide whether or not to allow hunting.

Initial Decommissioning and Site Restoration Plan. The Applicant will prepare this plan prior to commencing construction and submit it to EFSEC for approval. The Plan will be designed to restore the site to approximate or approved pre-project conditions.

2.2 PROPOSED ACTION

2.2.1 Existing Project Site Conditions

The Project Area Vicinity Map and revised Project Area are shown in **Figures 2.2-1** and **2.2-2**, respectively. It contains approximately 5,200 acres owned by five private landowners and Washington Department of Natural Resources (WDNR). The private landowners and WDNR have signed agreements authorizing the Applicant to seek permits to construct and operate the Project on their lands.

The southern edge of the Project Area is located approximately 8 miles north of the central part of Ellensburg, Washington. The Project Area extends approximately 4 miles from west to east and up to 3.5 miles from north to south. Access to the Project Area from Ellensburg can be via Wilson Creek Road, Robbins Road, Pheasant Lane, Reecer Creek Road, or Lower Green Canyon Road; and from U.S. Highway 97 via Smithson Road.

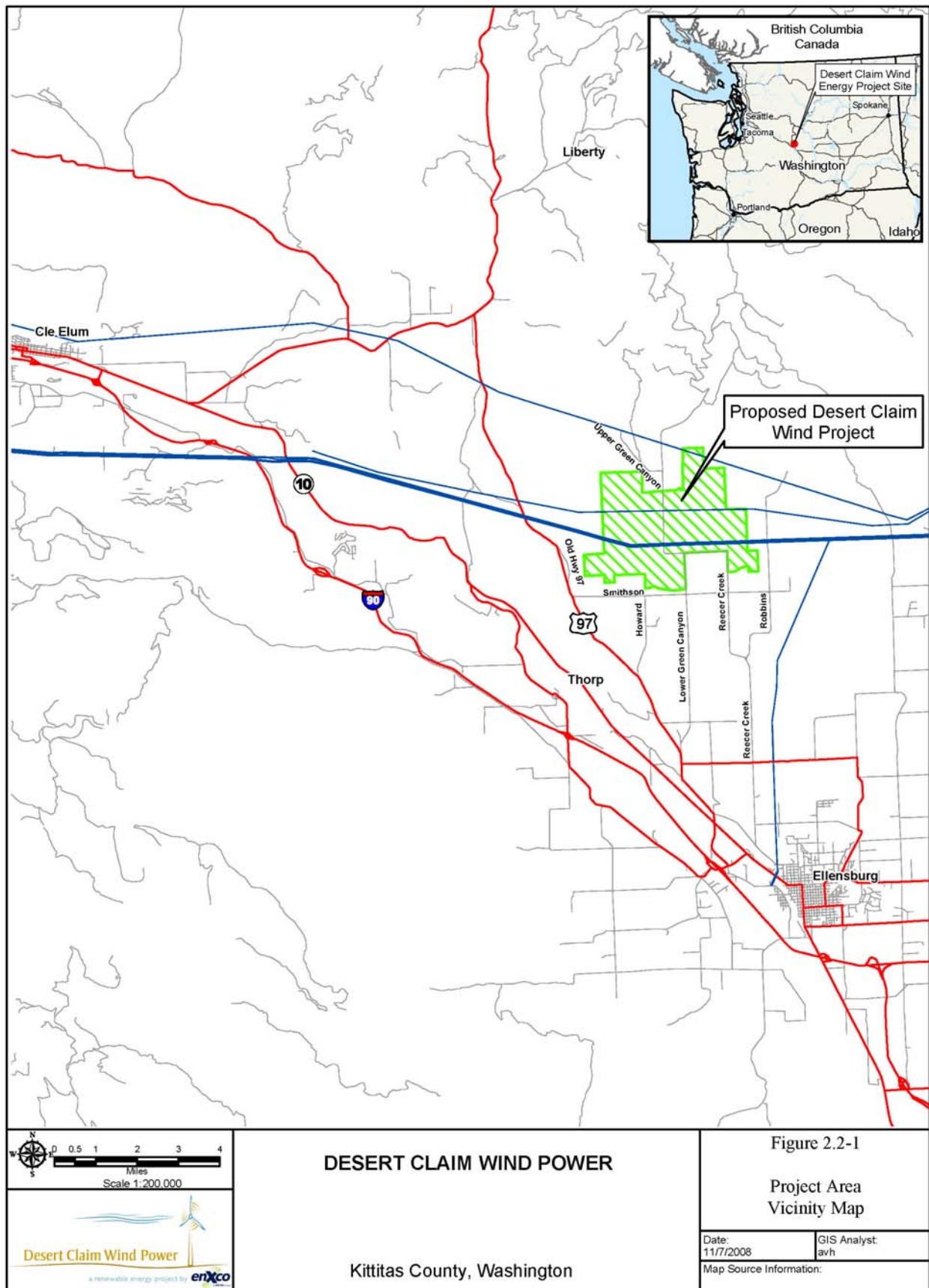
2.2.1.1 Physical Setting

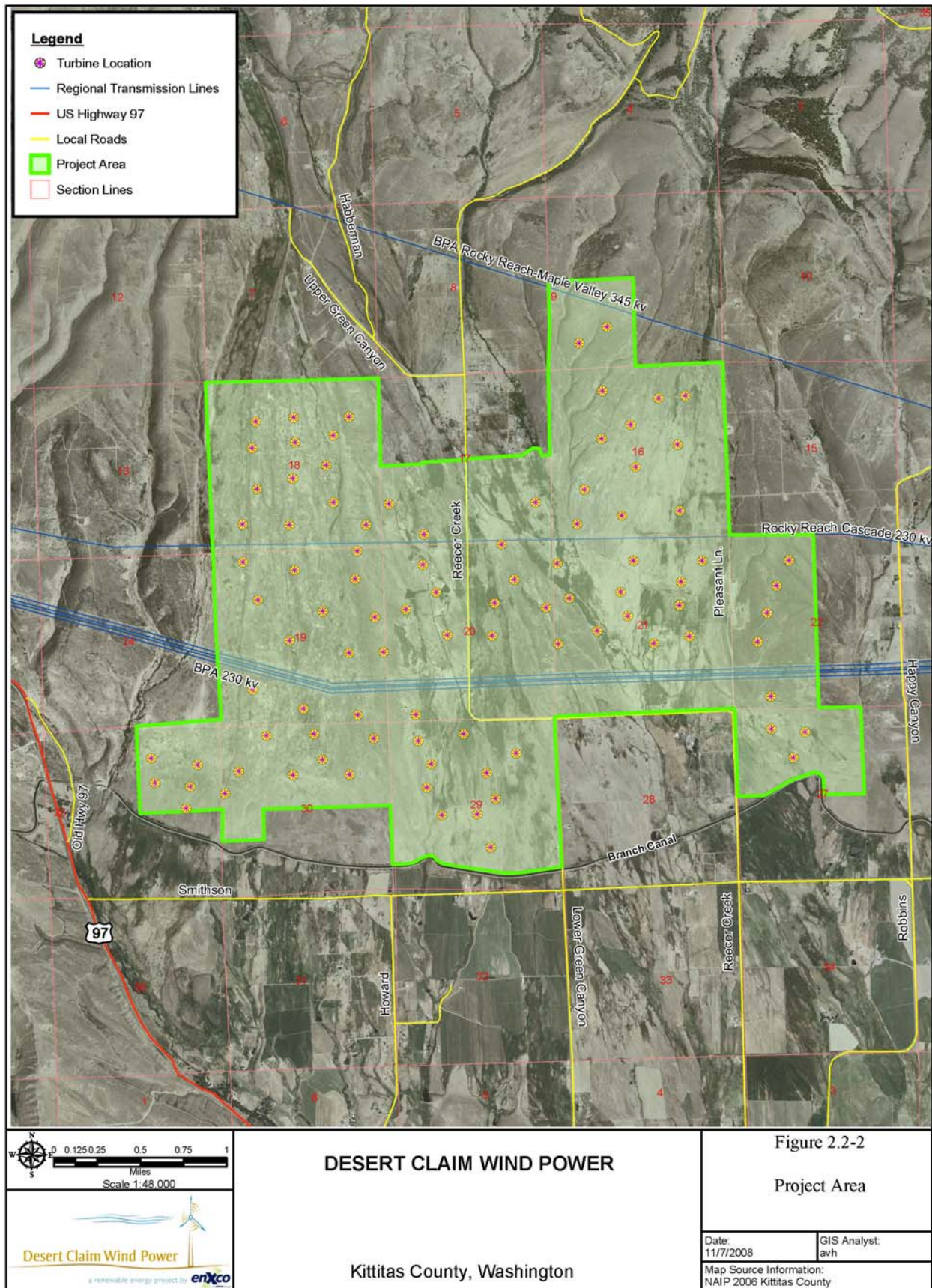
The Project Area is described in the Final EIS. It is situated along the northern margin of the Kittitas Valley, which is the broad valley area of central Kittitas County on either side of the Yakima River between Lookout Mountain and the Yakima Canyon. Unlike many wind projects that consist of turbine strings located along high ridgelines, the Desert Claim Project is generally spread out over the rising valley floor. The terrain within the Project Area is relatively flat and open, with a gradual south-to-north rise in elevation totaling approximately 400 feet over a distance of approximately 3.5 miles. Surface elevations range from approximately 2,100 feet to 2,500 feet above sea level across most of the Project Area.

Geologically, the Project Area is located on a broad alluvial fan at the base of the mountains. The alluvial fan is a gently sloping area built up by soils carried down and deposited over millennia by water generated by receding glaciers that at one time covered the mountainous area to the north. Several small, gently sloping creeks flow generally north to south across the Project Area, forming shallow depressions across the otherwise even landscape.

The Kittitas Valley has an arid to semi-arid climate, with annual precipitation in Ellensburg averaging 8.5 inches per year (Kittitas County Conservation District 2003). Some patches of native shrub-steppe or grassland vegetation remain, particularly around the outer edges of the valley, while the existing vegetative cover in most of the valley is dominated by agricultural cultivation and landscape plantings.

Land use is described briefly in Section 2.2.1.3, and in greater detail in the Desert Claim Final EIS (Kittitas County 2004, referred to hereafter as “Final EIS”).





2.2.1.2 Wind Resource

Publicly available wind resource maps characterize the Project Area and surrounding lands as an area of Class 4 (Good) wind resource, with typical wind speeds at a height of 164 feet (50 meters) averaging 15.7 to 16.8 miles per hour (mph) (Northwest Sustainable Energy for Economic Development 2003). The desired baseline criterion for feasible, utility-scale wind power production (depending on the model of turbine selected) is a wind speed of 13 to 15 mph at least 30 percent of the time annually. However, these benchmarks are likely to be lowered as utilities and the public continue to desire more renewable wind power.

The Applicant collected met data at multiple sites within Kittitas County beginning in 2001, as part of its resource exploration studies. Six temporary met towers were erected in several locations. Each tower was equipped with several anemometers to measure wind speed, a wind vane to measure wind direction, and a temperature sensor. All of the instruments provided site data to loggers that recorded the observed data. The met data collected over the past 8 years confirm that there is a sufficient commercial wind resource for power generation in the proposed Project Area.

2.2.1.3 Land Ownership and Use

Land Ownership

The Project Area consists of sections and portions of sections in Township 19N, Range 18E, Sections 9, 16, 17, 18, 19, 20, 21, 22, 27, 29, and 30 along with the northwest corner of Township 19N, Range 17E, Section 25.

Of the 5,200 acres of land within the Project Area, 2,551 acres will be leased from four private landowners, 1,120 acres will be owned by an affiliate of the Applicant, and 1,529 acres will be leased from WDNR. The following right-of-way easements cross the Project Area:

- BPA maintains five electrical transmission lines that cross the Project Area;
- PSE maintains one transmission line that crosses the Project Area;
- Kittitas County Public Utility District (PUD) maintains the electrical distribution system that serves the Project Area and vicinity; and
- Kittitas County maintains the county roads within and adjacent to the Project Area.

Land Use

Area land use is described in detail in the Final EIS. The Project Area is in a rural, relatively lightly populated section of Kittitas County and is characterized primarily by agricultural uses. Much of the land within and surrounding the Project Area is cultivated for feed crop production

or pasture. Extensive areas of rangeland are used for grazing. Rural residential development occurs in a number of locations, including dwellings on farm or ranch properties, scattered residences on large lots, and a few small clusters of homes.

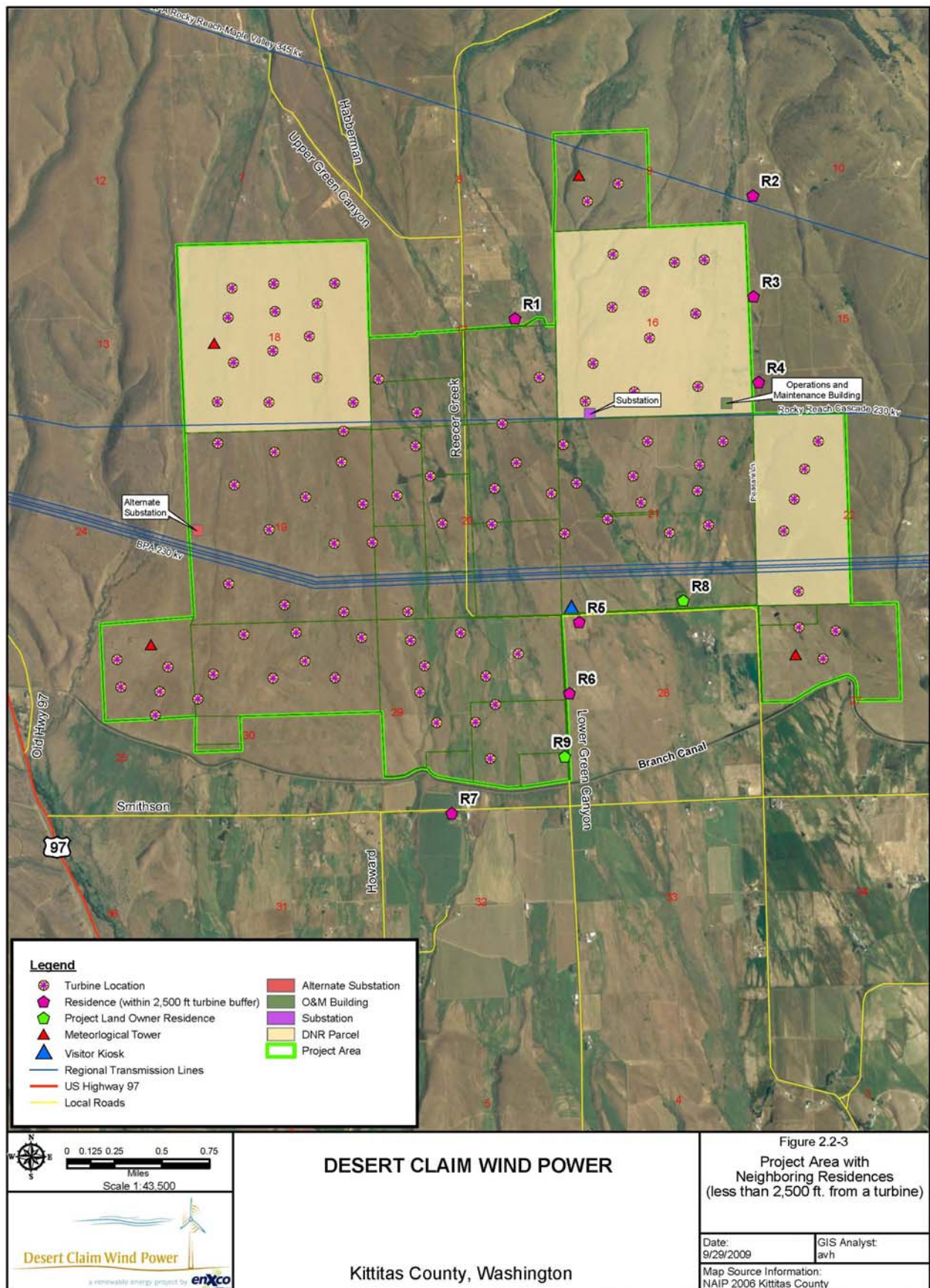
The land within the Project Area is zoned either Ag-20 (agricultural use, with a 20-acre minimum parcel size) or Forest & Range (residential development at a maximum density of 20 acres per dwelling unit). The entire Project Area and the adjacent lands are within a large area designated as Rural in the Kittitas County Comprehensive Plan. Forested areas to the north are designated as Commercial Forest.

There are nine residences that are located within 2,500 feet of a proposed turbine under the revised Project configuration. Two are located within the Project Area. **Table 2.2-1** indicates the distance from each of these residences to the nearest proposed turbine. **Figure 2.2-3** shows the locations of these residences.

Table 2.2-1. Nearby Residences and Distances from Nearest Proposed Turbine

Residence Number (See Figure 2.2-3)	Distance to Nearest Proposed Turbine
1	1,778 feet
2	2,241 feet
3	1,687 feet
4	1,694 feet
5	1,915 feet
6	1,789 feet
7	1,856 feet
8	1,920 feet
9	1,859 feet

The Project Area is within a major cross-state electrical transmission corridor that links hydroelectric dams on the Columbia River with the large power consumer market of western Washington. Six high-voltage transmission lines cross or are adjacent to the Project Area; five are owned and operated by BPA and one by PSE. A BPA regional substation is located on a 133-acre parcel 2.5 miles east of the Project Area.



...desert_claim\turbine_layout_7-24-08\figures\figure dnr project area 9_29_09 Version 18.mxd

Wenatchee National Forest lands north of the Project Area are used for recreation, grazing, and commercial forestry. Recreational activities include camping, hiking, horseback riding, mountain biking, off-road vehicle use, hunting, snowmobiling, and cross-country skiing. Members of the Yakama Nation hunt, gather plants, and conduct other traditional activities in the vicinity of the Project Area, pursuant to reserved treaty rights applicable to ceded lands. The private lands of the Project Area are not open to general public use. Some low-intensity outdoor recreational uses, including hunting, horseback riding, snowmobiling, and off-road vehicle use, occur with the permission of individual landowners. No formal recreational use occurs on the WDNR lands.

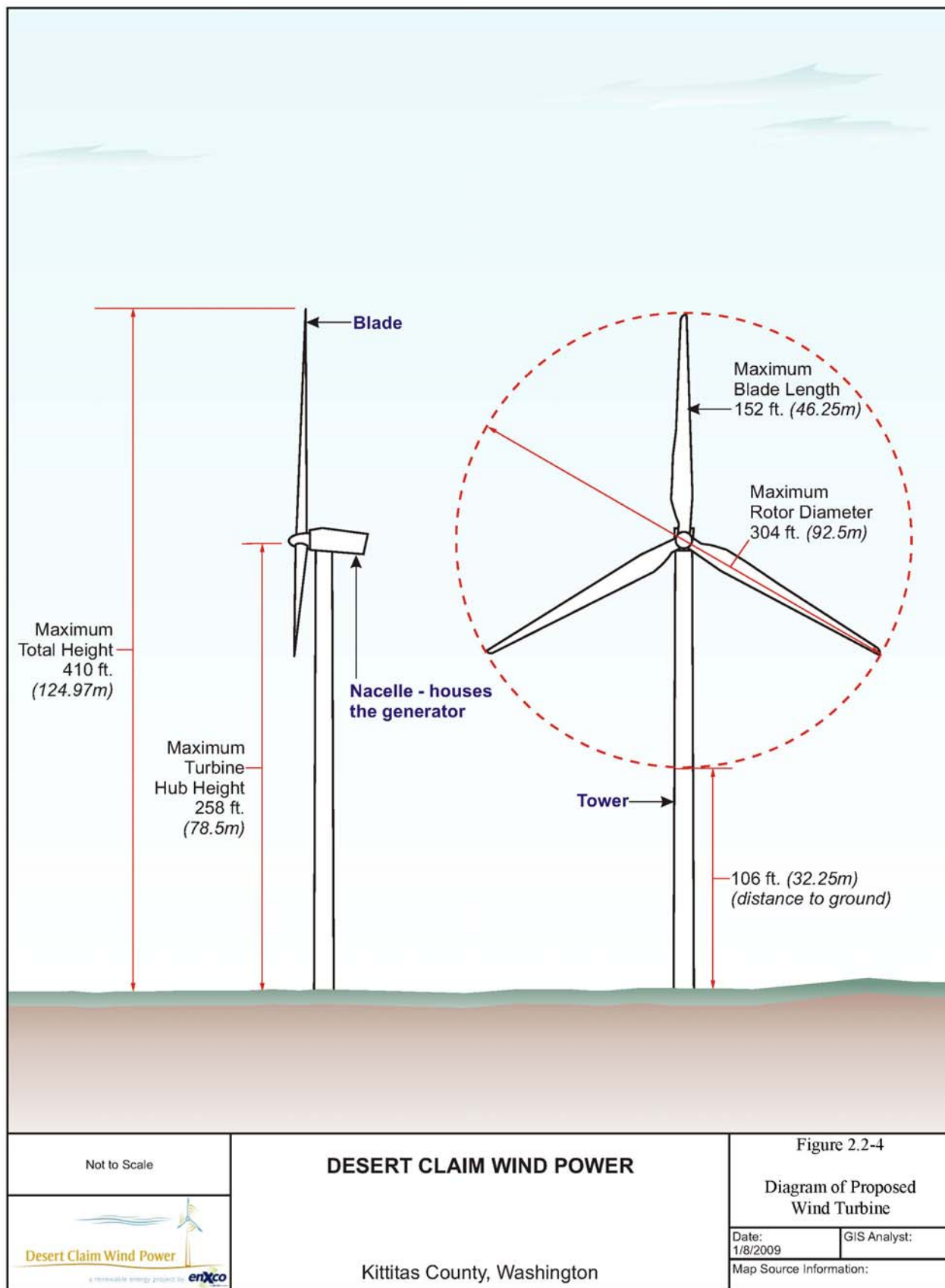
2.2.2 Project Facilities

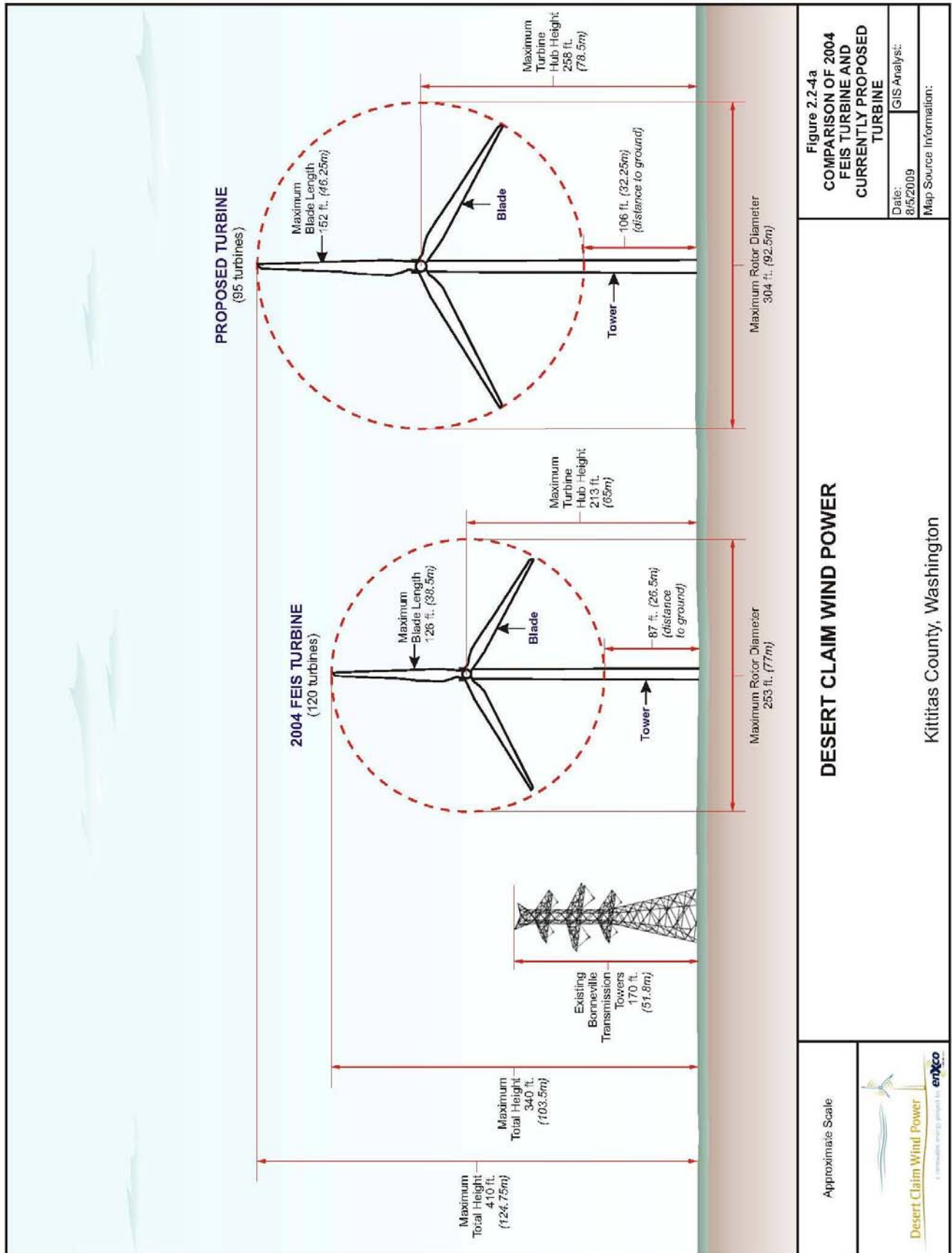
Wind energy projects consist of several distinct types of project facilities. These include the wind turbines themselves, power collection, substation and transmission facilities, project access roads, and a project O&M facility. Each facility component is described below.

2.2.2.1 Wind Turbines

The proposed Project includes a maximum of 95 wind turbines. The term “turbine” refers to the entire structure that produces electricity. Each turbine consists of three rotor blades connected at the rotor hub, a “nacelle” (the housing for the generator, which is connected via a gear box and rotor to the blades), and a tubular tower anchored to a tower foundation. Each of these turbine components is discussed below.

The prior Desert Claim EIS evaluated a variety of turbines, with different generating capacity, hub heights, and rotor diameters; please refer to Table 2-1 in the Final EIS, which provides dimensions for the various turbines. The Applicant proposes to use the REpower MM92 turbine in this Project. The REpower MM92 has a 2.0 MW “nameplate” generation capacity (i.e., the power generation specified by the manufacturer). The height from the ground to the blade tip point straight up is 410 feet (124.8 meters). Each tower (measured to the rotor hub) is 258 feet (78.5 meters) tall, and the rotor blades have a 304 feet (92.5 meters) diameter and would be 106 feet (32.3 meters) above the ground when pointing straight down. This model of turbine is taller than the General Electric turbines originally proposed for this Project and evaluated in the Final EIS. However, the former proposal also required more turbines (120) to produce less total generating capacity (180 MW). **Figure 2.2-4** illustrates the typical turbine that would be used for the Project; **Figure 2.2-4a** provides a comparison of the proposed REpower MM92 turbine to the turbine included in the Final EIS. To help indicate relative scale, Figure 2.2-4a also illustrates the towers associated with a typical BPA transmission line.





Towers

Tubular steel towers would support the nacelle, rotor, and blades. The purpose of the tower is to position the turbine blades high enough to intercept winds that are stronger than those near the ground surface, and to avoid wind turbulence that might be created by nearby trees, buildings, terrain, or other obstructions (National Wind Coordinating Committee 2002). Each tower would be a maximum of 262.5 feet (80 meters) in turbine hub height. The tower would have a diameter of approximately 14 feet at the base, tapering at the top of the structure. When fully assembled, each tower would weigh approximately 160 tons. The heavy, rolled steel forming the tower structure would have a smooth exterior surface. The turbine towers would be painted a neutral color as directed by the Federal Aviation Administration (FAA).

A locked steel door would provide secured access to the base of each tower. A locked, computerized control cabinet would be located inside the tower at the base. Cables and a steel ladder would extend within the hollow tower interior from the tower base to the nacelle, to provide access for turbine maintenance.

Foundations

The freestanding, tubular towers would sit atop steel and concrete foundations designed for the specific subsurface conditions at the individual turbine sites. There are two industry-standard foundation designs that could be used in the Project.

An inverted-T foundation employs a relatively shallow concrete base with a relatively large diameter. The maximum depth of the base would be about 8 feet below the ground surface and the diameter would be up to 80 feet. The turbine tower would be anchored to the foundation base by a base plate ring consisting of long, steel bolts extending nearly to the bottom of the concrete base.

The second type of foundation is a pile foundation. A cylindrical culvert is used to anchor the tower base. Inner and outer sections of culvert pipe of slightly different diameter are sunk into an excavation that would range from 25 to 35 feet in depth, depending on specific subsurface conditions, and are backfilled with compacted soil. Two parallel rings of full-length steel anchor bolts extend from the tower base plate through the culvert section, which is filled with concrete after installation of the bolts.

A registered engineer would select the appropriate foundation design for each turbine location based on site-specific information of geotechnical conditions present, advice on load-bearing capacities from a geotechnical engineer, and the design engineer's recommendations. The foundation designs would conform to State and County requirements and standard industry practices.

Nacelle and Rotors

The nacelle is the rectangular housing that covers the operating mechanism of the turbine. Each nacelle would be approximately 35 feet long, 10 feet wide, and 13 feet high. The exterior surface would be constructed of fiberglass lined with sound-absorbing foam. The generator, gear box, and associated control equipment for the turbine would be housed inside the shell of the nacelle. The nacelle would be accessed internally through the tower, and most servicing of the machinery would be conducted within the nacelle to protect the equipment and the workers from the elements.

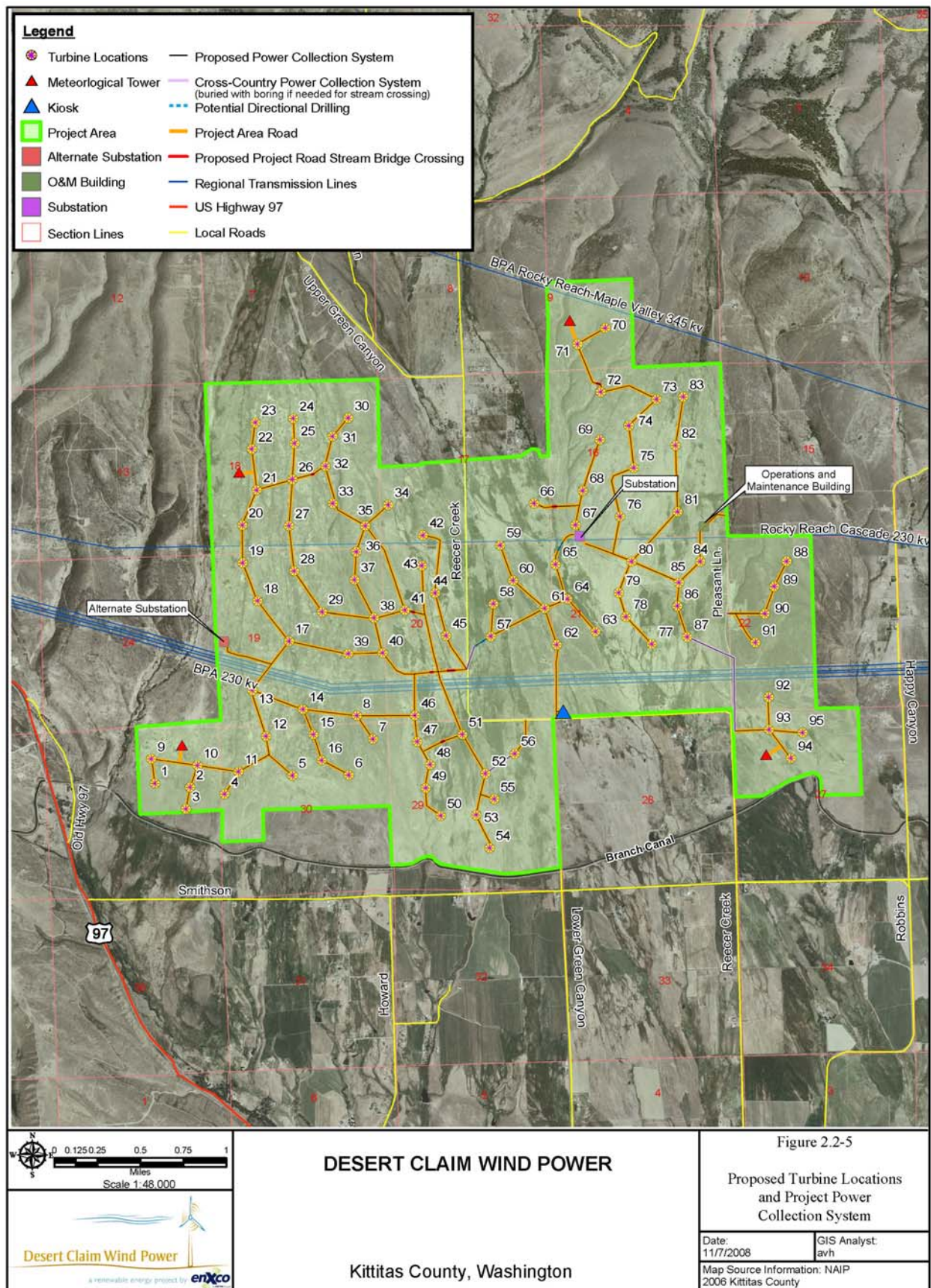
The rotor assembly for each turbine would include three blades, and would be attached to the front of the nacelle at the hub. The blades would be composed of laminated fiberglass or a fiberglass composite, and would have a smooth outer surface. Each blade would be fabricated off site in one piece, transported to the Project site, and then bolted to the rotor hub, raised into position by crane, and connected to the nacelle. The Project would use an upwind turbine design, in which the nacelle is turned into the wind to place the generator and tower behind the blades.

The equipment inside the nacelle would include electrical motors used to turn the nacelle and rotors into the wind, and to control the pitch of the rotor blades, and an automatic braking system. The pitch of the rotor blades would be controlled by a computer that would rotate them continually on their axis to maintain the optimum angle to the wind to maximize generation output at a given wind direction and speed. At wind speeds above the maximum safety threshold of 54 mph, the blades would be rotated into a feathered position and the braking system would stop the rotor from turning. After 10 minutes, and when the wind speed reduces to below 54 mph, the blades would rotate their pitch into the wind and start turning again.

Desert Claim has agreed to program the control system to stop the blades of a specific turbine during those times and conditions (if any) when that turbine would cause perceptible shadow flicker at a nearby residence. The owners of the affected residence may elect to execute a voluntary waiver agreement with the Applicant in lieu of stopping the turbine affecting their residence.

2.2.2.2 Turbine Locations

A maximum of 95 turbines would be installed within the Project Area, distributed across the Project site as shown in **Figure 2.2-5**. The turbine placement plan was determined using computerized modeling software that incorporated a number of factors: the field-verified residence data; streams and wetland locations; a 625-foot safety zone setback; a goal of increasing the distance between turbines and nonparticipating residences; wind resource



considerations from metrological data collected in the Project Area; long-term weather data; Project Area topography; and environmental factors such as stream and wetland setbacks, and State noise standards. The turbine location plan has been designed to provide each turbine with optimum exposure to wind from all directions, with emphasis on exposure to the prevailing northwesterly wind direction. Sufficient spacing was established between wind turbine towers to minimize array and wake losses (i.e., energy losses created by turbulence between and among the turbines). Turbines would also be micro-sited as necessary at each location during pre-construction detailed site design to maintain stipulated siting requirements, and/or during construction to avoid cultural resources and environmental features that become apparent during construction activities.

The distribution of turbines for the Project differs from what is often seen at wind energy projects, which locate turbines in long strings along high ridge tops. Unlike many locations where winds are strongest along ridge tops, winds in the Project vicinity typically come out of the northwest from the upper valley, after funneling through passes in the Cascade Mountains, and spread out on the lower, flat portion of the northern Kittitas Valley. The Project would locate turbines over a broad plain in response to this wind pattern.

The turbine layout incorporates a minimum 625-foot safety zone setback from buildings, Project Area boundaries, public roads, and utility transmission corridors. This safety setback is designed to ensure protection against potential mechanical failures and hazards, such as blade throw, ice throw, and tower collapse (KPF Consulting Engineers 2006).¹ The previous application to Kittitas County that was analyzed in the County Final EIS used a 487-foot safety setback because the proposed turbine model was shorter.

The revised turbine layout also increases the distance between turbines and non-participating residences in order to reduce visual impacts. All turbines are at least four times their tip height from residences. There are seven residences located outside the Project Area that are less than 2,500 feet from a turbine.

2.2.2.3 Project Electrical System

The electrical system for the Project would consist of three primary components: the power collection system, a Project substation, and an interconnection to the regional power transmission grid. The function of the electrical system would be to collect the electricity produced by the

¹ There is one exception to this safety setback in the southwest portion of the Project Area. An affiliate of the Applicant has contracted to purchase the property that makes up the southwest portion of the Project Area from a landowner who will continue to own property to the south and west of the Project boundary. This property owner has agreed to maintain the safety setback.

Project turbines and convert it to higher-voltage electricity to be fed into the regional power system.

Power Collection System

The power collection system has been configured to avoid sensitive environmental features identified in the County Final EIS, especially streams and wetlands. Power collection cables have been placed underground or on roads bridging water crossings except, in limited cases, where it is not reasonably feasible to do so.

The generator housed in the nacelle of each turbine would produce electricity at 575 volts. Low-voltage cables located inside the tower would carry the electricity from the nacelle through the tower to a transformer mounted on a concrete pad adjacent to the base of each tower. The pad would be approximately 8 to 9 feet square and 1 foot thick. The transformer would occupy almost the entire area of the concrete pad and would be approximately 5 feet high. The transformer would raise the voltage from 575 volts to 34.5 kilovolts (kV).

Electricity would be carried underground from the transformer into a 34.5-kV power cable installed as part of the power collection system. The network of power collection cables would connect the 95 turbines to the Project substation. Junction boxes that merge multiple incoming cables into one outgoing line would be installed at various locations within the Project Area to facilitate the collection of power from turbines. **Figure 2.2-5** also illustrates the expected layout of the power collection system.

Power collection cables would be placed underground, except where it is not reasonable to do so based on site-specific physical conditions (i.e., where it would be less disruptive to sensitive environmental features to place the cables above ground, or where steep and/or rocky terrain favored the use of overhead cable). Underground cables would be installed in trenches or plowed-in at a depth of 4 feet below the ground surface. At stream crossings, the cables may be located on the road bridge or structure. In certain areas, the underground cables may be encased in concrete to provide additional protection and stability in the ground.

Overhead collection lines would be carried on single wood-pole structures typically 37 feet high, similar to typical “telephone/electrical” poles seen along roads. The structures for overhead lines would provide a conductor spacing of at least 3 feet, to reduce the possibility of conductors contacting each other in storms.

Overall, the collection system is estimated to contain approximately 27 lineal miles of underground cable; of which approximately 25.5 miles would be laid as part of the Project road system to reduce impacts to the land surface. Power collection lines would be located within the

properties that comprise the Project Area, or short segments would be bored or trenched under County roads to connect parcels on either side of the County road.

Substation

An electrical substation would be needed to provide a further increase or step-up in voltage for the power collected from the Project turbines. The preferred substation location is shown on **Figure 2.2-5**, near the southeastern corner of Section 16, Township 19N, Range 18E, approximately 1 mile north of the intersection of Reecer Creek Road and Pheasant Lane. This location abuts the PSE Rocky Reach-Cascade 230-kV transmission line that crosses the Project Area. An alternative substation is also shown at the western edge of the Project Area, adjacent to the BPA 230-kv transmission line. Only one substation would be constructed, at the location closest to the interconnection point. The final selection of the substation location would be made after the interconnection point has been determined with the transmission system owner and the utility purchasing the power generated by the Project.

One or more large power transformers located within the Project substation would step-up or raise the voltage of the electricity flowing from the Project power collection system to meet the higher voltage of the receiving electrical transmission line. Substation equipment would include power transformer(s), disconnect switches, and metering relays. The substation would include a small building that would house the power generation control and relaying equipment, station batteries, and the Supervisory Control and Data Acquisition (SCADA) system. The entire substation area would be cleared, graded, and covered with gravel, and would be surrounded by a chain-link fence. The completed substation would occupy approximately 2 acres.

2.2.2.4 Meteorological Towers

Four temporary met towers are currently installed in the Project Area. Wind power development typically involves the use of temporary met towers during the exploration and design phases. Temporary met towers are usually slender, tubular aluminum structures that are secured by multiple guy wires that extend up to 110 feet from the tower base.

Permanent met towers are standard features of utility-scale wind power projects. These towers would be self-supporting steel structures with concrete foundations. The towers would have multiple anemometers to measure wind speed and direction at different elevations, and would be placed at strategic locations that best support automated control of the turbine operations. The Applicant proposes to construct up to four permanent met towers. The met towers would be approximately 212 feet (65 meters) tall, free-standing rather than secured by guy wires, and set on concrete bases.

2.2.2.5 Access Roads

Road access to the Project Area is currently provided by a number of existing public roads. Kittitas County roads that cross or pass adjacent to parcels within the Project Area include Smithson Road, Reecer Creek Road, Pheasant Lane and Lower Green Canyon Road.

The Project would include a system of roads providing access to all of the turbines, the substation and other key facilities. The proposed access road system is approximately 27 miles in length and is shown in **Figure 2.2-6**. The Project roads would connect with the existing public road system at a number of locations including four points along various sections of Reecer Creek Road and two points on Pheasant Lane.

Project access roads would be single-lane roads with a 15-foot travel surface width for straight sections and up to a 20-foot travel surface width for curved sections. Project access roads would have a compacted gravel surface. Stream crossing structures are incorporated into the Project access road system to allow for crossing or spanning of wetlands and streams and associated buffers.

Detailed plans for the Project road system and the connections to county roads would be prepared following micro-siting of the turbines. Project access road connections to county roads would be designed pursuant to County road ingress and egress standards.

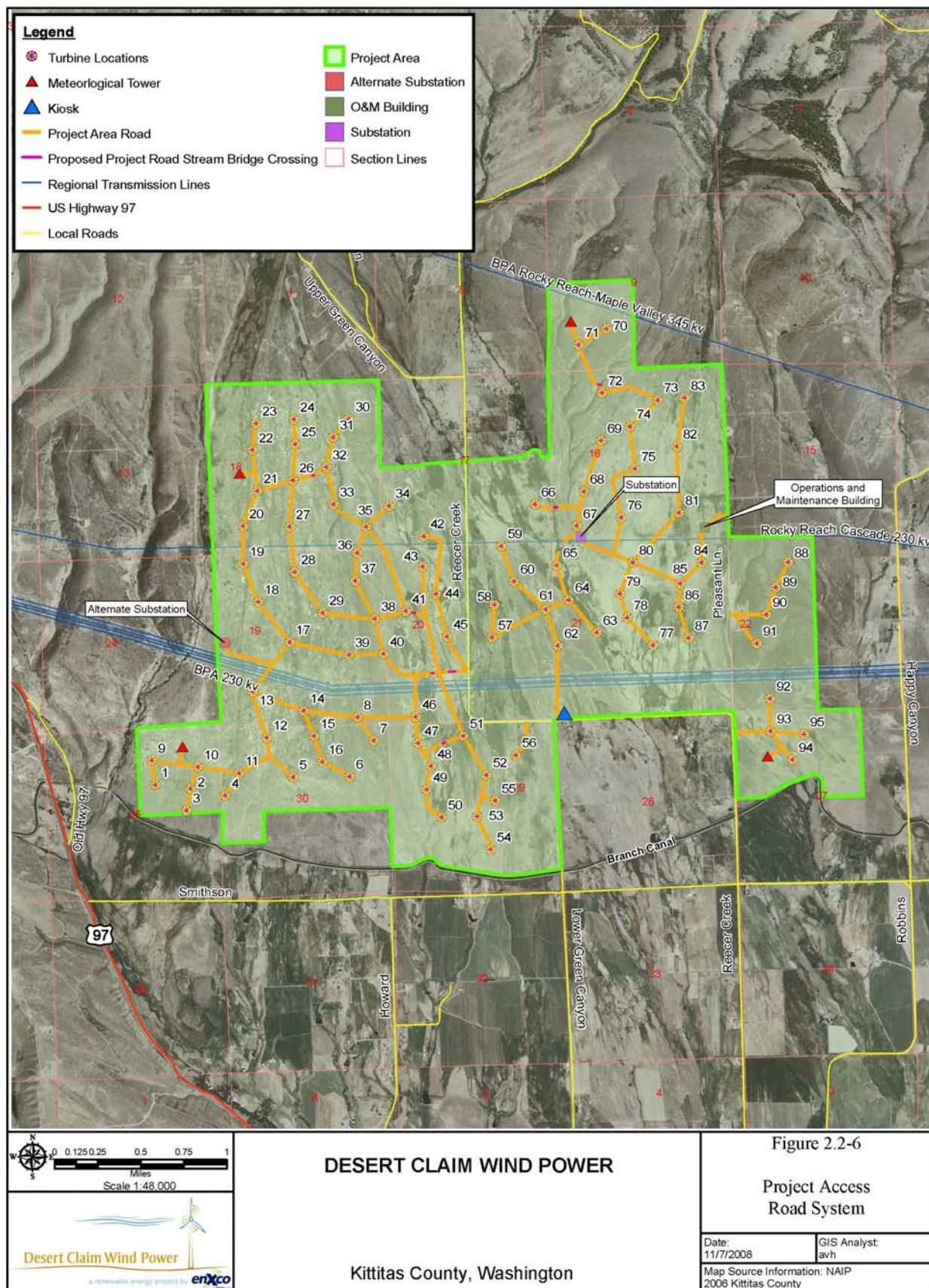
2.2.2.6 Operation and Maintenance Facility

Proposed Project facilities include a permanent building to support ongoing O&M activities. The O&M building would include an enclosed bay for storage of equipment, parts, and supplies; a workshop; an office for administration and monitoring of the facility; restroom and kitchen facilities; and parking for vehicles. The enclosed space needed for the O&M building is approximately 5,000 square feet, and the overall footprint, including parking and outside storage, would be up to approximately 2 acres.

The O&M facility would be constructed on a 2-acre site located 1 mile north of the intersection of Reecer Creek Road and Pheasant Lane. Domestic water for the O&M facility at this location would either be acquired from the landowner or obtained by developing an exempt well. Water consumption would be considerably less than 5,000 gallons per day. Restroom and kitchen facilities would drain into an on-site septic system. The O&M facility would be surrounded by a fenced enclosure with a locked gate.

Safety and Control Systems

The Project would include a communication system for monitoring and controlling the turbines. The communication system would use either copper lines, similar to telephone lines, or fiber-optic lines. Communication lines typically run to each turbine, parallel to the low- and medium-



voltage power collection lines, either underground or overhead on poles. The rotor control and braking system would be a key component of the Project safety systems.

Aircraft safety lighting would be installed on the exterior of some nacelles, to comply with FAA rules for structure lighting. Under the Project's lighting plan, 41 of the total 95 turbines would be equipped with synchronized low-intensity flashing red lights (L-864) for nighttime use. Experience with FAA review of prior lighting plans indicates this configuration should meet the FAA requirements (Chavkin 2008).

Each wind turbine, including the rotor blades, would be equipped with a lightning protection system, which would be connected to an underground grounding arrangement to facilitate lightning flow safely to the ground. All equipment, cables, and structures comprising the wind turbines would be connected to a metallic, Project-wide grounding network.

Turbine towers would be locked, and the substation would be fenced and locked to prevent unauthorized entry.

2.2.2.7 Visitor Facilities

The Project may provide some level of attraction or interest for tourists who want to view a working wind energy facility. The Project could develop visitor facilities to accommodate public interest in the Project, minimize potential traffic impacts to the surrounding area, reduce the potential for trespass, and ensure visitor safety.

The Applicant does not currently propose to include visitor facilities in the Project. If included, however, they could consist of a roadside turnout adjacent to a County road at a location providing a suitable view of Project wind turbines, with an information kiosk and appropriate signage. A possible location could be near the junction of Reecer Creek Road and Lower Green Canyon Road within the Project Area.

2.2.3 Construction Process

Construction of the Project would involve standard construction procedures typically used for wind energy projects in the Northwest and are described in more detail in the Final EIS. This section summarizes the schedule and general sequence for the construction process, and describes procedures to be used for construction of the various Project components.

2.2.3.1 Schedule and General Sequence

The construction process would be completed over an approximately 10-month period. The primary tasks in the construction process include the following:

- survey and stake Project facility locations;

- construct Project access roads and turbine pads;
- micro-site and construct foundations for towers;
- excavate trenches for underground utilities;
- place underground power collection and communication cables in trenches;
- construct overhead power collection and communication cables and interconnection with the BPA or PSE transmission line;
- construct the Project substation;
- construct the Project O&M facility;
- transport tower sections to the site and assemble towers;
- assemble and install nacelles, rotors, and other turbine equipment;
- install safety and control systems;
- test all Project systems; and
- conduct final site grading, reclamation, and cleanup.

Habitat, sensitive areas, and cultural protection areas within the Project Area would be delineated, defined in contracting documents, and marked in the field, pursuant to plans prepared in consultation with the Yakama Nation, WDFW, and DAHP, and approved by EFSEC. Please refer to the plans identified in Section 2.1.4.

In general, the first few months of construction activity would involve initial civil and electrical construction, including construction of the Project access roads and tower foundations, the power collection system and communication lines, and the Project substation. Tower installation would be accomplished in phases. As Project access roads and tower foundations are completed, turbines would be erected. Installation of the nacelles, rotors, and associated equipment would be the final task of major construction activity for each turbine. The Applicant expects to begin commercial operation within 1 month after commissioning the first wind turbine.

2.2.3.2 Construction Space Requirements

Construction activities would require temporary disturbance of a larger area than would be occupied by the permanent Project facilities. **Table 2.2-2** identifies the estimated area that would be disturbed in construction and within the permanent footprint of the various project components.

Table 2.2-2. Estimated Area of Construction Disturbance and Permanent Facilities ¹

Project Feature	Temporary Construction Disturbance (acres)	Permanent Project Footprint (acres)
Wind Turbine Pads	98.6	10.5
Internal Power Collection System ²	3.8	0.1
Project Substation	2.8	2.0
Kiosk Area (not currently proposed)	1.0	0.3
Met Towers	0.4	0.1
Project Access Roads ³	188.2 ⁴	71.5
Project O&M Facility	2.8	2.0
Construction Staging/Storage	19.5	-
Total Area	317.2	86.4
Percent of Project Area	6.1%	1.6%

¹ The table reflects the best estimates of disturbance available at this time. As identified in Section 2.1.4, disturbance would be limited to the extent possible. Calculations of actual disturbance would occur prior to the start of commercial.

² Power collection system within Project Area (under ground) with 85 percent contained within access road areas.

³ Area for Project access roads increased 15 percent to include curves and intersections to non-Project roads.

⁴ Temporary disturbance figure includes permanent footprint area.

2.2.3.3 Work Force

Approximately 120 to 180 people would likely be employed at some time during Project construction. Some of these workers would be employees of Desert Claim or enXco, Inc., but most would work for various construction contractors and equipment vendors who would provide construction goods and services to the Project. The size of the construction work force present at any given time would vary with the schedule of tasks in the construction process. Relatively few construction workers would be present during the initial and final stages of construction activity, for example. The road/pad and tower foundation construction tasks are likely to be the Project activities with the greatest labor requirements.

The Applicant would use local construction contractors and suppliers to the extent possible. Based on experience with other wind energy projects in the Northwest, it is likely that local firms and workers would be available for tasks such as surveying, site clearing and grading, road and turbine foundation construction, and site restoration/cleanup. Tasks such as transmission line and substation construction, turbine assembly, installing safety and control systems, and testing require more specialized skills that are less likely to be available locally and, therefore, may be performed by non-local firms and workers.

2.2.3.4 Erosion and Sedimentation Control

Erosion and sedimentation control measures would be applied during active construction and during the restoration and cleanup stage of the construction process. The Project would require a General Construction Stormwater Permit under the National Pollutant Discharge Elimination System (NPDES) permit program. As a requirement of the permit, the Applicant would develop

and implement an SWPPP to address the erosion control and water quality conditions of the permit. This design-level plan would prescribe the use of Best Management Practices that are standard features of such plans. The Project SWPPP would be based on and comply with the Washington Department of Ecology's Stormwater Management Manual for Eastern Washington.

Based on the applicable standards, the SWPPP would include using coverings for exposed soils (e.g., straw, jute netting, or soil stabilizers), stormwater detention ponds, sediment control basins and traps, and other well-established measures. Surface water runoff would be directed away from cut-and-fill slopes and other disturbed areas, and into ditches that drain to natural drainage features. Exposed areas would be re-vegetated as soon as possible following completion of the corresponding construction task.

2.2.3.5 Roads and Turbine Pads

Heavy construction activity for the Project would start with clearing and grading for the Project access roads and turbine pads. In some locations existing private farm roads would be used as segments of the Project access road system. These existing road segments would be improved as necessary to comply with the design standards for Project roads

New graveled roads would be constructed in areas where existing roads could not be used for access to the turbines. These roads would vary in width and have 15-foot travel surface widths for straight sections and 20-foot travel surface widths for curved sections. Project access roads would have turnouts at the turbine pads and other selected locations. Stream crossing structures would be incorporated into the Project access road system to allow for crossing or spanning of wetlands and streams, including any buffers. The temporary disturbance area along the Project access road routes is assumed to be approximately 35 to 50 feet wide under typical circumstances, with a wider area needed in locations where cuts and fills are required to construct and stabilize roads on slopes. The temporary disturbance width along the access roads would also accommodate trenching for Project utility lines and would accommodate access for cranes needed to erect the turbines. Temporary construction disturbance around the turbine pads is assumed to occupy an area about 1 acre per turbine.

Topsoil removed during grading for access road and turbine pad construction would be stockpiled on site adjacent to the disturbed areas. The removed topsoil would be re-spread in cut-and-fill slopes, and these areas would be re-vegetated as soon as possible after road construction was completed. No off-site deposition of excavated material would be needed. Once grading for the roads and pads in a given sector of the Project had been completed, fill materials (gravel, soil and sand) needed for road and pad bases and road surfaces would be hauled to the construction site, deposited, graded, and compacted, as needed. Native materials from the Project Area would be used to the greatest extent possible to meet fill material needs

and achieve a cut-and-fill balance within the Project Area. If fill must be imported, gravel and/or crushed rock provided by local permitted sources would be used. Quantities of filling and grading for the Project have not yet been estimated because they are dependent on the mix of tower foundations to be used, and the type of foundation for each turbine location would be determined based on site-specific geotechnical investigation. These quantities would be estimated after the type of tower foundation is determined for each turbine. Based on information developed for other wind energy projects of a comparable scale, however, the total volume of cut and fill quantities for the Project could be in the range of approximately 250,000 to 300,000 cubic yards. Gravel and other construction materials purchased by the road construction contractor from existing, permitted local sources would be trucked to the construction site via public roads.

2.2.3.6 Staging Areas

Temporary laydown or staging areas would be established in the Project Area to support various construction functions. These include temporary storage of tower sections, nacelles and other turbine components; temporary storage of other equipment and supplies; parking of construction vehicles and equipment; parking of construction workers' personal vehicles; and possible installation of portable fuel tanks surrounded by earthen berms for spill control. Staging area locations and dimensions have not yet been determined. One or more staging areas approximately 10 acres in size would be needed; these temporary facilities would be placed near existing roads and on previously disturbed land (e.g., heavily grazed and/or crop or pasture lands).

2.2.3.7 Concrete Supply

The Applicant would contract with one or more local construction companies to install the tower foundations and pads and the transformer pads. These facilities would require sizable volumes of concrete. The construction contractor would be responsible for obtaining the aggregate and concrete necessary to build these features. The contractor could elect to purchase the construction materials from local suppliers, in which case concrete would be manufactured at an existing local plant and trucked to the Project.

Alternatively, the contractor could choose to construct one or more temporary concrete batch plants within or near the Project Area, to minimize the cost impact of transporting concrete to the Project. In this event, the location and characteristics of the batch plant(s) would be determined by the contractor, and the contractor would be responsible for obtaining any land use or environmental permits required to develop the facilities.

2.2.3.8 Turbine Foundations

Once the Project roads are constructed, excavation would begin for turbine foundations. As described in Section 2.2.2.1, inverted-T and pile-type foundations are likely to be used, with selection of the foundation design depending on site-specific conditions at each turbine location. Foundation construction activities are expected to occur for approximately 4 to 5 months during the Project's construction process.

The inverted-T foundation requires a circular excavation approximately 8 feet deep and 90 feet in diameter. Construction for this design involves excavation with a backhoe; placement of a layer of compacted fill at the bottom of the hole; pouring an octagonal-shaped, reinforced-concrete (concrete poured over steel rebar) footing up to 4 feet deep on top of the fill; pouring a 4-foot-deep, reinforced-concrete pedestal on top of the footing; and covering the footing and pedestal with compacted backfill and topsoil. Steel anchor bolts extending through the pedestal to near the base of the footing would be used in a subsequent step to fix the tower to the foundation.

The pile foundation requires excavating a hole ranging from 25 feet to 35 feet deep (depending on site-specific subsurface conditions) and approximately 18 feet in diameter. A cylindrical, corrugated metal form approximately 16 feet in diameter would be inserted in the hole, and another cylindrical corrugated form several feet smaller in diameter would be placed inside the larger form. The space between the two forms would be filled with reinforced concrete and two rings of anchor bolts, and the space inside the inner metal form would be filled with compacted backfill.

If bedrock were encountered at any turbine location, rock anchors would likely be used to secure the base of the foundation. Rock anchors would be used in conjunction with either foundation design. Use of explosives (blasting) might be required for installation of rock anchors.

2.2.3.9 Collection System

The power collection system for the Project would be installed using underground cable, except where it is not feasible to do so and avoid sensitive environmental features. The cable would be located within the disturbance area for construction of the Project road system to the maximum possible extent. At stream crossings, the cables may be located on the road bridge or structure. Underground cable would be installed using a trenched or plowed-in method. The trenching method requires excavating a trench approximately 3 to 5 feet wide and approximately 2 to 4 feet deep, laying the electrical cables in a part of the trench, partially backfilling the trench, laying parallel communication cables, and backfilling the entire trench. Under the plowed method, the power collection and communication cables would be installed without the need to excavate an open trench; instead, the cables would be directly plowed into the ground. In either case, topsoil would be replaced on the surface of the disturbed area and would be reseeded with native plants.

In certain areas, the underground cables may be encased in concrete to provide additional protection and stability in the ground.

2.2.3.10 Substation and Operation and Maintenance Facility

The Project substation would be constructed while the electrical system components were being installed. Construction activities would include clearing and grading the substation site, which would occupy up to approximately 2 acres; constructing concrete pads for transformers, the control building and other equipment; installing the electrical equipment; assembling the control building; covering the remainder of the site with gravel; and constructing a chain-link fence around the perimeter of the substation site.

The Project O&M facility would be constructed on a 2-acre site located 1 mile north of the intersection of Reecer Creek Road and Pheasant Lane. It would involve conventional building construction techniques including site clearing and grading, constructing a concrete pad for the building, framing and finishing the building, installing electrical wiring and plumbing, and constructing a septic system and drain field.

2.2.3.11 Turbine Equipment

Once a sufficient number of tower foundations are in place and finished, the first turbine towers, nacelles and blades would be brought to the Project Area for placement. The turbine components would be transported to the Project Area by truck and trailer. The towers would have three sections, each approximately 70 to 90 feet long. They would be delivered by trailers, each carrying one tower section. Large cranes would lift the multiple tower sections into place. The bottom section would be bolted to the circular ring(s) of anchor bolts on the foundation pedestal, and the upper sections would be sequentially bolted in place.

Following foundation construction, the nacelles, rotors, and other components would be delivered to the tower locations. The nacelle would be hoisted to the top of the tower by crane and bolted to the tower. The rotor hub and blades would be assembled on the ground, and the assembly would be lifted by crane and secured to the nacelle.

The permanent met towers would also be installed during this stage of the construction process. The tower components would be transported to the construction site in sections, hoisted by crane, and anchored to the met tower foundations.

2.2.3.12 Final Grading and Restoration

Final grading of disturbed surfaces within the Project Area would occur following completion of the heavy construction activities, and any additional gravel needed would be placed on the Project access roads. All areas temporarily disturbed by Project construction would be restored to their original condition and reseeded with native vegetation. Areas subject to construction

activity would be inspected for the presence of noxious weeds and treated as necessary. Long-term stormwater management and erosion control measures would be implemented. A final site cleanup would be made before shifting responsibility for the Project Area to the Project O&M crew, including collection and disposal of all construction debris and other waste materials that could not be reused. County roads would be restored to their pre-Project condition.

2.2.3.13 Testing

Following completion of construction activities on the first group of wind turbines, approximately a month of testing would occur before commercial operation begins. Testing would involve inspections of the mechanical, electrical, and communication systems to ensure they are working properly and performing according to their respective specifications. The testing process would include checks of each wind turbine and the overall Project control system. Technicians qualified for the specific systems would perform all inspections.

2.2.3.14 Transportation and Access Management

Management of construction access and traffic would be a specific focus during the construction process, primarily because of the roadway and traffic considerations associated with transportation of construction materials and turbine components to the Project Area. The Applicant would develop a Construction Traffic Management Plan that would address transportation and access concerns during the construction period. The plan would define access routes and procedures to be used by various types of construction equipment and material shipments, approved hours of operation for construction traffic, safety provisions and other management requirements.

Operation and Maintenance

The Applicant intends to operate and maintain the Project once construction is complete and the Project begins commercial operation, though some utilities have shown an interest in purchasing the Project and operating it themselves. Electricity generated by the Project would be sold to power marketing entities, such as BPA; local and regional public utilities, such as the Kittitas County PUD and the Grant County PUD; and/or regional investor-owned utilities, such as PSE and Avista. Power from the Project would ultimately be distributed by utilities to their customers. This section summarizes the activities associated with long-term O&M of the Project.

2.2.3.15 Functions

Long-term O&M activities for the Project would include the following functions:

- round-the-clock monitoring of Project output, the safety and control system, and the performance of individual wind turbines;

- controlling turbine operations as necessary to meet scheduled power deliveries and implement scheduled outages for scheduled turbine maintenance;
- performing periodic, routine testing, and maintenance of the turbines as needed to maximize performance and detect potential mechanical difficulties;
- providing on-site repairs of Project equipment in response to malfunctions or scheduled maintenance;
- patrolling the Project Area to ensure security and monitor on-site conditions, including inspection for erosion, re-vegetation success, unauthorized uses, and potential wildlife impacts;
- periodically maintaining Project access roads, including grading and application of additional gravel, as necessary; and
- implementing the noxious weed control plan.

Through the life of the Project, the Applicant would follow an O&M protocol that would specify the timing of routine turbine maintenance and inspection. Such a protocol typically adheres to a program developed by the turbine manufacturer, similar to the way automobile manufacturers define recommended maintenance. Scheduled maintenance would be conducted approximately every 6 months on each wind turbine. On average, each turbine would require 40 to 50 hours of scheduled mechanical and electrical maintenance per year.

Most servicing of the turbines would be performed within the nacelle via access through the tower, rather than using a crane to remove the turbine from the tower. The use of a crane and equipment transport vehicles for turbine adjustments, larger repairs or replacement of rotors, or nacelle equipment would be needed on an occasional basis. Routine maintenance would include replacing lubricants and hydraulic fluids at specified intervals. The towers would need to be repainted on a periodic basis. All lubricants, hydraulic fluids, paints, solvents and other potential hazardous substances would be carefully stored, used, and disposed of in accordance with applicable laws and regulations.

2.2.3.16 Work Force

The Project is expected to employ 10 to 12 full-time staff for long-term O&M. This staff would include an operations manager, technicians specializing in maintenance and repair of the turbines, and field staff responsible for other Project functions. Most of the O&M staff is expected to be hired from the local work force.

2.2.3.17 Access Management

All Project access roads would be posted and maintained as private roads, with locked gates to minimize unauthorized access. Public roads within and adjacent to the Project Area would remain open to public use, as in their current condition.

2.2.4 Decommissioning

The useful life of the Project is assumed to be 30 years. New technology may become available for re-powering the Project (replacing the generators and/or other major turbine components) at some time in the future.

At the time the Applicant decides to terminate operation of the Project, the Project would be decommissioned. Decommissioning the Project would involve removal of the wind turbine nacelles, blades, towers, foundations, cables, and other facilities to a depth of 4 feet below grade; regrading the areas around the Project facilities; removal of Project access roads (except for any roads that landowners wanted to remain); and final restoration of disturbed lands. A Decommissioning/ Restoration Plan will be prepared prior to the start of construction and will be designed to restore the site to approximate or approved pre-project conditions; please see Section 2.1.4.

If, during the life of the Project, any turbine generates electricity for fewer than 250 hours during a continuous period of 12 months, it would be decommissioned. However, if a turbine stops generating electricity due to *force majeure*, mechanical breakdown, or malfunction, the Applicant may repair rather than decommission the turbine.

Prior to commencing construction, the Applicant would post a bond or corporate surety in favor of EFSEC, to cover decommissioning costs. The initial amount of the bond or corporate surety would be comparable, on a per turbine basis, to the security required by EFSEC for similar wind projects under its jurisdiction. The bond or corporate surety would name the Project landowners as additional beneficiaries.

2.3 CHANGES TO THE PROPOSAL

This section highlights the revisions that have been made in the Project since it was considered by Kittitas County from 2003 to 2005. The following are the most significant of those changes:

- The 5,200-acre Project Area, while 37 acres smaller than the prior proposal, has been consolidated from four separated parcels to one contiguous area. Approximately 2,046 acres of private land that previously made up the eastern portion of the Project was removed. The Project now includes approximately 1,529 acres of land leased from the WDNR, 2,551 acres

leased from private landowners, and 1,120 acres of property in the western portion of the Project to be owned by an affiliate of the Applicant.

- The number of turbines has been reduced from 120 to 95.
- The turbine model has changed from the 1.5 MW General Electric Wind Energy 1.5sl turbine to the 2.0 MW REpower MM92 turbine.
- The distance between turbines and neighboring residences has increased to at least four times the turbine tip height.
- Sound from the Project would be 50 A-weighted decibels (dBA) or less at the boundary between the Project Area and residential properties.
- Shadow flicker at adjacent residences has been reduced. For those residences (if any) that are still affected by perceptible shadow flicker, Desert Claim has committed to stop the blades of any wind turbine that causes shadow flicker during those hours and conditions when shadow flicker would occur, or offer a voluntary waiver agreement to the landowners in lieu of stopping the turbine.
- The Project would result in no temporary or permanent impacts to wetlands, streams, or specified buffers.
- Daytime white strobe lighting has been eliminated and nighttime red lighting has been reduced to 41 of the Project turbines.

The changes in the number and type of proposed wind turbines and the configuration of the Project Area have resulted in modifications to some other characteristics of the Project. **Table 2.3-1** provides a summary comparison of key measures for the Project as currently proposed, relative to the proposal evaluated in the County EIS.

Table 2.3-1. Comparison of Current and Prior Desert Claim Project Proposals

	Final EIS Proposal (August 2005)	Revised ASC Proposal (February 2009)
Project Area	5,237 acres	5,200 acres
Project Footprint	90.4 acres	86.4 acres
Number Turbines	120	95
Project Capacity (megawatts)	180 MW	190 MW
Turbine Height	340 feet	410 feet
Roads	27.5 miles	27 miles
Collection System (buried outside of Project Roads)	3 miles	<2 miles
Above Ground Transmission Lines	<1 mile	<300 feet
Safety Setback	487 feet	625 feet
Setbacks from Neighboring Residences	1,000 feet	Minimum of 1,640 feet
Number of residences located within 2,500 feet	29	9

2.4 ALTERNATIVES TO THE PROPOSAL

The Kittitas County Final EIS on the Desert Claim proposal evaluated a wide range of alternatives to the proposed Project. That EIS addressed alternative generation technologies (i.e., generation options other than wind energy) and alternative transmission interconnections. The County EIS also described an extensive process to search for and identify plausible alternative sites for development of a wind energy project, resulting in two such off-site alternatives that were evaluated in detail. Those alternatives included the Wild Horse site, located on Whiskey Dick Mountain in the eastern part of Kittitas County, and the Springwood Ranch site, located west of Ellensburg near the town of Thorp. The Wild Horse site has since been developed and become operational as a wind energy project, and that alternative is no longer applicable to EFSEC's consideration of the Desert Claim application.

There have been no other substantial changes to the alternatives addressed in the County EIS or the likely impacts associated with those alternatives. No new alternatives that are appropriate for consideration in the SEIS have been identified. The SEPA Rules direct that an SEIS should not include analysis of actions, alternatives, or impacts addressed in the previously prepared EIS. Therefore, because there has been no change in the previous alternatives other than the development of the Wild Horse site, there is no additional discussion of alternatives to the proposed action in the SEIS. The interested reader may refer to the discussion of alternatives in the County EIS.

2.4.1 No Action Alternative

The No Action Alternative is a required element in the review of a proposed action under SEPA. In this case, the No Action Alternative implies a decision by EFSEC not to recommend execution of a Site Certification Agreement for the Desert Claim Wind Power Project. The characteristics of this alternative remain as described in the County EIS; under the No Action Alternative, the proposed Desert Claim Wind Power Project and all associated features including the turbines, access roads, utility trenches, and substations would not be constructed. There would be no adverse environmental impacts from development of the wind power facility within the Desert Claim Project Area, although some changes could occur nevertheless.

Under the No Action Alternative, however, on-site agricultural and rural residential activities would continue for the foreseeable future; current Ag-20 and Forest and Range zoning are assumed to continue. The potential for residential development in the Project Area, to the extent permitted by existing zoning, and the potential for conflicts with existing agricultural activities, would continue. Conversion of some privately owned lands to rural residential uses could displace existing uses and affect the rural character over time.

The No Action Alternative would also eliminate the positive local economic effects for Kittitas County and nearby communities in the form of lease payments, tax revenues, and opportunities for employment resulting from this proposal.

2.5 ALTERNATIVES NOT CONSIDERED IN DETAIL

In 2007, Kittitas County amended its wind farm regulations to include provisions for areas that were “pre-identified” as suitable for siting wind farms (Kittitas County Code 17.61A.035). The new code provision is intended to expedite permitting for projects proposing to locate in such pre-identified areas. The code recognizes, however, that the lands within this area may be under federal, state, and local government ownership and may be subject to additional requirements.

The pre-identified areas include an estimated 12 townships or 285,120 acres of land in eastern Kittitas County. Of this total, approximately 92,160 acres include federal lands used for the Yakima Firing Center, and approximately 136,746 acres are on Washington State lands managed by WDFW for wildlife and habitat conservation (the Quilomene Wildlife Area and Colockum Wildlife Area). These areas are substantially constrained for use for a wind power project.

Of the remaining 56,214 acres in the pre-identified area, approximately 14,630 acres are the subject of operating, permitted, or proposed wind project development (including the Wild Horse and Vantage projects). Most of the remaining lands are either contiguous to the I-90 corridor, in fragmented/non-contiguous parcels, or in locations where wind resources are unsatisfactory (e.g., south of I-90). The remaining area does not provide sufficient contiguous or available lands within which to plan a wind power project alternative.

In summary, the environmental conditions, land available, and wind resource limitations associated with Kittitas County’s pre-identified areas are considered to be substantial and would severely constrain the location of a third wind farm proposal. The two developed and approved wind power projects have committed most contiguous properties with sufficient wind resources. As a result, this area is not considered to be a reasonable off-site alternative and is not evaluated in detail in the SEIS.

3.0 AFFECTED ENVIRONMENT, SIGNIFICANT IMPACTS, MITIGATION MEASURES, AND SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

This chapter of the SEIS contains supplemental information concerning the revised Desert Claim proposal. It evaluates significant impacts and recommends mitigation measures, where appropriate, related to wetlands and streams, wildlife and habitat, cultural resources, and visual resources for the revised proposal. This information supplements the analysis contained in the Desert Claim Final EIS (2004) and focuses on changes to the proposal, including the revised site area and turbine layout. The former analysis is not repeated in this document; however, for the convenience of the reader, the major conclusions of the Final EIS are summarized at the beginning of each sub-section.

The impact analysis addresses the following types of impacts: direct (construction and operational), indirect, and cumulative. For the purposes of this analysis, cumulative impacts are defined to encompass those generated by the Project in combination with other approved wind power projects in the general area, including the Wild Horse, Kittitas Valley, and the Vantage Wind Power projects. Information on those proposals was obtained from the following published environmental documents: Kittitas Valley Final EIS, Wild Horse EIS, and the Vantage Wind Power Project SEPA Checklist and Determination of Non-Significance.

3.1 WATER RESOURCES: STREAMS

3.1.1 Summary of Prior Environmental Analysis

The Desert Claim Final EIS identified potential impacts to streams from the original project proposal, which could possibly be mitigated through micro-siting, use of Best Management Practices, and restoration. Impacts included temporary impacts to disturbance along 3,700 lineal feet of streams and 3 acres of riparian area; and permanent impacts from Project facilities estimated at 1,200 lineal feet of streams and less than 1 acre of riparian area.

3.1.2 Affected Environment

The proposed Project is located within the central portion of the Upper Yakima River drainage basin. The Yakima River begins on the eastern slope of the Cascade Mountains at Keechelus Lake in the Upper Kittitas Valley and flows southeasterly through the lower plateau and river-bottom lands to the Columbia River, draining an area of approximately 6,155 square miles.

Streams located within the Project Area drain into the Yakima River, upstream of Ellensburg and approximately 40 miles downstream of the river's headwaters. Because the Yakima River Basin

receives little direct precipitation (8.9 inches per year), these streams are primarily fed by the snowmelt of the ridges to the north of the Project Area (WRCC 2007).

Twenty-one streams were identified, evaluated, and delineated within the Project site. The definitions and standards in Kittitas County's Critical Area regulations was used to classify streams (KCC 17A.07). For more detailed information regarding the stream inventory, refer to the Desert Claim Wind Power Final EIS (Appendix B, Stream and Wetland Delineation Report).

Of the streams identified, seven were classified as Type 3, which are defined as segments of natural waters that are not classified as Type 1 or 2, and have a moderate to slight fish, wildlife, or human use. The remaining 14 streams were classified as Type 4, which are defined as segments of natural waters that are not classified as Type 1, 2, or 3 waters, and have a channel width of 2 feet or more between the ordinary high water marks); or Type 5, that are segments of natural water which are not classified as Type 1, 2, 3, or 4 waters, and have a channel width of two feet between the ordinary high water marks, including streams with or without well-defined channels. Type 4 and 5 streams are intermittent in nature and may be dry beds at any time of the year. Kittitas County's regulations require a 50-foot buffer for Type III streams and 15-foot buffer for Type 4 and 5 streams. The ordinance does not classify irrigation ditches, waste ways, drains, outfalls, operational spillways, channels, stormwater runoff facilities or other wholly artificial watercourses as streams (Kittitas County 2007).

3.1.3 Significant Impacts

3.1.3.1 Desert Claim Revised Proposal

Potential impacts to streams and buffers from construction activities include disturbance of the streambed and banks, disturbance or removal of riparian vegetation, potential filling or relocation of parts of streams, and erosion and sedimentation, which could degrade water quality.

Project access roads or the power collection system would cross six Type 3 streams or irrigation ditches. All road crossings are proposed to bridge the affected streams to avoid impacts. In locations where the power collection system intersects these water bodies, crossings would occur by boring underneath, bridging, or using aboveground power poles. No temporary or permanent impacts are anticipated to occur.

Potential indirect impacts would be the same as identified in the Desert Claim Final EIS.

No Action

As described in the Desert Claim Final EIS, under the No Action alternative, the proposed wind power facility would not be constructed and no project-related impacts to streams would occur. However, past and current impacts to streams—such as can occur in conjunction with rural

residential development or ongoing agricultural activities—would continue for the foreseeable future. Conversion of land for low density rural residential uses could occur over the long term and result in direct and indirect impacts to streams. Such effects cannot be quantified.

3.1.4 Cumulative Impacts

As identified above, no temporary or permanent impacts to streams are expected to occur as a result of the revised Desert Claim proposal. Similarly, based on review of applicable environmental documents, no impacts are identified for the Kittitas Valley or Wild Horse projects. The Vantage Wind Power Project could entail a small but unquantified amount of fill placed in one seasonal drainage. Each project would implement mitigation measures in the form of construction Best Management Practices to minimize sedimentation and potential water quality impacts. Cumulative impacts are not expected to be significant.

3.1.5 Mitigation Measures

Mitigation measures, such as bridging or boring, have been incorporated into the proposal so that no significant impacts to streams would occur. As identified in the Desert Claim Final EIS and Section 2.2.3.4 previously, these include developing and implementing construction BMPs prescribed in an SWPPP required as a condition of the construction stormwater permit. The measures identified in the SWPPP would minimize erosion, sedimentation, and impacts to water quality. No additional mitigation measures are required.

3.1.6 Significant Unavoidable Adverse Impacts

Potential temporary and permanent impacts to streams would be avoided. Therefore, no significant unavoidable adverse impacts to streams would occur as a result of the proposal.

3.2 PLANTS AND ANIMALS

3.2.1 Vegetation

3.2.1.1 Summary of Prior Environmental Information

The Desert Claim Final EIS documented an inventory of vegetation types within the Project Area for the original proposal and an analysis of the impacts of project development on those resources. The analysis indicated that construction would temporarily disturb 322.4 acres of land in various habitat types (not including approximately 20 acres within construction staging and storage areas that had not yet been located), while permanent facilities would displace 87.9 acres. Project facilities would primarily be located in grassland and shrub steppe habitat types. Based on the specified significance criteria applied in the analysis, the temporary and permanent impacts to vegetation were not considered to be significant. The Final EIS described a variety of

mitigation measures intended to minimize vegetation impacts, restore disturbed areas, and replace lost habitat.

3.2.1.2 Affected Environment

Vegetation in the original Project Area was mapped according to vegetation types characterized by the dominant plants (Young et al. 2003a). This mapping was updated in fall 2006 and again in fall 2008 based on the revised Project Area, the results of vegetation mapping in the surrounding areas, aerial photography and a ground survey. The revised Project Area includes parcels totaling 5,200 acres, including a combination of private property and land leased from WDNR. Based on the new Project Area and updated vegetation mapping, habitat acreages in the Project Area were revised (**Table 3.2-1**).

Vegetation in the Project Area was classified into ten types (**Table 3.2-1, Figure 3.2-1**). The primary vegetation type is grassland, covering over half of the Project Area (57.3 percent), primarily in the western and central parcels. Shrub-steppe is the second most common vegetation type (32.7 percent of the Project Area), followed by agricultural areas (4.7 percent). For the purposes of the vegetation map, the agricultural areas consisted of those areas where the vegetation is actively managed (e.g., irrigated and/or mowed) for agricultural purposes; however, the shrub-steppe and grassland types are also used for agriculture (i.e., cattle grazing). Other vegetation types mapped in the Project Area include grassland/lithosol (0.6 percent), riparian shrub (2.1 percent), wet meadow (1.7 percent), riparian forest (0.6 percent), open water (0.2 percent), and developed (0.1 percent).

The Project Area has been decreased by approximately 37 acres from the previous project area identified in the 2004 Final EIS. The descriptions of the different types of vegetation found in the EIS have not changed, but pine forest does not occur in the new Project Area.

According to U.S. Fish and Wildlife Service information, a federally listed species of orchid—Ute-ladies tresses—could occur in habitat found in Kittitas County. Consultation with the DNR regarding Heritage Program data indicates that Ute-ladies tresses has been documented in Chelan and Okanogan Counties, but not in Kittitas County.

A formal survey for federally-listed rare plants was conducted for the entire Project Area on July 28 through 30, 2009, during the growing season for Ute-ladies tresses; the survey report is included in Appendix B of the Final SEIS. The survey did not identify the presence of any Ute-ladies tresses.

Washington Natural Heritage Program data for Kittitas County was also reviewed for the potential occurrence of state-listed threatened or endangered plants on the site. Of the plants identified as potentially occurring within Kittitas County, none were identified as likely to be

present on the site because the habitat requirements of listed species are not present, and because a high degree of site disturbance has occurred from ongoing activities.

Table 3.2-1. Vegetation Types in the Project Area

Vegetation Type	Approx. Acres¹	Percent of Project Area	General Habitat Description
Agricultural	245.4	4.7	Agricultural areas are sites used for irrigated hay meadows that are periodically mowed.
Developed	5.9	0.1	Areas where human activity has removed or altered natural vegetation, such as residential homes and farm buildings and yards.
Grassland	2,981.9	57.3	Areas dominated by grass species, primarily bunchgrasses bluebunch wheatgrass, Sandberg's bluegrass, cheatgrass, and bulbous bluegrass.
Grassland/ Lithosol	30.7	0.6	A subset of the grassland habitat type found on exposed ridges in shallow soils (lithosol) in the northern-most parcel. Sparse grasses (Sandberg's bluegrass) dominate, along with scattered forbs and occasional shrubs.
Open Water	7.9	0.2	Areas of open water including natural ponds, stock ponds, and the irrigation canal.
Riparian	30.7	0.6	Riparian zones dominated by trees and tall shrubs, located in drainages with perennial or intermittent streams. The dominant species include cottonwoods and various willows. In some locations, the shrub understory is very dense, limiting herbaceous growth.
Riparian	109.8	2.1	Riparian areas adjacent to streams or irrigation ditches where shrubs are common, but often scattered. Common shrub species include black hawthorn and coyote willow. Various herbaceous species are present in the understory. Weedy species, including and knapweed were often observed.
Shrub Steppe	1,701.7	32.7	Upland areas dominated by shrubs, primarily bitterbrush and rigid sagebrush, with an understory of mixed grasses and forbs. Four acres of hawthorne are also included in this category but are not impacted by planned facilities. A few weedy species, such as cheatgrass and knapweed, were observed, but weedy species in general were not found over large extents of the area.
Wet Meadow	86.1	1.7	Areas dominated by hydrophytic vegetation, including various sedges, grasses, and rushes and other herbaceous species. These areas appear to be saturated or inundated most of the year, either from leakage from the irrigation canal or stockponds, or due to high groundwater in low spots and swales. Weeds were observed in some of the wet meadows, primarily chicory.
Total	5,200	100	

¹ Approximate acreage totals based on GIS mapping and calculations.

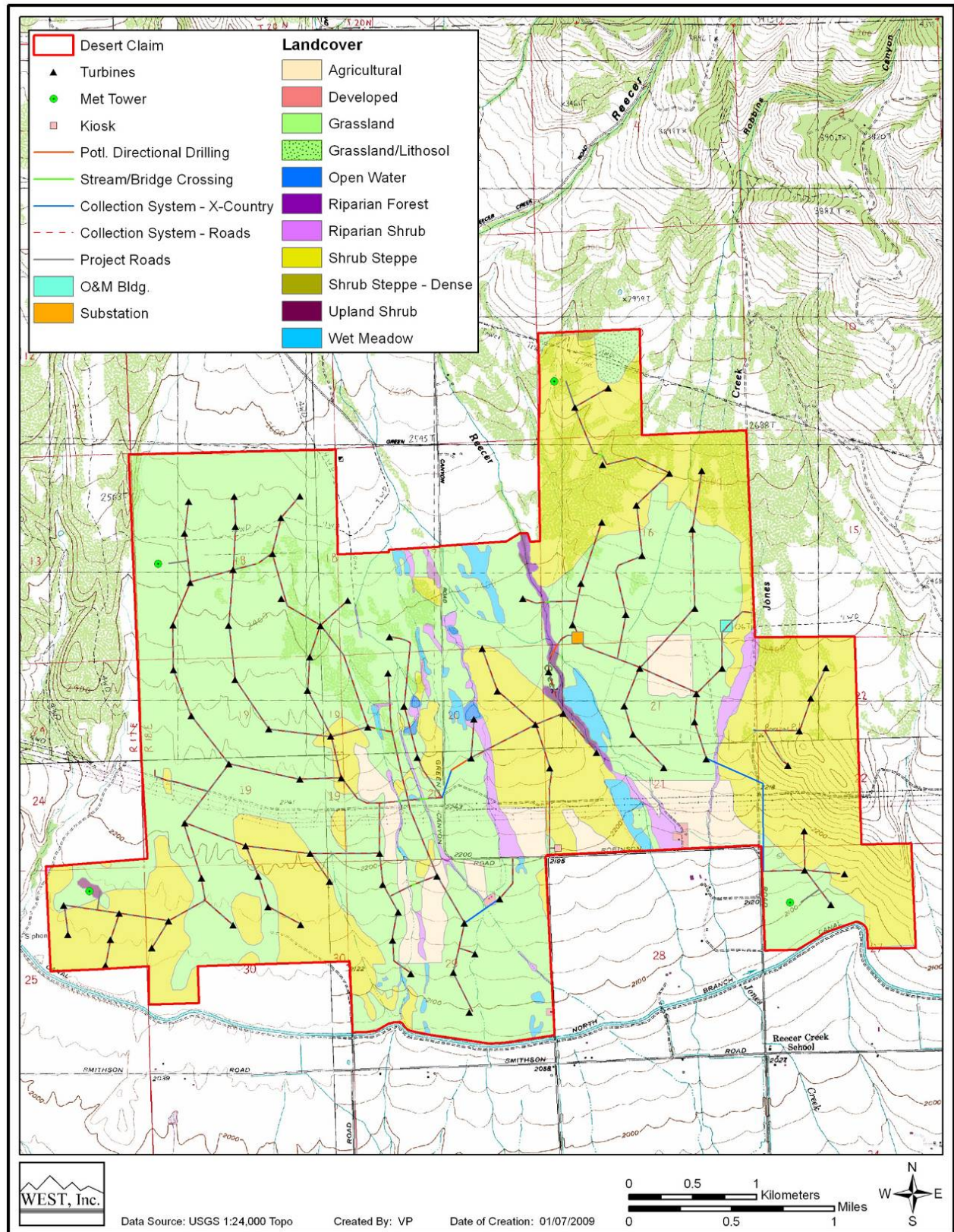


Figure 3.2-1. Vegetation Mapping of the Revised Desert Claim Wind Power Project

3.2.1.3 Significant Impacts

Desert Claim Revised Proposal

The potential habitat impacts were first identified using GIS analysis based on the proposed Project layout provided by the Applicant. These potential impacts are summarized in this section and shown in Table 3.2-2. Based on this analysis, the Applicant then made small modifications in the layout to avoid any wetlands or streams within the Project area. For purposes of the Habitat Mitigation Plan, actual habitat impacts will be determined based on the final project design.

Based on the initial GIS analysis of the Project layout before mitigation, an estimated 86.4 acres of vegetation in the Project Area would be permanently occupied by Project facilities and an additional 230.8 acres would be temporarily disturbed (**Table 3.2-2**; total disturbance is calculated at 317.2 acres). These calculations do not account for Project facilities that have not yet been sited, including construction staging and storage areas; these would likely add approximately 19.5 acres of temporarily disturbed area to the Project total. The access roads account for most of the permanent impacts to vegetation, accounting for 71.5 acres of the permanent habitat loss.

The total acreage of permanent impact for the new proposed layout before mitigation is slightly less (by 1.5 acres) than had been calculated for the original Desert Claim layout (see Table 3.4-2, page 3-65 of the 2004 Final EIS). The acreage of temporary disturbance for the new proposed layout is approximately 5 acres less than had been calculated for the original proposal.

Most Project facilities would be located in grassland and shrub-steppe habitat types. An estimated 23.04 acres of shrub-steppe would be occupied by Project facilities and permanently displaced. An estimated 58.12 acres of grassland (including the grassland/lithosol type) would be permanently displaced. In addition, an estimated 2.19 acres of agricultural lands would be permanently displaced, as well as 0.71 acre of riparian forest and 0.30 acre of riparian shrub. Desert Claim has committed to use micro-siting of facilities to avoid impacts to wetlands and streams; as a result, the potential impacts to open water and wet meadow impacts shown on **Table 3.2-1** would not occur.

As noted above, a formal survey for Ute-ladies tresses was conducted in July 2009, and this federally-listed rare plant was not observed on the Project site. Therefore, no impacts to Ute-ladies tresses would occur. State-listed rare plants are not expected to be present on the site because relevant habitat characteristics are not present and the Project Area has been disturbed by ongoing agricultural activities.

Table 3.2-2. Approximate Acres of Impact by Facility and Habitat Type (before mitigation)

Facility	Vegetation Type	Approximate Acres of Impact	
		Temporary	Permanent
Turbines ¹	Agricultural	1.12	0.11
	Developed	<0.01	0.00
	Grassland	64.29	6.82
	Grassland/Lithosol	<0.01	0.00
	Open Water	0.59	0.09
	Riparian Forest	0.84	0.03
	Riparian Shrub	0.45	0.02
	Shrub Steppe	31.29	3.42
	<i>TOTAL</i>	<i>98.60</i>	<i>10.50</i>
Access Roads ²	Agricultural	5.59	2.13
	Grassland	127.03	48.31
	Open Water	0.35	0.13
	Riparian Forest	1.91	0.70
	Riparian Shrub	0.77	0.28
	Shrub Steppe	52.07	19.77
	Wet Meadow	0.48	0.18
	<i>TOTAL</i>	<i>188.20</i>	<i>71.50</i>
Collection System	Agricultural	0.09	0.00
Buried Along Project Roads ³	Grassland	2.10	<0.01
	Open Water	<0.01	0.00
	Riparian Forest	0.03	0.00
	Riparian Shrub	0.01	0.00
	Shrub Steppe	0.86	<0.01
	Wet Meadow	<0.01	0.00
	<i>TOTAL</i>	<i>3.11</i>	<i><0.10</i>
Buried Cross-Country	Developed	0.02	0.00
	Grassland	0.35	<0.01
	Riparian Shrub	0.01	0.00
	Shrub Steppe	0.31	<0.01
	<i>TOTAL</i>	<i>0.69</i>	<i><0.10</i>
Met Towers	Grassland	0.30	0.07
	Shrub Steppe	0.10	0.03
	<i>TOTAL</i>	<i>0.40</i>	<i>0.10</i>
Construction Staging/Storage		(19.5)	-
Substation	Grassland	2.80	2.00
O&M Facility	Grassland	2.72	1.94
	Shrub Steppe	0.08	0.06
	<i>TOTAL</i>	<i>2.80</i>	<i>2.00</i>
Kiosk	Grassland	0.19	0.00
	Shrub Steppe	0.81	0.30
	<i>TOTAL</i>	<i>1.00</i>	<i>0.30</i>
Total		317.20	86.40

¹ Assumes construction disturbance for each turbine pad and transformer will temporarily affect a 120-foot radius around the tower (~1 acre); area of permanent impact based on a 39-foot radius tower pad (0.11 acre).

² Assumes a 50-foot wide temporary disturbance corridor and a 20-foot wide permanent disturbance corridor. A 115% factor applied to account for increase curves and intersections which are larger than the standard road.

³ For buried collection system an 5-foot wide temporary disturbance corridor was used with residual permanent impacts diminishing over time through reclamation and an 85% reduction factor applied for temporary disturbance that would occur along roads and within road disturbance.

No Action

Under the No Action alternative the existing vegetation conditions within the Project Area would remain generally as they are, subject to ongoing agricultural operations and rural residential development. No impacts to existing vegetation communities would occur as a result of wind energy development.

3.2.1.4 Mitigation Measures

Measures to mitigate impacts to vegetation described in the Desert Claim Final EIS are still applicable to the revised Project. Generally, these include use of the following:

- All Project facilities (turbines, roads, electrical system components) will be micro-sited to avoid any impacts to wetlands.
- Best management practices will be implemented during construction to minimize the disturbance footprint. These include, but are not limited to, the following:
 - installing temporary sediment controls on roads used for construction access prior to construction;
 - using silt fencing and straw bale sediment barriers around temporary workspaces and construction rights-of-way;
 - maintaining temporary sediment control structures until construction area vegetation re-establishes; and
 - clearing vegetation only to the extent necessary.
- Plans and standards for site reclamation and restoration will be developed and submitted to EFSEC for approval.
- Measures to control noxious weeds will be implemented, including but not limited to, the following:
 - developing a noxious weed control plan prior to construction and implementing it over the life of the Project;
 - washing down construction and maintenance vehicles entering and exiting the site to avoid transport of noxious weeds;
 - using certified “weed free” straw bales; and
 - re-vegetating temporarily disturbed areas quickly with native vegetation.
- The Applicant will provide compensatory mitigation, by acquiring a mitigation parcel or make a payment in lieu of mitigation, pursuant to the WDFW Wind Guidelines.

Subsequent to the Draft SEIS, the Applicant agreed to a list of specific mitigation measures as documented in the Stipulation with the CFE and the Agreement with WDFW. With respect to mitigation of vegetation impacts, these documents address the development and implementation of a Habitat Mitigation Plan, preparation of a Construction Soil Management and Vegetation Plan and a Noxious Weed Control Plan, use of project design and construction procedures to avoid or minimize habitat impacts, and assignment of an Independent Environmental Monitor

during construction. Please refer to Section 2.1.4 for identification of the specific measures included in these agreements.

3.2.1.5 Cumulative Impacts

Development of the Desert Claim project would result in both temporary and permanent loss of vegetation within the Project Area, with corresponding impacts to several types of plant communities present. These impacts would be mitigated in accordance with WDFW guidelines as described above. These impacts would occur within the context of disturbance and vegetation change associated with current and expected future land uses in the Project vicinity, primarily agricultural activities and scattered rural residential development.

Impacts to vegetation from development of the Kittitas Valley, Wild Horse and Vantage wind power projects would be similar to those described for the Desert Claim Project, generally consisting of localized impacts to the same types of vegetation communities, and would be mitigated in a similar manner in accordance with the WDFW guidelines. The permanent footprint for the Kittitas Valley project as presently configured would displace a somewhat smaller acreage than would the Desert Claim proposal, as would the Vantage Wind Power Project. The analysis of the original Wild Horse Project indicated approximately 165 total acres would be displaced, including 87 acres of shrub-steppe habitat; those figures would be increased somewhat with the proposed expansion of the Project. For each project, the area of existing vegetation permanently displaced by the Project facilities amounts to a small portion (approximately 2 percent or less) of the respective project area. The combined impacts for the four projects amount to approximately 350 to 400 total acres of existing vegetation lost, of which less than half would be shrub-steppe habitat. Based on the limited incremental loss of native vegetation relative to the local distribution of these communities, the combined effects of the three projects would not represent a significant cumulative impact on local vegetation communities. In addition, mitigation measures for each project include replacement of lost habitat, according to the WDFW mitigation ratios.

In addition to direct loss of shrub-steppe and other native habitat types, fragmentation of habitat has been identified as a resource management concern. Compensatory mitigation parcels identified in connection with the Habitat Mitigation Plan will help to reduce fragmentation. In a more regional context, a key factor is the continued maintenance of large areas of protected grassland, shrub-steppe, and sagebrush communities within the Colockum, Quilomene, and L.T. Murray wildlife areas and the Yakima Training Center.

Environmental documentation for the respective projects also indicates that the minimal potential impacts of the proposed wind projects on rare plants would not represent a significant cumulative impact to any species.

3.2.1.6 Significant Unavoidable Adverse Impacts

There would be approximately 86 acres (less than 2 percent of the Project Area) of unavoidable displacement of existing vegetation with development of the Project. These impacts are not considered significant because they would not result in elimination of an entire vegetation type in the Project Area, loss of 10 percent or more of a priority habitat in the Project Area, or a decrease in species richness resulting from the loss of a plant population in the Project Area. No significant unavoidable adverse impacts to rare plants from construction, operation or decommissioning of the proposed Project are expected. Similarly, the Project is not expected to result in significant unavoidable adverse impacts related to potential introduction or spread of noxious weeds.

3.2.2 Wetlands

3.2.2.1 Summary of Prior Environmental Information

Information about wetland resources is found in the Desert Claim Final EIS, Section 3.4.2. The formerly proposed site (5,237 acres) contained 76 wetlands, primarily categorized as palustrine or fresh water emergent. None support fish or other protected species, although some are hydrologically connected to perennial streams or associated riparian corridors. Construction of the prior Project proposal (120 turbines, roads, power collection system, and substation) was estimated to cause temporary impacts to 17.06 acres of wetland and buffer, and permanent impacts to 3.23 acres.

3.2.2.2 Affected Environment

The region surrounding the proposed Project site is comprised predominately of upland environment and can be described as open country with shrub-steppe-covered rolling hills and flats. Typically, the dry environment of eastern Washington limits wetland areas to the immediate vicinity of perennial streams, seeps, and springs.

A reconnaissance-level survey of the WDNR parcel was conducted in July 2006. Approximately 10 wetlands were observed, generally associated with, or located between, on-site streams. These wetlands were not formally delineated, but their general locations were mapped and characteristics were recorded. Streams were delineated and evaluated.

A survey of the private property in the southwest portion of the Project Area was conducted in July 2008. No wetlands were observed during this investigation. On-site streams were delineated and evaluated.

Sixty-seven wetlands were identified, evaluated, and delineated within the Project site. Wetlands were classified using the definitions and standards contained in Kittitas County's Critical Area regulations (KCC 17A.04). More detailed information regarding the wetland delineation is

contained in the Desert Claim Final EIS and Appendix B of the ASC, Stream and Wetland Delineation Report.

Of the 67 wetlands evaluated on site, 65 were classified as Category III, defined to include wetlands that do not meet the criteria for Categories I, II or IV, and which have a habitat value rating of 21 points or less. An 80-foot buffer is required for Category III wetlands. Two wetlands were classified as Category IV, which are defined as either: (i) hydrologically isolated wetlands that are less than or equal to one acre in size, have only one wetland class, and are dominated (greater than 80 percent aerial cover) by a single non-native plant species; or (ii) hydrologically isolated wetlands that are less than or equal to two acres in size, have only one wetland class, and greater than 90 percent aerial cover of non-native plant species. A 25-foot buffer is required for Category IV wetlands.

3.2.2.3 Significant Impacts

Desert Claim Revised Proposal

The revised Project proposal is not expected to result in any temporary or permanent impacts to wetlands. The revised proposal has been designed and would use micro-siting to locate turbines, roads, and other project facilities so as to avoid wetlands impacts. Two wetlands would be crossed by the proposed power collection system. To avoid potential impacts, these crossings are proposed to be accomplished by boring underneath the wetlands, bridging the wetlands, or using above ground power poles.

Potential indirect impacts would be the same as identified in the Desert Claim Final EIS.

No Action

As described in the Desert Claim Final EIS, under the No Action alternative, the proposed wind power facility would not be constructed and no project-related impacts to wetlands would occur. However, past and current effects to wetlands—such as in conjunction with rural residential development or ongoing agricultural activities—would continue for the foreseeable future. Conversion of land for low density rural residential uses could occur over the long term and could result in direct and indirect impacts to wetlands. Such effects cannot be quantified.

3.2.2.4 Mitigation Measures

Mitigation measures have been incorporated into the proposal so that no wetland impacts would occur. No additional mitigation measures are required.

Any work adjacent to wetlands would adhere to applicable federal, state and local regulations and would be addressed in the Stormwater Discharge Permit, SWPPP, and TЕСP.

3.2.2.5 Cumulative Impacts

In general, impacts to wetlands have been or would be avoided by each of the approved or proposed wind power projects through site planning and micro-siting of individual turbines.

As identified above, no temporary or permanent wetland impacts are expected to occur as a result of the revised Desert Claim proposal. Impacts identified for the Kittitas Valley Project (DEIS Addendum 2005) would be limited to 165 square feet (.00375 acre) of intrusion in two small wetlands in conjunction with road construction. No wetlands were identified on the Wild Horse site and no impacts would occur. Similarly, no wetland impacts were identified for the Vantage Wind Power Project.

3.2.2.6 Significant Unavoidable Adverse Impacts

All potential temporary and permanent wetland impacts would be avoided, and no significant unavoidable adverse impacts to wetlands would occur as a result of the proposal.

3.2.3 Wildlife (Birds and Bats)

3.2.3.1 Summary of Prior Environmental Information

The Desert Claim Final EIS documented an extensive inventory of wildlife resources within and near the Project Area for the original proposal and an analysis of the impacts of project development on those resources. The analysis indicated that loss of wildlife and/or habitat from construction would have minor impacts. Impacts from project operation would primarily involve risk of collision impacts for birds and bats. The rate of bird fatalities was expected to be within the range of mortality that has been observed at other wind projects in the Northwest, and was estimated at 140 to 220 total birds per year. Passerines were expected to comprise the largest share of fatalities, and the European starling, western meadowlark and American robin were identified as the individual species most at risk. The potential impacts to wildlife were not considered to be significant relative to the size of species populations. The Final EIS described a variety of mitigation measures intended to minimize wildlife impacts and monitor conditions with the Project in operation.

3.2.3.2 Affected Environment

The Desert Claim Final EIS provided extensive information on baseline conditions for birds (including data specific to raptors), bats, big game, small mammals, reptiles and amphibians, and threatened and endangered wildlife species in the vicinity of the Project. That information remains valid for the current proposal, and is reflected in the impact analysis presented in Section 3.2.3.3.

3.2.3.3 Significant Impacts

The following section describes impacts to birds, bats and other wildlife expected to result from construction and operation of the revised Project. The analysis focuses on anticipated changes to impacts from the original layout and potential cumulative effects from other wind projects in Kittitas County. In addition, the analysis incorporates new information that has become available since the Final EIS. When the Final EIS was prepared in 2003-2004, biologists typically estimated avian impacts based on per-turbine fatality rates developed by comparing mortality results from studies at similar wind projects. Because of large differences in turbine sizes among various projects and the availability of more project data, biologists have now begun to use a different approach. The approach is to standardize data on a per-MW basis for predicting fatality impacts. This approach assumes that the mortality rates are proportional to the MW capacity of the turbine, which is nearly equivalent to assuming mortality is proportional to the rotor-swept area of the turbine. The analysis presented below uses the approach based on turbine MW nameplate capacity.

Desert Claim Revised Proposal

Birds

Construction Impacts

Wind plant construction could affect birds through loss of habitat, potential fatalities from construction equipment, and disturbance/displacement effects from construction and human occupation of the area. Habitat impacts are slightly less compared to the 2004 Final EIS because the number of turbines has been reduced, thereby reducing the overall footprint of turbine pads and associated facilities. Consequently, potential impacts from construction equipment and disturbance/displacement effects will likely be slightly lower than the previous proposal, due to the smaller number of turbines and less time needed to complete the Project. Potential mortality from construction equipment on site is expected to be low and similar to other wind projects. The risk of bird mortality from construction is most likely limited to potential destruction of a nest with eggs or young for ground- and shrub-nesting species (such as Vespar sparrow and western meadowlark) when equipment initially disturbs the habitat. Because less native vegetation will be disturbed in connection with the current proposal compared to the proposal considered in the Final EIS, the risk of destruction of a nest with eggs or young will be lower. In addition, compared to the original proposal, the disturbance area for the revised project includes a greater proportion of grassland (primarily pasture) vegetation and lesser acreages of riparian forest, riparian shrub, shrub-steppe, and wet meadow; the latter habitat types are more likely than grassland to be used by birds for nesting and foraging. Disturbance-type impacts can be expected to occur if construction activity occurs near an active nest or primary foraging area.

Based on the previous avian studies for the Project, raptor nest density in the original project area and within a 2-mile buffer of the site was 0.28 nest/mi² (0.11 nest/km²) for buteos and 0.34 nest/mi² (0.13 nest/km²) for all raptors. Raptor nest density around the new proposal, including a 2-mile buffer, is 0.18 nest/mi² (0.07 nest/km²) for buteos and 0.20 nest/mi² (0.08 nest/km²) for all raptors. The best raptor nesting habitat in the Project vicinity is located along the Wilson Creek riparian corridor east of the site and along the numerous transmission lines within the Project Area. Nests closer to proposed turbines within the site are more likely to be affected by Project activities and may experience disturbance or displacement effects to the point that raptors do not return and use those nests. Compared to the original proposal, this potential impact would be less with the new Desert Claim proposal due to the lower nest density in the revised Project Area. The 2003 nest survey indicated there were only 2 active raptor nests (both red-tailed hawks) within 0.5 mile of the new Project boundary. Higher nest densities occurred in the southeast part of the original project area, and that area has been dropped from the Project as now proposed. In addition, Wilson Creek falls outside the 2-mile buffer of the new site. It is unlikely that construction of the proposed Project would result in significant disturbance or displacement impacts on nesting raptors.

Operation Impacts

Estimates of Mortality Due to Turbines. Mortality impacts of the proposed Project are projected primarily based on data collected at 11 existing regional wind power facilities (see **Table 3.2-3**). Monitoring studies at these projects were all similar in scope, and the mortality estimates for all projects except Condon were adjusted for bird and bat carcass removal and searcher efficiency biases.

All Raptors. Compared to other wind projects studied in the region, raptor (defined as buteos, accipiters, eagles, falcons) use for the Desert Claim site was slightly above average, with the equivalent of 0.72 raptors observed for a 20-minute survey. The majority of the raptor sightings during the spring, summer, and fall were red-tailed hawks, and rough-legged hawks during the winter. Raptor mortality for the 11 listed wind projects in Washington and Oregon (see Table 3.2-3) ranged from 0 to 0.15 fatalities per MW per year, with an average of 0.07 fatalities per MW per year. Considering these mortality results and raptor use estimates at these wind projects, it is estimated that potential raptor mortality at the proposed Project could be higher than average. Using the raptor mortality rates from projects in the region, potential raptor mortality at Desert Claim would be expected to range from 0 to 29 per year.

Table 3.2-3. Avian Use Estimates and Avian Fatality Estimates for Wind Power Projects in the Columbia Plateau Ecoregion

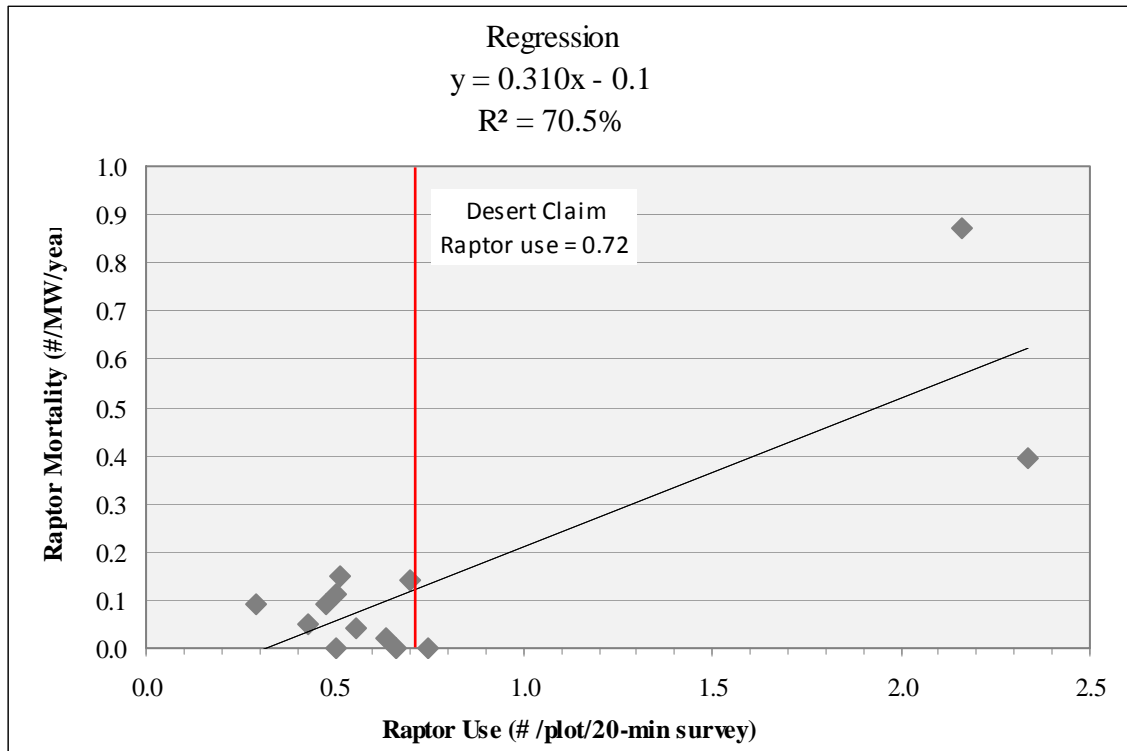
Project	Mean Annual Avian Use (#/20-min survey)		Mean Annual Mortality (#/MW/year)			Source
	Raptors	All Birds	Raptors	All Birds	Nocturnal Migrants	
Combine Hills, OR	0.60	6.0	0	2.6	0.27	Young et al. 2005
Klondike, I OR	0.47	17.5	0	0.9	0.35	Johnson et al. 2003
Klondike II, OR	0.47	17.5	0.11	3.1	2.11	NWC and WEST, 2007
Vansycle, OR	0.41	13.1	0	1.0	0.32	Erickson et al. 2000
Stateline, WA/OR	0.41	13.1	0.10	2.4	0.78	Erickson et al. 2004, 2007
Hopkins Ridge, WA	0.64	8.7	0.14	1.2	0.46	Young et al. 2007
Nine Canyon, WA	0.26	9.4	0.05	2.8	0.45	Erickson et al. 2003
Wild Horse, WA	0.40	5.0	0.09	1.6	0.88	Erickson et al. 2008
Bighorn I, WA	0.90	16.6	0.15	2.6	0.57	Kronner et al. 2008
Leaning Juniper, OR	0.52	23.6	0.06	3.2	na	Kronner et al. 2007
Condon, OR	0.37	5.8	0.02 ¹	0.05 ¹	NR	Fishman Ecological Services 2003
Mean	0.50	12.4	0.07	2.1	0.69	

¹Not adjusted for searcher efficiency or scavenger removal; study methods differed from other projects and were not as rigorous; therefore this estimate should be regarded as a minimum mortality estimate and it was not used in calculation of the mean values.

A more recent analysis of results from multiple projects (**Figure 3.2-2**), including numerous studies in the Columbia Plateau region, suggests that there is a correlation between raptor use and raptor mortality. The relationship between raptor use (standardized to 20-minute surveys) and raptor mortality (adjusted for site-specific estimates of carcass removal and searcher efficiency) was plotted for 13 wind projects studied since 2002. A strong relationship is apparent in this analysis. Two California projects (High Winds and Diablo Winds) have very high raptor use, and much higher raptor mortality than Pacific Northwest and Mid-west projects. (Note that raptor use in this analysis does not include vultures, and that raptor use at the Desert Claim site was analyzed to include just the first 20 minutes of surveys [Young et al. 2003] and to exclude turkey vultures, so that it could be accurately compared to the regression results.

Applying the regression model from this method and the estimated raptor use for the Desert Claim Project (0.72/survey), raptor fatalities for the Project are predicted at 0.12 MW/year, or 23 raptors per year for the entire project. This result is within the range of mortality predicted based solely on fatality rates at the other regional projects (as indicated in **Table 3.2-3**).

These estimates indicate the Project would not result in any population-level consequences (e.g., within the Kittitas Valley, within the Columbia Plateau, or some larger population) for the raptor species likely to be affected. For example, most fatalities are likely to be red-tailed hawks and American kestrels, and these two species are the most common raptor in the Kittitas Valley, as



Study and Location	Raptor Use	Source	Raptor Mortality	Source
Buffalo Ridge, MN	0.64	Erickson et al. 2002	0.02	Johnson et al. 2000
Combine Hills, OR	0.75	Young et al. 2003c	0.00	Young et al. 2005
Diablo Winds, CA	2.16	WEST 2006a	0.87	WEST 2006a
Foote Creek Rim, WY	0.55	Erickson et al. 2002	0.04	Young et al. 2003b
High Winds, CA	2.34	Kerlinger et al. 2005	0.39	Kerlinger et al. 2006
Hopkins Ridge, WA	0.70	Young et al. 2003d	0.14	Young et al. 2007
Klondike II, OR	0.50	Johnson 2004	0.11	NWC and WEST 2007
Klondike, OR	0.50	Johnson et al. 2002	0.00	Johnson et al. 2003
Stateline, WA/OR	0.48	Erickson et al. 2002	0.09	Erickson et al. 2002
Vansycle, OR	0.66	WCIA and WEST 1997	0.00	Erickson et al. 2002
Big Horn, WA	0.51	Kronner et al. 2008a	0.15	Kronner et al. 2008b
Wild Horse, WA	0.29	Erickson et al. 2003c	0.09	Erickson et al. 2008
Nine Canyon, WA	0.43	Erickson et al. 2002	0.05	Erickson et al. 2003b

Figure 3.2-2. Relationship between Raptor Use and Mortality for 13 Wind Projects Studied Since 2002

well as in the Columbia Plateau and nationally. Also, based on results from other monitoring studies in the Columbia Plateau (see Table 3.2-3), impacts would be distributed among both adults and juveniles and would be spread throughout the year, thereby potentially affecting both migrants and winter residents. Based on results data from the USGS Breeding Bird Survey (BBS) routes in the Columbia Plateau over the past 20 years (Sauer et al. 2006), the estimated breeding populations for these two species in the Columbia Plateau are approximately 5,890 kestrels and 7,035 red-tailed hawks in the ecoregion (see discussion of cumulative impacts below). Assuming the annual raptor fatality level of 23 raptors estimated above would be equally divided between kestrels (12 individuals) and red-tailed hawks (12 individuals) and that half of the fatalities occur during the breeding season, the estimated annual fatalities represent 0.10 percent of the kestrel breeding population and 0.08 percent of the red-tail breeding population within the Columbia Plateau.

Bald Eagles. Bald eagles were documented occurring in the study area in 2002 during the winter months. It is known that bald eagles continue to occur in the Kittitas Valley during the winter months, and they have likely increased in number. The annual Ellensburg Christmas Bird Count has documented an increasing number of bald eagles in recent years. Since the wind project was originally proposed, the bald eagle has been removed from the list of federally threatened species, indicating recovery of the species and documented population growth.

Bald eagle use estimates for the Desert Claim Project are similar to the bald eagle use estimates for other wind project sites in the Columbia Plateau Ecoregion. The chance of a bald eagle fatality is not expected to be any different than at other wind projects in the region.

The Final EIS concluded that while bald eagles flying within the Project Area would have some exposure to wind turbines, any mortality that might occur would be at a very low level and, if it occurred, would not have a measurable effect on the bald eagle population. The Final EIS noted that there had been no documented bald eagle fatalities at wind energy projects, which is still the case.

The new project configuration does not change the conclusions from the Final EIS regarding impacts to bald eagles. There is still a possibility of collision with turbines. However, the absence of any recorded bald eagle fatalities at other wind projects suggests that the species is at a lower risk of turbine collision than other raptor species. The fact that bald eagles are found in the Project Area during the least windy time of the year also reduces the risk to eagles. In any event, project operation is expected to result in minimal effect on the regional eagle population.

WDFW biologists have noted a potential risk to bald eagles during the calving season, because calving activity (primarily, the existence of afterbirth material as a food source) can attract bald eagles. Local ranchers currently conduct calving within fenced areas in the Project Area, and

would continue to do so with the Project in operation. To minimize the risk to bald eagles, the Applicant has agreed to several additional mitigation measures as documented in the Stipulation with the CFE and the Agreement with WDFW (see Section 3.2.3.4).

Passerines. Passerines have been the most abundant fatalities at other wind projects studied, often composing more than 80 percent of total avian mortality. Both migrant and resident passerine fatalities have been observed. Given that passerines make up the vast majority of avian observations on-site, it is expected that passerines would make up the largest proportion of fatalities. As with raptor fatality estimates, biologists now generally estimate passerine mortality for wind projects on a per-MW rather than a per-turbine basis. Considering the available data from existing regional wind projects and the fact that passerines make up approximately 70 percent of bird fatalities at wind projects in the Pacific Northwest (**Table 3.2-4**), it is estimated that potential passerine mortality at the proposed Project would be approximately 1.47 birds per MW per year. This would result in approximately 280 passerine fatalities per year at the Desert Claim Project with 190 MW of capacity developed. Applying the range of mortality rates from Northwest projects (**Table 3.2-3**), annual passerine fatalities at the Project would range from approximately 50 to 400.

Table 3.2-4. Percent Composition of Avian Fatalities by Species Group for Existing Columbia Plateau Ecoregion (WA, OR) Wind Energy Facilities

Species	Number of Fatalities	Percent Composition
Passerines	461	69.5
Upland gamebirds	96	14.5
Raptors	57	8.6
Doves/pigeons	21	3.2
Waterbirds/waterfowl/shorebirds	11	1.7
Other birds ¹	17	2.6
Totals	663	100

¹ woodpeckers, nighthawks, swifts

Waterfowl. Little waterfowl mortality has been documented at other wind projects. The most common waterfowl species observed in the Project Area were mallard, Canada goose, and northern pintail, and were seen mainly in winter. A variety of other waterfowl species were seen incidentally in the study area. Some waterfowl mortality at the Project could be expected, likely composed mostly of mallards; however, the total number of anticipated fatalities is low. While mallards were seen year round, the majority of waterfowl use was during winter and in the western portions of the original Project Area. Potential impacts to waterfowl would not be expected to change based on the new proposal because the portion of the original Project not included in the current proposal was primarily shrub-steppe vegetation that had little waterfowl use.

Total Avian Mortality. The range of bird mortality for the 10 regional wind projects listed above for which fatality counts were adjusted for bias (searcher efficiency, carcass removal) is approximately 0.9 to 3.2 birds per MW per year for all birds, and the average is 2.1 birds per MW per year (**Table 3.2-3**). Using this range, avian mortality at the proposed Project would be approximately 171 to 608 birds per year with a Project capacity of 190 MW. Because the total capacity has increased by 10 MW, compared to the original proposal, this approach yields a slightly higher avian mortality estimate for the new Project than would have been predicted for the original project proposal.

Carcass searches at other wind projects have found avian fatalities associated with guyed met towers, but not with un-guyed towers. The proposed Project would have four permanent, un-guyed met towers. Based on the result of the above studies, no avian fatalities associated with these met towers are expected.

Bats

Research at other wind projects indicates that the primary impact to bats appears to be risk of collision for fall migratory species. The hoary bat (*Lasiurus cinereus*) and silver-haired bat (*Lasionycteris noctivagans*) are the species with the most prevalent wind project fatalities in the Pacific Northwest (**Table 3.2-5**; Johnson 2005). Sparse information exists regarding bat populations in the region; however, non-migratory and resident bat populations do not appear to be negatively impacted by wind turbines (see Johnson 2005). The wind project monitoring studies within the region have found very little impact to resident bats, with very low numbers of resident bat species (little brown bats, big brown bats) being observed among the fatalities.

Table 3.2-5. Number and Species Composition of Bat Fatalities Found at Wind Projects in the Columbia Plateau Region

Species	Number of Fatalities	Percent Composition
Silver-haired bat	163	48.4
Hoary bat	152	45.1
Unidentified bat	8	2.7
Little brown bat	8	2.4
Big brown bat	5	1.5
Totals (4 species)	337	100

Fatality estimates for ten Northwest wind projects studied have ranged from 0.39 to 2.46 bats per MW per year, with an average of 1.18 bats per MW per year (**Table 3.2-6**). In these studies more than 90 percent of the bat fatalities have been hoary and silver-haired bats. Bat mortality at the Desert Claim Project is not expected to greatly exceed mortality at the other regional wind projects. The 2004 Final EIS had speculated that bat mortality at the Desert Claim site could be higher due to the proximity of forests to the north and west, and some projects in other parts of

Table 3.2-6. Mean Bat Mortality Estimates Based on Fatalities Found at Wind Projects in the Columbia Plateau Region

Project Name (state)	No. Bats/turbine/year	Bats per MW ¹	Reference
Stateline (OR/WA)	0.95	1.44	Erickson et al. 2004, 2007
Vansycle (OR)	0.74	1.12	Erickson et al. 2000
Klondike (OR)	1.16	0.77	Johnson et al. 2003
Klondike II (OR)	0.63	0.41	NWC and WEST, Inc. 2007
Hopkins Ridge (WA)	1.13	0.63	Young et al 2007
Wild Horse (WA)	0.70	0.39	Erickson et al. 2008
Nine Canyon (WA)	3.21	2.46	Erickson et al. 2003b
Leaning Juniper (OR)	1.28	0.86	Kronner et al. 2007
Big Horn I (WA)	2.85	1.90	Kronner et al. 2008
Combine Hills (OR)	1.88	1.88	Young et al. 2005
Average	1.46	1.18	

¹ Most reports do not provide number per MW of energy produced so this number was calculated based on the mortality per turbine and capacity of turbines studied.

the country have shown that risk to bats may be greater in forested environments (e.g., Kerns and Kerlinger 2004, Nicholson 2003). The revised Project Area is farther away from forested habitat to the north and west than was the original Project Area, however, and other wind projects in the region are in similar proximity to forests without resulting high bat mortality.

Using a per-MW estimation basis, bat mortality at the Desert Claim site may be approximately 0.4 to 2.5 bats per MW per year, or between 76 and 475 total bats per year with a 190 MW capacity. This range is a similar to the mortality estimated for the original proposal.

Provided bat mortality at the Desert Claim project is similar to the rates at other Columbia Plateau wind projects, impacts to resident and non-migratory species would be minor and not significant. The low level of mortality impacts for *Myotis* species and big brown bats would be to individuals and not populations, are not considered significant, and would likely be less than natural levels of variation in mortality for these species. This would also hold true for the cumulative impact from all local wind projects (see subsequent discussion).

Unlike the situation with birds, there is little information available about local, regional or national populations of bat species. For most species that are not threatened or endangered and have large geographic distributions, very little is known about numbers that exist. Results of monitoring studies across the U.S. and Canada have found similar trends in impacts, such as finding that risk to bats from wind turbines is unequal across species and across seasons. The majority of bat fatalities at wind projects in the U.S. and Canada have been tree/forest dwelling, long-distance migrant species found in the late summer and fall periods. Species in the *Lasiurus* genus, hoary bat in the west and red bat (*L. borealis*) in the east, and silver-haired bats have been the most abundant fatalities found at wind projects. Numerous studies across the U.S. and Canada have shown this trend (see Johnson 2005). The highest mortality has occurred during

what is believed to be the post-breeding dispersal and fall migration period for bats, from roughly late July through September. Numerous studies across the U.S. and Canada have also shown this trend (see Johnson 2005). Much lower mortality rates, and particularly in the Columbia Plateau Ecoregion, have occurred in the spring and summer.

Hoary bats and silver-haired bats generally occupy forested or treed habitats during the breeding season. This type of habitat is distinctly lacking and localized throughout the Columbia Plateau Ecoregion, but is present adjacent to the wind projects proposed in Kittitas County. Monitoring of the nearby Wild Horse wind project did not suggest that the nearby forest influenced bat mortality, however. The impacts to bats at Wild Horse were similar to rates for the other Columbia Plateau wind projects and were on the low end of the range of bat mortality (see **Table 3.2-6**).

The significance of the potential Project impact on hoary and silver-haired bat populations is difficult to determine, as there is very little information available regarding the overall population size and distribution of the bats potentially affected. Hoary bats and silver-haired bats are two of the most widely distributed bat species in North America (Shump and Shump 1982; Kunz 1982) and it is likely that, due to the size of the species ranges, that they have fairly large population sizes. Unlike many bird species that may have multiple clutches of multiple young per year, hoary bats and silver-haired bats typically raise only one or two young per year and only breed once per year (Shump and Shump 1982; Kunz 1982). Consequently, it is possible that the loss of breeding individuals to bat populations such as these may have greater consequences than for birds. Bats tend to live longer than birds, however, and may have a longer breeding lifespan. Because of uncertainties such as these, the long-term consequences of mortality on long-lived, low-fecundity species such as bats are generally unknown.

Other Wildlife

Compared to the original proposal, no significant changes to impacts on other wildlife such as small mammals, reptiles and amphibians, fish, big game, and federally listed species are expected for the revised Desert Claim project. Impacts to these other wildlife species would remain as described in the 2006 EFSEC application for the Project.

No Action

Under the No Action alternative the existing wildlife conditions within the Project Area would remain generally as they are, subject to ongoing local changes associated with agricultural operations and rural residential development and more broad-based regional trends affecting wildlife. No impacts to existing wildlife populations, including protected species, would occur as a result of wind energy development in the Project Area.

3.2.3.4 Mitigation Measures

Measures to mitigate impacts to wildlife described in the Desert Claim Final EIS remain applicable to the revised Project. Briefly, these include:

- use of BMPs during construction to minimize the potential for disturbance such as confining construction equipment to defined construction corridors and implementing measures to control noxious weeds;
- timing construction activities to reduce impacts such as conducting clearing and grubbing activities outside the breeding season to the extent possible;
- use of standard design measures to minimize wildlife interactions such as buried collector lines, tubular turbine towers, and un-guyed met towers; and
- a program of post-construction monitoring, focusing on effects to birds, bats and mule deer and consistent with the WDFW guidelines.

Subsequent to the publication of the Draft SEIS, the Applicant agreed to several additional mitigation measures as documented in the Stipulation with the CFE and the Agreement with WDFW. With respect to mitigation of wildlife impacts, these documents address the following measures:

- development and implementation of a Habitat Mitigation Plan
- use of project design and construction procedures to avoid or minimize habitat impacts
- assignment of an Independent Environmental Monitor during construction
- specific bald eagle, raptor, and avian mitigation measures during Project operation
- development and implementation of an Avian Monitoring Plan covering the first 2 years of the post-construction period
- performance of a bat survey prior to commercial operation of the Project
- creation and operation of a TAC to review and address results of monitoring data
- cooperation in management efforts related to deer and elk in the project vicinity

Among other wildlife-related measures, to protect bald eagles the Applicant has agreed not to locate turbines within the fenced calving areas or surrounding buffer, and to remove carcasses and afterbirths promptly. The Applicant has also agreed to conduct a bald eagle study during the calving season in the first 2 years of the Project's operation and to present the results of the study to the TAC, which can consider whether to recommend additional mitigation measures.

3.2.3.5 Cumulative Impacts

The methodology used to identify cumulative impacts, and supporting data and graphics, are described in detail in Johnson & Erickson (2008). The geographic area that was used to estimate cumulative impacts is identified as the Columbia Plateau Ecoregion, which includes southeastern Washington, including Kittitas County, and northeastern Oregon; refer to Johnson & Erickson, 2008, Figure 1. The cumulative impact area includes 17 existing and 30 proposed wind energy facilities, totaling almost 6,700 MW. This total was used to estimate cumulative mortality, even though it is unlikely that all of the proposed projects will be constructed. Estimates for the four existing, approved, and proposed wind power facilities in Kittitas County are also provided. The Wild Horse project has been monitored for fatalities for one year (2007) (Erickson et al. 2008). Results of this monitoring study were included in the estimation of potential project impacts above (see **Table 3.2-3**). The cumulative estimates are believed to be conservative, since it is unlikely that all proposed facilities will be approved and constructed.

Raptors

An updated mortality analysis has been developed for the Desert Claim Project using recent information on wind project impacts (as described above). This analysis estimated the range of raptor mortality would be from 0 to 29 raptors per year for the Desert Claim Project. Provided all four of the Kittitas County wind projects are eventually constructed, and raptor mortality is similar for each project, the total estimated annual raptor mortality for the County due to wind turbines would range from approximately 0 to 116. In 2007, raptor mortality at the Wild Horse project was estimated at 0.09 per MW. The total raptor mortality for the project was estimated at 20 for the year. Because the Desert Claim, Kittitas Valley, and Vantage projects are smaller in size than the Wild Horse project, the total cumulative annual impact to raptors is not expected to be greater than 80 for all four projects. In a previous analysis of cumulative impacts on birds for the entire Columbia Plateau, Johnson and Erickson (2008) estimated that an additional annual mortality of 469 raptors could be attributable to approximately 6,700 MW of existing and proposed wind energy projects within the Columbia Plateau.

In order to determine if this predicted mortality would be considered significant, it was assumed that raptors within the Columbia Plateau physiographic region (ecoregion) would be the populations most likely affected. While local populations of raptors are somewhat difficult to define, birds within the Columbia Plateau Ecoregion may easily intermix without any major geographic or topographic barrier, so more local populations (e.g., within the Kittitas Valley) are not isolated or separated from the larger regional population.

Based on their relative abundance (observed use of the site; see Young et al. 2003a) and mortality at other Northwest wind projects, the two species expected to compose a majority of the raptor fatalities are the American kestrel and red-tailed hawk. Five of the six raptor fatalities

observed at Wild Horse were American kestrel or red-tailed hawks. These two species were among the three most common raptors observed during the baseline studies for all four wind projects in Kittitas County (based on use estimates), and they are one of the most common raptors observed during BBS surveys (Sauer et al. 2006) and Christmas bird counts in Kittitas County (National Audubon Society 2006). These two species are also the two most commonly reported raptor species among fatalities at modern wind projects (see Erickson et al. 2001, 2002), and they account for more than 63 percent of the raptor fatalities recorded at the regional wind projects studied.

Based on results data from the USGS BBS routes in the Columbia Plateau over the past 20 years, the breeding populations for these two species in the Columbia Plateau ecoregion are approximately 5,890 kestrels and 7,035 red-tailed hawks. Cade (1982) estimated the North American breeding population of American kestrels at greater than 1.2 million pairs. Reported estimates of the total red-tailed hawk population in the U.S. have ranged between 300,000 and 1,000,000 (Preston and Beane 1993).

Given the size of the regional population of the American kestrel and red-tailed hawk, neither the estimated Project impact nor estimated cumulative impact of the four wind projects in Kittitas County will be significant at the Columbia Plateau population level. Previous analyses of the cumulative impact of 6,700 MW of existing and proposed wind projects for the entire Columbia Plateau physiographic region have reached a similar conclusion (Johnson and Erickson 2008, Young and Poulton 2007). Similar to the county-level analysis, the level of wind turbine development proposed for the Columbia Plateau region is not expected to have a cumulative impact on raptor populations. Johnson and Erickson (2008) concluded that the additional annual mortality of 469 attributable to approximately 6,700 MW of wind energy within the Columbia Plateau would not have measurable population consequences. That is, the additional wind-project mortality of from 0.5 to 1 percent for different species was far less than the total annual mortality estimates of approximately 20 to 30 percent for adults and approximately 40 to 60 percent for juveniles indicated in other scientific studies (Johnson and Erickson 2008). The overall conclusions of the cumulative effects analyses for the entire Columbia Plateau were that the additional mortality associated with wind development in the region would not have population consequences.

Performing comparable quantitative analyses for bald and golden eagles would not be appropriate. In the case of bald eagles, there have not been any recorded bald eagle fatalities at operating wind plants in the Columbia Plateau Ecoregion and, therefore, there is no mortality rate that can be applied to the baseline use level for the species. Although it is possible that a bald eagle may be killed at a wind project at some time in the future, no significant impact to the bald eagle population is expected. For golden eagles, baseline use of the Project Area is

minimal, and mortality for this species is expected to be nearly zero. Therefore, the Desert Claim Project would not contribute measurably to the potential for cumulative impacts to the regional golden eagle population.

Other Birds

Passerines have been the most abundant avian fatality at wind projects studied (see Erickson et al. 2000, 2001, 2002; Johnson et al. 2002; Young et al. 2003b, 2005, 2007), often representing more than 80 percent of the avian fatalities. For projects in the Columbia Plateau ecoregion, on average approximately 70 percent of the avian fatalities have been passerines. Both migrant and resident passerine fatalities have been observed, with migrants generally making up 20 to 30 percent of the avian fatalities.

For most studies that have occurred in agricultural settings, a few common species make up the majority of bird observations and fatalities at the site. A variety of other species, including migrants, have been recorded as fatalities, but typically in low numbers and frequency. The majority of avian deaths (70 percent) due to wind power facilities in the Columbia Plateau region were of common passerines in mixed agriculture and grassland habitat. Horned larks have been the most common fatality at most of the projects studied. For example at the Stateline, Combine Hills, and Nine Canyon I projects, horned larks were 39 percent, 41 percent, and 47 percent of all avian fatalities, respectively and a much higher percentage of the passerine fatalities. At Wild Horse, horned lark was also the most common avian fatality (14 percent of all birds; 20 percent of passerines) despite the lack of cultivated agriculture at the site, which tends to increase horned lark numbers. Other shrub-steppe and open country passerines, such as western meadowlarks and European starling, were also found regularly. For example, European starling made up 18 percent of the fatalities at the Hopkins Ridge project (Young et al. 2007).

The expected number of fatalities from Desert Claim alone or in combination with the other wind projects in Kittitas County would not be significant to the regional populations, in general simply because the regional populations are so large. For example, over all passerines recorded during the regional monitoring studies, horned lark made up over half (51 percent) of the fatalities. Assuming this pattern holds for the projects in Kittitas County, it is expected that on average there would be 190 horned lark fatalities per year for Desert Claim and approximately 635 horned lark fatalities for all four projects. This compares to an estimated regional population of approximately 111,000 horned larks based on the BBS results for the Columbia Plateau Ecoregion (Saur et al. 2006). Natural variation in the horned lark population is likely substantially higher than the estimated impacts. Impacts to other bird species are expected to be less based on the results of the other monitoring studies and comprise a much smaller percentage of the pool of fatalities from Columbia Plateau wind projects. These small impacts would be to

individuals and would not result in a significant impact to specific species or general populations.

Similarly, the total non-raptor bird mortality that would occur if 6,700 MW of existing, approved, and proposed wind energy facilities in the Columbia Plateau Ecoregion were constructed is estimated to be 14,070 annually. Previous analyses of this cumulative impact concluded that the proposed level of wind development in the region is unlikely to have consequences at the population level for birds (Johnson and Erickson 2008, Young and Poulton 2007). Conclusions from the analyses were that the total cumulative mortality impact associated with wind energy development would be approximately 0.05 percent of the breeding population of the species for which fatalities were most common, and far less for the species with fewer fatalities. For the vast majority of species recorded as wind project fatalities in the Columbia Plateau (11 wind projects monitored; Johnson and Erickson 2008), five or fewer fatalities have been found. This level of mortality is essentially immeasurable when compared to the total estimates of the breeding population sizes (Johnson and Erickson 2008, Young and Poulton 2007). The overall conclusion of the cumulative effects analyses for the entire Columbia Plateau was that the additional mortality associated with wind development in the region would not have population consequences.

Bats

The four wind projects proposed or constructed in Kittitas County represent a total of 755 MW of installed capacity, if all four projects are constructed as proposed. Based on the per-MW method for estimating potential bat mortalities, the four projects could result in a combined total of between 302 and 1,888 bat deaths annually in Kittitas County. Recent experience in the local area suggests the cumulative mortality would likely be toward the low end of the range indicated above. Total bat mortality at Wild Horse for 2007 was estimated at 89 individuals (Erickson et al. 2008). Provided the Desert Claim, Kittitas Valley, and Vantage projects have similar or lesser impacts than Wild Horse (due to their smaller generation capacities), there would be less than 356 total bat fatalities per year in Kittitas County due to wind turbines.

Johnson and Erickson (2008) estimated bat mortality for all existing, approved and proposed wind energy facilities in the Columbia Plateau Ecoregion at 7,906 annually. Previous analyses of cumulative impacts on bats for the whole Columbia Plateau physiographic region have concluded that the current and proposed level of wind energy development in the region is unlikely to have consequences at the population level, provided that the populations of the bat species likely to be impacted (hoary bats and silver-haired bats) are large and stable (Johnson and Erickson 2008, Young and Poulton 2007). As discussed in Section 3.2.2.3, hoary bats and silver-haired bats are two of the most widely-distributed bat species in North America and, because of their wide range, are thought to have fairly large population sizes. While there is

uncertainty over the actual population sizes for these species, the existing data do not suggest that the population sizes are sufficiently small that the limited level of potential mortality estimated would have a significant effect on the breeding population.

3.2.3.6 Significant Unavoidable Adverse Impacts

There would be unavoidable adverse impacts to several types of wildlife as a result of the Project. These would include temporary displacement of wildlife as a result of construction disturbance, loss of some individuals from immobile species during construction, loss of existing habitat within the construction footprint of the Project, and collision-related mortality of birds and bats during Project operation. These impacts are not considered significant because the impacts would be temporary, limited in extent or intensity, and/or would be mitigated. With respect to bird and bat mortality, the analysis determined that the mortality levels estimated for the Project would not represent significant population-level impacts for the species affected. With the mitigation measures identified, no significant unavoidable adverse impacts to birds or other wildlife are expected.

3.3 HISTORIC RESOURCES

3.3.1 Summary of Prior Environmental Analysis

The Desert Claim Final EIS identified possible expected adverse impacts to five cultural resource sites from development of the original Project proposal, which could be mitigated through avoidance of the sites during micro-siting. The document also indicated that any direct impacts to cultural resources that could not be avoided could be mitigated through an approved data recovery program developed in coordination with DAHP and affected Tribes, and that significant indirect impacts to the cultural resources in the Project vicinity were not anticipated.

3.3.2 Affected Environment

A Cultural Resources Assessment Addendum was prepared by Northwest Archaeological Associates in January 2009. The study evaluates the additional property included in the revised Desert Claim Project Area. The assessment, which includes an evaluation of the entire Desert Claim site, was submitted to the Department of Archaeology and Historic Preservation, but it is not included in the ASC or this SEIS because this information is considered confidential under state law (RCW 42.56.300) and federal law (16 USC 470w.3).

The Project Area is located in the upper Kittitas Valley at the western margin of the Columbia River Plateau, at elevations ranging from 2,000 to 2,680 feet (610 to 817 meters) above mean sea level. The vicinity of the Project is characterized by broad, gently sloping alluvial fans composed of Pleistocene-aged Kittitas drift and Thorp gravels (Fecht et al. 1987; Waitt 1979; Walsh et al. 1987). **Figure 3.3-1** shows the typical terrain of the Project Area. An unnamed



Figure 3.3-1. Project Overview during 2008 Field Survey, Vicinity of BPA Transmission Lines; View to the North

tributary of Dry Creek makes a low-gradient descent from the north through the western edge of the Project area, Green Canyon Creek and Reecer Creek descend through the middle of the Project Area, and Currier Creek descends east of the Project Area. Climatic conditions in the region support a shrub-steppe vegetation community dominated by sagebrush, lomatium, and perennial grasses that provide habitat for a variety of mammals and birds (Franklin and Dyrness 1973).

3.3.2.1 Cultural Setting

The Kittitas Valley forms the boundary between two major Native American linguistic groups: speakers of Interior Salish dialects to the north, and Sahaptin dialects to the south. The Project is within the traditional use area of people commonly referred to as the Kittitas Indians, a name derived from their important summer village *k'ti'tas*. The Kittitas referred to themselves as the *pswanwapum* and were the upper division of two groups whose territory encompassed the Yakima River drainage basin (Schuster 1998:349). Downstream from the Kittitas were the Lower Yakama, who occupied the Yakama River and its tributaries below Wenas Creek and portions of the Columbia River (Schuster 1975). Although their language is most closely related

to the Yakama, the Kittitas maintained close relations with Interior Salish people, particularly the Wenatchi to the north. Both linguistic groups followed a similar seasonal round organized around winter villages and seasonal forays to various resource procurement locations. In the spring, groups that had wintered together dispersed to root gathering and fishing locations. During the fall, forays into the foothills and mountains were organized to hunt game and gather berries (Ray 1936).

Euroamerican settlement of the Kittitas Valley began as early as the 1860s with small-scale cattle ranching, but by the 1880s, sheep surpassed cattle in importance because of their wider tolerance of different altitudes and more efficient grazing (Glauert and Kunz 1976). Early attempts at irrigation in the Valley diverted water from mountain streams into private or partnership ditches, but these sources of water were unreliable during the annual summer drought (Whitley 1949). These early irrigation networks, which tended to be small and affected limited acreage, were soon followed by larger, more complex federally assisted projects such as the North Branch canal, completed in 1929, which delineates a portion of the south boundary of the Project Area. Land use of the Project vicinity during the 20th century primarily focused on cattle ranching. During World War II, the Ellensburg Flying Service was displaced from the Ellensburg Air Base north of the town to a landing strip and facilities quickly built by the government in Section 30 that includes the southernmost portion of the additional Project Area (Kittitas County Centennial Committee 1989). The facilities were dismantled and the landing strip abandoned shortly after the war ended.

3.3.2.2 Previously Recorded Cultural Resources - 2003 Desert Claim Assessment

The initial field survey for the original Desert Claim proposal (Hodges et al. 2003) identified and recorded a total of 22 archaeological sites and 46 isolated finds within the lands now comprising the central and eastern portions of the revised Desert Claim Project Area. The sites include 10 historic sites, 7 pre-contact sites, and 2 dual-component sites. During the 2003 survey, 51 rock piles categorized as field clearing piles or fence jacks were noted but not recorded. Sites associated with standing structures and historic-period isolates without characteristics that were clearly diagnostic of a manufacture date were not given permanent trinomial state numbers by DAHP. (Sites recorded during the initial 2003 survey within the eastern segment of the original Project Area that is no longer under consideration for this Project are not included in the above discussion.)

3.3.2.3 Newly Recorded Cultural Resources

Subsequent field surveys conducted in 2006 and 2008 for the revised Desert Claim project proposal recorded 11 archaeological sites and 58 isolated finds. These totals include 5

archaeological sites and 31 isolated finds during the 2006 fieldwork, and 6 sites and 27 isolates recorded in 2008 (Northwest Archaeological Associates 2009).

The archaeological sites recorded during the 2006 and 2008 surveys are primarily pre-contact lithic scatters, ranging from three pieces of lithic debitage dispersed within 22 meters of each other (45-KT-2942) to a site with a large and diverse artifact assemblage comprised of debitage and formed and expedient lithic tools in an area of approximately 33,000 square meters (45-KT-2910). Two historic sites were also recorded: an irrigation ditch (45-KT-2790), and the remnants of the Ellensburg Auxiliary Airport (45-KT-2914). Further information, including sketch maps and photographs, may be found in their respective state inventory site forms filed with DAHP.

The combined record from the 2003, 2006, and 2008 surveys includes 30 archaeological sites and 103 isolated finds within the current Project Area. These documented resources represent Native American use of this landscape for at least the past several millennia, followed by several kinds of activity associated with post-Euroamerican settlement.

3.3.2.4 Site Significance Evaluations

The following evaluation, and the Historic and Cultural Resources Report submitted to the DAHP, uses criteria contained in the National Register of Historic Properties (NRHP) as a means to help identify “significant” resources. Distinguishing between categories of resources is a means to focus on significant adverse impacts, as required by SEPA, and to identify sites that satisfy NRHP Criterion D, which includes sites that may provide important archaeological information. It is acknowledged that Washington’s Archaeological Sites and Resources Act (RCW 27.53) does not distinguish between historic and archaeological sites on the basis of significance. DAHP does use the NRHP criteria, however, to help evaluate sites. Other criteria that may be relevant to the site’s resources relate to possible associations with culturally important events and people (NRHP criteria A and B), and the presence of TCPs. The Applicant has been consulting with the Yakama Nation to help identify these properties.

In August 2009, the Applicant and Yakama Nation entered into an MOU concerning surveys that will be performed prior to construction to identify traditionally important plants and root grounds, TCPs, and archaeological sites of interest to the Yakama Nation. The MOU addresses concerns expressed in the Yakama Nation’s comments on the Draft SEIS (see Comment Letter 12), and provides a framework for developing a Traditional Cultural Resources Mitigation Plan with the Yakama Nation. Fourteen of the 30 archaeological sites recorded within the current Desert Claim Project Area are recommended significant and eligible for listing on historic registers. Of these 14 sites, 6 are prehistoric or ethnographic Native American sites, 7 are

historic, and 1 has dual historic/prehistoric components (although the significance of this site is based on its prehistoric component).

Significance of individual pre-contact and ethnohistoric Native American sites is considered in terms of their potential to address important research questions. The ability of a particular site to address research questions, and therefore be recommended significant and eligible for listing on historic registers, is a function of its artifact assemblage diversity and size as well as its potential to yield subsurface features and chronological data. To be considered significant, archaeological sites must also retain a level of physical integrity such that associations can be made between its contents, the site matrix, and the surrounding physical environment. Those associations are necessary to adequately address any research questions.

All of the Native American archaeological sites identified in the Project Area are entirely or almost entirely comprised of lithic artifacts. All contain the technological byproducts of chipped stone tool manufacture, and therefore may provide some data regarding stone tool technology. Sites that contain finished implements, both expedient flake tools and those involving a greater investment in time and materials, have the potential to address other research domains including subsistence and resource processing behavior and site chronology. However, sites with assemblages containing few artifacts, even if they represent several classes, are unlikely to provide *additional* information that can be used in a quantitatively meaningful way to address those research domains. Sites with artifact assemblages consisting of approximately 75 artifacts or more are therefore considered likely to yield additional information about local and regional Native American settlement, technology, and subsistence with further investigation. The sites that meet or exceed this assemblage size also contain at least three artifact classes. These sites also retain important aspects of their integrity, considering they are surface deposits without (or very unlikely to have) site stratigraphy that would have been substantially disturbed by historic and modern land use. Using these criteria, seven sites (45-KT-513 [prehistoric component], 45-KT-2413, 45-KT-2421, 45-KT-2787, 45-KT-2788, 45-KT-2789, and 45-KT-2910) are considered significant and recommended eligible to the NRHP.

The 19th- and 20th-century sites that may yield archaeological information about important aspects of the region's history, and are also associated with historically important events are those in which additional historical research provided associations between the physical remnants and records of specific homesteading, agricultural, or military activities (c.f., Hodges et al. 2003). The historic-period Desert Claim sites considered significant have the potential to yield additional information with further archaeological investigation, and may also complement existing historical documentation about the events with which they are associated. Historic sites considered significant require the same integrity of physical characteristics as Native American sites, allowing potential archaeological data from the site to be confidently linked to important

research questions, and/or must retain features, artifacts, and spatial relationships that convey important associations with events or persons (National Park Service 1990:46). Based on these criteria, seven sites (45-KT-2410, 45-KT-2411, 45-KT-2914, DC-03-25, DC-03-26, DC-03-28, and DC-03-31) are considered significant and recommended eligible to the National Register of Historic Places.

3.3.3 Significant Impacts

3.3.3.1 Desert Claim Proposal

Direct Impacts from Construction

The revised Desert Claim Project encompasses over 5,000 acres, with 95 proposed turbines and a network of supporting facilities and infrastructure, such as the electrical collection system, access roads, met towers, and switch yards. This impact analysis is based upon the configuration shown in Figure 2.2-2. However, as identified in the ASC, the Applicant intends to avoid significant archeological sites during final design and micro-siting where practical, and implement other mitigation measures when avoidance is not practical.

Thirty sites and 103 isolates were identified within the Project Area boundary during the three field surveys conducted between 2003 and 2008. Comparison of the locations of these sites and the Project layout as currently proposed indicates that 26 archaeological sites and isolates could be affected by construction disturbance if measures were not taken during final design and micro-siting to avoid them. Of these, five are sites considered significant. Direct impacts to sites and isolates were considered possible if their buffered boundary overlapped with the Project configuration as mapped at a 1:12,000 scale. Because of the buffering, no direct impacts were anticipated to sites and isolates whose boundaries touched but did not overlap the Project configuration.

The five significant pre-contact and historic sites potentially affected by the Desert Claim Project, based on locations where mapped construction elements intersect a 100-foot (30-meter) buffer zone around each resource, are identified as follows:

- DC-03-26 Historic White Ranch Farmstead
- 45 KT 2413 Pre-Contact Lithic Scatter
- 45 KT 2421 Pre-Contact Lithic Scatter/Procurement Site
- 45 KT 2910 Pre-Contact Lithic Scatter
- 45 KT 2914 Ellensburg Auxiliary Airport

Proposed turbine locations are within the boundaries of four of the sites, and segments of access roads and electrical collection alignments ranging from 40 to 240 meters in length bisect all five sites.

If measures were not taken during final design and micro-siting to avoid impacts, Project construction elements would intersect with buffers for an additional 21 features, including archaeological and historic sites (with 100-foot/30-meter buffers applied) and archaeological isolated finds (50-foot/15-meter buffers) that are not considered significant. Three of these cases involve turbine locations, which intersect the buffers around an historic irrigation ditch (45-KT-2790), a lithic scatter and a single lithic flake, and another isolated find (a single lithic flake) is within the proposed northern switch yard location. The remainder of the non-significant sites and isolates are within the alignments of access roads and/or electrical collection system segments.

Indirect Impacts

In the general sense, potential indirect impacts from wind project development could include increased opportunities for removal of prehistoric or historic artifacts, particularly if development increased public accessibility to the area, and changes to the visual environment around cultural resource sites. As indicated in Section 3.1.3, the Desert Claim Final EIS concluded that significant impacts of this type were not anticipated. Development of the Desert Claim Project would not change the existing access conditions for the lands within the Project Area (most of which are privately owned). The visual environment around the cultural resource sites in the Project Area and vicinity currently exhibits substantial modification of the natural landscape.

3.3.3.2 No Action

As described in the Desert Claim Final EIS, under the No Action alternative, the proposed wind power facility would not be constructed and no project-related impacts to cultural resources would occur. However, past and current activities would continue to affect cultural resources. Natural processes such as surface erosion and weathering would continue. Likewise, agricultural activities would continue for the foreseeable future. Conversion of land for low-density rural residential uses could also occur in the future and could result in direct and indirect impacts to cultural resources.

3.3.4 Cumulative Impacts

In general, wind projects have avoided significant impacts to cultural resources by site planning and micro-siting of individual turbines and facilities, and mitigating unavoidable impacts through approved data recovery programs.

With the mitigation measures outlined below, no significant impacts to cultural resources are expected to occur as a result of the revised Desert Claim proposal. No impacts to cultural resources were identified for the Kittitas Valley Project (Final EIS 2005), the original Wild Horse Project or the proposed expansion to that project, or the Vantage Wind Power Project.

3.3.5 Mitigation Measures

Impacts to cultural resources could be avoided or mitigated in several ways, and the Applicant has agreed to implement mitigation. The Applicant has also agreed to conduct additional surveys of TCPs of importance to the Yakama Nation and to work with the Yakama Nation to prepare a Traditional Cultural Resources Mitigation Plan.

Avoiding all or most of the potential impacts to sites that have previously been identified as significant may be possible by micro-siting the wind turbines and other associated facilities during final project design to maintain a 100-foot (30-meter) buffer area around the recorded boundary of each significant archaeological or historical site. In some cases, a turbine could be moved a short distance, allowing straight-line road or transmission line connections between turbines to be moved away from archaeological resources. If a turbine is not within an archaeological site, the electrical or road connections could be re-routed around resources without moving the footprint of the turbine. If practical, the Applicant will also attempt to micro-site project facilities in order to avoid other sites that have been classified as significant.

For sites to be avoided in this manner, the boundaries of identified cultural resources (with suitable buffer zones) would need to be staked in the field and flagged as no-disturbance areas to avoid inadvertent entry and disturbance during construction. To preserve confidentiality of the resource locations, these site markings would be removed following construction. Given other siting constraints, it may not be possible to micro-site turbines and associated facilities in such a way that all archaeological and cultural resources are avoided. For example, the Project must observe safety-based setbacks of various distances from adjoining properties, homes, and public roads. The facility locations designated in the Project layout also reflect efforts to avoid wetlands, streams, and their buffer areas. Consequently, it may not be possible to avoid all impacts to archaeological and cultural resources without incurring offsetting impacts to other resources. In cases where final placement of project elements within the buffer areas of archaeological or cultural resources would be unavoidable, mitigation measures could be taken to retrieve the scientific and historical information that makes the resources significant. Other ways of mitigating adverse effects to archaeological or cultural resources can include (but are not limited to) maintaining or restoring the integrity of the site to the extent possible, relocating historic structures, and undertaking tribal consultation regarding treatment of cultural resources.

For archaeological sites that could not be avoided during the final design of the Project and micro-siting, mitigation would involve retaining a qualified cultural resource specialist to develop a cultural resource mitigation plan in consultation with the Yakama Nation and DAHP. This plan would include mitigation measures tailored to the specific circumstances of each resource and would be consistent with applicable federal, state, and local regulations. For the historic sites (such as the White Ranch and the Ellensburg Auxiliary Airport), it is possible that

nearby construction of specific project components would not damage archaeological features, or would impact them in such a way that their data potential was not compromised. In these cases, mitigation could involve additional research into the historic context of the resources and more detailed documentation of their physical remains.

To the extent that some impacts to archeological or cultural resources might be unavoidable, other available measures to mitigate impacts include the following:

- If project construction would unavoidably demolish or alter the setting and character of existing historic buildings and structures, those resources would be documented in accordance with Historic American Buildings Survey/Historic American Engineering Record guidelines and in consultation with DAHP prior to construction.
- In prior comments on the Desert Claim Wind Power Project Draft EIS (Kittitas County 2003), DAHP expressed concern that the Project could impact the setting or historic character of the surrounding landscape. The Applicant consulted with DAHP and volunteered to address this concern by documenting the current cultural landscape and developing a landscape history prior to construction. An MOA could be developed to specify the scope of such documentation and analysis to be completed prior to commencement of construction for the proposed Project.

Twenty-one isolated finds and archaeological sites not previously identified as significant would potentially undergo direct impacts during construction from the Desert Claim Project as proposed. These artifacts will be addressed in the Cultural Resources Mitigation Plan developed in consultation with DAHP and the Yakama Nation. It may not be necessary to avoid non-significant archaeological sites and isolates given the isolated nature of these finds and their low or non-existent data potential. However, management measures could be undertaken to protect these resources if possible. Because these resources lack important aspects of integrity, moving them out of the direct impact area would in all likelihood not damage them further. Such relocations should be limited to the shortest distance possible; in most cases, a move of up to 20 to 30 meters may be sufficient. Twelve of these 21 resources consist of non-diagnostic isolated lithic flakes or small scatters of lithic artifacts with limited archaeological data potential. These buffered areas should be examined through additional pedestrian survey prior to construction. In some cases it may not be feasible to relocate specific artifacts that were previously recorded. If artifacts can be relocated, the inventory forms should be updated to reflect the moves. Any additional associated artifacts found during the pre-construction pedestrian survey should be treated in the same manner. Another 7 of the 21 resources are isolated non-diagnostic historic artifacts or abandoned farm machinery. These items could be treated in a similar manner, by moving them away from construction zones and updating their inventory forms as appropriate. The other two resources, an historic irrigation ditch and a stock pond, cannot be moved.

Additional documentation of their physical characteristics in the specific areas of potential disturbance could be conducted prior to construction of the Project features that would affect these resources.

Regardless of the disposition with respect to other impacts and mitigation measures, an unanticipated discovery plan should also be developed for Project construction. This plan would provide a protocol for evaluation and treatment of any archaeological remains or human remains that might be discovered during construction.

3.3.5.1 Significant Unavoidable Adverse Impacts

Construction and operation of the Desert Claim Project could result in significant adverse direct and/or indirect impacts to cultural resources. As discussed above, however, the Applicant has proposed to implement mitigation measures that would reduce these impacts to a level of insignificance. These measures include avoidance of the impacts by relocating selected Project facilities or, if relocation is not practical, implementing approved data recovery programs. Therefore, with the mitigation identified, there would be no significant unavoidable adverse impacts to cultural resources from the Desert Claim Project.

3.4 AESTHETICS, LIGHT, AND GLARE

3.4.1 Summary of Prior Environmental Analysis

The Final EIS identified 19 viewpoints that were used to assess visual impacts of the Project. It generally concluded that long-term impacts associated with the original project proposal would vary with location and proximity to the Project. Four locations in the Northwest Valley Visual Assessment Unit (viewpoints 1A, 1E, 1F, and 1G), northwest of Ellensburg, were estimated to experience “High” levels of impacts. These views all had the foothills of the Wenatchee Mountains or Manastash Ridge as their background, had proposed turbines less than 1/4 mile away, and looked out over relatively flat terrain. As a result, the turbines’ color contrasted with the colors of the foothills and sky, and the turbine size broke the skyline and was prominent in the view.

Under the original proposal, six locations in the Northwest Valley (viewpoints 1B and 1D), Greater Ellensburg (viewpoints 3C), Hayward Hill (viewpoint 6A), and Table Mountain Slope Visual Assessment Units (viewpoints 8A and 8B) would experience “Moderate” levels of impacts; these viewpoints were generally at higher elevations and located farther (1 to 4 miles) from the Project. At longer distances, there would be less perceived contrast in color between the turbines and background, and the turbines would occupy less of one’s view; they would appear similar to power lines, fences, and other man-made objects in the foreground.

The remaining nine viewpoints were concluded to have “Low” levels of impact due to distance from the project and/or the presence of disrupting visual elements—particularly suburban development around Ellensburg—that are part of the existing visual environment.

3.4.2 Affected Environment

3.4.2.1 Methodology

The methodology used to evaluate visual impacts is described in detail in the Desert Claim Final EIS (Section 3.10 and Appendix G) and was used for this SEIS with a few changes discussed further below. In general, this approach entails several steps to identify, characterize and rank visual resources, and to assess the degree of impact. These steps are as follows:

1. Existing visual resources are categorized in discrete “landscape units,” which are areas that share a common visual character and sense of place). Each landscape unit is documented and characterized using photographs. The existing conditions and visual character of each landscape unit is documented using a rating system (1, 2, or 3). Criteria used to characterize landscape units include their vividness, intactness, and unity; these terms are explained further in the Desert Claim Final EIS.
2. Viewpoints are identified to provide a focus for the analysis of visual impacts. The viewpoints were revised for the SEIS to reflect the new property configuration and turbine layout, as described further below.
3. For the viewpoints evaluated, a computer program is used to simulate (or visually superimpose) wind turbines on the existing landscape based on revised turbine dimensions and locations in the new proposed layout (see **Figure 2.2-1** and **2.2-2**). The simulations are intended to reflect what a viewer would observe from these viewpoints. All simulations have been updated to reflect the revised proposed layout.
4. The next step identifies and scores the degree of visual “exposure,” characterizes the “sensitivity” of viewers, and assesses the overall quality of the existing view. Visual exposure refers primarily to the number of people who would see the turbine(s) from a particular viewpoint, but also considers the degree to which they are exposed to the view by their physical location and the duration of the view. Viewer sensitivity refers to how aware people are likely to be of the visual environment, which depends primarily on their typical activity. The scores are used by the analyst as a reference or short-hand for conclusions about visual exposure and viewer sensitivity; they are not used in a mathematical formula.

The analysis assumes that while viewer groups often vary in the degree to which a visual impact is perceived, they do not often differ in their recognition of a project’s visual

impact as positive or negative. The analysis is intended to focus on objective factors (such as vividness and intactness), and does not address viewer likes and dislikes.

It is noted that several recent studies of viewer perceptions indicate that the public seems to be embracing renewable energy solutions, such as wind power; this acceptance may also affect their visual perceptions. The British Wind Energy Association (BWEA), for example, has conducted more than 60 public perception surveys at or near wind power facilities since 1990. Support averaged 70 to 80 percent, both for wind energy in general and in the opinion of residents living near wind farms (www.bwea.com, BWEA Briefing Sheet: Public Attitudes to Wind Energy in the UK, October 2005). The surveys also indicated that pre-project concerns about visual and other environmental impacts declined significantly after the wind farm was in operation. (Also see American Wind Energy Association [AWEA], Wind Energy: Views on the Environment: Clean and Green).

5. The overall level of change or impact caused by the project is measured by the degree of change that occurs between the existing view and the view with the project. A number is used to indicate the analyst's assessment of the degree of change; a decrease of .33 equates to a low impact, a decrease of .67 equates to a medium impact, and a decrease of 1.0 equates to a high impact. The assessment is conservative in that the visibility of even a single turbine at any distance is presumed to have at least a low impact. The conclusions are discussed in narrative and summarized in a table.

This general approach was used in the Desert Claim Final EIS and in this SEIS. Two modifications are reflected in the SEIS:

- (1) Thirteen new viewpoints, described in the following subsection, were identified and used in the analysis to reflect the revised property configuration, the new turbine layout, and the new proposed turbine height. Some viewpoints used in the Final EIS were eliminated for reasons described in the following section. Twenty-five viewpoints were evaluated in the SEIS, compared to nineteen in the Final EIS;

- (2) A 50 mm lens was used to photograph the existing landscape and to prepare the simulations, rather than the 35mm lens used in the Desert Claim Final EIS. The change in camera focal length is in response to recommendations by EFSEC's consultant. A 50mm lens generally corresponds to the normal field of view of a typical viewer looking straight ahead, and is most frequently used in landscape analysis. In comparison, a 35mm lens shows more of the surrounding landscape but makes objects appear to be further away compared to a 50mm lens. (The camera used for the analysis was a Canon EOS Digital Rebel XT_i, which has a 1.6 digital crop ratio, with a Canon EFS 18-55mm lens.)

In cases where a viewpoint used in the present analysis (50mm lens) was also used in the Final EIS analysis (35mm lens), the findings were reassessed to determine whether the change in camera focal length (as distinct from change in turbine configuration) had an effect on impact ratings. Examples of the same view using a 35mm and 50mm lens are shown in **Figures 3.4-1** and **3.4-2**. As described in Section 3.4.3, the change in camera lens was not found to have a material influence on the ratings.

3.4.2.2 Viewpoints

The viewpoints used for the visual analysis were revised to reflect changes in the Project Area and turbine layout. The Project Area has generally shifted to the west and slightly to the north, compared to the Final EIS proposal (**Figure 3.4-3**). The easternmost parcels in the Final EIS proposal have been eliminated, and the property is now contiguous. New property has been added to the west (WDNR and private property owners), which is sparsely populated, has fewer residences, and is generally further away from Ellensburg and its concentration of population. The revised property configuration and reduced number of turbines have reduced turbine density from 1:43 acres to 1:55 acres. In view of these changes, some viewpoints used in the Desert Claim Final EIS were no longer used, either because no turbines would be visible with the new layout; the viewpoint was not considered representative of how nearby residents and other viewer groups would experience the project; or elements in the foreground (such as topography or recent construction) now blocked the view of turbines. As a result, thirteen new viewpoints (shown on **Figure 3.4-4**) were identified and used for the SEIS analysis; five of these are oriented to the western portion of the Project Area.



Figure 3.4-1. Viewpoint 1B – Existing View with 35mm Lens (above) and 50mm Lens (below)

Note that the utility pole in the middle-ground appears closer and larger with the 50mm lens.



Figure 3.4-2. Viewpoint 3C – Existing View with 35mm Lens (above) and 50mm Lens (below)

Note that green water tower in background (right side) appears larger with 50mm lens.

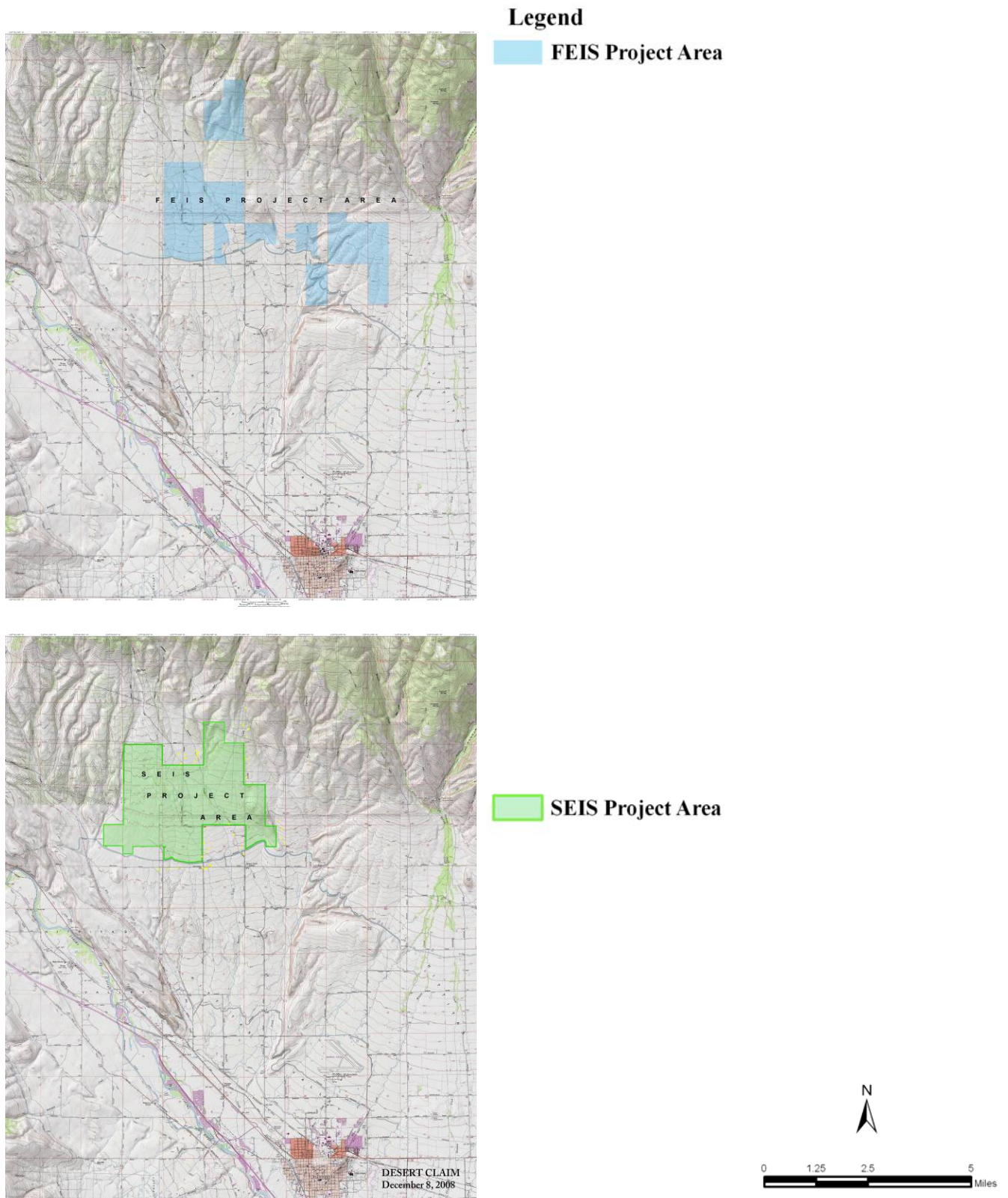


Figure 3.4-3. Final EIS and SEIS Project Areas

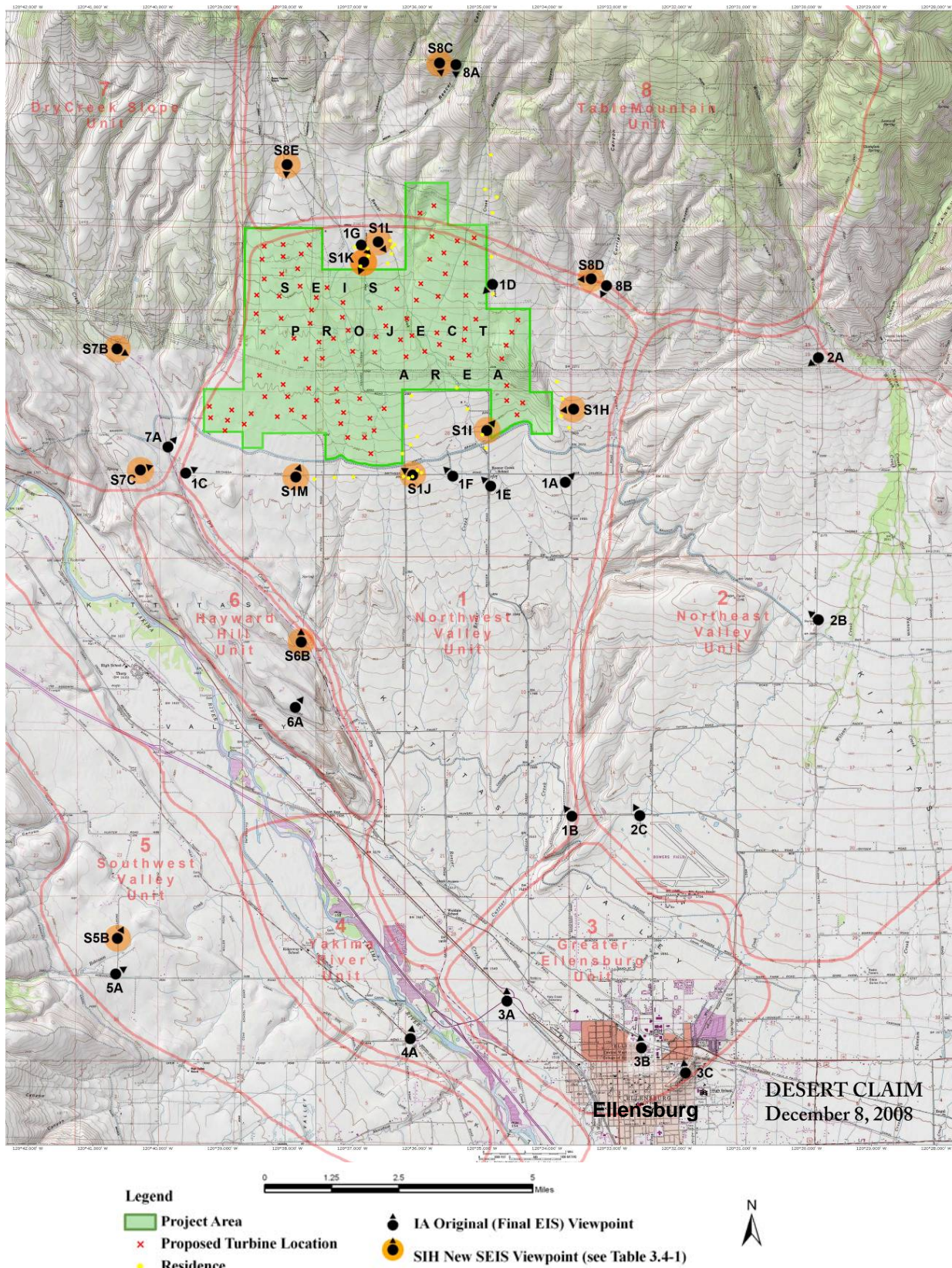


Figure 3.4-4. Project Area and Viewpoints

3.4.3 Significant Impacts

3.4.3.1 Desert Claim Proposal

Input Methods

Photosimulations

“Before” and simulated “after” photos of viewpoints are used to show the landscape as it currently exists and with proposed wind turbines. The photos are used to assist in the evaluation of impacts and to depict the changes that would occur to the visual environment. Computer-generated photosimulations, which electronically superimpose proposed wind turbines on the landscape, were created for each of the identified viewpoints. The before and after photos for each viewpoint are presented at the end of this section (**Figures 3.4-5 through 3.4-49**).

Factors Influencing Degree of Impact

Using the methodology described in Section 3.4.2, visual quality was assessed and scored for each viewpoint, and impacts were rated as High, Moderate, or Low. The impact to each viewpoint is discussed in the following subsection. Major factors influencing the assessment are described below.

The height of the turbines was determined to be the major component affecting long-term visual impacts, and impacts generally decrease with increasing distance. Other components of the project including roads, O&M center, substation, met towers, and others described in Chapter 2 of the SEIS, are much smaller, would be visible only from the immediate surrounding area, and would be designed to blend in with their surroundings. As a result, they would have a minor impact on the visual environment

The primary changes to the revised Desert Claim Project affecting visual quality are the reduction in the number of turbines, from 120 to 95; the decrease in turbine density, from 1 turbine per 43 acres to 1 turbine per 55 acres; the contiguous Project Area, which has also shifted to the west and north, farther away from Ellensburg; a reduction in the number of turbines required to be lit at night and the elimination of daytime flashing strobe lights; and the increase in the distance between turbines and adjacent residences, from a minimum of 1,000 feet to at least 1,640 feet for residences located outside the Project Area.

A separation of 1,640 feet (four times the turbine tip height) has been used as a guide for Desert Claim’s revised turbine configuration. Increasing distances further may be possible through individual turbine micrositeing for turbines located within 2,500 feet of residences. At a viewing distance of four times its height, an object blends in more with its surroundings, and does not dominate a view. Examples of the literature supporting this distance are summarized below.

(Note that pre-filed testimony, Exhibit 18, also contains an analysis of the mitigating effect of increased distance from large objects.)

For centuries, architects, designers, and optical theorists have considered the appropriate spacing of tall structures. In the 1400s, Alberti wrote that to avoid buildings feeling too high, buildings around a square should be a maximum of one-third the breadth of the open area (Alberti, Leone Batista, *The Ten Books of Architecture*, Book 8, Chapter 6, p. 173.). In 1570, Palladio similarly concluded that a harmonious relationship between spaces is established if structures built around a square are not taller than a third of the width of the square (Palladio, Andrea. *The Four Books of Architecture*, Book 1, Chapter 16, p. 193.).

More recently, in 1953 Hans Blumenfeld cited the work of H. Maertens (*The Optical Scale in the Plastic Arts* 1884) who related the mathematics for the measurement of optics to architectural scale and building design. Blumenfeld explains Maertens' work as follows:

the maximum angle at which an object can be perceived clearly and easily, is about 27 degrees, corresponding to a ratio of 1:2 between the size of the object and its distance from the beholder....At an angle of 27 degrees...the object appears... 'as a little world in itself' with the surroundings only dimly perceived as a background; at an angle of 18 degrees (1:3) it still dominates the picture, but now its relation to its surroundings becomes equally important. At angles of 12 degrees (1:4) or less, the object becomes part of its surroundings and speaks mainly through its silhouette (Blumenfeld, Hans. *Scale in Civic Design*, in *Town Planning Review*, Vol 24, April 1953, pp. 36, 37).

In 1973, a planning document developed for the County of Essex, England, stated as follows: "The relationship between the 'effective height' of the buildings and the width of the space is critical if a harmonious [spatial relationship] is to be created. If too high in relation to width, a feeling of oppression may result." The guide goes on to suggest that a 1:4 proportion of height to width creates a harmonious spatial relationship (County Council of Essex, 1973, p. 65.).

While the works cited deal primarily with larger buildings that have more mass than a wind turbine, the optical and psychological principles can also be applied to most types of environmental design. A wind turbine is, of course, much narrower than the buildings considered in these references, so at a viewing distance of four times its height, it blends in with its surroundings, and generally no longer dominates a view; a viewer does not have to physically move his/her head upward to see all of the object. By increasing the distance between turbines and residences to more than four times the tip height of the turbine, therefore, the revised proposal has significantly reduced visual impacts.

Impacts to Visual Assessment Units

This subsection describes the visual impact evaluation for the revised Desert Claim proposal, which is summarized in **Table 3.4-1**. The discussion includes new viewpoints selected for the SEIS, along with viewpoints used in the Final EIS that are still relevant to the revised proposal. Final EIS viewpoints that were no longer considered representative are not discussed. For each assessment unit, primary viewer exposure and sensitivity are characterized, followed by an assessment of existing visual quality. Then, visual quality with the project and the resulting level of impact are described. Viewpoints that are identified with an “S” (e.g., S1H or S5B) are new viewpoints used in the SEIS. Please refer to the Desert Claim Final EIS (Appendix G) for more detailed information about how ratings were derived.

Table 3.4-1. Summary of Impacts by Visual Assessment Unit and Viewpoint

Key View	Primary Viewer Exposure	Primary Viewer Sensitivity	Existing Visual Quality	With Project Visual Quality	Level of Visual Impact
Unit 1: Northwest Valley Floor					
1B	2	2	3.0	2.33	Moderate
1C	2	2	2.0	1.33	Moderate
1D	2	3	2.0	1.33	Moderate
S1H replaces 1A	2	3	2.33	1.33	High
S1I replaces 1E	2	3	2.67	1.33	High
S1J replaces 1F	2	3	2.0	1.33	Moderate
S1K replaces 1G	1	3	2.0	1.0	High
S1L	2	3	2.0	1.0	High
S1M	2	3	2.33	1.67	Moderate
Unit 2: Northeast Valley Floor					
2A	2	3	1.67	1.67	None—Turbines no longer visible
2B	1	2	2.0	1.67	Low
2C	2	2	2.67	2.33	Low
Unit 3: Greater Ellensburg					
3A	2	2	1.33	1.00	Low
3B	1	1	1.33	1.33	None—Turbines no longer visible
3C	1	2	2.67	2.0	Moderate
Unit 4: Yakima River					
4A	1	2	3.0	3.0	None—Turbines no longer visible
Unit 5: Southwest Valley Floor					
S5B replaces 5A	1	2	2.33	2.00	Low
Unit 6: Hayward Hill					
6A	1	3	3.0	2.67	Low

Table 3.4-1. Summary of Impacts by Visual Assessment Unit and Viewpoint (continued)

Key View	Primary Viewer Exposure	Primary Viewer Sensitivity	Existing Visual Quality	With Project Visual Quality	Level of Visual Impact
S6B	1	3	2.0	1.33	Moderate
Unit 7: Dry Creek Slope					
7A	2	1	2.33	1.67	Moderate
S7B	2	1	2.0	1.33	Moderate
S7C	1	3	2.67	2.0	Moderate
Unit 8: Table Mountain Slope					
S8C replaces 8A	1	3	2.67	2.0	Moderate
S8D replaces 8B	3	3	2.33	1.67	Moderate
S8E	2	3	2.33	1.67	Moderate

The Final EIS discussed the existing visual quality of many of the viewpoints. The following subsection addresses only the viewpoints that are new to the SEIS or that have experienced changes in visual quality since the Final EIS was written.

Visual Assessment Unit 1: Northwest Valley

Viewer Group Exposure and Visual Sensitivity

Primary Viewer Groups	Viewer Exposure	Viewer Sensitivity
Rural residents	Moderate	High
Agricultural workers	Moderate	Low
Motorists on Reecer Creek Rd.	Moderate	Moderate
Motorists on County roads	Low	Moderate
John Wayne Trail Users	Low	Moderate

Existing Visual Quality

View SIH: **Figure 3.4-11** shows an existing view looking west-by-southwest across the Northwest Valley Visual Assessment Unit from Robbins Road, just north of the North Branch Canal. (Note: This viewpoint was considered more relevant than Final EIS Viewpoint 1A, which was oriented toward an area that is no longer part of the Project Area.)

Vividness—2: Regional representation of agricultural land and open space that includes, farm pastures and structures, broad open valley floor, foothills and mountains beyond. Hillside in middleground on right side rises dramatically and blocks view of distant mountains.

Intactness—2: Strong visual character that is mostly free from encroachment of discordant elements, with the exception of a few distant powerline poles.

Unity—3: Unified and coherent visual composition.

Overall Visual Quality: 2.33—Moderate.

View SII: **Figure 3.4-13** shows an existing view looking northeast across the Northwest Valley Visual Assessment Unit from Reecer Creek Road, immediately north of North Branch Canal. This viewpoint was selected as being more relevant than Viewpoint 1E because the original viewpoint was oriented toward an area where turbines are no longer being proposed (although more distant turbines would still be visible).

Vividness—2: Unobstructed view of rolling pastureland ascending to more steeply rising foothills beyond. Grassland punctuated by sparsely scattered shrub steppe vegetation, with upland forest beginning to appear in higher elevations. Somewhat memorable and picturesque.

Intactness—3: Intact example of Kittitas Valley pastureland with natural foothills beyond.

Unity—3: Unified and coherent visual patterns of rural farmland and natural foothill environments.

Overall Visual Quality: 2.67—High.

View SIJ: **Figure 3.4-15** shows an existing view looking west-by-northwest across the Northwest Valley Visual Assessment Unit from Smithson Road, just east of Green Canyon Road. This viewpoint was selected as being more relevant than Viewpoint 1F, because the original viewpoint was oriented toward an area where turbines are no longer being proposed (although more distant turbines would still be visible).

Vividness—2: Foreground view of enclosed pasture surrounded by a variety of wetland, riparian, and shrub steppe vegetation. Distant views of Wenatchee Mountains foothills and powerline transmission towers.

Intactness—2: Distant powerline transmission towers, and utility poles in the foreground disrupt the pastoral character of the view.

Unity—2: The scattered appearance of a variety of fence post types, utility poles, and distant powerline towers break up what would otherwise be a fairly unified pastoral composition.

Overall Visual Quality: 2.00—Moderate.

View SIK: **Figure 3.4-17** shows an existing view looking south-by-southwest across the Northwest Valley Visual Assessment Unit from Reecer Creek Road, just north of the project boundary. This viewpoint was selected as being more relevant and representative than

Viewpoint 1G, because it is oriented toward turbines that are closer to nearby residences in the current SEIS proposal.

Vividness—2: View across the valley floor to foothills and the Manastash Ridge in the distance are picturesque but fairly typical. The contrasting patterns of shrub steppe vegetation, pastureland, distant powerlines, and dramatically rising foothills add depth and interest to the scene.

Intactness—2: Distant powerline transmission towers, utility poles, and light reflected from roofs on opposite side of the valley disrupt the intactness of the view.

Unity—2: The variety of powerline transmission towers, utility poles and fencing elements detract from the unity of the visual patterns.

Overall Visual Quality: 2.00—Moderate.

View SIL: **Figure 3.4-19** shows an existing view looking southeast across the Northwest Valley Visual Assessment Unit from 1/8 mile east of Reecer Creek Road, 1/8 mile north of the Project boundary. This viewpoint was selected as being relevant because it shows a group of existing farms/residences that would be near proposed turbines.

Vividness—2: View across the valley floor to foothills and the Manastash Ridge in the distance are picturesque but fairly typical. The contrasting patterns of farm buildings and poplar windbreaks, shrub steppe vegetation, pastureland, distant powerlines, and dramatically rising foothills add depth and interest to the scene.

Intactness—2: Distant powerline transmission towers, utility poles, and light reflected from roofs of farm structures and residences disrupt the intactness of the view.

Unity—2: The variety of farm buildings and residences, powerline transmission towers, utility poles, and fencing elements detract from the unity of the visual patterns.

Overall Visual Quality: 2.00—Moderate.

View SIM: **Figure 3.4-21** shows an existing view looking north-by-northeast across the Northwest Valley Visual Assessment Unit from Smithson Road, 1/4 mile west of Howard Road. This viewpoint was selected because it provides a representative view of the area where turbines are being proposed on the WDNR and private parcels added to the revised proposal.

Vividness—3: Unobstructed view of rolling pastureland ascending to more steeply rising foothills beyond. Grassland punctuated by sparsely scattered shrub steppe vegetation, distant powerlines, and farm structures, with upland forest beginning to appear in higher elevations. Somewhat memorable and picturesque.

Intactness—2: Distant powerline transmission towers and utility poles disrupt the intactness of the view.

Unity—2: The variety of powerline transmission towers, utility poles, and fencing elements detract from the unity of the visual patterns.

Overall Visual Quality: 2.33—Moderate.

Visual Assessment Unit 5: Southwest Valley

Viewer Group Exposure and Visual Sensitivity

Primary Viewer Groups	Viewer Exposure	Viewer Sensitivity
Rural residents	Low	Moderate
Agricultural workers	Low	Low
Motorists on County roads	Low	Moderate

Existing Visual Quality

View S5B: **Figure 3.4-32** shows an existing view looking north-by-northeast from the Southwest Valley Visual Assessment Unit approximately 1/2 mile north of the intersection of Killmore Road and Robinson Road. This viewpoint was selected as being more relevant than Viewpoint 5A because a recent housing development has blocked views of most of the wind farm Project Area.

Vividness—3: Memorable regional representation of agricultural land and open space that includes farm pastures and structures, broad open valley floor, foothills, and mountains.

Intactness—2: Strong visual character that is relatively free from encroachment of discordant elements, although wind turbines detract slightly from overall intactness.

Unity—2: Slight reduction in compositional harmony due to highly contrasting styles and scales of expression of farmland built elements.

Overall Visual Quality: 2.33—Moderate.

Visual Assessment Unit 6: Hayward Hill

Viewer Group Exposure and Visual Sensitivity

Primary Viewer Groups	Viewer Exposure	Viewer Sensitivity
Rural residents	Low	High
Motorists on County roads	Low	Moderate

Existing Visual Quality

View S6B: **Figure 3.4-36** shows an existing view looking north from the Hayward Hill Visual Assessment Unit near a group of residences immediately south of U.S. Highway 97, above the intersection with Howard Road. This viewpoint was added because it shows the area where the Project Area has expanded farther to the south and west from the Final EIS Project Area, and it shows the area where turbines may be more visible to motorists along U.S. Highway 97 and residences in the area.

Vividness—2: Somewhat memorable view across agricultural land and open space that includes farm pastures and structures, residences, riparian areas, broad open valley floor, and foothills.

Intactness—2: Strong visual character that is somewhat compromised by the presence of utility poles, traffic signs, and other roadside elements associated with U.S. Highway 97.

Unity—2: Slight reduction in compositional harmony due to highly contrasting styles and scales of expression of farmland built elements, the presence of U.S. Highway 97, and associated roadside objects.

Overall Visual Quality: 2.00—Moderate.

Visual Assessment Unit 7: Dry Creek Slope

Viewer Group Exposure and Visual Sensitivity

Primary Viewer Groups	Viewer Exposure	Viewer Sensitivity
Rural residents	Low	High
Motorists on Hwy 97.	Moderate	Low

Existing Visual Quality

View S7B: **Figure 3.4-40** shows an existing view looking southeast from U.S. Highway 97 in the Dry Creek Visual Assessment Unit approximately 1½ miles north of the intersection of Smithson Road at driveway 16011. This viewpoint was selected because it represents the only view that southbound motorists on U.S. Highway 97 will have of the proposed wind turbines.

Vividness—2: Somewhat memorable view that includes dramatic ridgelines, and some views to the foothills and mountains beyond. The ridgeline blocks views of the open Kittitas Valley floor.

Intactness—2: Roadside elements and utility poles detract from the visual quality.

Unity—2: Scale of roadway and utility poles contrasts with and dominate the overall landscape character.

Overall Visual Quality: 2.00—Moderate.

View S7C: **Figure 3.4-42** shows an existing view looking north-by-northeast from the Dry Creek Slope Visual Assessment Unit approximately 1/2 mile west of U.S. Highway 97 above the terminus of Smithson Road. This viewpoint is representative of a group of farms that sit on the hill to the west of the Project Area. Though roughly a mile from the nearest turbine, the site has a good vantage point from which to view most of the Project Area.

Vividness—3: Memorable regional representation of agricultural land and open space that includes farm pastures and structures, broad open valley floor, and foothills in the distance.

Intactness—3: Strong visual character that is relatively free from encroachment of discordant elements, although power transmission poles are visible in the distance.

Unity—2: Slight reduction in compositional harmony due to presence of powerline transmission towers and contrasting styles and scales of expression of farmland built elements.

Overall Visual Quality: 2.67—High.

Visual Assessment Unit 8: Table Mountain Slope

Viewer Group Exposure and Visual Sensitivity

Primary Viewer Groups	Viewer Exposure	Viewer Sensitivity
Rural residents	Moderate	High
Outdoor recreationists	Low	High

Existing Visual Quality

View S8C: **Figure 3.4-44** shows an existing view looking south from the Table Mountain Slope Visual Assessment Unit over the Kittitas Basin. This view is more relevant than View 8A because elements in the foreground blocked view of part of the current turbine layout.

Vividness—3: Memorable display of the open sky, mountains, valley floor; dramatic changes in topography from vantage point. Diverse plant communities: ponderosa pine forest, riparian vegetation, shrub-steppe, rangeland, and pasture. Farms dot the valley floor.

Intactness—3: Strong visual character. Undisrupted skyform, landcover, landform, and built forms.

Unity—2: Clear visual composition and sense of prospect and refuge; moderately harmonious patterns across the valley.

Overall Visual Quality: 2.67—High.

View S8D: **Figure 3.4-46** shows an existing view looking west from the Sun East development in the Table Mountain Slope Visual Assessment unit along Robbins Road. This viewpoint is more relevant than viewpoint 8B because it was oriented mainly toward an area where turbines are no longer being proposed.

Vividness—3: View across the valley to Manastash Ridge allows an appreciation of the larger form of the valley as well as its distinctive rolling landforms and a diverse array of native shrub steppe vegetation. The top of Mount Rainier is visible among the clouds behind the mountains.

Intactness—2: View over stunning valley interrupted by utility poles, fence rows, and scattered residential structures.

Unity—2: Clear, uninterrupted progression from foreground through background along undulating landforms. Powerlines and utility poles break up visual patterns.

Overall Visual Quality: 2.33—Moderate.

View S8E: **Figure 3.4-48** shows an existing view looking south from the Table Mountain Slope Visual Assessment Unit toward the WDNR property from Upper Green Canyon Road. This view is a new view selected because it provides a clear view of the WDNR property (which was not part of the Final EIS Project Area) where no turbines were previously proposed.

Vividness—2: Somewhat memorable view of vast, undulating topography that changes color and texture as it rolls from dry desert steppe to the greener Yakima River valley bottom in the distance. Farms, associated structures, utility poles, and towers form repeating patterns that fade into the distance.

Intactness—3: Strong visual character. Undisrupted repeating patterns of sparse vegetation on rolling hills, with occasional farm structures and outlines of pastures.

Unity—2: Clear visual composition and balanced integration of built and natural elements in a harmonious pattern; broken up slightly by powerlines and utility poles.

Overall Visual Quality: 2.33—Moderate.

Impacts with the Revised Desert Claim Project

Visual Assessment Unit 1: Northwest Valley

Visual Quality of Views-With Project

View S1H: **Figure 3.4-12** shows a simulated view looking west-by-southwest across the Northwest Valley Visual Assessment Unit from Robbins Road, just north of the North Branch Canal.

Vividness—2: Height and concentration of turbines create a vivid scene, but they detract from the open, expansiveness of the agricultural open space and views of the mountains beyond. The superior position of the tower on the right side adds to its height.

Intactness—1: The intactness of the view is severely diminished by the introduction of the discordant turbines.

Unity—1: The strong vertical character of the turbines contrasts sharply with the horizontally oriented visual characteristics of the agricultural landscape and the hills and ridgelines beyond.

Overall Visual Quality: 1.33—Low.

Level of Visual Impact: 1.00—High.

View SII: **Figure 3.4-14** shows a simulated view looking northeast across the Northwest Valley Visual Assessment Unit from Reecer Creek Road, immediately north of North Branch Canal.

Vividness—1: Height and light color of turbines impact the qualities of the pastureland and foothills beyond.

Intactness—2: The presence of the turbines, in an otherwise intact landscape, creates a contrast to their surroundings.

Unity—1: The strong horizontal characteristic of the progression from foreground to background is disrupted by the turbines.

Overall Visual Quality: 1.33—Moderate.

Level of Visual Impact: 1.34—High.

View SIJ: **Figure 3.4-16** shows a simulated view looking west-by-northwest across the Northwest Valley Visual Assessment Unit from Smithson Road, just east of Green Canyon Road.

Vividness—1: Height and density of turbines diminish the intrinsic features of the foreground pastureland and distant mountains.

Intactness—2: Although the turbines disrupt the skyline and pastoral qualities of the view, the view was already disrupted by existing transmission towers and utility poles.

Unity—1: The turbines add additional discordant elements to the view and detract from the expansiveness of the distant view.

Overall Visual Quality: 1.33—Low.

Level of Visual Impact: .66—Moderate.

View SIK: **Figure 3.4-18** shows a simulated view looking south-by-southwest across the Northwest Valley Visual Assessment Unit from Reecer Creek Road, just north of the project boundary.

Vividness—1: Large scale and quantity of turbines detract from the intrinsic qualities and features of the long, cross-valley view.

Intactness—1: Turbines break up the view of the Manastash Ridge and foothills in the distance, and decrease the openness of the middleground pastureland.

Unity—1: The turbines appear as a large scattered group, encompassing the entire scene and disrupting the strong horizontal character of the landscape.

Overall Visual Quality: 1.00—Low.

Level of Visual Impact: 1.00—High.

View SIL: **Figure 3.4-20** shows a simulated view looking south east across the Northwest Valley Visual Assessment Unit from 1/8 mile east of Reecer Creek Road, 1/8 mile north of the Project boundary.

Vividness—1: Somewhat memorable view—large scale and quantity of turbines detract from the intrinsic qualities and features of the long, cross-valley view.

Intactness—1: Turbines break up the view of the Manastash Ridge and foothills in the distance, and decrease the openness of the middleground pastureland.

Unity—1: The turbines appear as a large scattered group, encompassing the entire scene and disrupting the strong horizontal character of the landscape.

Overall Visual Quality: 1.00—Low.

Level of Visual Impact: 1.00—High.

View SIM: **Figure 3.4-22** shows a simulated view looking north-by-northeast across the Northwest Valley Visual Assessment Unit from Smithson Road, 1/4 mile west of Howard Road.

Vividness—2: Large scale and quantity of turbines detract moderately from rolling pastureland and foothills beyond. Ridge in background still dominates scale of turbines.

Intactness—2: Although turbines and existing powerline transmission towers break up views of foothills in the distance, and decrease the openness of the middleground pastureland, the intactness of views was already disrupted by existing utility towers and utility poles.

Unity—1: The turbines and existing powerline transmission towers detract from the unity of the visual patterns in the landscape.

Overall Visual Quality: 1.67—Moderate.

Level of Visual Impact: 0.66—Moderate.

Visual Assessment Unit 5: Southwest Valley

Visual Quality of Views-With Project

View S5B: **Figure 3.4-33** shows a simulated view looking north-by-northeast from the Southwest Valley Visual Assessment Unit approximately 1/2 mile north of the intersection of Killmore Road and Robinson Road.

Vividness—3: No significant change in vividness; the turbines are not strong features at this distance.

Intactness—2: Turbines do not break up the skyline or views of the distant hills. They do contrast slightly with the brown foothills, but not enough to change the existing intactness rating.

Unity—1: Although they are distant, the wind farm introduces elements and patterns that are not part of the existing farmland view.

Overall Visual Quality: 2.00—Moderate.

Level of Visual Impact: 0.33—Low.

Visual Assessment Unit 6: Hayward Hill

Visual Quality of Views-With Project

View S6B: **Figure and 3.4-37** shows a simulated view looking north from the Hayward Hill Visual Assessment Unit near a group of residences immediately south of U.S. Highway 97, above the intersection with Howard Road.

Vividness—2: Somewhat "memorable" view across agricultural land and open space that includes proposed turbines, farm pastures and structures, residences, riparian areas, broad open valley floor, and foothills. Distant hills dominate proposed wind turbines, farm elements, and residences.

Intactness—1: The intactness of the view is diminished by the introduction of a large number of wind turbines.

Unity—1: The strong vertical character of the turbines contrasts sharply with the horizontally oriented visual characteristics of the agricultural landscape, hills, and ridgelines beyond.

Overall Visual Quality: 1.33—Low.

Level of Visual Impact: 0.67—Moderate.

Visual Assessment Unit 7: Dry Creek Slope

Visual Quality of Views-With Project

View S7B: **Figure 3.4-41** shows a simulated view looking southeast from Highway 97 in the Dry Creek Visual Assessment Unit approximately 1½ miles north of the intersection of Smithson Road at driveway 16011.

Vividness—2: Height and contrast of the turbines create a vivid scene. Although they detract somewhat from the rural/agricultural character of the landscape and from the views of the mountains beyond, the view remains in the moderate range of vividness.

Intactness—1: The intactness of the view is diminished by the introduction of the turbines.

Unity—1: The strong vertical character of the turbines contrasts sharply with the horizontally oriented visual characteristics of the agricultural landscape and the hills and ridgelines beyond.

Overall Visual Quality: 1.33—Low.

Level of Visual Impact: 0.67—Moderate.

View S7C: **Figure 3.4-43** shows a simulated view looking north-by-northeast from the Dry Creek Slope Visual Assessment Unit approximately 1/2 mile west of U.S. Highway 97, above the terminus of Smithson Road.

Vividness—3: Memorable view disrupted slightly by presence of distant turbines.

Intactness—2: Turbines encroach slightly on strong visual character of agricultural landscape.

Unity—1: The turbines contrast with the lines and forms of the existing agricultural landscape and introduce a new element to the view.

Overall Visual Quality: 2.00—Moderate.

Level of Visual Impact: 0.67—Moderate.

Visual Assessment Unit 8: Table Mountain Slope

Visual Quality of Views-With Project

View S8C: **Figure 3.4-45** shows a simulated view looking south from the Table Mountain Slope Visual Assessment Unit over the Kittitas Basin.

Vividness—2: Turbines only moderately diminish appreciation of the open expansiveness of the valley floor and the distant views.

Intactness—2: The leftmost turbine intrudes on the view; the majority of the turbines, however, blend to some degree with the mixture of tones and textures in the valley floor.

Unity—2: Although scattered turbine arrangement clutters middleground and contrasts somewhat with the strong horizontal character of the vegetation and pasture patterns, the view remains in the moderate range for unity.

Overall Visual Quality: 2.00—Moderate.

Level of Visual Impact: 0.67—Moderate.

View S8D: **Figure 3.4-47** shows a simulated view looking west from the Sun East development in the Table Mountain Slope Visual Assessment unit along Robbins Road.

Vividness—2: Scattered pattern of turbines diminish appreciation the larger form of the valley and of Mt. Rainier, but overall experience of the valley is still dominant.

Intactness—2: Turbines slightly detract from valley view that is already interrupted by utility poles and other elements.

Unity—1: Scattered turbine arrangement clutters middle- and background, and contrasts with the strong horizontal character of the vegetation and pasture patterns.

Overall Visual Quality: 1.67—Moderate.

Level of Visual Impact: 0.66—Moderate.

View S8E: **Figure 3.4-49** shows a simulated view looking south from the Table Mountain Slope Visual Assessment Unit toward the WDNR-managed property from Upper Green Canyon Road. This view is a new view selected because it provides a clear view of the WDNR-managed property (which was not part of the Final EIS Project Area) where no turbines were previously proposed.

Vividness—2: Turbines diminish appreciation of the distant view and rolling topography, but the view remains in the moderate range for vividness.

Intactness—2: Turbines interrupt the patterns of vegetation, farm structures, and outlines of pastures.

Unity—1: Scattered turbines clutter middleground and break harmonious patterns of built and natural elements.

Overall Visual Quality: 1.67—Moderate.

Level of Visual Impact: 0.66—Moderate.

Summary and Conclusions

Of the seven original viewpoints in the Final EIS within the Northwest Valley Visual Assessment Unit (1A through 1G), the four viewpoints that were rated High for level of visual impact in the Final EIS (1A, 1E, 1F, and 1G) dropped to ratings of Moderate, Low, or None with the SEIS proposal because the project layout essentially moved away from them or out of view. The only viewpoint where the level of visual impact increased with the SEIS project layout was viewpoint 1C. The visual impact for viewpoint 1C was rated Low in the Final EIS analysis since the nearest turbine was almost 2 miles away, but it was changed to Moderate in the SEIS analysis because the new project layout now has turbines located just over 1/2 mile from the viewpoint.

Of the six new viewpoints studied in the SEIS in the Northwest Valley Unit (viewpoints S1H through S1M), four were rated High and two were rated Moderate. Four of these new viewpoints (S1H through S1K) were selected to represent the residences closest to multiple turbines. Two other new viewpoints (S1L and S1M) were added because they were near groups of farms or residences that would be potentially impacted by the SEIS project layout.

From the visual assessment units that surround the Northwest Valley Unit, wind turbines would also be visible, to varying degrees, but in these cases views of the turbines would be from much greater distances and the levels of visual impact would be Moderate to Low. At viewpoints in the other seven visual assessment units that were reassessed, the visual impact ratings for four of the viewpoints went down (2A, 3B, 6A, and 8A) and the ratings for seven viewpoints stayed the same (2B, 2C, 3A, 3C, 4A, 5A, and 8B). The only location where the visual impact rating increased was Viewpoint 7A in the Dry Creek Slope Visual Assessment Unit. In the Final EIS project layout, this viewpoint was almost 2 miles from the nearest turbine, while in the SEIS project layout it is only 3/4 mile to the nearest turbine; the level of visual impact changed from Low to Moderate.

Seven new viewpoints (S5B, S6B, S7B, S7C, S8C, S8D, and S8E) in the more distant visual assessment units were added for the SEIS project layout to replace viewpoints that were no longer relevant, or that captured views from groups of farms or residences impacted by the SEIS project layout. All of the new viewpoints received visual impact ratings of Moderate to Low.

In summary, the ratings for the 24 simulations (compared to 19 in the Final EIS) that were determined to best represent visual impacts to each of the visual assessment units are as follows:

- Four viewpoints were rated High for visual impact (S1H, S1I, S1K, and S1L).

- Thirteen viewpoints were rated Moderate for visual impact (1B, 1C, 1D, S1J, S1M, 3C, S6B, 7A, S7B, S7C, S8C, S8D, and S8E).
- Eight viewpoints were rated Low or None for visual impact (2A, 2B, 2C, 3A, 3B, 4A, S5B, and 6A).

Both the Final EIS and the additional analysis in the SEIS indicate that the greatest impacts would be experienced by those observers closest to the turbines. However, the revised configuration has significantly reduced the number of residences located close to proposed turbines. It has also increased the distance between neighboring residences and the nearest turbines to more than four times their tip height.

Although the visual quality of the revised Desert Claim project has improved when compared to the Final EIS layout, there would be some new impacts associated with the new project configuration:

- A few residences nearest the Project Area will have more turbines in their view because the proposed project now consists of a single, contiguous area (compared to the Final EIS evaluation of a project area with four separate parcels).
- The introduction of turbines on lands added to the west creates additional visual impacts (rated Low and Moderate) where none existed in the Final EIS project layout, while eliminating impacts identified in the Final EIS at locations near the eastern portion of the original project that have since been eliminated. This shift of the Project Area to the west also moves visual impacts farther away from Ellensburg, which is the population core in the area.

On the whole, the visual impacts of the Desert Claim project have been reduced in a number of ways compared to the proposal evaluated in the Final EIS. These include:

- a smaller, contiguous project area;
- reduced number of turbines and turbine density;
- fewer nearby residences;
- increased distances between turbines and neighboring residences;
- reduced nighttime flashing lights and eliminated daytime strobes;
- reduced number of met towers; and
- reduced length of roads.

These changes would lessen project impacts for most viewer groups. Visual impacts may also be reduced through the use of micro-siting to increase the distances of turbines within 2,500 feet of residences. While these measures and visual quality improvements would not lead to a project

that is invisible, which is impossible, they would result in a project that fits better with the landscape of the Kittitas Valley, and that better responds to the aesthetic values of the people who live in the region.

3.4.3.2 No Action Alternative

Under the No Action alternative, visual quality of the surrounding environment would not change as a result of the Proposed Project. Visual quality in and near the Project Area would continue to be influenced by existing land uses, and by potential changes in existing land uses. Continued development pressure to unincorporated rural land near Ellensburg could result in development of some lands for housing, and low density rural residential uses could expand. Alternative power generating facilities could be built in other, undetermined locations in response to state-wide demand for electricity and mandated state renewable portfolio standards. Such energy facilities, if they occurred, could have some degree of visual impact, depending on their type, location, and design.

3.4.4 Cumulative Impacts

Figure 3.4-50 at the end of this section shows the locations of the Desert Claim Project and three other approved or existing wind power projects in the general vicinity: Kittitas Valley, Wild Horse, and Vantage. The Desert Claim project is within 1/2 mile of the Kittitas Valley project, and is approximately 16 miles and 19 miles from the Wild Horse and Vantage projects, respectively.

The existing landscape in the vicinity of the Desert Claim Project and elsewhere in the Kittitas Valley has been substantially modified through agricultural practices, road construction, rural residential development, and infrastructure facilities such as electric transmission lines and irrigation canals. The cumulative visual effect of existing, approved and proposed wind power projects would represent a significant change from the baseline aesthetic condition in areas where those facilities would be visible. The Wild Horse and Vantage projects are 16 and 19 miles from the Desert Claim Project and 21 and 24 miles from the Kittitas Valley project, respectively. There are some areas near the Desert Claim and Kittitas Valley projects from which views of the Wild Horse and/or Vantage projects may also be possible, but at these distances the Wild Horse and Vantage turbines will have very little effect on views. Although sometimes visible, the scale of the distant turbines would be dominated by the shapes, colors, and patterns of the hills, ridges, valleys, and vegetation in the landscape.

Visitors and residents would be aware that there are numerous wind turbines in the greater Kittitas Valley area. Their perceptions of the area would change to some degree as a result of the scale and number of turbines. The shift and consolidation of the revised Desert Claim Project to

the west, and the reduction in the number of turbines, would likely lessen the cumulative impact of all wind power projects to local residents and to the region in general.

At night, flashing red lights on some turbines in each project, as required by the FAA, would be visible to residents and travelers within several miles of the project areas. This change in the nighttime skyline would likely be perceived by residents in the area as an adverse visual impact.

The Final EIS prepared for the nearby Kittitas Valley project indicates that, due to topographic conditions, there are no areas from which the Kittitas Valley project could be seen in the foreground with the Desert Claim project in the middleground or background (EFSEC 2007). For this evaluation, it was determined that there are several locations where the Desert Claim Project could be seen in the foreground with the Kittitas Valley Project visible in the middleground to background. In these instances, the Kittitas Valley Project would appear more distant and the turbines would appear more faint. In those views where both the Desert Claim and Kittitas Valley projects would be visible, the presence of the Kittitas Valley turbines would not add significantly to the impacts caused by the Desert Claim turbines alone. Photo simulations from four locations with views of both projects are shown and described below.

Figure 3.4-51 shows the viewpoints from which photo simulations were generated to depict cumulative visual effects. During reconnaissance and analysis, it was observed that there are few locations along public roadways or public areas in the vicinity from which both projects will be seen in the same view. The locations shown below provide a variety of views of both projects from areas to the north, northwest, and west of Ellensburg.

Cumulative Viewpoint 1 (Figure 3.4-52): *Simulated view looking north across the Greater Ellensburg Visual Assessment Unit, over the Burlington Northern RR near U.S. Highway 97 and Cascade Way.* Photographed from on top of the bridge that crosses the railroad, this is one of the only views within the Ellensburg population core from which *either* the Desert Claim or the Kittitas Valley projects would be visible. Motorists crossing the bridge in either direction will briefly have this view if they look to the northwest. Residents in the development within the foreground will most likely not see the turbines due to their lower vantage point, and the dense riparian vegetation to the north. At this distance, while turbines from both projects are visible, the foothills in the background dominate the view. Although the Kittitas Valley turbines (far left side and background left of center) add slightly to the visual impact caused by the Desert Claim turbines (center and right side), cumulatively they would not have a significant impact on the view.

Cumulative Viewpoint 2 (Figure 3.4-53): *Simulated view looking north-by-northwest from U.S. 97, ¾ mile north of intersection with Hungry Junction Road.* This viewpoint was determined to be the only location along U.S. 97 from which turbines in both the Desert Claim and Kittitas

Valley projects would be visible in the same view. Both projects would be visible to northbound travelers for approximately ¼ mile before and after the location from which the photograph was taken; in all other locations, trees or landforms would block views of at least one of the projects, and often block views of both projects. From this distance, the Desert Claim turbines (center and right side) visually appear as tall as the foothills beyond, but the Kittitas Valley turbines (mostly left side) are quite faint. Cumulatively there would not be a significant impact to the overall quality of the view.

Cumulative Viewpoint 3 (Figure 3.4-54): *Simulated view looking 7 degrees east of north, ½ mile north of the intersection of Killmore Road and Robinson Road.* Photographed from near the base of the foothills on the high southern edge of the valley that slopes down toward the Yakima River and Ellensburg, this viewpoint is elevated and a viewer is able to see both the Desert Claim project (to the right of the nearest utility pole) and Kittitas Valley project (to the left side of the pole). Although visible in the simulation, turbines in both projects are quite distant and faint; they are also dominated in scale by the foothills and Stewart Mountain Range in the distance. From this distance, the Desert Claim turbines only slightly detract from the overall visual quality of the scene; the Kittitas Valley turbines also appear quite faint. Cumulatively, there would not be a significant impact to overall visual quality.

It should be noted that straight ahead (to the north) and farther down the slope, motorists traversing the scene on I-90 would have their views of the Desert Claim project completely blocked by the long hillside/mesa that extends across the scene (Hayward Hill—shown just above the roofs on the right side of the photograph); it appears that the mesa would block I-90 motorists' views of the majority of the Kittitas Valley project as well.

Cumulative Viewpoint 4 (Figure 3.4-55): *Simulated view looking northwest from the intersection of Hungry Junction Road and Lookabout Lane, near Bowers Field Airport.* From this location on an elevated ledge just north and east of the airport, the view includes the majority of both the Desert Claim and Kittitas Valley project areas. Because of the viewpoint's elevated position on the eastern edge of the valley, most of the Desert Claim turbines are in view (center and right side), while the Kittitas Valley turbines are more faintly seen in the distance (left side and center, background). Because of their proximity and the viewing angle, the Desert Claim turbines visually reach nearly to the top of the foothills beyond and have a moderate impact upon the visual quality of the scene. The patterns they make contrast with the more typical agricultural landscape patterns and colors closer to the foreground. Although the Kittitas Valley turbines slightly increase the overall visual impact, they do not add significantly to the moderate impact that the Desert Claim turbines have upon the view.

3.4.5 Mitigation Measures

A number of visual quality improvements have been made to the Desert Claim Project, including increased turbine distances and other factors discussed in Section 3.4.3. Impacts may be further reduced by the use of micro-siting to increase the distance of turbines within 2,500 feet of residences. The Project would also adhere to a number of “best practices” that pertain to design and implementation of wind farms. These measures can avoid some impacts and reduce the overall impacts of projects, but all visual impacts cannot be avoided.

Increased Turbine Setbacks. The distance separating proposed turbines from the closest residences has been increased to mitigate the visual impacts from those residences. Based on research referenced in the SEIS, at a distance of four times its height, an object does not dominate the view or appear to loom over nearby objects. All proposed turbines are at least 1,640 feet from off-site residences. There are two residences located within the Project Area that are at least 1,640 feet from the closest turbine, and these property owners have consented to the location of turbines on their property and have no objection to any associated visual impacts.

Evenly Spaced Turbine Array: Paul Gipe, in *Aesthetic Guidelines for a Wind Power Future*, states that, “The absence of visual order is the principal aesthetic criticism of [many] wind farms. They are often described in terms of the “disorder, disarray, or clutter” of turbines on the landscape. Maintaining order and visual unity among clusters of turbines is the single most important means of lessening the visual impact of large arrays.” This best practice is also supported by research done by Thayer and Freeman, the Danish Ministry of Energy, and others (Gipe, *Aesthetic Guidelines for a Wind Power Future*, p. 180; Thayer and Freeman, *Altamont: Public Perceptions of a Wind Energy Landscape*, p. 395). The currently proposed array of turbines is fairly evenly spaced, with no major gaps or isolated groupings. This represents an improved project configuration compared to the proposal analyzed in the Final EIS.

Uniform Height and Type of Turbines and Towers: Many wind farm projects contain a variety of turbine types and tower heights, although research has shown that arrays of turbines and towers that are of the same height and type are preferred (Gipe, *Aesthetics*...p. 183, Thayer and Freeman, *Public*...p. 395). The towers and turbines that are being proposed for this Project are of a consistent height and type.

Commitment to Remove Decommissioned Turbines: Malfunctioning, inoperative or towers without turbines cause negative public responses. In their research, Thayer and Hansen deduced that, “the single most significant action wind companies could take to boost public acceptance [of wind farms] is to quickly fix broken turbines and remove

those that are not repairable” (Thayer and Hansen, “*Wind on the Land*,” 68-73). The project proponent has committed to keep conspicuous turbine malfunctions to a minimum and to remove any towers that are decommissioned.

In addition to the measures above, the Applicant has agreed to implement the following measures:

Visual Integration:

- Construct required ancillary structures of local materials and maximize their fit in the vernacular landscape by studying local building types and siting them sensitively.
- Use native shrub-steppe vegetation around buildings and equipment boxes to integrate the structures into the surrounding landscape.
- Use existing roads to access turbines. Minimize new road building.
- Do not piggyback advertising, cell antennas, or other clutter on the turbines. Do not prominently display the logo of the manufacturer on the nacelle.
- Sculpt natural landforms and plant foreground screening native vegetative along some nearby roads and around residences with expected significant visual impacts.
- Use low-reflectivity, neutral-color finishes for turbines, equipment boxes, substation equipment, and O&M building. Earth-tone finish would blend in best with the surrounding landscape.
- Use only minimum required lighting on turbines (aviation warning lighting) required by the FAA, and minimize security lighting at the substation and O&M facility. Make any ground level security lighting motion-sensitive so that most of the time it does not impact the night landscape.
- Use lighting devices designed to be least visible from ground level.
- Synchronize blinking of aviation warning night lights and maximize period in light-off condition.

Ecological Restoration and Management of Disturbed Areas:

- Remove construction debris.
- Replace native vegetation disturbed in non-road surface areas or non-turbine areas.
- Seed or cover temporarily stockpiled materials and disturbed sites to reduce dust and prevent erosion.

Equipment Maintenance:

- Maintain uniform, high-quality turbine towers, nacelles, and blades. Any replacements should maintain uniform height, model, color, etc.
- Promptly repair all parts of non-functioning turbines.
- Keep O&M area and turbines clean.

Information and Education:

- Notify the local community of the timing and duration of construction.

3.4.6 Significant Unavoidable Adverse Impacts

Development of the Desert Claim Project as currently proposed would result in unavoidable impacts to the visual environment. Those residents living closest to the Project might find the impacts to be significant and adverse. Some of these visual impacts may also be reduced through micro-siting of turbines. Wind turbines would be visible to varying degrees from other locations, though views would be more distant and the level of visual impact would be lower. While mitigation for many types of built projects may include measures like screening the project from view with vegetation, or constructing the project with materials that blend with the vernacular architecture, wind farms cannot be completely hidden from view or blended into their surroundings. Some degree of visibility is inherent in a wind power facility.



Figure 3.4-5. View 1B – SEIS Existing View Looking NW across the Northeast Valley Visual Assessment Unit from Intersection of Hungry Junction Road and Lookabout Lane



Figure 3.4-6. View 1B – SEIS Simulated View



Figure 3.4-7. View 1C – SEIS Existing View Looking NE across the Northwest Valley Visual Assessment Unit along Smithson Road near Highway 97



Figure 3.4-8. View 1C – SEIS Simulated View



Figure 3.4-9. View 1D – SEIS Existing View Looking SW across the Northwest Valley Visual Assessment Unit from Immediately N of the Project Area



Figure 3.4-10. View 1D – SEIS Simulated View



Figure 3.4-11. View S1H – SEIS Existing View Looking W-by-SW across the Northwest Valley Visual Assessment Unit from Robbins Road, just N of North Branch Canal



Figure 3.4-12. View S1H – SEIS Simulated View

Note: This is a new viewpoint that was not included in the Final EIS.



Figure 3.4-13. View S1I – SEIS Existing View Looking NE across the Northwest Valley Visual Assessment Unit from Reecer Creek Road, just N of North Branch Canal



Figure 3.4-14. View S1I – SEIS Simulated View

Note: This is a new viewpoint that was not included in the Final EIS.



Figure 3.4-15. View S1J – SEIS Existing View Looking W-by-NE across the Northwest Valley Visual Assessment Unit from Smithson Road, just E of Green Canyon Road



Figure 3.4-16. View S1J – SEIS Simulated View

Note: This is a new viewpoint that was not included in the Final EIS.



Figure 3.4-17. View S1K – SEIS Existing View Looking S-by-SW across the Northwest Valley Visual Assessment Unit from Reecer Creek Road, just N of the Project Boundary



Figure 3.4-18. View S1K – SEIS Simulated View
 Note: This is a new viewpoint that was not included in the Final EIS.



Figure 3.4-19. View S1L – SEIS Existing View Looking SE across Northwest Valley Visual Assessment Unit from Katie Ln., 1/8 Mile E of Green Canyon Rd., 1/8 Mile N of Project Limit



Figure 3.4-20. View S1L – SEIS Simulated View
 Note: This is a new viewpoint that was not included in the Final EIS.



Figure 3.4-21. View S1M – SEIS Existing View Looking NE across the Northwest Valley Visual Assessment Unit from Smithson Rd., ¼ Mile W of Howard Rd., just S of Project Area



Figure 3.4-22. View S1M – SEIS Simulated View

Note: This is a new viewpoint that was not included in the Final EIS.



Figure 3.4-23. View 2A – SEIS Existing View Looking SW across Northwest Valley Visual Assessment Unit from Wilson Creek Road

Note: There are no turbines visible from this viewpoint in the current proposal.



Figure 3.4-24. View 2B – SEIS Existing View Looking W across the Northeast Valley Visual Assessment Unit from Wilson Creek Road on Rabbit Hill



Figure 3.4-25. View 2B – SEIS Simulated View



Figure 3.4-26. View 2C – SEIS Existing View Looking NW across the Northwest Valley Visual Assessment Unit from the N end of Bowers Field at Hungry Junction Road



Figure 3.4-27. View 2C – SEIS Simulated View



Figure 3.4-28. View 3A – SEIS Existing View Looking N across the Greater Ellensburg Visual Assessment Unit over the Burlington Northern Railroad near Hwy 97 and Cascade Way



Figure 3.4-29. View 3A – SEIS Simulated View



Figure 3.4-30. View 3C – SEIS Existing View Looking NW across the Greater Ellensburg Visual Assessment Unit from Reed Park in Ellensburg



Figure 3.4-31. View 3C – SEIS Simulated View



Figure 3.4-32. View S5B – SEIS Existing View Looking N-by-NE from the Southwest Valley Visual Assessment Unit ½ mile N of the intersection of Killmore Rd. and Robinson Rd.



Figure 3.4-33. View S5B – SEIS Simulated View

Note: This viewpoint was selected as an alternative to 5A since recent development there has blocked views of most of the wind farm.



Figure 3.4-34. View 6A – SEIS Existing View Looking NE from the Hayward Hill Visual Assessment Unit at the Top of the Hill



Figure 3.4-35. View 6A – SEIS Simulated View



Figure 3.4-36. View S6B – SEIS Existing View Looking N from above Highway 97 in the Hayward Hill Unit from a Group of Residences roughly 2 miles S of the Project Boundary



Figure 3.4-37. View S6B – SEIS Simulated View

Note: This viewpoint was added because it provides clear view of new property in the SW quadrant of the Project Area where no turbines were previously proposed.



Figure 3.4-38. View 7A – SEIS Existing View Looking NE from the Dry Creek Slope Visual Assessment Unit 1/3 mile N of Smithson Road, off Highway 97



Figure 3.4-39. View 7A – SEIS Simulated View



Figure 3.4-40. View S7B – SEIS Existing View Looking SW from the Dry Creek Slope Visual Assessment Unit from Hwy 97 at Driveway 16011, roughly ½ Mile W of the Project Area



Figure 3.4-41. View S7B – SEIS Simulated View

Note: This viewpoint was added because it provides clear view of new property in the SW quadrant of the Project Area where no turbines were previously proposed.



Figure 3.4-42. View S7C – SEIS Existing View Looking E-by-NE from a Hilltop in Dry Creek Slope Visual Assessment Unit, 1/3 mile W of Hwy 97, due W of Smithson Road



Figure 3.4-43. View S7C – SEIS Simulated View

Note: This viewpoint was added because it provides clear view (from a group of farms) of new property in the SW quadrant of the Project Area where no turbines were previously proposed.



Figure 3.4-44. View S8C – SEIS Existing View Looking S from the Table Mountain Slope Visual Assessment Unit over the Kittitas Basin, Slightly W of Final EIS Viewpoint 8A



Figure 3.4-45. View S8C – SEIS Simulated View

Note: This viewpoint was selected as an alternative to 8A since the slope in foreground blocked view of part of the SEIS turbine layout.



Figure 3.4-46. View S8D – SEIS Existing View Looking W from the Table Mountain Slope Visual Assessment Unit from Robbins Road



Figure 3.4-47. View S8D – SEIS Simulated View

Note: This viewpoint was selected as an alternative to 8B because it was oriented to an area where turbines are no longer being proposed.



Figure 3.4-48. View S8E – SEIS Existing View Looking S from the Table Mountain Slope Visual Assessment Unit toward the WDNR Property from Upper Green Canyon Road



Figure 3.4-49. View S8E – SEIS Simulated View

Note: This viewpoint was added because it provides clear view of new property in the SW quadrant of the Project Area where no turbines were previously proposed.

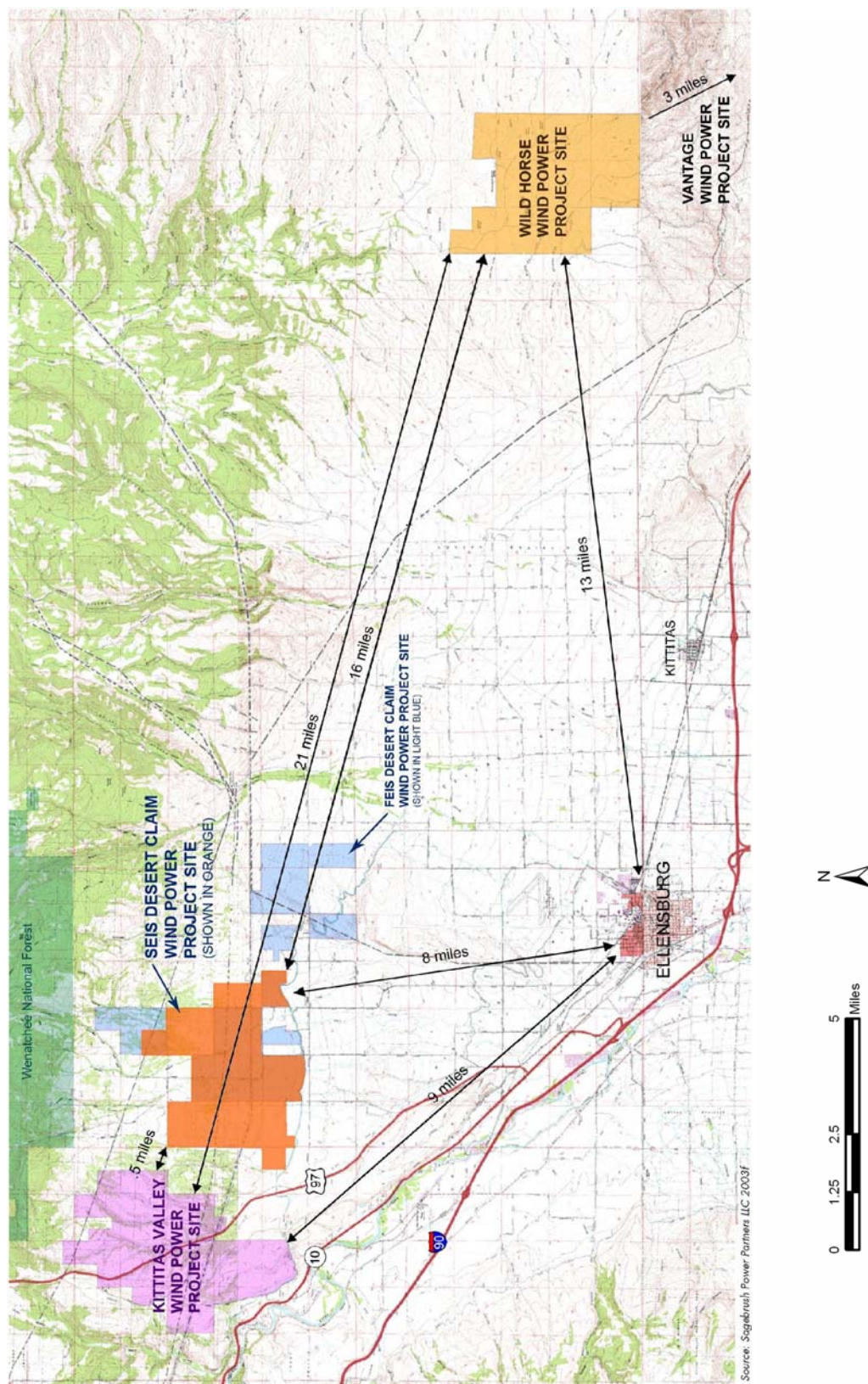


Figure 3.4-50. Visual Resource Cumulative Impact Study Area

Note: Map modified from original Cumulative Impacts Map in Kittitas Valley Project Final EIS.

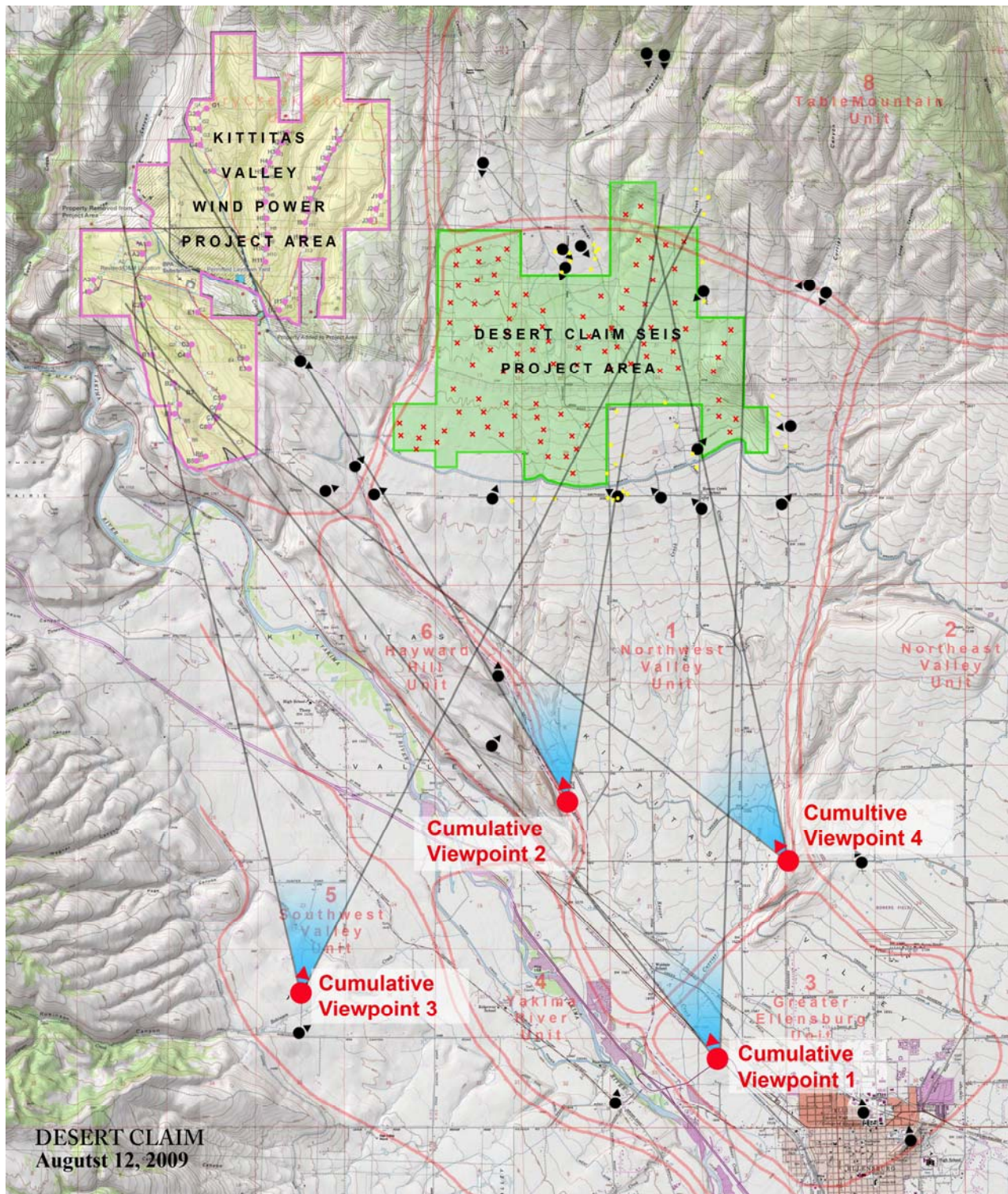


Figure 3.4-51 Cumulative Impacts Viewpoints for Simulations of Desert Claim and Kittitas Valley Wind Power Projects



Figure 3.4-52 Cumulative Viewpoint 1 Simulation



Figure 3.4-53 Cumulative Viewpoint 2 Simulation



Figure 3.4-54 Cumulative Viewpoint 3 Simulation



Figure 3.4-55 Cumulative Viewpoint 4 Simulation

4.0 DRAFT SEIS COMMENTS AND RESPONSES

This chapter of the Final SEIS includes comments on the Draft SEIS received from agencies, tribes, associations and individuals, and provides responses to those comments.

The Draft SEIS was published on April 2, 2009. Copies of the document were mailed to agencies, tribes, groups, and individuals identified on the distribution list. It was also posted on the EFSEC website and was made available for review at local libraries. A public comment meeting on the Draft SEIS was held in Ellensburg, Washington on April 23, 2009 and provided an opportunity for verbal or written comment.

Forty-five (45) written comment submittals were received via mail, email and comment forms from agencies, tribes, groups, and individuals. Verbal comments were also provided by 28 individuals at the public meeting. A list of those who submitted comments on the Draft SEIS is provided in Table 4-1.

The comments and responses comprise the remainder of this chapter. Each comment letter is reproduced in its entirety; some included voluminous attachments that did not contain comments specific to the Draft SEIS, and those have been omitted to conserve paper. Comment letters are presented in the order in which they were received. Each individual comment letter is given a number (e.g., Comment 1). Within each letter, each section or paragraph that provides a comment is also given a sequential number in the margin (e.g., 1-1, 1-2). The responses to the comments in each letter follow the letter. Responses are numbered to correspond to the letter and comment (e.g., 1-1). The transcript from the April 23 public comment meeting is also reproduced. Each speaker who commented at the meeting is annotated as a separate comment letter. Responses to those comments follow the meeting transcript, in the same format as used for the responses to letter comments.

Table 4-1. List of Draft SEIS Comments

Comment Number	Commentor	Number of Comments
	Comment Letters	
1	Geoff Saunders	2
2	Spokane Tribe (Randy Abrahamson)	2
3	Dwight Lee Bates	17
4	David Crane	1
5	Mark Braun	1
6	No name	1
7	Chris & Lee Burtchett	18
8	Helen Wise	2
9	Craig Johnson	3
10	Jan Sharar	2
11	Windworks! Northwest	1
12	Yakama Nation (Johnson Meninick)	4
13	Patty Kinney	2

Table 4-1. List of Draft SEIS Comments (continued)

Comment Number	Commentor	Number of Comments
14	Thom McCosh	1
15	Washington Department of Natural Resources (Sandy Swope Moody)	2
16	Ellensburg School Dist	1
17	Kittitas Audubon Society	10
18	Everett Olson	1
19	Tom & Ginger Morrison	3
20	Tony Helland	3
21	Eloise Kirchmeyer	2
22	Bob & Judy Corey	3
23	Thom McCosh	4
24	Liz Lasell-McCosh	5
25	Deidre Link	4
26	Washington Department of Ecology (Gwen Clear)	4
27	Chet Morrison	3
28	Gina Jefferson-Lindemoen	2
29	Christine Cole & Roger Binette	5
30	Craig Nevil	1
31	J.P. Roan	5
32	David O. Young	1
33	Washington Attorney General, Counsel for the Environment (H. Bruce Marvin)	17
34	Gina Jefferson-Lindemoen	3
35	Gina Jefferson-Lindemoen	2
36	Jan Sharar	1
37	Washington Department of Fish and Wildlife (Brock Applegate)	47
38	Catherine Clerf	2
39	Liz Lasell-McCosh	4
40	Tanna McVicker	4
41	Burtchett	2
42	Kittitas County (Gregory Zempel)	10
43	Washington State Department of Transportation (Bill Preston)	5
44	Darrell Lehmann, Katana Summit	1
45	Stephen Prue	27.
	DSEIS Hearing Testimony	
46	Marshall Madsen, Ellensburg Chamber of Commerce	1
47	Anita Boyum, Ellensburg School Board	2
48	Theresa Petrey	2
49	Dan Morgan	2
50	Bernice Best	1
51	Helen Wise	2
52	Catherine Clerf	2
53	Jan Sharar	3
54	Chris Burtchett	7
55	Patty Kinney	3
56	Mary Scott	3
57	David Crane	2
58	Randy Richmond	2
59	Melanie Garrod	3
60	Kevan Smith	1
61	Dana Lind	4
62	Roger Overbeck	10
63	Desmond Knutsen	3
64	Liz McCosh	2
65	Paula Thompson	4
66	Ellen Finch	7

Table 4-1. List of Draft SEIS Comments (continued)

Comment Number	Commentor	Number of Comments
67	Eloise Kirchmeyer	2
68	Noel Van Geisen	2
69	Bertha Morrison	1
70	David Young	3
71	Aaron Zimmerman	2
72	Linda Johnson Huber	2
73	Eric Gustafson	1

From: Geoff Saunders [geoff@geoffsaunders.com]
Sent: Tuesday, April 07, 2009 3:23 PM
To: CTED EFSEC
Cc: Talburt, Tammy (CTED)
Subject: FW: Notice of Availability of DSEIS Desert Claim

Attachments: notice avail DSEIS 4-6-09.pdf

You state in this notice that there will be a public hearing in Ellensburg. Why bother? Hundreds of people have attended dozens of EFSEC hearings about wind farms over the last 8 years, and neither you nor anybody at else at EFSEC could care less – it made not one whit of difference. We all saw that you were bored and irritated. You intended to approve the Horizon wind farm from day one, just as you intend to force this one on the county as well - hearings are just a legal nuisance, aren't they?

1-1

Geoff Saunders,
disgusted home owner a few hundred feet from the Horizon windfarm you forced on the county.
Want to buy my house? It will be worthless and a miserable place to be when the Horizon wind farm is built.

1-2

From: Talburt, Tammy (CTED) [mailto:TammyT@CTED.WA.GOV]
Sent: Tuesday, April 07, 2009 7:52 AM
Subject: Notice of Availability of DSEIS Desert Claim

Attached is the Notice of Availability for the Draft Supplemental Environmental Impact Statement for the Desert Claim Wind Project.

If you have questions on the project please contact Stephen Posner at 360-956-2063

Issues Opening the document please call me.

<<notice avail DSEIS 4-6-09.pdf>>

*Tammy Talburt, Administrative Assistant 3
Energy Facility Site Evaluation Council
(360)956-2122
helping with the little things...*

Comment 1: Geoff Saunders

1-1 *Response:* EFSEC conducts its site certification proceedings according to the direction provided by the EFSEC statute, State Environmental Policy Act (SEPA) and other applicable laws and regulations. Public processes administered by EFSEC are open to all interested parties, and all public input is given serious consideration. Comments provided concerning the Draft SEIS have been considered carefully and several changes have been made to the Final SEIS in light of those comments.

1-2 *Response:* This comment expresses concern about the Council's decision in an unrelated proceeding to recommend certification of the Kittitas Valley Wind Project, claiming that the construction of that project will adversely affect the commenter. This comment does not relate specifically to the SEIS for the Desert Claim Wind Project. For additional information regarding the potential effect of the Desert Claim Project on property values in the vicinity, see the response to Comment 3-17 below.

April 13, 2009

Allen Fiksdal
City Planner

RE: City of Ellensburg: Desert Claim Wind Power Project

Mr. Fiksdal:

Thank you for allowing the Spokane Tribe of Indians the opportunity to review and comment on submitted SEPA checklist.

I have received your permit of the project area, after doing archive research; no cultural resources have been reported in the APE.

2-1

This letter is your notification that your project has been cleared, and your project may move forward.

As always, if any artifacts or human remains are found upon excavation, this office should be immediately notified and the work in the immediate area cease.

2-2

Should additional information become available our assessment may be revised.

Again thank you for this opportunity to comment and consider this a positive action that will assist in protecting our shared heritage.

If questions arise, please contact me at (509) 258 – 4315.

Lem lmt,

Randy Abrahamson
Tribal Historic Preservation Officer (T.H.P.O.)

Comment 2: Spokane Tribe (Randy Abrahamson)

2-1 *Response:* The comment is noted.

2-2 *Response:* Consistent with this comment, the Applicant proposes to stop work and contact state agencies and tribes if any artifacts or human remains are discovered during excavation. See SEIS Section 3.3.5 and Revised Application Section 6.12.

RECEIVED

Page 1 of 7

DWIGHT LEE BATES

1509 Brick Road
Ellensburg WA
98926
(509) 925-5055
bateslee@elltel.net

APR 14 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

March 9, 2009

Allen J. Fiksdal
Manager, EFSEC
P.O. Box 43172
Olympia WA
98504-3172

Dear Mr. Fiksdal,

This letter contains my comments on the Desert Claim DEIS.

Bird Kills

The summary of projected mortality of birds and bats shows the research for this DEIS is incomplete. Studying other studies and giving a range of information does not substitute for doing an actual two year study of the turbine sites near Ellensburg. The species listed (offers a reason for a thorough study.

3-1

Bird Kill Mitigation

The mitigation methods to reduce bird kills are a band aid approach. The real problem is the 20 RPM blades cause bird kills. The estimated number of kills in Altamont Pass, California is 44,000 birds in 20 years. The only mitigation is to not build turbines period.

3-2

Study on Bird Kills

two year study is needed before even writing this Draft Environmental Impact Statement (DEIS). Promises do not get it. We should halt this process until the two year study is done. complete two year study needs to be done.

3-1
(con't)

Passerine Bird Kills

The estimated 740 kills of Passerine birds is unacceptable for the minor amount of electricity generated by these bird and bat killing turbines.

3-3

Fire

The fire mitigations are not good enough. Fires fanned by the wind have occurred in the area in the past. I live down wind and do not want to lose my house like happened in the California fires. A Quick Response Plan by Department of Natural Resources is needed. It goes without saying that a better fire suppression Plan is needed. Without this Plan which should have been submitted in the DEIS, this process should not proceed further! Promises to provide a plan in the future is not good enough.

3-4

Visual Impact of Turbines

The high turbines are too high. They will impact the scenic view I have out my front windows. I retired here for the scenic views of the valley. I do not want to look out my windows and see these monstrosities with flashing lights all hours of the day.

3-5

Highway 97 a Scenic Byway is surrounded by these monstrosities. These turbines should not be located anywhere near Highway 97. Wind farms are not scenic. Do not give me it is in the eye of the beholder crap! They may interesting at first but this soon fades. I have seen wind farms at Stateline, Tehachapi and Palm Springs so I know what I am talking about.

3-6

The simulated views of turbines are ugly. I do not want to see foot monstrosities out in the country where I drive to relax! You people have no right to destroy a scenic valley I retired to for the scenery. The only reason you want to destroy the scenery with ugly turbines is your greed for the Federal Subsidies. Painting the turbines gray will not help. I do not want to see any turbines at all.

Shadow Flicker

Planting trees to prevent shadow flicker and installing automatic shades are not solutions for shadow flicker. People living near these monstrosities report health problems which should be studied at these turbine sites. People living near the Lincoln Township Wisconsin Wind Farm stated in a survey (available upon request) that shadow flicker causes a strobe effect throughout their houses causing headaches and sick to stomach cases. Also this shadow flicker lowers property values. Where is the study in this DEIS on the effect these turbines have on lowering property values?

3-7

3-8

Blade Throw

A set back from these monstrosity turbines is not sufficient. Blades and ice could be thrown 1000 feet in a high wind. To ensure safety a 4000foot set back from residents and roads is needed. Measures to reduce blade throw are both mandatory and common sense. What report can the public see to ensure these inspections take place on a regular basis?

3-9

Ice Throw

The mitigation measures to locate these monstrosity turbines from residences should be changed to ensure safety. Who monitors the sensors to make sure the system shuts down in icing conditions? The set back from public roads is not safe enough to prevent a passer by on the road from getting hurt. A 4000 foot set back is needed for safety.

Tax Savings

The tax savings for this project are not given . To say it is a draft is not good enough. It should be written as thoroughly as possible before being submitted to the public for review. Does not the writer know the impact of these monstrosities in the Kittitas Valley for years to come?

3-10

Impact on Historical Culture

This DEIS is insufficient. Supplemental DIS needs to be done per Section 106 Regulations of the National Historic Preservation Act (NHPA). The respect for the Yakama Tribe is lacking. The tribe's culture depends on preserving Historical Sites.

3-11

Wildlife

The mortality rates given for wildlife and birds are estimates. A complete two year survey needs to be done before we can reasonably evaluate this DEIS. The species are listed as potentially occurring in the project area. This is not good enough.

3-1
(con't)

Power Generated

The level of generated power listed shows that these monstrosity turbines generate only a minuscule amount of power. The beauty of a scenic valley is not worth destroying for so little power generated. Studies show that five tenths of one per cent of Washington power needs is all these monstrosity turbines will generate. We now sell our power to other states due to our dams high output. We do our part to generate national electricity. Let other states do their share by building efficient dams in their states as we have done. Wind farms are not the answer!

3-12

Lights

These turbines will cumulatively contribute to increased nighttime lighting in the Kittitas Valley. These lights are likely to have an adverse cumulative effect on views from residential properties in the Kittitas Valley . This is unacceptable! I retired here for the scenic view out my front windows. I do not want to see these horrible monstrosities with their flashing lights day and night. The low power output does not justify building these monstrosities anywhere. They are not cost effective.

3-13

The mitigation measures for lighting demonstrate how horrible these lights will be. I hate the lights we now have on the obnoxious cell phone towers in Kittitas County. The turbine red and white

flashing lights (20,000 candela) are too intense and will ruin views.

3-13
(con't)

Noise

The statement that the residents will not experience elevated noise levels is not true. The Lincoln Township Wisconsin Survey shows that residents can not stand the constant noise from the turbines and have resulting health problems. The noise level for these

3-14

monstrosity turbines will affect the local residents. The 50 dBA noise level will affect the health of local residents as the Lincoln Township Survey shows. The Lincoln Township Wisconsin Survey showed 67% of people near the wind farm were awakened by wind turbine noises.

Decommissioning

The Decommissioning Plan should be in the DEIS. This project should stop and the DEIS should be redone. . Where is the information on a bond Desert Claim we can tear down the turbines when they result in being eyesores, inefficient and a waste of taxpayer money? I think the wind farm companies will sell the wind farm and need to allow for tearing them down.

3-15

Aircraft Safety

I am a Private Pilot who flies in the Kittitas valley and these monstrosity turbines are in the way. They are too close to the Flying Rock Ranch grass air strip near Reecer Creek which I land on. Midstate Aviation at Bowers field trains CWU students to fly in the valley. The monstrosity turbines are dangerous and unsafe for these students. The very fact that the Federal Aviation Agency

3-16

requires lights proves these monstrosity turbines are a hazard to flight.

3-16
(con't)

Setbacks

The setbacks are inadequate to protect from shadow flicker, flashing lights, noise, ice throw and blade throw. These set backs as I mentioned earlier should be 4000feet to ensure safety. This is especially true in our litigation society.

3-9
(con't)

Property Values

Regardless of the untruths in the local Daily Record Newspaper that property values would not be affected, the results of the Lincoln Township Wisconsin Survey show that turbines within one mile lower property values by 26% and 74% of the people would not buy within a quarter mile of turbines. Real estate people in Kittitas county have stated that wind farms will affect property values. Who would want to live next door to these monstrosity turbines? Where is the impact on the Kittitas County property values.

3-17

Dwight Lee Bates
1509 Brick Road
Ellensburg WA
98926
(509) 925-5055
bateslee@elltel.net

Comment 3: Dwight Lee Bates

3-1 *Response:* The one-year study conducted by the Applicant was based on and consistent with the Washington Department of Fish and Wildlife (WDFW) guidelines for wind power siting and development. The 2003 WDFW Guidelines that were in effect at the time avian studies for the project were completed recommended 1 year of pre-construction avian studies. The updated Guidelines that WDFW issued in April 2009 also recommend 1 year of avian studies, unless there is very limited data about the surrounding area or indications of relatively high or especially sensitive avian populations in the area; the latter circumstances do not apply to the Desert Claim Project Area. Similar comments were received in response to the Draft EIS issued by Kittitas County, and a detailed response was provided in the 2004 Kittitas County Final EIS.

3-2 *Response:* The SEIS presents a detailed technical analysis of potential bird impacts associated with the proposed project, and the consequences of the estimated mortality. The analysis determined that the impacts to the affected species would not be significant at the regional population level, and the SEIS identified mitigation measures that would further reduce the potential impacts. This comment references bird mortality at Altamont Pass, but it is widely acknowledged that the Altamont Pass experience is not indicative of avian impacts expected from wind projects proposed today. The Altamont Pass project used older wind generation technology and was sited in a particularly high avian use area. The SEIS discusses avian impact information gathered from 11 wind power projects currently operated in the Pacific Northwest, which are believed to provide data that are much more representative of the likely impacts at Desert Claim.

3-3 *Response:* The commenter's opinion concerning bird mortality is noted. Passerine fatalities resulting from the Desert Claim project are estimated to be 280; not 740. SEIS Section 3.2.3.5 explains that this number of fatalities is not significant because the regional populations of these species are so large.

3-4 *Response:* Based on the documentation already in the record at the time EFSEC began preparing the Draft SEIS, the topic of fire hazards was not included within the scope of the SEIS. Fire hazards were addressed thoroughly in the Final EIS published by Kittitas County in 2004, and this information does not need to be repeated in the SEIS; see Final EIS Section 3.8.2.1. The Final EIS presented information indicating that wind power projects are unlikely to cause fires because of the fire safety features, monitoring and control systems, and response measures that are standard features in modern wind energy projects. The Final EIS recommended that power collection lines be placed underground as much as possible to reduce fire risks. In addition to locating power collection lines underground, the Applicant has proposed to prepare both a Construction Emergency Plan and an Operations Emergency Plan that will include measures to prevent and respond to fires. The Applicant has also indicated that it will enter into a fire services agreement so that the entire project site is included within a fire district service area.

3-5 *Response:* The SEIS provides a complete assessment and disclosure of the expected visual impacts from the Project. The commenter's preference for maintaining the existing view is noted.

The height of the proposed turbines is related to energy output. The Repower MM92 turbine that the Applicant proposes to use is 410 feet high (measured to the tip of the blade pointing straight up) and generates 2.0 MW of power. The proposed 95 turbines would generate 190 MW of power. In comparison, the proposal evaluated in the Final EIS included 120 turbines that were 340 feet high but generated 1.5 MW of power each. By using taller turbines in the current proposal, fewer turbines can be used to generate more power than the original proposal.

A setback of at least 1,640 feet from non-participating residences is incorporated in the proposed turbine layout to reduce visual impacts. The visual setback is sufficient to avoid the so-called "looming effect" that may be caused by large objects, such as wind turbines, when they are located close to smaller buildings, such as residences. See SEIS section 3.4.3.1.

The pre-filed testimony of David Blau (Exhibit 18) and his accompanying research report (Exhibit 18.2) set forth factors that were used to determine an appropriate setback distance. The report identified recommended height:distance relationships between buildings and surrounding open space. Since the 1400s, architects and urban designers have recommended ratios of between 2:1 and 4:1 as the appropriate relationship between the height of buildings and surrounding spaces. The report also reviewed literature regarding the physiology of the human eye, to identify the standard field of vision encompassed by a viewer.

The report also includes a case study of an existing wind power project using the same turbines as the Desert Claim Project (Goodnoe Hills) to illustrate how distance influences the presence or lack of the looming effect. The report concludes that any visual looming effect of a 410-foot wind turbine is substantially dissipated at a setback ratio of 3:1 (1,230 feet) and is non-existent at a ratio of 4:1 (1,640 feet).

Section 3.4 of the Draft SEIS evaluates the impact of turbines on 25 representative views in the project vicinity. Photos were taken from public roads, parks, and similar areas, where large numbers of people would be exposed to views of turbines. Photos were not taken from individual homes; it is acknowledged that turbines will be visible. The evaluation describes the features of the existing landscape, including scenic quality, and identifies impacts from the Project.

It is acknowledged that the commenter would prefer not to have any wind turbines in his view. At the same time, it is noted that several residents who live near the Project Area have testified in support of the project. A study conducted by the National Research Council of the National Academy of Sciences has noted that "public perceptions of wind energy projects vary widely" (NAS/NRC 2007). Some people find them beautiful; some find them intrusive and ugly. Acceptance levels generally increase following construction. (Id.)

3-6 *Response:* As noted above, the SEIS provides a complete assessment and disclosure of the expected visual impacts from the project. Figures 3.4-29, 3.4-35, 3.4-37, 3.4-41 and 3.4-43 (the simulations from viewpoints 3A, 6A, S6B, S7B and S7C) illustrate expected impacts along or in the vicinity of Highway 97.

The Washington State Tourism website (www.experiencewa.com) contains a map of “scenic resources and byways”. Highway 97 is not designated as scenic byway. According to this website, views of the Stuart Range and Mt. Stuart from Cle Elum are identified as scenic, but not from other locations. The Yakima Canyon from Ellensburg south toward Yakima is identified also as a scenic byway, but Highway 97 to the north is not.

The Scenic & Recreational Highways Act of 1967 (RCW 47.39) also designates various scenic highways. A portion of Highway 97—from the junction with SR 10, 2.5 miles north of Ellensburg north to the junction with Highway 2—is designated as a “scenic highway.” The statute, however, does not place any restrictions on land uses in the vicinity of a scenic highway. Rather, as described in the statute, the designation is intended to encourage cooperative state and local corridor management plans for scenic and recreational resources. No such plan has been developed for Highway 97.

3-7 *Response:* The topic of shadow flicker falls outside the scope of the SEIS, but was addressed extensively in the Final EIS published by Kittitas County in 2004. See Final EIS Section 3.8.2.3. The Final EIS discusses the available literature. It explains that the potential for adverse health affects from shadow flicker depends primarily on the frequency of flickering, and that the frequency for shadow flicker from wind projects is not likely to result in adverse health consequences. Modeling and analysis of shadow flicker expected from the Desert Claim Project indicates that nearby residences are unlikely to experience any noticeable shadow flicker. Furthermore, if nearby residences do experience shadow flicker, the Applicant has agreed to shut down turbines during periods of shadow flicker.

3-8 *Response:* The SEIS does not address property values because SEPA does not recognize property values as an element of the environment; an EIS is not required to discuss non-environmental issues (see WAC 197-11-444, 197-11-448, and 197-11-450). EFSEC is providing information about property values due to the expressed local concern, however. Please see the response to Comment 3-17, which addresses more specific concerns about property values. Comment 3: Dwight Lee Bates (continued)

3.9 *Response:* Hazards such as ice or blade throw were addressed in detail in the Final EIS published by the County in 2004 and the analysis is not repeated in the SEIS; see Final EIS Section 3.8.2.1. The comment provides no reference in support of the claim that ice or blades could be thrown 1,000 feet, and no rationale for proposing a 4,000-foot setback. A study completed by KPFF Consulting Engineers concluded that the maximum distance of blade throw from the turbines proposed to be used in this project would be 500 feet, and the maximum distance of ice throw would be 100 meters (Tab 6 of the Revised ASC: KPFF, Hazard Zones

Resulting from Certain Defined Failures of REpower MM92 Wind Turbines at the Desert Claim Project, 2006). The Applicant has, therefore, proposed a safety setback of 625 feet, providing a 25 percent margin of safety beyond the maximum potential distance of blade throw, ice throw, and tower collapse.

3-10 *Response:* The extent to which a project's construction and operation will generate state and local tax revenues is a topic that SEPA does not require an EIS to address and it falls outside the scope of this SEIS. Nonetheless, the following information is provided.

An economic study prepared by Central Washington University, Kittitas County Economic Impacts from Proposed Desert Claim Wind Power Project (February 2009), estimates that the Desert Claim project would generate approximately \$1.15 million annually in local property taxes. These property tax revenues would flow to various taxing districts as follows:

Taxing District	Value of Project in District	Tax
State Schools	\$155,040,000	\$339,205
County Current	\$155,040,000	\$142,766
County Roads	\$155,040,000	\$174,471
Hospital #1 Levy	\$155,040,000	\$299
Hospital #1 Bond	\$155,040,000	\$38,890
Fire #2 Levy	\$77,520,000	\$106,766
Ellensburg School #401		\$277,665
Levy	\$146,880,000	
Ellensburg School #401		\$62,324
Bond	\$146,880,000	
Cle Elum School #404 Levy	\$8,160,000	\$6,896
Cle Elum School #404 Bond	\$8,160,000	\$2,953
		<hr/>
		\$1,152,236

An economic study prepared by ECONorthwest, Economic Impacts of the Desert Claim Wind Project (April 2009), estimates that the Desert Claim project would also generate approximately \$138,000 each year in various other state taxes, as well as making annual lease payments to the Washington Department of Natural Resources of approximately \$435,000, which will benefit the State School Fund.

3.11 *Response:* Section 106 of the National Historic Preservation Act applies to federal undertakings. Because there is no identified need for a federal permit or federal funding for the Desert Claim Project, Section 106 does not apply. The cultural resource studies undertaken for and documented in the SEIS reflect consideration for historical sites that are important to all people, including the Yakama Nation. The Applicant consulted with the Yakama Nation and has entered into a Memorandum of Understanding to address cultural resources of significance to the Yakama Nation; please refer to the responses to Comment Letter 12 below.

3-12 *Response:* The typical U.S. home uses an average of 10,000 kWh of electricity annually. One MW of wind energy capacity typically generates enough electricity to power 225 to 300 homes; therefore, a 190-MW project would generate enough electricity to power 42,750 to

57,000 homes (www.awea.org/faq/wwt_basics.html). Washington State has already made a policy decision to increase electricity generation from renewable resources such as wind. According to RCW 43-21F.015, "[i]t is the policy of the State of Washington that . . . The development and use of a diverse array of energy resources with emphasis on renewable energy resources shall be encouraged." RCW chapter 19-285 (Initiative 937) requires all utilities serving more than 25,000 customers to serve 15 percent of their load from renewable energy, such as wind, by the year 2020. Based on current supply conditions for all types of renewable energy, it is clear that wind generation will comprise a substantial proportion of the renewable generation needed to comply with the law.

3.13 *Response:* Based on the documentation already in the record at the time EFSEC began preparing the Draft SEIS, the topic of lighting impacts was not included within the scope of the SEIS. Nighttime lighting was addressed thoroughly in the Final EIS published by Kittitas County in 2004 and this information is not repeated in the SEIS; see Final EIS Section 3.10.2.3. In addition, Section 3.4.4 of the Draft SEIS acknowledges that the visibility of red lights on turbines from multiple wind projects would likely be perceived by residents in the area as an adverse visual impact. As noted in the SEIS, the Applicant has proposed to install the minimum number of safety lights on the turbines that will meet FAA guidelines for marking wind turbines; those guidelines now prescribe only red lights on turbines, not red and white lights as was the case in the past. The Applicant has proposed various other mitigation measures (including use of full-cutoff light fixtures and use of motion sensors on outdoor lighting) to minimize the effects of project lighting.

3-14 *Response:* The comment incorrectly reports the results of the Lincoln Township survey. In a survey of 233 people living near the Lincoln Township Wind Turbine Project, only 6 percent responded that they had been awakened by noise from a wind turbine in the past year; see Township of Lincoln Wind Turbine Moratorium Study Committee, Final Report of the Wind Turbine Moratorium Study Committee, Tab 8 Survey Results (Feb. 11, 2000). Other studies have indicated that noise from wind turbine projects is not a significant problem. For example, a nationwide study in Britain concluded that "windfarm noise is an extremely small-scale problem," and that noise complaints concerning wind farms are rare, especially compared to noise complaints regarding other industrial sources (A. Moorehouse, et al, Research into Aerodynamic Modulation of Wind Turbine Noise: Final Report, July 2007).

For this project, the Applicant commissioned a noise modeling study, which concluded that noise levels will be 50 dBA or less at the Project's boundary with residential properties. 50 dBA is the limit established by the Washington Department of Ecology and EFSEC regulations for nighttime noise levels at residential properties (WAC 173-60-040; WAC 463-62-030). Noise levels are expected to be lower at the residences themselves, and still lower inside residences where people would sleep.

3-15 *Response:* A conceptual description of the decommissioning plan is provided in Section 2.2.4 of the SEIS; that description is sufficient and appropriate for SEPA compliance purposes. If this proceeding results in a Site Certification Agreement for the Desert Claim Project, the

Applicant will be required to submit a more detailed decommissioning and site restoration plan prior to beginning project construction.

3.16 *Response:* Based on the documentation already in the record at the time EFSEC began preparing the Draft SEIS, the topic of air transportation was not included within the scope of the SEIS. Air transportation issues were addressed thoroughly in the Final EIS published by Kittitas County in 2004; see Final EIS Section 3.13.2. The Final EIS explained that the impact analysis reasonably focused on project consistency with air traffic regulations, and that actions that are consistent with the regulations can reasonably be presumed to be sufficiently safe. All aircraft operations, such as flight activity at Flying Rock Ranch or flight training out of Bowers Field, must be consistent with safe and legal flight procedures and must maintain a safe minimum flying altitude. The federal air traffic regulations acknowledge that human activity will result in the construction of tall objects that could be obstacles for aviation, and such obstacles are routinely marked on aeronautical charts so that aviators will know to avoid them. Development of the Desert Claim project would result in no aviation safety issue as long as aviators fly in accordance with the applicable legal requirements and the project is built and operated in accordance with the safety lighting requirements. Comment 3-16 is a nearly verbatim repeat of a comment on the Draft EIS from the same source, which was addressed in the Final EIS. The comment provides no new information about this issue.

3-17 *Response:* The SEIS does not address property values because SEPA does not recognize property values as an element of the environment; an EIS is not required to discuss non-environmental issues (see WAC 197-11-444, 197-11-448, and 197-11-450). EFSEC is providing responses to comments about property values due to the expressed local concern, however.

The comment incorrectly reports the results of the Lincoln Township survey. The survey did not ask respondents whether or not they believed their property values had declined, and did not conclude that property values had declined by 26 percent. The survey did ask people how close to a turbine they would consider buying or building a home. The respondents replied as follows: 17 percent would buy or build within 800 feet to 1/4 mile of a turbine; 13 percent from 1/4 to 1/2 mile; 7 percent from 1/2 to 1 mile; 12 percent from 1 to 2 miles; 42 percent from 2 or more miles; and 9 percent provided no response. Although the survey indicates that many people would not purchase a home less than a half mile from a wind turbine, it also indicates that one-third of respondents would do so, suggesting a sizeable market for such homes.

The commenter provides no reference or authority supporting the contention that wind farms will adversely affect property values. The issue of the potential negative effect of wind power projects on the value of surrounding properties was addressed in the Final EIS published by Kittitas County (Section 5.3.1 Issue NS-1). The Final EIS referenced a 2003 report published by Kittitas County that summarized the existing literature on the effect of wind power projects on property values (Huckell/Weinman Associates 2003). The studies summarized in that report concluded that wind power facilities have not diminished the value of surrounding properties, and in some instances, the value of properties within views of wind power projects have increased more than comparable properties without such views.

A study titled “Impacts of the Desert Claim Wind Farm Project on Local Property Values” (June 10, 2009) was prepared for enXco by Barton DeLacy. Mr. DeLacy is a certified real estate appraiser with specialized experience with energy projects. The study examined land use in the area surrounding the Project site, evaluated recent Kittitas County property sales market data, and reviewed the available literature on how wind power projects affect property values. The report concludes that Desert Claim would not be likely to adversely affect the value of nearby properties; effects would be neutral or positive. Major findings are summarized below.

Most properties surrounding the Desert Claim site are used for agriculture or ranching, and their value is based on the land’s productivity for these uses, not on aesthetics or views of the surrounding area. Most of the residences in the area, the study observes, have not been designed or oriented to maximize a particular view, and do not derive their primary value from views.

The study reviewed local property sales data over a 5-year period to determine if the announcement of the Desert Claim proposal, or the existence of other wind power facilities in Kittitas County, had affected property values. The data do not indicate that either Desert Claim or other wind power projects has had an adverse effect on property values. Recent changes in property values were concluded to be symptomatic of the current recession and general decline in the housing market; this was also the opinion of local realtors who were interviewed as part of the study.

The DeLacy study also reviewed published literature on the property value effects of numerous wind power projects in the U.S. and Great Britain. This includes studies prepared by the Lawrence Berkeley National Laboratory (Hoen & Wiser 2006), Sims & Dent (2004), and the Renewable Energy Policy Project (Sterzinger et al. 2003). None of these studies found evidence that close proximity to wind turbines or views of wind turbines has an adverse effect on property values.

Finally, DeLacy analyzed market data on property sales (until mid-2007) near four wind projects in rural areas of New York, Vermont, and Illinois. The market data did not identify any adverse effect on property values in areas proximate to the wind power facilities.

David Crane
1201 N. Vista Rd.
Ellensburg, WA. 98926

April 13, 2009

EFSEC
Allen J. Fiksdal, Manager
905 Plum St. SE
Olympia, WA. 98504-3172

To Whom It May Concern,

This is in regard to the Desert Claim Wind Power Project DSEIS. In my opinion, the project has been carefully planned and will be a huge benefit to our city and county. I believe it has the support of a huge majority here in our valley.

Thank you for your wise and professional work in behalf of our community and state, in past projects. We are hopeful of a soon and smooth approval of the Desert Claim Wind Power Project and especially in view of the current (no pun intended) economic downturn and the urgent need of our schools.

The people at enXco have demonstrated commendable professionalism, restraint, and expertise in the design and development of this project.

Respectfully,



David Crane
(509) 962-1431

RECEIVED
APR 15 2009
ENERGY FACILITY SITE
EVALUATION COUNCIL

4-1

Comment 4: David Crane

4-1 *Response:* The comment is noted.

Public Comment
DSEIS #5
RECEIVED

BEFORE THE STATE OF WASHINGTON

APR 20 2009

ENERGY FACILITY SITE EVALUATION COUNCIL
**ENERGY FACILITY SITE
EVALUATION COUNCIL**

In the Matter of
Application No. 2006-02

DESERT CLAIM WIND POWER
LLC

DESERT CLAIM WIND POWER
PROJECT

ORDER COMMENCING ADJUDICATIVE
PROCEEDING;

NOTICE OF OPPORTUNITY AND
CLOSING DATE TO FILE PETITIONS
FOR INTERVENTION- April 17, 2009

NOTICE OF PREHEARING
CONFERENCE AND ORAL ARGUMENT
ON INTERVENTION -
April 23, 2009 1:30 P.M. at Hal Holmes
Community Center Ellensburg,
Washington

NOTICE OF TOUR OF THE DESERT
CLAIM WIND POWER PROJECT SITE -
April 23, 2009 Leaving at approximately
3:00 P.M. from the Hal Holmes
Community Center Ellensburg,
Washington

The Application

*No
THESE ARE A JOKE!!
THEY DO NOT SUPPORT
THEMSELVES! TAX PAYS
DO - THEY THEN PAY
PROPERTY OWNERS!!
THANKS*

Desert Claim Wind Power Project, Application No. 2006-02 - On February 2, 2009 Desert Claim Wind Power LLC, a Washington limited liability company submitted a revised Application for Site Certification to the Washington State Energy Facility Site Evaluation Council (EFSEC or Council) to construct and operate the Desert Claim Wind Power Project (Project) a 190 megawatt electrical wind generation facility. This application is a revision to the original application submitted in November 2006 and includes the following Project design changes: The project area has been consolidated to one contiguous area covering 5,200 acres; the total number of turbines has been reduced from 120 to 95; non-participating residences located within 2,500 feet of a proposed turbine have been reduced to seven. The Project is proposed to be located in unincorporated Kittitas County, approximately 8 miles northwest of the city of Ellensburg.

EFSEC has taken lead agency status under WAC 197-11-938 of the State Environmental Policy Act (SEPA) rules for the environmental review of the Desert Claim Wind Power Project. EFSEC has prepared a draft supplemental environmental impact statement (DSEIS) for this project that has been issued for public comment. EFSEC will also conduct an

Desert Claim Wind Power Project: Notice to Hold Adjudicative Proceeding;
Notice of Closing Date to File Petitions for Intervention - April 17, 2009
Notice to Hold Prehearing Conference - April 23, 2009

Page 1 of 3

examination of the project through a formal adjudicative proceeding.

Notice of Adjudicative Proceeding

The Council is reviewing Application No. 2006-02 under the procedures set forth in Chapter 80.50 of the Revised Code of Washington (RCW) and Title 463 of the Washington Administrative Code (WAC) for reviewing applications for new major energy facilities. The statute requires the Council to hold an adjudicative proceeding under Chapter 34.05 RCW, the Administrative Procedure Act. EFSEC in this order commences the adjudicative hearing related to Application No. 2006-02 in accordance with the procedural requirements found in Chapter 463-30 WAC and Chapter 34.05 RCW.

Notice of Closing Date for Submitting Petitions for Intervention – April 17, 2009 5:00 P.M.

The statutory parties to an adjudicative proceeding are the Applicant, Desert Claim Wind Power LLC., and the Counsel for the Environment (as defined in RCW 80.50.020(12)), Assistant Attorney General, Bruce Marvin. According to WAC 463-30-050, any state agency that is a member of EFSEC, or has opted to appoint a Council member for this proposal, may participate as a party. Any other person may petition to intervene as a party in this adjudicative proceeding under RCW 34.05.443, RCW 80.50.090, and WAC 463-30-091. The Council will consider the requests for intervention and determine whether or not to grant intervention.

An "intervenor," as defined in RCW 80.50.020(3), may be an individual, partnership, joint venture, private or public corporation, association, firm, public service company, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private, however organized. Any such "person" who wishes to participate in this proceeding may petition for intervention. The nature of intervenor status and a discussion of factors that the Council has used in deciding whether to grant petitions for intervention are described in this notice.

Each person admitted to an adjudicative proceeding as an intervenor is a party to the proceedings only for the purposes and subject to any limitations and conditions specified in the EFSEC order, granting intervention.

In this case, the deadline for submitting requests for intervention is April 17, 2009.

The Council will consider requests for late intervention according to the requirements of WAC 463-30-091 and 463-30-092 and other considerations identified in this Notice. See the discussion below for further information. Also see Other Opportunities for Public Participation below.

How to Intervene

To be considered timely, Petitions for Intervention in the matter of Application No. 2006-02

Desert Claim Wind Power Project: Notice to Hold Adjudicative Proceeding;
Notice of Closing Date to File Petitions for Intervention – April 17, 2009
Notice to Hold Prehearing Conference – April 23, 2009

Page 2 of 3

Windmills generate complaints

ENERGY | Eastern Oregon residents are concerned that the nonpolluting turbines are noisy and may harm their health.

The Associated Press

BOARDMAN, Ore. — Wind turbines may supply power without pollution but they are also generating complaints about noise and even possible health effects for people who live near them.

Dan Williams says the 240-foot-tall turbines he can see from his hilltop home near Boardman in Eastern Oregon make so much noise they keep him awake at night.

Williams is among neighbors along Highway 74 demanding that Morrow County enforce state noise regulations on the Willow Creek Wind Energy Project or revoke its land-use permit.

The 40-year-old construction contractor told *The Oregonian* newspaper in Portland that wind-energy companies downplay the noise.

"They said this is going to be about as loud as your refrigerator in your house, which is a crock," he said.

With Oregon on track to triple its wind-energy production in coming years, concerns are likely to increase.

Oregon wind farms already generate 1,000 megawatts, enough to power as many as 300,000 homes, said Lou Torres, spokesman for the Oregon Department of Energy.

Wind farms to produce an additional 2,000 megawatts are in the works, he said, giving the state a total of about 2,000 turbines, many taller than the Statue of Liberty when blades are pointed up.

"When that (work) is completed in the next couple of years, we will probably be fourth or fifth in the country on wind energy," Torres told *The Oregonian*.

Many are planned for Columbia Plateau in Morrow, Sherman, Gilliam, Wasco and Umatilla counties.

The Oregon Facilities Siting Council last July approved a 909-megawatt farm with 305 turbines spread over 32,000 acres in Gilliam and Morrow counties, being developed by Caithness Energy of Chicago.

But the backlash is getting some attention.

In January, a Massachusetts company yanked plans for a wind farm outside The Dalles after opponents complained that it would be too close to homes, ruin spectacular Columbia River Gorge vistas and put wildlife at risk.

Other critics, including some in Oregon, cite work by a New York doctor who coined the term "wind turbine syndrome" to describe effects such as headaches, dizziness and memory loss of living near the machines.

"This thing is not rare," Dr. Nina Pierpont of Malone, N.Y., said of the syndrome.

Industry representatives dismiss such talk.

Shawna Seldon, spokeswoman for the American Wind Energy Association in Washington, D.C., said her group is unaware of any peer-reviewed research linking wind turbines and negative health effects.

Likewise, Mike Logsdon of Invenergy, the 6-year-old Chicago company that built the Willow Creek farm, also said there is no evidence sug-

gesting the turbines cause health problems.

Still, another resident of the area, Mike Eaton, agrees with Williams and other neighbors who complain about the noise and vibrations from the turbines.

The retired 61-year-old furniture maker said the turbines give him nausea by aggravating inner-ear and balance problems he's had since a 1966-67 tour in Vietnam subjected him to the constant pounding of an Army 155-mm artillery piece.

"I cannot live where I'm living now with these decibels and vibrations," he said.

Carla McLane, Morrow County planning director, said health issues never came up during planning for the 72-megawatt Willow Creek project. The county approved the farm in 2005, and turbines began operating this past December.

But Ryan Swinburnson, an attorney for Morrow County, said officials take the complaints seriously.

"The county's position is if there is a violation, the violating party needs to correct it," he said.

Comment 5: Mark Braun (spelling uncertain)

5-1 *Response:* The specific point of this hand-written comment is not clear. The commenter's opposition to the Project is noted. The newspaper article provided with this comment has been added to the record. The article is not specific to the Desert Claim Project and does not address the Draft SEIS; consistent with SEPA regulations regarding the specificity of comments (WAC 197-11-550), there are no substantive comments in the article and no further response is provided.

Public Comment :
DSEIS #6**Why Noise Criteria Are Necessary for Proper Siting of Wind Turbines**

Date: November 02, 2008

By:

George W. Kamperman, INCE Bd. Cert. Emeritus
Kamperman Associates, Inc.

And,

Richard R. James, INCE
E-Coustic Solutions

RECEIVED

APR 23 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL**Introduction**

Although industrial-scale wind turbines are now a familiar sight in many countries, they are only now becoming common in the USA and Canada. If the past few years are any guide, industrial "wind farms" will become very common indeed in North America, especially considering the robust government incentives for renewable energy.

Nina Pierpont's foregoing report injects an element of caution, perhaps even alarm, into this enterprise. Her research reveals significant health effects associated with living in the vicinity of industrial wind turbines. As a result of her research and that of others, we have reviewed sound studies conducted by consultants for governments, wind turbine owners, and local residents for a number of sites with known health or annoyance problems. (We included the homes of some of Pierpont's study subjects in our review.)

It is clear from Pierpont's report that turbine noise is a major issue for virtually all of her subjects. That wind turbine noise might be responsible for the majority of ailments identified by Pierpont as Wind Turbine Syndrome should not be a surprise. Sound levels of the type and level of those found on properties and inside homes of people living near operating turbines are often associated with sleep disturbance and the vast set of pathologies known to be caused by noise induced sleep problems. Dr. Pierpont's work builds upon a foundation of well accepted health risks documented by the World Health Organization (WHO) and other health standards organizations.

Building on Pierpont's work and that of other clinicians, we have developed a set of simple guidelines, using dBA and dBC sound levels, for communities to use in maintaining turbine

noise emissions within healthy limits. The following is a synopsis of a much longer report presenting measurement procedures and noise standards for use by towns in drafting responsible wind laws.¹

Background

Wind farms using the newer 1.5 to 3 MW (megawatt) turbines have resulted in numerous complaints from people who find they no longer live in the quiet rural community they enjoyed before the turbines went online. Questions have been raised about whether the current siting guidelines used in the USA are sufficiently protective for people living closest to the developments. Research into the computer models used to determine the layout of industrial wind farms and the distances from residents nearest the turbines show that models are not accurate enough to be used as the sole basis for making siting decisions without corrections for known errors and unaccounted for weather conditions. The models fail to account for increased sound output from turbines, and the effects on sound propagation, under certain weather conditions. In addition, the models fail to disclose the known errors of the underlying algorithms that are given as ± 3 dB for ISO 9613-2 based computer models. Other tolerances for the input data and turbulence in the wind are also not disclosed, yet they can add another 8 dB to the wind turbine's sound levels at a receiving property under common weather conditions..

We also reviewed noise criteria from other countries used for siting wind turbines. Current standards for turbine siting rely either on not-to-exceed dBA sound levels, such as the 50 dBA limit promoted by the wind industry in the USA, or on not-to-exceed limits based on the pre-construction background sound level plus an add-on (e.g., $L_{90A} + 5$ dBA). Nearly all countries rely on A-weighted sound. Only Germany has an explicit limiter for C-weighted sound levels.

Discussion

Our study revealed that some people living as far as 3 km (1.9 miles) from a wind farm complain of sleep disturbance from turbine noise. Many people living one-tenth this distance

¹See www.windturbinesyndrome.com.

(300 meters, or 984 feet) from turbines reported major sleep disruption and other serious medical problems from nighttime turbine noise. It is important to realize that the peculiar acoustic characteristics of wind turbine noise immissions cause the sounds heard at receiving properties to be far more annoying and troubling than the more familiar noise from traffic, industrial factories, and even aircraft.² Hence, the common community noise limits and “rules-of-thumb” used for the more common community noise sources are clearly not appropriate for siting industrial wind turbines.

It is worth noting, furthermore, that rural communities located at a distance from industry, highways, and airport-related noise emitters are much quieter than what is normally classified as “rural” in other community noise standards. Our studies show that the A-weighted L₉₀ background sound level in rural communities is often between 20 and 30 dBA, sometimes lower. For communities a mile or more from major roadways, nighttime background sound levels of less than 20 dBA are not uncommon. This also results in much lower dBC values than for other suburban or rural communities nearer major roadways. Our research shows that low frequency sound is often in the range of 25 to 40 dBC for communities a mile or more from highways. Thus, a new noise source with strong low frequency content is more significant when in an isolated rural community than in a suburban or urban area with more traffic and other man-made noises.

In general, *the further away from major roadways, airports, or industry the lower the low frequency background sound levels.* Thus, C-weighted criteria are more necessary in these communities to avoid problems inside homes, especially during late evening and nighttime.

We pose, below, some frequently asked questions, together with our responses. (The complete list can be found in the fuller version of our report at www.windturbinesyndrome.com).

Do national, international, or state and local community noise standards for siting wind turbines near dwellings address the low frequency portion of the wind turbine's sound immissions? No, they do not. Although state and local governments are in the process of establishing wind farm noise limits or wind turbine setbacks from nearby residents, these

² Sound “immissions” refer to sounds as heard at the receiving location. “Emissions” refer to the sound from the perspective of the sound source.

standards incorrectly assume that limits based on dBA levels alone are sufficient to protect residents.

Do wind farm developers have noise limit criteria or wind turbine setback criteria that apply to nearby residents? Yes. However, the wind industry routinely recommends residential wind turbine noise level limits of 50-55 dBA at the nearest home. These levels are far too high for the quiet nature of rural communities and pose health risks for the nearest residents, according to research like Dr. Pierpont's. An additional concern is that some of the methods for implementing computer models to predict operational sound levels at locations in the community report sound levels that are lower than what will occur in real operation. These two factors in combination can lead to post-construction complaints and health risks from locating wind turbines too close to people.

How does wind turbine noise impact nearby residents? Initially, the most common problem is chronic nighttime sleep deprivation. According to the reviewed medical research, this may develop into far more serious physical, psychological, and cognitive problems.

What are the technical options for reducing (mitigating) wind turbine noise immission at residences? There are only three: 1) increase the distance between source and receiver, 2) prohibit nighttime operation, or 3) reduce the source sound power immission.

Is wind turbine noise at a residence more annoying than traffic noise? Absolutely. Studies show that wind turbine noise was perceived by roughly 85% of respondents even when the A-weighted sound level were as low as 35.0-37.5 dB. Traffic and other common community noises levels seldom cause similar responses for perception, annoyance or sleep disturbance at such low sound levels.

Why do wind turbine noise immissions of only 35 dBA disturb sleep? The assumptions about wall and window attenuation being 15 dBA, or more, that are commonly applied to outdoor noise sources may not be sufficiently protective, considering the relatively high amplitude of the wind turbine's low frequency immission spectra. When evaluating sound penetration through a modern wood frame home all frequencies, including the lower frequencies, must be considered, not just the A-weighted levels. The reduction may be 15 dBA or more, but that is

not the proper criteria for preventing sleep disturbance. When considered as C-weighted values the difference from outside to inside the home may be only 6 dB or less. It is the low frequency aspect of wind turbine immissions that creates the “rumble problem” indoors, plus building vibration, and this can be addressed solely with C-weighted criteria.

What are typical wind farm noise immission criteria or standards? Limits are not consistent and may vary even within a particular country. For example:

- a) Australia: the greater of 35 dBA or $L_{90A} + 5$ dBA
- b) Denmark: 40 dBA
- c) France: $L_{90A} + 3$ (night), $L_{90A} + 5$ (day)
- d) Germany: 40 dBA
- e) Holland: 40 dBA
- f) United Kingdom: 40 dBA (day), 43 dBA (night) or $L_{90A} + 5$ dBA
- g) United States:
 - a. Illinois: 55 dBA (day), 51 dBA (night)
 - b. Wisconsin: 50 dBA
 - c. Michigan: 55 dBA

What is a reasonable wind farm sound immission limit to protect the health of residents? We propose a maximum property line immission limit of 35 dBA (L_{Aeq}) and that the post construction L_{Aeq} with turbines operating not exceed the pre-existing background $L_{90A} + 5$ dBA. We also include C-weighted criteria to address people’s complaints of low frequency noise. The dBC (L_{Ceq}) operating immission limit shall not be more than 20 dB above the measured dBA (L_{A90}) pre-construction nighttime background sound level plus 5 dB. A maximum not-to-exceed limit of 55 dBC (L_{Ceq}) is also proposed with adjustments if there are near-by heavily traveled major roads.

Why should the dBC immission limit not be more than 20 dB above the background dBA ($L_{A90} + 5$)? The World Health Organization (WHO) and others have determined that a sound emitter’s noise, which results in a difference between a dBC and dBA value greater than 20 dB, will be a troubling low frequency issue.

Is not L_{A90} the minimum dBA background noise level? L_{A90} is the statistical descriptor representing the quietest 10% of the time. It is not the minimum noise level. It may be understood as the sounds one hears when there are no nearby or short-term sounds from man-made or natural sources. It excludes sounds that are not part of the soundscape during all

seasons including wind generated noise. It is very important to establish the statistical average background noise environment outside for a potentially impacted residence during the quietest sleeping hours of the night (typically 10 PM to 4 AM). Nighttime sleep disturbance has generated the majority of wind farm noise complaints throughout the world. The basis for a community's wind turbine sound immission limits would be the minimum 10 minute nighttime L_{A90} plus 5 dB for the period of 10 pm to 7 am. This would become the Immission Limit for the proposed wind farm during the night. This can be accomplished with one or more ten (10) minute measurements during any night when the atmosphere is classified stable with a light wind from the area of the proposed wind farm. The Daytime Limits (7 am to 10 pm) could be set 10 dB above the minimum nighttime L_{A90} measured noise, but with 24 hour operation of the wind facility the nighttime criteria will always be the limiting sound levels.

Doesn't wind noise mask the sound of wind turbines? It is true that the sound level can increase over the L_{90} background sound level as surface wind speeds increase, but it is not true that wind masking is always present when wind speeds at the hub are sufficient to power the turbines. Nighttime weather conditions, especially in warm seasons, often result in wind velocities at the turbine hubs sufficient to power the turbines, while at ground level there is little or no wind. The result is the turbines can be operating at (or close to) full capacity while it is otherwise very quiet outside the nearby dwellings. These conditions exist frequently on clear nights when there is the vertical heat radiation from the surface of the earth decreases after sunset and the atmosphere becomes "stable." This condition is the focus of the "wind turbine noise problem" for many people. On nights like this, in the quiet of a remote rural community, turbine noise can be disturbing for miles (reports mention 3 km, nearly 2 miles).

Proposed Sound Limits

The simple fact that so many residents complain of low frequency noise from wind turbines is clear evidence that the single, A-weighted (dBA) noise descriptor used in most regions for siting turbines is not adequate. The only other simple audio frequency weighting which is standardized and available on all sound level meters is the C-weighting, or dBC. A standard sound level meter set to measure dBA is increasingly less sensitive to low frequency sound below 500 Hz. This is equivalent to one octave above middle-C on the piano. The same sound

level meter set to measure dBC is equally sensitive to all frequencies down to 32 Hz (lowest note on a grand piano). It is generally accepted that dBC readings are more predictive of perceptual loudness than dBA readings whenever low frequency sounds are significant.

Based on the above evidence, we recommend that wind turbine noise be measured using a) the commonly accepted criteria, which are based on pre-existing background sound levels in dBA and dBC, with b) a maximum 5 dB allowance for wind turbine immission – that is, 5 dB maximum for the audible sounds from wind turbines, over and above existing background sound levels. In other words, we recommend $L_{A90} + 5$ and $L_{C90} + 5$. To address excessive low frequency sound, we add criteria for low frequency noise out of balance with higher frequency sound.

We summarize the wind turbine sound limits as follows:

Wind Turbine Sound Limits to Protect Public Health

1. Establishing Long-Term Background Noise Level

- a. Instrumentation: ANSI or IEC Type 1 Precision Integrating Sound Level Meter plus meteorological instruments to measure wind velocity, temperature and humidity near the sound measuring microphone. Measurement procedures must meet ANSI S12.9 Part 3.
- b. Measurement location(s): Nearest property line(s) from proposed wind turbines representative of all non-participating residential property within 2.0 miles of project boundary.
- c. Time of measurements and prevailing weather: The atmosphere must be classified as stable with no vertical heat flow to cause air mixing. Stable conditions occur in the evening and middle of the night with a clear sky and very little wind near the surface. Sound measurements are only valid when the measured wind speed at the microphone does not exceed 2 m/s (4.5 mph).
- d. Long-Term Background sound measurements: All data recording shall be a series of contiguous ten (10) minute measurements. The measurement objective is to determine the quietest ten minute period at each location of interest. Nighttime test periods are preferred unless daytime conditions are quieter. The following data shall be recorded

simultaneously for each ten (10) minute measurement period: dBA data includes L_{A90} , L_{A10} , L_{Aeq} and dBC L_{C90} , L_{C10} , L_{Ceq} . Also record, maximum wind speed at the microphone during the ten minutes and a single measurement of temperature and humidity at the microphone for each new location or each hour whichever is more often. A ten-minute measurement contains valid data provided: Both L_{A10} minus L_{A90} and L_{C10} minus L_{C90} are not greater than 10 dB and the maximum wind speed at the microphone did not exceed 2 m/s during the same ten-minute period as the acoustic data.

2. Wind Turbine Sound Immission Limits

No wind turbine or group of turbines shall be located to cause wind turbine sound immission at any location on non-participating property containing a residence in excess of the limits in the following table:

Table of Not-to-Exceed Property Line Noise Immission Limits ¹			
Criteria		dBA	dBC
A	Immission above pre-construction background:	$L_{Aeq} = L_{A90} + 5$	$L_{Ceq} = L_{C90} + 5$
B	Maximum immission:	35 L_{Aeq}	55 L_{Ceq} for quiet ² rural environment 60 L_{Ceq} for rural-suburban environment
C	Immission spectra imbalance	L_{Ceq} (immission) minus ($L_{A90} + 5$ (background)) ≤ 20 dB	
D	Prominent tone penalty:	5 dB	5 dB
Notes			
1	Each Test is independent and exceedances of any test establishes non-compliance Sound "immission" is the wind turbine noise emission as received at a property		
2	A "Quiet rural environment" is a location 2 miles from a state road or other major transportation artery without high traffic volume during otherwise quiet periods of the day or night.		
3	Prominent tone as defined in IEC 61400-11. This Standard is not to be used for any other purpose.		
¹ The procedures amending ANSI S12.9, Part 3 provided in the most recent version (2.1 or later) of the "THE "HOW TO" GUIDE TO SITING WIND TURBINES TO PREVENT HEALTH RISKS FROM SOUND" by Kamperman and James apply for this table.			

3. Wind Farm Noise Compliance Testing

All of the measurements outlined above in 1. Establishing Long-Term Background Noise Level must be repeated to determine compliance with 2. Wind Turbine Sound Immission Limits. The compliance test location is to be the pre-turbine background noise measurement location nearest to the home of the complainant in line with the wind farm and nearest the wind farm. The time of day for the testing and the wind farm operating conditions plus wind speed and direction must replicate the conditions that generated the complaint. Procedures of ANSI S12.9-Part 3 apply as amended and the effect of instrumentation limits for wind and other factors must be recognized and followed.

We have based our recommendations in this report on our present understanding of wind turbine sound emissions, land-use compatibility, and the effects of sound on health. Anyone choosing to follow these recommendations must assume all risks. Please seek professional assistance in applying these recommendations to any specific community or Wind Energy Conversion System (WECS) development.

For the most current version of the recommended criteria (2.1 or later), a sample noise ordinance and an explanation supporting the need for and basis of the criteria, please retrieve the full manuscript from: www.windturbinesyndrome.com.

Comment 6: No Name

6-1 *Response:* The article submitted as this comment is not specific to the Desert Claim Project and does not address the Draft SEIS; consistent with SEPA regulations regarding the specificity of comments (WAC 197-11-550), there are no substantive comments in the article. While no further response to this comment is provided, please note that the article addresses topics involving noise and the concept of “wind turbine syndrome” that are attributed to wind turbines in general. The same or similar points are included in several substantive comments that address the Draft SEIS. Please refer to the responses to Comments 22-1 and 24-4, for example.

April 23, 2009

RECEIVED

APR 23 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

:
Allen J. Fiksdal,
Manager EFSEC,
P.O. Box 43172,
Olympia, Wa. 98504 - 3172

The DSEIS that Desert Claim is asking to be considered is deeply flawed. The photography of the selected areas was edited for content and did not show the rural landscape at all. The simulations don't alter the size of the power poles and misrepresents the size and visibility of the windtowers. The barns and homes you do see, are in many instances over 30 feet high, and would be dwarfed by the windtowers. From Interstate 82 coming down the hill from Yakima the homes and barns in the project area are very visible. The presumption that they wouldn't be seen from town is ludicrous. The photographs also did not include the residences that will be visually impacted by the project and the number of citizens who will suffer from the destruction of the valley and its tremendous views. The DSEIS states that the land is sparsely populated and consists of pasture land and sagebrush. I am enclosing a map of the project site as it is portrayed in the DSEIS and the black dots represent residences that I was able to visually identify myself just from the road. As you can see there will be hundreds of people affected by the power project. In many parts of the country people are protected from having their views obstructed and ruined. How can EnXco get by with this sort of thing.

The people who live above the high line canal depend on natural water such as rivers and streams to irrigate pasture land and water livestock. We do not have access to the water from the canal. We also all depend on well water for home use. The ground water is tenuous, in that it is unpredictable as to how deep or where it flows. Desert Claim says that their disruption will be minimal, and temporary. I don't know how they can promise this when they need to build access roads, blast and excavate pads and pour the equivalent of 180,148 cubic feet of concrete for their 95 turbines. The access roads are 15 to 25 feet wide and provide vehicle access to the base of each tower. They will cross and crisscross 15 streams, 8 of them twice, and their construction will overlap 6 streams. They will also lay underground collection cables along these roads. These collection cables will also cross and crisscross the same streams. EnXco claims there will be no permanent disruption to the streams. Who are you kidding? Any disruption temporary or permanent is threatening the life blood of this area. We depend on the rivers and streams for our very survival. If I do not have the water I am entitled to under the Yakima River Adjudication Decision, then my pasture will die and the cattle with it. If my well fails and I have to dig another one, who will pay for the +360 ft. that need to be drilled to gain water, if it is available? A maintenance and operations building and a visitor center is also in the plans. They will need water for that. They say they will dig a well or get it from the landowner. I thought that well drilling in our county was under review? If they plan on getting water from the landowner as they say, then when did they plan on asking me if I would share my water rights? EnXco is very good at using the word temporary. The entire project is supposedly temporary. 30 years. For me and my husband its the rest of our lives and beyond.

The DSEIS claims that the bird mortality rate is acceptable and will not impact the species. They claim that 20 raptors per year, 400 passerines and 475 bats might die. The DSEIS states that in the whole columbia basin totaling all the wind projects we will lose 14000 birds and 8000 bats per year. They consider this insignificant and acceptable. They use those two words repeatedly in their DSEIS. No

mention of bald eagles or the bee population needed to pollinate alfalfa fields and orchards. Our agriculture is already in need of manual pollination. How many more bees can we afford to lose?	7-8
None I would think. There is also no mention of the increase in rodent or mosquito population when the birds are gone, or the disease factor from their increased population. The ground vibration generated by the windtowers will drive the mice , rats and moles away from here to a safer place.	7-9
Mabye to town??	7-10
The project area is still not contiguous. It has jutting areas and extensions that make it look like a building that has added wings and rooms to it making it not rectangular or square ; encompassing many land areas of unwilling and unhappy participants. Those people who thought that they had moved to the country and were bordered by state land where nothing would be built next to them are in for a rude awaking. The new towers are even taller than the proposal we turned down!!	7-11
The company says that it will replant disturbed areas. How do they plan to water that? If they are leaving it to nature, it will take 10 to 15 years to regrow. If they plan to plant and then abandon the care, then the new planting won't happen. They don't care about that. They will have gotten their project built, and I guarantee, sold to someone else, and the power will have been sold to the highest bidder, and Kittitas county?? We'll be left with the eyesore and no benefits.	7-12
Desert Claim promises 1.8 million to the local economy per year. Do you really believe that? They say that 340,00 will go to the school district. 775,000 to the DNR & State School Fund, 170.00 to county roads, 145,000 to county government, 40,000 to the hospital district, 210,000 to fire and rescue, 160 construction jobs, 3.6 million to the construction Local Income and 970,000 annually from new residents shopping in Ellensburg. Lets examine that more carefully. The land they are using is mostly private. The property taxes will be paid by the landowners, not EnXco. The land leased by the DNR will get some yearly \$\$. The money for county roads, fire and rescue, county government , schools and hospitals, also comes from property owners although some will come from B& O taxes from EnXco, eventhough the majority will go to the General Fund and not Kittitas county. The only reason EnXco wants to build the project here is because they have secured land leases from private landowners and will receive huge tax write-offs and production credits from the federal government. The promised money includes 970,000 annually from people shopping in Ellensburg. Do you really believe that there will be that many tourists who stay here just to see a windfarm and will generate that much \$\$\$ in shopping here? The residential base that has been paying their taxes faithfully for years will decrease. As many of us as possible will leave the area. Our home and land values will decrease and the chances of anyone buying our homes is minimal, but we will try to break even and go. This will become a community of Windfarms that generate electricity for California. The construction jobs will be gone after initial completion, and the workers will go home(far from here). If the local building doesn't warrant it, the people who were unemployed, will be unemployed again.	7-13
Desert Claim states that no alternative site is available. 92,160 acres belongs to the federal government. Make a deal with them. They seem to be subsidizing wind energy. Surely they will be receptive to the idea of windfarms on federal land? Let the military patrol it and reap some of the \$ it promises to generate. Mabye it will reduce your taxes! 136,746 acres belongs to the state for wildlife habitat and conservation. Your planning to disrupt elk herds, deer population and many other kinds of wildlife with your proposal, and you claim it will have no effect. The fact that hunting and hiking and snowmobiling generates over 4 billion \$ annually to our state has been greatly overlooked. The Reecer Creek area is one of the prime recreation areas of our State. Hunters, Hikers, Snowmobilers, and Stargazers come from all over the western U.S. To participate. I guarantee they spend more time and \$ in our county than windfarm tourists. We'll lose them and their money.	7-14
	7-15
	7-16

Don't let the present state of the economy sway you into thinking that we need to embrace this opportunity. The economy will turn around and if we don't allow this power generating plant to destroy our valley, then we will emerge from this economic downturn intact. Tell the EFSEC NO, NO, NO!!!!!! Wind turbines are to power what dirigibles were to airlines: huge, expensive, inefficient, low capacity, and totally dependant on perfect weather and government handouts! There were valid reason why this application was turned down 4 years ago. These same reasons still exist. Please support your citizens! They will be greatly affected if this comes to pass. At the very least restrict how many towers can be built and where. I've enclosed two different proposals that will make this project comparable to the kittitas wind power project you approved. Also get a promise from EnXco in the final contract that they can't sell out for at least 10 years; that the power will stay in the state and county, and that the 1.8 million dollar boost to the local economy will be guaranteed by them.

7-17

7-18

As a final incentive, my husband and I are willing to donate some of our 33 acres to someone interested in developing more solar power, but only if the windfarm DOES NOT happen. I'm sure there are companies out there who could build a solar facility for the same cost of the proposed windfarm. It would and could produce the same amount of MW, and use less land, be less destructive, less invasive and satisfy the GREEN requirement of the state and Federal Government.

Please stand by the county's 2005 decision and deny EnXco the right to destroy our valley. This is definitely the WRONG location for a power generating plant of this magnitude.

Chris & Lee Burtchett
12611 Reecer Creek Road
Ellensburg, Wa. 98926 (509) 962-6009

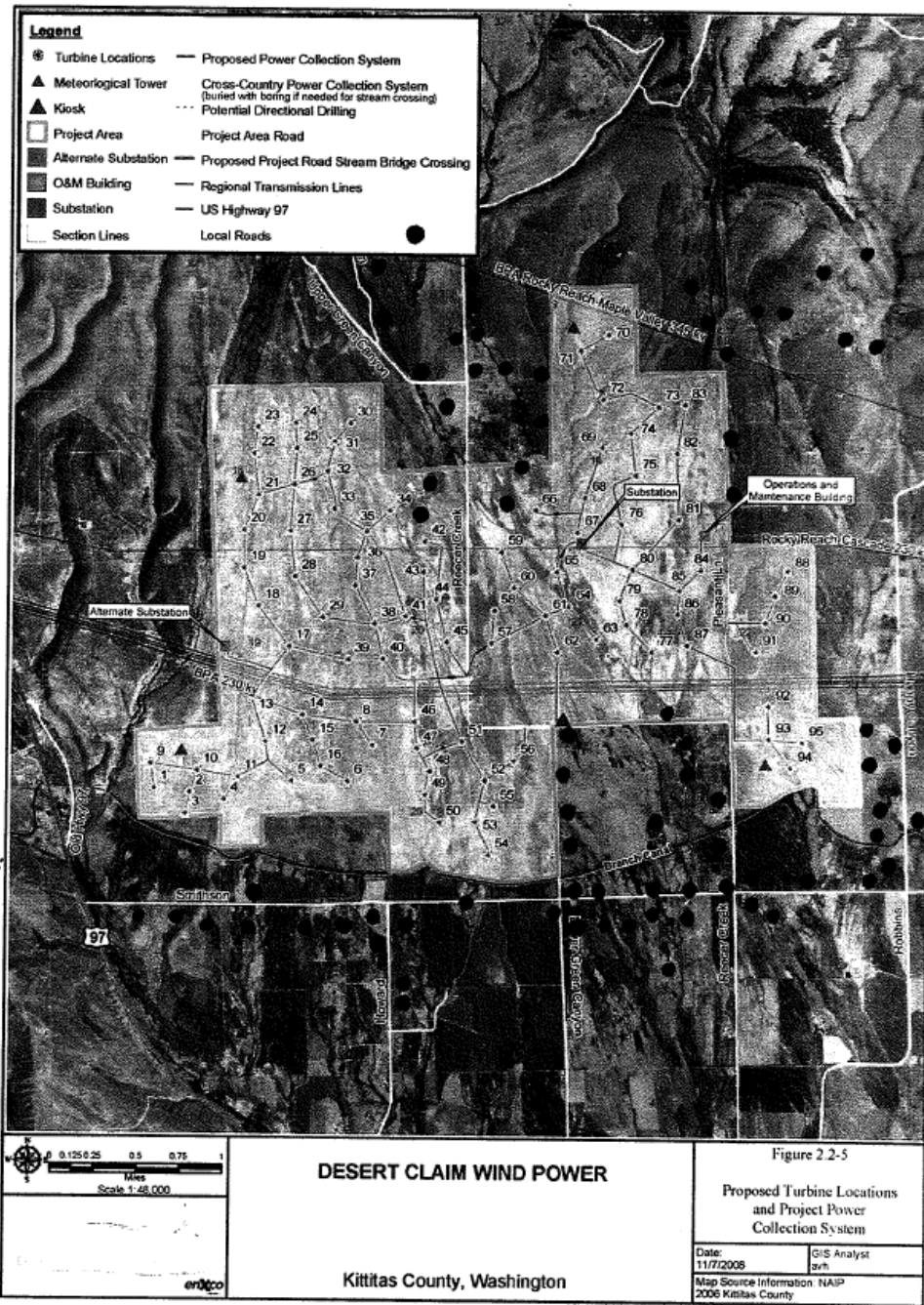
● residences within view of project area.

Aesthetics effect:

Highly Visible

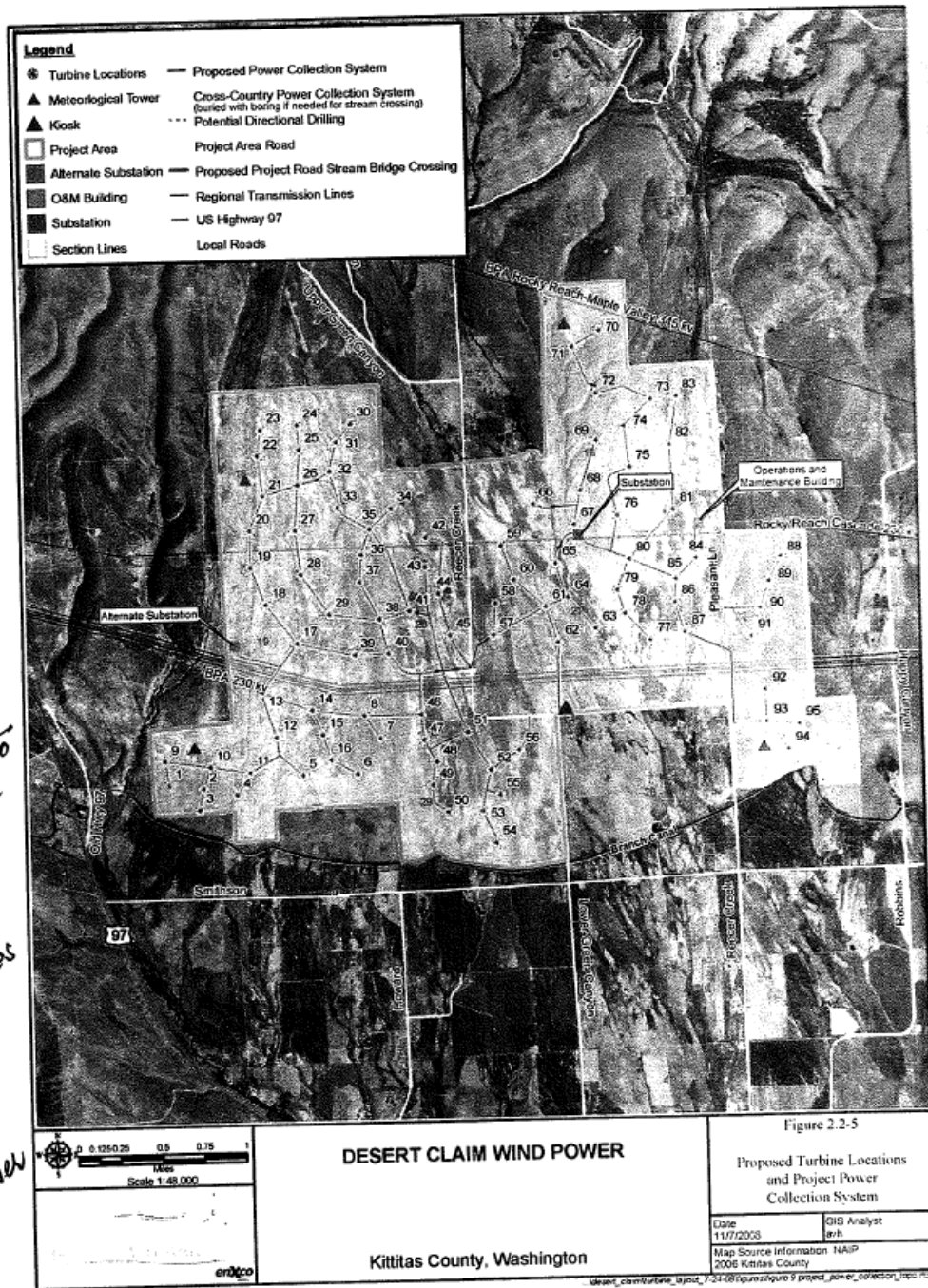
Turbines that should be eliminated:
46-54 } (13)
92-95 }

Still have 82-more than Kittitas Wind Power Project (Approved) Same 195MW



TURBINES
 1-16 (16)
 46-56 (10)
 92-95 (4)
 Total 30
 should not be
 built
 Reduce amt
 to 65 turbines

(Same as
 approved
 Kittitas Wind Power
 Project.)

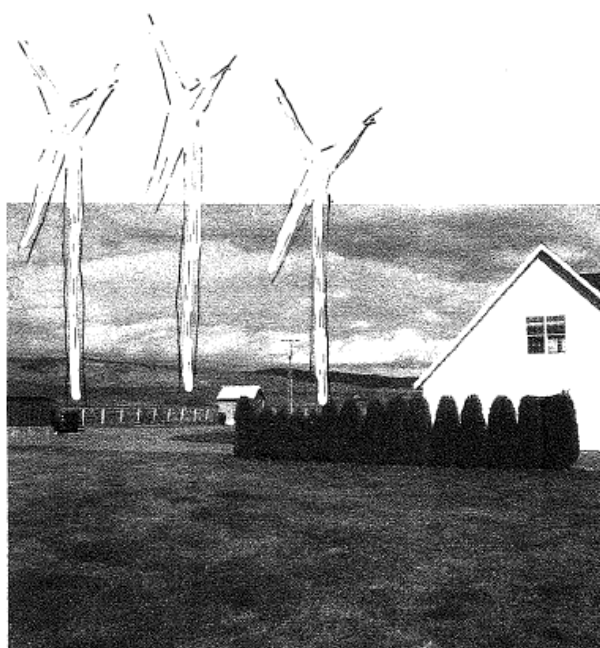




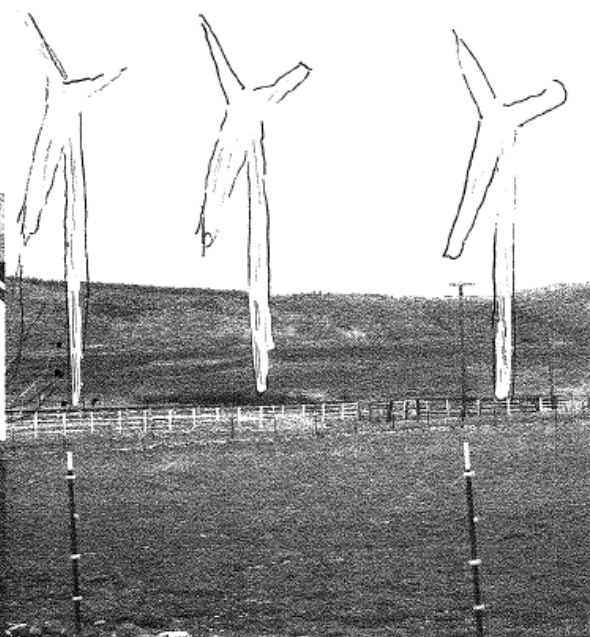
my house looking NE to towers 92-95



my front yard looking NE



view to NE From my back yard
Power Pole 60'
wind turbine 410'



Comment 7: Chris & Lee Burtchett

7-1 *Response:* All photos were taken with a 50mm lens, which is the focal length recommended for visual impact assessment. The photos were not edited. Section 3.4.3 of the SEIS describes the surrounding rural area in terms of landscape attributes; this rural landscape is illustrated in the photos and simulations. Please refer to the detailed response to Comment 13-1 regarding the accuracy of the simulations.

7-2 *Response:* The SEIS acknowledges that turbines will be visible from some residences and residents may object to changes in their views. Representative viewpoints were selected along public roads and other locations where relatively large numbers of the general public would potentially have views of turbines. This is consistent with the visual assessment methodology recommended by Kittitas County and by professional visual analysts. The visual assessment methodology is described in the Final EIS (Section 3.10 and Appendix G) and the SEIS (section 3.4), and is discussed further in response to Comment 42-1.

The comment suggests that hundreds of residences are located near the project. The 2004 Desert Claim Final EIS, which this SEIS supplements, contains a thorough description of land use patterns in the area surrounding the Project. The SEIS Project Description (Section 2.2.1.3) generally characterizes land use in the surrounding area, and identifies residences that are located proximate to proposed wind turbines. As described in the text, and shown on Figure 2.2-3 and Table 2.2-1, seven (7) residences—excluding those participating in the Project—would be closer than 2,500 feet to a wind turbine; none would be closer than 1,640 feet, which is four times the tip height of the proposed turbines. Please refer to the response to Comment 3-5, which discusses setbacks and how visual impacts decrease with increasing distance from wind turbines.

7-3 *Response:* Washington State law does not prohibit or regulate changes to views from individual properties. One purpose of SEPA is to identify how a proposal would impact the environment, which includes changes to views, and to identify measures that could be applied to mitigate impacts when a decision is made on a project. Section 3.4 of the SEIS evaluates the visual effects of the Desert Claim proposal from numerous viewpoints. As noted in the response to Comment 7-2, visual impacts are assessed from representative viewpoints such as public roads and parks, not from individual residences. All turbines are located at least four times the turbine tip height ($4 \times 410 = 1,640$ feet) from nearby residences; this is a means to mitigate the impact on nearby residences.

The comment implies that the laws in other states would prohibit the location of wind turbines in the view of residences, but it provides no reference or authority in support of that suggestion. In fact, other states that have adopted guidelines or model ordinances concerning wind project development have required lesser setbacks. The Massachusetts Model Ordinance requires a setback of 1.5 times the turbine tip height from residences; the Michigan Siting Guidelines recommend a setback of 1.0 times the turbine tip height from the property line; the Minnesota Model Ordinance requires a setback of 750 feet from residences and 1.1 to 1.25

times the tip height from the property line; the New York Model Ordinance requires a setback of at least 1.0 times the tip height from residences; the Oregon Model Ordinance requires a setback of 1.5 times the tip height from the property line; and the Wisconsin Model Ordinance requires a setback of 1,000 feet or 2 times the tip height from residences.

7-4 *Response:* Based on the documentation already in the record at the time EFSEC began preparing the Draft SEIS, the topic of groundwater and/or well impacts was not included within the scope of the SEIS. Water resources and uses, including ground water wells, were thoroughly addressed in the Final EIS published by Kittitas County in 2004, however; see Final EIS Section 3.3. The evaluation concluded that there would be no disruption to groundwater flow, recharge or discharge, depletion of groundwater supply, or reduction of groundwater quality as a result of the Project (Desert Claim Final EIS, Section 3.3.2.2). The evaluation included the effects of new impervious surfaces, construction of roads and pads, and blasting. Minor short-term turbidity due to water level fluctuations from blasting vibration was identified as a possible effect, but this would be minimized by compliance with required procedures.

In response to this comment, additional information regarding the location of wells within and adjacent to the revised Project Area was obtained from the Washington Department of Ecology database and reviewed by Associated Earth Sciences Inc. (AESI). No additional wells were identified within the revised Project Area; five domestic wells were identified west of the expanded Project Area in the northeast quarter of Section 25 of Township 19N, Range 17E. AESI reviewed the assessment in the Final EIS impacts and concluded that no new significant impacts would occur to groundwater supply or resources within or adjacent to the Project Area. The AESI evaluation is included in Appendix A of this Final SEIS.

7-5 *Response:* Section 3.1.3 of the Draft SEIS documented an evaluation of existing water resources and proposed Project actions that might disturb those water resources. The conclusion of that evaluation was that potential impacts would be avoided by use of bridges for road crossing of streams and use of boring, bridging, or overhead lines for electrical collection system crossings. Note that the water bodies involved are Type 3 streams and irrigation ditches; these are small water bodies that do not present engineering or construction challenges for bridging or boring. The comment disputes the conclusion presented in the EIS, but it does not provide a specific basis for that view or any technical evidence to the contrary.

7-6 *Response:* Section 2.2.2.6 of the SEIS indicates that water supply needs for the O&M facility would be considerably less than 5,000 gallons per day and would be met by developing an exempt well or acquiring water from the participating landowner on whose property the facility would be located. Under Washington water law, wells producing less than 5,000 gallons per day have been exempt from the need to obtain a groundwater right. This exemption has applied to prospective water users throughout Kittitas County and elsewhere in the state, although the Washington Department of Ecology has instituted a temporary moratorium on exempt wells in Kittitas County as a result of concern over County groundwater management rules. The Applicant will not need to obtain water from any non-participating landowner, such as the commenter. If the Applicant elects to acquire water from a participating landowner, that

transaction would not require the commenter or any other water right holder to share their water rights. Please note that the Applicant does not propose to construct visitor facilities at the Desert Claim Project.

7-7 *Response:* Please see the response to Comment 3-3.

7-8 *Response:* Please see the response to Comment 17-2, which addresses this topic in detail.

7-9 *Response:* Historically, potential impacts to the bee population have not been raised as a concern with wind projects. Because bees are flying insects, they could conceivably be at risk of collision with turbines. The propensity for bees to fly within the altitude of the turbine rotors would depend on the species behavior, and possibly on their abundance in an area. Because bees are generally associated with vegetation, it is not expected that they would be likely to occur within the rotor-swept area frequently or in great abundance. Consequently, impacts to bees are not expected to be significant.

7-10 *Response:* Based on the documentation already in the record at the time EFSEC began preparing the Draft SEIS, the topics of potential changes in the rodent and/or mosquito populations were not included within the scope of the SEIS. These issues were thoroughly addressed in the Final EIS published by Kittitas County in 2004; see Final EIS Section 3.8.2.4. In summary, the Final EIS concluded that because the potential level of mortality for raptors, other birds, and bats would not have a measurable effect on the populations of the predator species, there is no reason to believe rodent or mosquito populations will increase. The comment regarding potential vibration is noted. Vibration is not expected to be significant and is not known to have affected the rodent populations at other wind projects.

7-11 *Response:* EFSEC regulations do not require project areas to be contiguous. Nevertheless, the Project Area defined in the ASC and the SEIS is in fact contiguous, meaning that all parcels within the Project boundary are touching or in contact; the term contiguous does not mean that the area must have a rectangular shape.

7-12 *Response:* The Applicant will develop a Habitat Restoration and Revegetation Plan in consultation with WDFW and submit it to EFSEC for approval. The Plan will require all temporarily disturbed areas to be reseeded with an appropriate mix of native, locally adapted plant species in a manner and sequence that will maximize the likelihood of successful restoration of the area and prevent the spread of noxious weeds. The Plan will include a pre-identified reference site or sites to be used to judge the success of the habitat restoration and revegetation efforts. The Plan will also address the timing and intensity of grazing during revegetation.

7-13 *Response:* The comment questions the economic benefits of the proposed wind power facility, and this question is presumably based on information contained in the Desert Claim Final EIS (pages 3-317 through 3-321) regarding an earlier version of the Project. As noted in

that prior document, an EIS is focused on the environmental impacts of proposals, and SEPA does not define economics as an “element of the environment.” Therefore, this topic is not required to be discussed in an EIS. Please refer to WAC 197-11-448 (State SEPA Rules) and WAC 463-47-010 (EFSEC’s SEPA Rule adopting 197-11-448). In addition, the topic of economics was not identified through the scoping process as an issue to be addressed in the Desert Claim SEIS. The following response is presented for general information purposes.

Two studies were prepared for the revised Desert Claim proposal to estimate state-wide and local (Kittitas County) economic impacts. These studies are included as exhibits to pre-filed testimony (see Exhibits 14.2 and 15.2). The studies’ general findings are summarized below; please consult the detailed reports for more information.

The first study, “Economic Impacts of Desert Claim Wind Project” (April 2009), prepared by ECONorthwest (Exhibit 15.2), examines state-wide increases in expenditures and employment that would be associated with construction and operation of the Desert Claim facility. The analysis employed IMPLAN, a generally accepted and commonly used input-output computer model, to estimate the purchases of goods and services that would result from the project. The model shows how direct purchases of goods and services can multiply as they ripple through various sectors of the economy. Direct and indirect expenditures, for example, result in increases in employment and income, which enhance economic purchasing power, and in turn, induce further spending on goods and services.

The following table summarizes the estimated state-wide increase in jobs, wages and total new economic output that would result from construction and operation of Desert Claim. The construction phase (approximately 10 months) would generate 282 new jobs and \$33 million in new economic activity. Operation of the facility would result in 36 jobs and \$6.2 million of new economic activity each year for the expected 30-year life of the project.

	Employment	Wages	New Economic Output
Construction	282 jobs	\$12 million	\$33 million
Operation (annual)	36 jobs	\$1.9 million	\$6.2 million

Source: ECONorthwest 2009

The second study prepared by Central Washington University (CWU), “Kittitas County Economic Impacts from Proposed Desert Claim Wind Power Project” (February 2009), used another generally accepted input-output model to estimate local/Kittitas County jobs and economic activity that would result from construction and operation. The CWU study also estimated potential tax revenues generated by the project and discussed effects on the local economic base.

The following table summarizes the increase in jobs, wages, and total new economic output that would result in Kittitas County from construction and operation of the Desert Claim Project. The construction phase would generate 160 jobs and \$17.3 million in new economic activity in the local economy. Operation of the facility would result in 25 jobs and \$2.8 million in new economic activity in the County each year over the expected 30-year life of the project.

	Employment	Wages	New Economic Output
Construction	160 jobs	\$3.6 million	\$17.3 million
Operation (annual)	25 jobs	\$986,000	\$2.8 million

Source: Central Washington University 2009.

The CWU study also identified some qualitative (i.e., unquantified) benefits to Kittitas County. These include:

- economic diversification, in a county where the agricultural and state government sectors dominate the economic base, and which are subject are to fluctuations in jobs and revenues;
- preservation of the agricultural base, through additional lease income to farmers and ranchers while allowing continued agricultural use; and
- new construction jobs, at a time when other major local construction projects (such as Suncadia and CWU) and residential construction have been reduced.

The comment questions whether the Project would result in significant numbers of tourists shopping in the County. Although wind farms can attract some tourists, the jobs and economic activity estimated in the CWU study do not stem from tourism. Rather the CWU study describes construction-related jobs associated with road and site preparation, foundation work, tower erection and construction management, as well as the resulting indirect and induced economic activity during the construction phase. It also describes field technician, administration, and management jobs during the operations phase, as well as the indirect and induced economic activity associated with project operation and maintenance.

As a check on the model results, the CWU study compared the model's estimates for Desert Claim to the economic statistics for the Wild Horse Wind Power Project. Overall, the updated estimates of job growth, economic activity, and tax revenues to Kittitas County contained in CWU's report are very similar to the estimates contained in the Desert Claim Final EIS.

Detailed information about the tax revenues expected to be generated by the Project, including a breakdown of the taxing districts that will receive those revenues, is provided in response to Comment 3-10.

The commenter provides no authority or evidence to support the claim that home and land values near the Project will decrease. More information regarding property values is provided in response to Comment 3-17.

7-14 Response: The SEPA Rules require an EIS to consider alternatives to the proposed action. The primary purpose of considering an alternative in an EIS is to provide the decision maker with comparative information about environmental impacts. The SEPA Rules only require that an EIS consider "reasonable" alternatives (WAC 197-11-440(5)), and the word "reasonable" limits both the type and number of alternatives. A reasonable alternative must be consistent with the proponent's objectives and result in a reduced level of environmental impact. The alternatives considered in the SEIS are consistent with these requirements. SEPA

does not require that the site with the absolute lowest or no impacts be evaluated; hypothetical or speculative alternatives do not need to be considered.

Alternatives to the proposed site are discussed in the Draft SEIS in Section 2.4. A range of alternative sites, including the Wild Horse and Springwood Ranch sites, were fully considered in the 2004 Desert Claim Final EIS. According to the SEPA Rules, existing information about impacts and alternatives should not be duplicated in a supplemental EIS (WAC 197-11-620); this provision is intended to reduce redundancy. Additional sites for further discussion in the SEIS were not identified. As indicated in Section 2.5 of the SEIS, a reasonable alternative site was not identified in Kittitas County's pre-identified wind farm area due to constraints related to wind resource, the I-90 corridor, designated state wildlife conservation areas, conflicts with activities at the Yakima Training Center, and property availability. Additional information regarding EIS alternatives is contained in the response to Comment 42-5.

The commenter's preference that wind turbines be located on federal land, such as the Yakima Training Center, is noted.

7-15 *Response:* Based on the documentation already in the record at the time EFSEC began preparing the Draft SEIS, the topics of potential impacts to elk, deer, and wildlife other than birds and bats were not included within the scope of the SEIS. These issues were thoroughly addressed in the Final EIS published by Kittitas County in 2004, and the information is not repeated in the SEIS; see Final EIS Section 3.4.3.2. The Final EIS concluded that temporary loss of big game habitat during construction would be a minor impact, and that after construction, big game would become habituated to wind turbines and would resume occupancy of the site.

7-16 *Response:* Based on the documentation already in the record at the time EFSEC began preparing the Draft SEIS, recreational impacts were not included with the scope of this SEIS. Recreation impacts were addressed extensively in the 2004 Kittitas County Final EIS, and this information is not repeated in the SEIS; see Final EIS Section 3.11.2. The Final EIS noted that the area within approximately 3 miles of the Project site had minimal recreational facilities and accounted for an extremely small proportion of total recreation and tourism use in Kittitas County. The Final EIS concluded that the Project's impact on recreation within this area and elsewhere in the County would be insignificant. The comment does not provide any new or additional information about this issue, nor does it explain how the Project might adversely impact recreational activities.

7-17 *Response:* The comment is noted.

7-18 *Response:* The comment proposes two alternative project configurations with fewer turbines. Although reducing the number of turbines may reduce the aesthetic impacts to some nearby residences to some extent, it would also reduce the environmental and economic benefits of the Project. Please also see the response to Comment 7-14 regarding SEPA requirements for consideration of alternatives.

*To EFSEC - a copy of my
guest column in Daily Record
April 21, 2009 Helen Weso*

April 15, 2009

To the Editor:

The heading of the April 9, 2009 *In Our View* editorial was misleading: "County needs to have a seat at EFSEC table." The county has a representative on the EFSEC Council by law and has had with all EFSEC meetings related to wind power proposals from our county.

Your View supports the Commissioners consideration to file as interveners in the April 23 EFSEC hearing on Desert Claim Wind Power Project despite the cost involved. We should all be aware that intervention would, as you admit, cost the county taxpayers money for litigation but an even greater cost could be the delay of the process EFSEC is carrying out to make its recommendation to Governor Gregoire regarding a site permit for Desert Claim.

I would remind the editorial board that the original application proposal for Desert Claim Wind Power was submitted to Kittitas County in January 2003. (At that time wind farms were not a permitted use anywhere in Kittitas County.) Kittitas County was the lead agency and published a Draft Environment Impact Statement in December 2003 and the Final EIS for Desert Claim was published in August 2004. Many meetings and open hearings were held by the County Planning Commissioners and the County Commissioners. The Kittitas County Commissioners denied the Desert Claim application in April of 2005.

In November 2006 Desert Claim submitted an Application for Site Certification to EFSEC. The Draft Supplemental Environmental Impact Statement was published by EFSEC in April 2009. This document is the subject of the hearing on April 23, 2009 at 7:00 p.m. at the Hal Holmes Center.

Why did the County Commissioners have such a struggle deciding whether to sign up as interveners? Assuming that they have read the document, their hesitancy to sign up as interveners is understandable. The original proposal was redesigned and modified to mitigate the objections the County Commissioners made in denying the original project plan. They really have no issue to intervene for, especially since the State Supreme Court has validated EFSEC's authority.

8-1

I agree with Commissioner Paul Jewell that the Commissioners should attend the April 23rd hearing. If they go as interveners or as members of the public, I hope it is not just to delay the process. They could adopt the attitude so well expressed by Rich Elliot in his letter to the editor (on the same page as your editorial column) in which he supports the wind farm for all the benefits it will bring to the community.

Rich Elliot's letter bears repetition. I quote at least the last two paragraphs of it.

RECEIVED

APR 23 2009

Page 1 of 2

ENERGY FACILITY SITE
EVALUATION COUNCIL

"The local economic impacts should not be ignored. All levels of local government are facing decisions that go beyond discretionary spending cuts. Cuts that will eliminate basic services in public health and education are under consideration and asking for additional taxes from our community is not attractive for a number of reasons."

"Desert Claim will create 160 construction jobs. Desert Claim will create 25 "family wage" sustainable jobs with an annual payroll of over \$950,000.00. Desert Claim will generate over \$1,000,000.00 in annual tax revenues which will offset losses, lower tax assessment rates for community members and add to the community's infrastructure."

In essence we are offered a "stimulus project" with private investment paying for it rather than the taxpayers. Come to the April 23rd hearing and be supportive. Let there be no delay! This project is "shovel ready"!! Let us boost our local economy and get the turbines on line and on property tax rolls.

Sincerely,
Helen Wise
925-5594



8-2

Page 2 of 2

Comment 8: Helen Wise

8-1 *Response:* The comment is noted.

8-2 *Response:* The comment is noted.

To: EFSEC
From: Craig Johnson
352 Danko Road
Cle Elum, WA 98922

Re: Desert Claim Project Support

To all: I support the Desert Claim Project, and I support wind energy in general. I installed a 1.8Kw unit on my own property in Cle Elum, and am proud to be a 'producer' of energy. As an engineer I know our society balances supply and demand of energy, and it is inevitable that non-fueled systems will be required. The fact is that this is a viable project in an economic recession.

Any resistance is moot. Esthetics is a personal perspective, especially when no one is interested in including the whole valley (power transmission lines and all). Personally, I find mercury vapor lamps and Kentucky blue grass a serious threat to my health (www.darksky.org) and a serious threat to our diminishing shrub steppe habitat http://www.wnps.org/ecosystems/shrubsteppe_eco/shrubsteppe.htm.

9-1

Environmental impact is also 'system dependent'; meaning that a claim of bird loss does not include the bird gains from habitat management. My sources claim that Wildhorse has more shrub-steppe wildlife than the adjacent (non-managed) residential areas. Even loss claims of 'threatened' birds are not supported by data. To the contrary, my sources claim that saving and managing this 'range land' has supported more (threatened) wildlife in the area.

9-2

Claims of economic 'loss' are unsubstantiated. In fact, the opposite is true. Private land has increased in value. And now our community can benefit! We have a chance to secure significant funding for public use.

9-3

Please support the Desert Claim Project.



Sincerely, Craig Johnson

RECEIVED

APR 23 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

Page 1 of 1

Comment 9: Craig Johnson

9-1 *Response:* The comment is noted.

9-2 *Response:* The comment is noted.

9-3 *Response:* The comment is noted. Please see the response to Comment 3-17 for additional information.

SEIS Public Hearing Energy Facility Siting Evaluation Council

Members of the Council,

I speak to you tonight and a resident of the Desert Claim project area, a land use planner, a tax payer, and a proponent of clean renewable energy. My home is approximately $\frac{3}{4}$ of a mile from the location of the nearest turbine.

The tax benefits to various jurisdictions, the addition of much needed jobs both from construction - short term - and ongoing operation and maintenance – long term – benefit everyone in Kittitas County.

10-1

The project as presented is also good planning. Using one of our most predominant natural resources, the wind, in an area where I for one certainly don't need scientific instruments to tell me it blows a lot up there, makes good sense.

10-2

These are resource lands and in my professional and personal opinion the resources should be used for the benefit of many. This county has a wealth of resources, prime agriculture ground, timber, rivers, lakes and streams to name a few. This county has often been referred to as the Saudi Arabia of wind as I am sure you have heard.

Wind and solar resources are two that can make a real positive difference in energy generation for a long time and can keep up with developing technology to maintain and increase efficient use of the resources they capture.

RECEIVED

APR 23 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

Page 1 of 2

The location of the project in the existing electrical grid area is another benefit of the Desert Claim project. Our preferential county policies for placement of major wind projects in areas far from the existing grid make little sense to me.

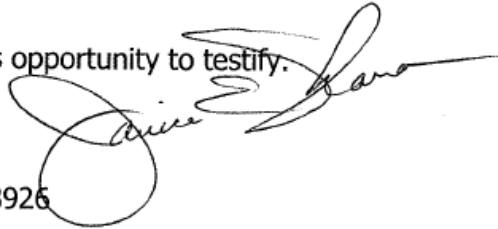
10-3

One thing in the SEIS and the previous FEIS I urge you to scrutinize closely is the potential impacts to birds. This area hosts numerous species of raptors and I hope you will assure the mitigations required will be appropriate.

10-4

Thank you for this opportunity to testify.

Jan Sharar
390 Cattail Road
Ellensburg, WA 98926

A handwritten signature in black ink, appearing to read 'Jan Sharar', is written over the printed name and address. The signature is stylized with a large, looping 'J' and a long, sweeping horizontal stroke.

Ph. (509) 925-7216

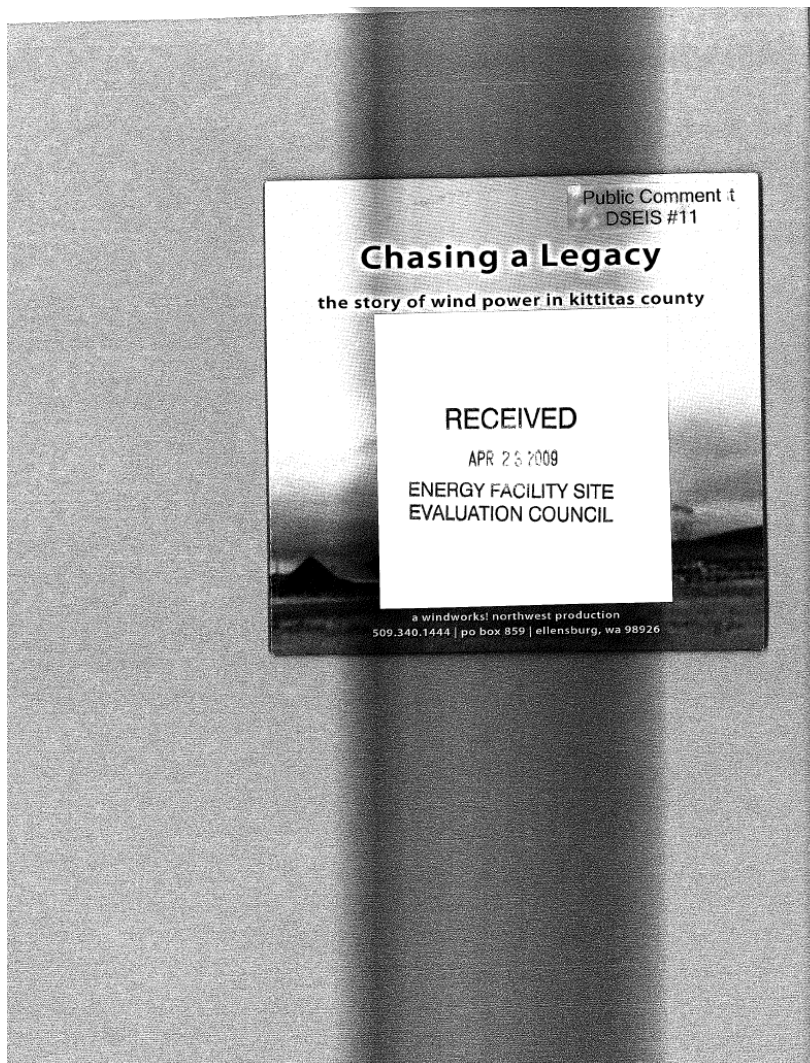
Comment 10: Jan Sharar

10-1 *Response:* The comment is noted.

10-2 *Response:* The comment is noted.

10-3 *Response:* The comment is noted.

10-4 *Response:* The concern about birds is noted. Both the Final EIS (Section 3.4.3) and the SEIS (Section 3.2.3) contain detailed analysis of potential impacts to birds.



Comment 11: Windworks! Northwest

11-1 *Response:* A copy of the DVD has been added to the record. The documentary describes the history of wind power development in Kittitas County and expresses support for the Desert Claim Project. It does not include any substantive comments specific to the Draft SEIS, so no further response is required.



Confederated Tribes and Bands of the Yakama Nation
Established by the Treaty of June 9, 1855

Post Office Box 151
Toppenish Washington 98948

Allen J. Fiksdal, Manager
Energy Facility Site Evaluation Council
P.O. Box 43172
Olympia, Washington 98504-3172

April 22, 2009

RECEIVED

APR 27 2009

RE: Desert Claim Wind Power Project Draft Environmental Impact Statement

ENERGY FACILITY SITE
EVALUATION COUNCIL

Dear Mr. Fiksdal,

Thank you for contacting the Yakama Nation requesting review and commentary regarding the Desert Claim Wind Power Project Draft Environmental Impact Statement (EIS). The Desert Claim Wind Power Project is located within the Ceded Lands of the Yakama Nation, the legal rights to which were established by the Treaty of 1855, between the Yakama Nation and the United States Government. The Treaty set forth that Yakama Nation shall retain the rights to resources upon these lands and, therefore, it is with the assistance and backing of the United States Federal Government that Yakama Nation claims authority to these resources.

The Yakama Nation Cultural Resources Program staff has reviewed the Desert Claim Wind Power Project in terms of its potential for adverse impacts to environmental resources, sacred areas, traditional cultural properties, and archaeological sites. We have also reviewed the manner in which the Desert Claim Wind Power Project Draft EIS has addressed such impacts and, in doing so, we have identified the following concerns:

- 1.) The Draft EIS inventory and *informal* vegetation-survey made no attempt to identify traditional-subsistence, medicinal, or culturally important plants. The proposed project location lies within an area of known root-grounds and, therefore, the identification of these plants within the proposed project area is of utmost importance. Additionally, the Draft EIS did not examine the cumulative 400-acre loss of traditional plants and plant habitat expected to occur between the four Kittitas Valley wind project locations. The Yakama Nation has suffered the loss of many acres of root-grounds due to the construction of wind power projects throughout Washington State, and in particular the Kittitas Valley. Often, with such projects comes a loss of access to root-grounds and traditional resources, through property restrictions and safety restrictions, even when measures have been taken to conserve the resource.

Recommendations: A formal vegetation survey must be conducted with the presence of a Yakama Nation Cultural Specialist and should focus on the identification of traditional root-grounds, as well as the identification of traditional-subsistence, medicinal, ceremonial, and rare plants. Analysis of the vegetation survey and project-related impacts should also include estimates regarding how long it will take for these plants to return to their pre-project condition, should they be disturbed. Once traditional root-grounds have been identified, Yakama Nation requests that the Desert Claim Wind Power Project facilitate and provide unlimited, easy access to traditional root-grounds for members of the Yakama Nation. Furthermore, an examination of the cumulative loss of traditional plants and plant habitat due to construction of wind power projects throughout Kittitas Valley and Washington

12-1

State must be conducted in regards to the manner in which this loss has affected the practice of traditional lifeways.

- 2.) Desert Claim's identification of impacts to wildlife did not fully explore impacts to migratory birds, migratory bats, endangered species, and big game. The Draft EIS stated that despite the loss of thousands of animals per year, wind-turbine related mortality and habitat loss was considered not significant, as impacted species are considered "abundant" in the local area. Desert Claim states that the majority of impacts to wildlife remains unknown and will be fully explored after the facility is operational.

Recommendations: We recommend that the impacts to wildlife be examined in more detail *prior* to facility construction. To simply say that species are "abundant" does a disservice to the intricate balance of habitat and species populations. Further studies are required to determine cumulative impacts of wind facilities on wildlife populations, not only in regards to migratory, threatened, or endangered populations, but also to well-established populations. By disregarding this step, and simply studying effects post-construction, we run the risk of causing irreparable damage to an already floundering environment, injuring recovery efforts of endangered animals, and endangering species not yet threatened.

12-2

- 3.) The proposed location of the Desert Claim Wind Power Project sits precisely on one of the most archaeologically-dense areas of northern-Ellensburg. In fact, frequency of known archaeological sites drops considerably just outside Desert Claim property boundaries. Therefore, the location of the proposed wind facility, and the treatment of archaeological resources is of utmost concern.

The Draft EIS stated that out of 30 archaeological sites and 103 isolates identified, 26 sites will be adversely impacted by the construction of the wind facility, only 5 of which Desert Claim considers to be *significant* sites under Criterion D of the National Register of Historic Places (NRHP). It is proposed that impacts to only these 5 significant sites will be avoided through micro-siting of the wind turbines. However, at times, this may be impractical and, if so, mitigation through excavation and data recovery has been proposed. Impacts to non-significant cultural resources will not be mitigated.

The determinations of significance and the proposed mitigation measures made in the Draft EIS are unacceptable to the Yakama Nation, as is the destruction of sites deemed to be non-significant. Identification of significant pre-historic sites was based only on NRHP Criterion D. While admittedly significance under criterion C is unlikely (but not impossible) for pre-historic sites, Criterion A and B should have certainly been considered. It is not uncommon for pre-historic sites to have strong associations with events and people significant to Native American history and legends.

12-3

Furthermore, while it is understood that the proposed data recovery of impacted significant-sites is intended to be a way to "mitigate" damages by salvaging scientific information prior to site destruction, it should be noted that excavation is, by nature, destructive and will forever alter the contextual integrity of the cultural materials present at the sites. Furthermore, it must be remembered that proposed research questions and data recovery are the interest of science only, and do not serve the interest of the Yakama Nation, to whom these cultural resources belong. The value of archaeological and cultural sites goes far beyond what data they can yield. To the Yakama Nation, the value and integrity of a site lies in the fact that it simply exists, and is allowed to remain undisturbed.

Recommendations: Identification of significant pre-historic or Native American sites should be considered not only under NRHP Criterion D, but also under Criterion A and B. Consultation with Yakama Nation will be required to determine significance under these criteria. Excavation, data

recovery, and damage to archaeological sites and isolates should be considered unacceptable, and every attempt should be made to avoid impacts to cultural resources, significant or otherwise.

- 4.) The Desert Claim Wind Power Project Draft EIS made no attempt to identify Traditional Cultural Properties (TCPs) of the Yakama Nation. TCP sites are those that carry meaning to living members of the Yakama Nation, and can include legendary sites, sacred sites, traditional subsistence-gathering areas, as well as many other types of resources. Proper identification of TCPs can only be accomplished through consultation with Yakama Nation.

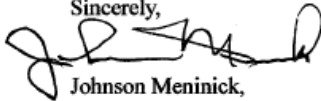
Recommendations: We recommend that the Desert Claim Wind Power Project consult with Yakama Nation Cultural Specialists regarding the identification of TCPs within the subject property, as well as the surrounding area. Impacts to TCPs should be considered in context of permanent loss of the TCP through construction damage, loss of access, and degradation of view-shed or aesthetic value.

We further suggest that Desert Claim consider the use of Yakama Nation biologists, archaeologists, and cultural specialists in refining their assessment of project-related impacts to cultural resources, wildlife, and habitat. Yakama Nation maintains a well qualified cultural resource staff that meets the Secretary of the Interior's Standards, and possesses inherent knowledge regarding the proper treatment and protection of Yakama Nation cultural resources.

In summary, Yakama Nation does not agree with the findings of the Draft EIS, and believes many significant and irreparable damages will be the result of such a project. Our prior knowledge of recent conduct by existing wind facilities and associated landowners has raised serious questions regarding the treatment of cultural resources, both during facility construction, and daily operation. Taking this into consideration, along with the above mentioned concerns, Yakama Nation will not condone the construction of the Desert Claim Wind Power Project, until further impact assessment and resource protection measures have been taken.

Please feel free to contact me at 509-865-5121, ext. 4737, or Yakama Nation archaeologist, Jessica Lally at ext. 4766, if you have any questions.

Sincerely,



Johnson Meninick,
Yakama Nation Cultural Resources Program Manager

CC: Kate Valdez, Yakama Nation Tribal Historic Preservation Officer
YN Tribal Council Executive Board
Culture Committee Members
Cultural Resources Program Staff
CRP Files

12-4

Comment 12: Yakama Nation

12-1 *Response:* The Applicant initiated consultation with the Yakama Nation to gain further insight into its concerns and requests for additional studies. The identity of plants that have traditional, medicinal, or cultural importance to the Yakama Nation is within the knowledge of tribal members but is not general knowledge among biologists. Confidentiality is a means to protect these resources. In the course of discussions with the Applicant, Yakama Nation representatives agreed that the requested survey to identify the presence of traditional, medicinal, and culturally important plants within the Project Area could occur prior to construction, as part of the micro-siting process, rather than as part of the Final SEIS.

The request for unlimited access to harvest such plants raises legal issues regarding property rights. The majority of the Project would be developed on lands that the Applicant has leased from private owners or the State of Washington, not on land owned by the Applicant. Access to those properties is limited by lease agreements, and the Applicant, therefore, cannot grant access without the consent of the property owners. The Applicant has agreed to allow Yakama Nation members reasonable access to traditional root grounds located on the portion of the Project owned by the Applicant.

The presence of traditional, medicinal, and culturally important plants on other wind power sites has not been documented in environmental documents for those projects. Therefore, cumulative impacts cannot be accurately identified.

12-2 *Response:* Section 3.2.3 of the SEIS documents a thorough analysis of potential impacts to migratory birds and bats, which included consideration of cumulative impacts. Based on the documentation already in the record at the time EFSEC began preparing the Draft SEIS, the topic of potential impacts to big game was not included within the scope of the SEIS. These issues were thoroughly addressed in the Final EIS published by Kittitas County in 2004; see Final EIS Section 3.4.3.2. The Final EIS concluded that temporary loss of big game habitat during construction would be a minor impact, and that after construction, big game would become habituated to wind turbines and would resume occupancy of the site. The SEIS and the Final EIS also identify listed species that may occur in or near the Project Area and assess the potential impacts to those species.

The Applicant's Stipulation with the Counsel for the Environment and Agreement with WDFW further address issues associated with the wildlife resources identified in the comment. Please see the responses to Comments 33-13, 33-14, 33-15, 33-16, 33-17, 37-2, 37-7, 37-36, 37-40, 37-45, 37-46, and 37-47, in particular, for related discussion.

12-3 *Response:* Section 3.3 of the SEIS, and the Historic and Cultural Resources Report transmitted to the Department of Archaeology and Historic Resources (DAHP), use NRHP criteria as a means help identify "significant" resources. Distinguishing between categories of resources is an attempt to address the SEPA requirement that an EIS focus on probable significant adverse impacts, and to identify sites that might provide important archaeological

information (Criterion D). Criteria A and B deal with associations with culturally important events and people; the most reliable way to identify these resources is through consultation with the Yakama Nation. The same holds true for Traditional Cultural Properties (TCPs). The Applicant has entered into a Memorandum of Understanding with the Yakama Nation regarding the identification of cultural resources and TCPs. The Applicant will also develop a Cultural Resources Mitigation Plan in consultation with the Yakama Nation.

12-4 *Response:* Traditional Cultural Properties are sites that carry meaning to living members of the Yakama Nation and can include legendary sites, sacred sites, traditional-subsistence gathering areas, and other types of resources. As noted in the response to Comment 12-3, the Applicant has entered into a Memorandum of Understanding with the Yakama Nation to identify and address Traditional Cultural Properties located within the Desert Claim Project Area.

RECEIVED

APR 20 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

Mr. Allen Fiksdal
EFSEC Manager
905 Plum St. SE, Building 3
P.O. Box 43172
Olympia, WA 98504-3172

Dear Mr. Fiksdal:

I am writing to address the visual simulations of the Desert Claim Wind Power Project in the Draft Supplemental EIS. Specifically, I want to discuss the focal lengths used in the simulations and the conclusions they draw based on them.

Before I begin my argument, I will tell you my qualifications to discuss photographic lenses. I am a high school photography teacher who teaches both film and digital photography. I have been teaching photography for about eighteen years.

As you are well aware, the focal length used for the photos in the FEIS was 35mm, and the recommendation in the Golder Report was that the photos be retaken using a 50mm focal length to more closely estimate what the human eye sees.

In the draft SEIS the methodology is described (p3-37) as using a 50 mm lens and that new pictures were taken to reflect the new configuration, and later they show the before and after views. The pictures they show are the same ones found in the revised application, which makes no reference to focal length that I could find. What I find troubling is that these pictures were taken with a 35mm focal length. How do I know that? First, from my experience of viewing photos with a critical eye, I can tell how wide the angle of view should be for a photo shot with a 35mm focal length versus one shot with a 50mm focal length. Second, I am very familiar with three of the views, as I live on Smithson Road, just west of Howard Road. I knew that there was simply too much information in the photos, that is, the fields of view were too wide to be shot at a 50mm focal length. If this were true, then the magnification of the objects in the frame would be affected; they would appear larger and closer. The impact of the turbines could be much greater than indicated.

13-1

Here is my proof, please see the enclosed photos:

View S1M (p. 3-72 in the SEIS): was taken right in front of my house; I shot Picture 2 in order to replicate all the features in the picture; so, I had to get in the three fence poles in the left foreground as well as the tree to the right in the middle ground, with room to spare on each side. In order to do this I had to use a focal

length of 31mm. My camera is a Nikon D80 with an 18-135mm Nikkor lens. Since not all digital cameras are the same, I am confident that the simulated photo was taken at or near a 35mm focal length. Picture 3 was taken from the same spot with a 50mm focal length. I see a significant difference in the size of objects within the frame. If this photo were used for a simulation, the turbines would appear significantly larger. In fact, in the simulated view, the turbine right behind the tree is between 9/16 and 10/16 inch from the top of the tree to the tip of the blade. Using simple proportions, the size of the turbine would increase to 15/16 of an inch. That may not seem like much to uncritical viewers, but the size of the turbine almost doubles from one picture to another.

View S6B (p. 3-80 in the SEIS): this picture is just too wide to be taken with a 50mm lens. In order to include all the information in view S6B, I had to shoot Picture 4 at a focal length of 32mm. I am confident that the focal length used in view S6B was at or near 35mm. Picture 5 shows what the scene looks like using a 50mm focal length. I compared the height of the prominent brown house with white windows in View S6B to its height in the 50mm shot. It increased from 2/16 to 4/16 of an inch. If the size of the house doubled, then it follows that the size of the turbines will also double. Again, I find that quite significant.

View 1C (p. 3-65 in the SEIS): this scene was more difficult to replicate, as there was extensive flooding in the area in earlier this year. If you look at the power pole near the middle of the picture, you will see that the replication is quite close. In Picture 6, I used a focal length of 31mm, so again, I am confident that view 1C was shot with a 35mm focal length. Picture 7 shows the scene using a 50mm focal length. A person who is untrained, or has little experience in viewing photos critically, may well decide that there is no significance difference in these photos, but there is a near doubling in size of the objects.

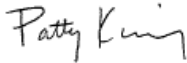
If these three simulations were made with photos shot with a 35mm focal length, how many other of the photos also had a focal length of 35mm? It's my educated guess that all the new viewpoints were photographed with a 35mm focal length.

I strongly disagree with the conclusion that the difference in focal lengths of the lenses used in the simulations is insignificant. I feel there is no way to accurately evaluate the visual impact that turbines will have in the area without reshooting photographs with at least a 50-52mm focal length. I predict that if the photos are re-shot with a 50mm focal length, the resulting simulations will depict turbines nearly double in size. That cannot be considered insignificant. In fact, it becomes a drastic difference.

13-2

Finally, I would like to invite you test my proofs. When you visit the project site on April 23, go to View S1M on Smithson Road, ¼ mile west of Howard Road. Hold up my picture shot at the 50mm focal length. If you close one eye, you can really see how the tree in the photo is almost the same size as the actual tree. Try it with View S1M. I think you will agree that the tree looks much smaller and farther away than the actual tree.

Sincerely,



Patty Kinney
2362 Smithson Road
Ellensburg, WA 98926

Attachments: 9 photos



View S1M – Simulated view looking NE across the Northwest Valley Visual Assessment Unit from Smithson Rd., 1/4 mile W of Howard Rd., just south of project boundary.

99999-8579\LEGAL\151923\99 1



(2) View SW along





View S6B – Simulated view looking N from above U.S. Highway 97 in the Hayward Hill Unit from a group of residences roughly two miles south of the project boundary.

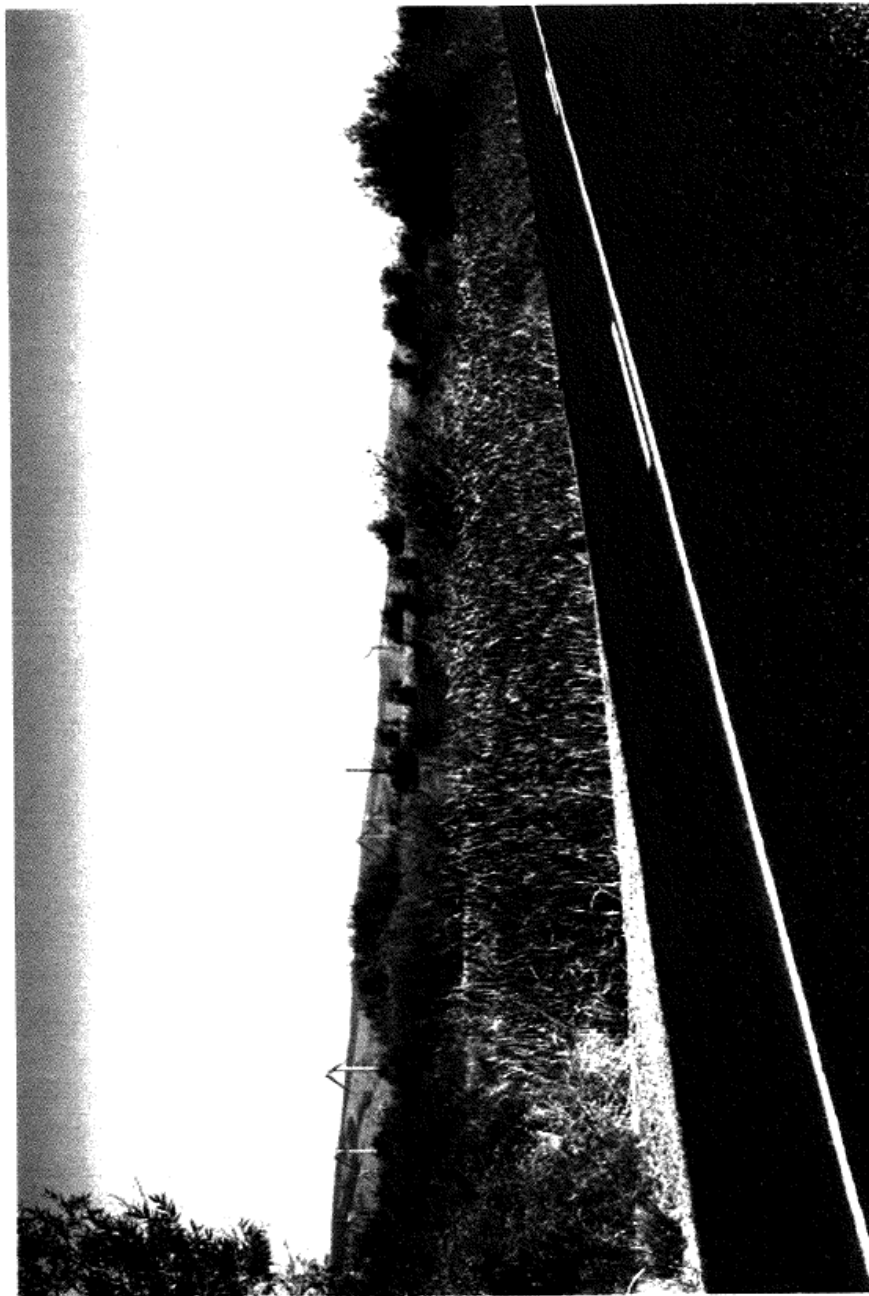
000000-8-CT001 FIG. A1.151023190 1



Figure 4-2: Aerial View of the Project Area



AVIATION FORM



View 1C – Simulated view looking NE across the Northwest Valley Visual Assessment Unit along Smithson Road near U.S. Highway 97.

999999-85790-LEGAL15102399.1





Comment 13: Patty Kinney

13-1 *Response:* This comment questions the focal length of the camera lens that was used in the photos and the resulting accuracy of the simulations. As stated in the SEIS, a 50mm lens was used for all photographs and simulations because it most closely approximates the typical field of human vision. There is a difference between focal length on 35 mm film cameras and focal length on 35 mm digital cameras, however, which explains the questions about lens size reflected in this comment.

Prior to digital cameras, 35mm film cameras were a popular format for both amateur and professional photographers. It was during this time that the 50mm focal length lens became the standard for replicating what the human eye sees. Historically, the 50mm lens has been the standard for documenting visual conditions and for creating photographic simulations for visual impact analysis. Lens angles with higher focal length numbers (i.e., 80mm or 105mm) produce photos that make things look larger or closer than what the human eye sees, while lower numbers (i.e., 24mm or 35mm) make things look farther away.

Modern digital cameras typically have image sensors on the back of the camera that are smaller than traditional 35mm film cameras. Images made with most digital cameras are, in effect, cropped from the center of what the full frame image would have been if it had been captured with a 35mm film camera with the same lens. The terms focal length multiplier and digital crop ratio are the industry standards for describing this factor associated with digital cameras. While there is much variation among digital cameras, Nikon single lens reflex (SLR) digital cameras generally have a focal length multiplier of 1.5, while Canon SLR digital cameras generally have one of 1.6.

When the focal length multiplier is accounted for, a photograph taken with a 50mm lens on a Canon SLR digital camera with a focal length multiplier of 1.6 (the camera used for the photos in the SEIS) would produce an image equivalent to that produced with an 80mm lens on a 35mm film camera ($50\text{mm} \times 1.6 = 80\text{mm}$). Conversely, in order to produce an image with the same Canon SLR digital camera that is equivalent to one produced with a 50mm lens on a 35mm film camera, the lens on the digital camera would need to be set to 31mm ($50\text{mm} / 1.6 = 31\text{mm}$). The process used to account for this factor is substantiated by industry documentation and can be verified via email through Canon, Nikon, and Olympus technical support.

To evaluate and reproduce several photographs shown in the SEIS, the commenter used a Nikon D80 SLR digital camera. This digital camera has a crop ratio of 1.5. To obtain the equivalent view of a standard 35mm film camera with a 50mm lens, the lens on the camera would need to be set to about 33mm ($50\text{mm} / 1.5 = 33\text{mm}$). This is why the commenter's lens had to be set to 31mm or 32mm (close to 33mm) in order to "match" the views of existing and simulated conditions shown in the SEIS. Photographs taken with the camera set to 50mm (to illustrate how the commenter thought the photos "should" appear) actually would be equivalent to those taken with a 75mm lens on a standard 35mm film camera ($50\text{mm} \times 1.5 = 75\text{mm}$).

In summary, all of the views of existing conditions and simulations provided for the Desert Claim SEIS were photographed with a Canon EOS Rebel XTi digital camera, which has a 1.6 digital crop ratio, using a Canon EFS 18-55mm lens. The camera lens was set manually to 31mm, which is the equivalent of a 50mm lens on a traditional 35mm film camera ($50\text{mm} / 1.6 = 31\text{mm}$). The focal length settings are stored automatically with the image data on the camera disk. In response to this comment, the image data were checked and all settings were verified to be 31mm.

13-2 *Response:* As described in the response to Comment 13-1, all photos and simulations used in the SEIS to evaluate visual impacts were taken with a 50mm lens. The visual experts performing the visual impact analysis compared the 50mm photos used in the SEIS with the 35mm photos used in connection with the analysis in the 2004 Final EIS, and concluded that the difference in lens did not have a material influence on the ratings in the visual analysis. The 35mm/50mm comparison photos (Figures 3.4-1 and 3.4-2) are presented in the SEIS for illustrative purposes only. The commenter's opinion that the difference between 35mm and 50mm focal length photos is significant is noted.



Washington State Energy Facility Site Evaluation Council

COMMENT FORM

Desert Claim Wind Power Project
Draft Supplemental Environmental Impact Statement

Public Meeting – Ellensburg, Washington, April 23, 2009

Name: THOM McCOSH
Address: 201 CASEY DR ELLensburg
(Please include your Zip!)

Please write any comments you have about the
Desert Claim Wind Power Project Draft Supplemental Environmental Impact
Statement below.

Leave this sheet in the Comment Box tonight, or mail it to:
EFSEC, PO Box 43172, Olympia, WA 98504-3172.
Comment letters must be postmarked by Monday May 4, 2009.

WE DO NOT OPPOSE WIND POWER
ONLY THE LOCATION OF THIS PROJECT
LET ~~THE~~ THIS GROUP SUBMIT SOME
OR TWO REMARKS 8400 ACRES AT
WILKINSON TO SITE THESE WINDMILLS
THE BENEFIT TO ONLY A FEW
LANDOWNERS SHOULD NOT OVERRIDE
THAT BOTH THE COUNTY COMMISSIONERS
AND THE VOTERS HAVE TOWNED THIS
AREA DOWN FOR WIND TOWERS.

14-1

Use the back of this form if you need more room for your comments.

RECEIVED

For more information about EFSEC's review of this project, please contact:
Stephen Posner, Compliance Manager, PO Box 43172, Olympia, WA 98504-3172, 2009
telephone (360) 956-2063, or e-mail efsec@cted.wa.gov

ENERGY FACILITY SITE
EVALUATION COUNCIL

Page 1 of 2

THE JOBS, THE GENERATION COULD
STILL BE ACCOMPLISHED BY USING
THE AREA THE COUNTY WANTS WITH
TOWERS W.

14-1
(con't)

ONE REASON THESE COURT FOR
APPROVED FAMILIES IS SO LOW IS
THAT THEY HAVE FAMILIES AND
CANNOT GET BACK RECOVERMENTS
TO BE ABLE TO SEE THIS PROJECT
AT THIS LOCATION

Comment 14: Thom McCosh

14-1 *Response:* The comment is noted. The Council is aware of the previous decision made by the Kittitas County Board of County Commissioners to deny approvals for an earlier version of the Desert Claim Project. Although Kittitas County intervened in the EFSEC proceedings, the County did not submit any evidence or briefing opposing certification of the revised Project, and has since formally withdrawn any opposition to the Project. The Council is not aware of any vote by the citizens of Kittitas County concerning either the earlier or current version of the Project.



WASHINGTON STATE DEPARTMENT OF
Natural Resources

Public Comment
DSEIS #15

PETER GOLDMARK
Commissioner of Public Lands

April 22, 2009

Allen Fiksdal
EFSEC
PO Box 43172
Olympia WA 98504-3172

SUBJECT: Desert Claim Wind Power Project DSEIS

The Washington Natural Heritage Program is responsible for maintaining information on the state's rare plant species as well as high quality native ecosystems. We have reviewed the DSEIS for the Desert Claim Wind Power Project and have the following comments.

Although we currently don't have any information on rare plant species occurring within the proposed project area, the area likely has never been surveyed for rare plants. The "informal survey, conducted in conjunction with wetland field work", which did not identify any rare plants, is not an adequate effort. A thorough survey by qualified botanists at the appropriate time of year, as is planned by the applicant this spring, is necessary to make that determination.

15-1

Shrub steppe communities once covered most dryland areas of eastern Washington. About half of the shrub steppe in Washington has now been converted to agriculture. The document acknowledges that there will be some loss of shrub-steppe habitat from the proposed project but states that this loss is not significant. Under Cumulative Impacts 3.2.1.5, we would like to see the long-term impacts of fragmentation addressed.

15-2

Thank you for consideration of our comments. If you have any questions or would like more information, please contact me by phone at 360-902-1697, or by e-mail at sandra.moody@dnr.wa.gov.

Sincerely,

Sandy Swope Moody, Environmental Review Coordinator
Washington Natural Heritage Program

RECEIVED

APR 24 2009

**ENERGY FACILITY SITE
EVALUATION COUNCIL**

Land Management Division, PO Box 47014, Olympia WA 98504-7014

1111 WASHINGTON ST SE • MS 47001 • OLYMPIA, WA 98504-7001
TEL: (360) 902-1000 • FAX: (360) 902-1775 • TRS: 711 • TTY: (360) 902-1125 • WWW.DNR.WA.GOV
EQUAL OPPORTUNITY EMPLOYER

Page 1 of 1

Comment 15: WDNR

15-1 *Response:* Subsequent to the Draft EIS, the Applicant commissioned a rare plant survey of the Project Area. The survey was conducted in July 2009, during the growing season for Ute-ladies tresses, which is the rare plant of concern. The plant was not identified on the Project site. The survey is discussed in Section 3.2.1 of the Final SEIS.

15-2 *Response:* Additional discussion of shrub-steppe fragmentation has been included in Section 3.2.1 of the Final SEIS.



Washington State Energy Facility Site Evaluation Council

COMMENT FORM

Desert Claim Wind Power Project
Draft Supplemental Environmental Impact Statement

Public Meeting – Ellensburg, Washington, April 23, 2009

Name: Ellensburg School District Board of Directors
Address: 1300 E 4th Avenue, Ellensburg, WA
(Please include your Zip!) 98926

Please write any comments you have about the
Desert Claim Wind Power Project Draft Supplemental Environmental Impact
Statement below.

Leave this sheet in the Comment Box tonight, or mail it to:
EFSEC, PO Box 43172, Olympia, WA 98504-3172.
Comment letters must be postmarked by Monday May 4, 2009.

see attached Resolution 10-04-09

RECEIVED

MAY 01 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

Use the back of this form if you need more room for your comments.

For more information about EFSEC's review of this project, please contact:
Stephen Posner, Compliance Manager, PO Box 43172, Olympia, WA 98504-3172,
telephone (360) 956-2063, or e-mail efsec@cted.wa.gov.

ELLENSBURG SCHOOL DISTRICT #401

RESOLUTION 10-04-09

Siting of Wind Farm within Ellensburg School District Boundaries

WHEREAS, Members of the Ellensburg School District Board of Directors recognize that the taxpayers of the Ellensburg School District are being asked to continue to support their schools and other community services through construction bonds and special levies, and

WHEREAS, these obligations continue to require the passage of self imposed taxes on the taxpayers of the Ellensburg School District, and

WHEREAS, other school districts have received significant tax relief and benefit from the construction of a wind farm

16-1

THEREFORE, BE IT RESOLVED,
that members of the Ellensburg School District Board of Directors urge Governor Christine Gregoire to support the enXco Desert Claim Wind Power Project located in the Ellensburg School District and allow the taxpayers of the Ellensburg School District to enjoy the tax relief and other benefits such a project would provide


BE IT RESOLVED,


DATED this 22nd day of April, 2009


ATTEST:

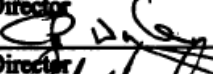



Paul Farris, Superintendent
Secretary to the Board



Chairperson


Director


Director


Director


Director

18

Comment 16: Ellensburg School District

16-1 *Response:* The comment is noted.



Kittitas Audubon Society • P.O. Box 1443 • Ellensburg, WA 98926

April 26, 2009

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

RE: Comments on the SDEIS for the Desert Claim Wind Power Project.

Dear Mr Fiksdal,

We have reviewed the SDEIS as well as the FEIS and the Revised Application for Site Certification for the Desert Claim Wind Power Project and appreciate this opportunity to make comments.

We note numerous changes in the Revised ASC reflecting adoption of comments made to Kittitas County in the DEIS for this project. By our overlaying the maps for both projects, it appears that there have been roughly four new sections added to what was the western portion of the original DCWPP. Almost four sections, to the east and north were deleted. (We did not see comparison mapping of this sort in the SDEIS or Revised Application)

We surmised from the SDEIS that raptor nest surveys as well as new wetland surveys were done on the four new sections in the project as well as. We do not see any other new wildlife surveys such as birds, mammals, plant, reptiles etc. for the new sections. It appears as though a rare plant survey will be done before construction.

It is acknowledged in the SDEIS that very little is known about bats in this area. ***“Page 3-20. Unlike the situation with birds, there is little information available about local, regional or national populations of bat species” This is reiterated throughout the FEIS and SDEIS.***

We urge that a bat survey be done on this project. It is located in an area much closer to the forested mountains than WHWPP and has many wetlands and some streams on it which would attract bats for insect feeding and hydration.

Fall is when the young disperse and migration takes place so a study from mid summer to mid fall might be appropriate.

17-1

RECEIVED

MAY 01 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

Page 1

A bat survey was recently done on the Wild Horse WPP which, by the way, has no wetlands. This was a most welcome event.

The greater bat activity at the forested area and the springs was an important finding. (WHWPP SDEIS 3.2.1.4 page 23) Will there be more mortality of bats in the new expansion which includes this forested area adjacent to the springs?

We need to know more about bats in this entire area and a Desert Claim bat survey would provide important information based on this locale so close to raptor migration routes and perhaps bat migration routes.

Since the FEIS was done, the Bald Eagle has been delisted and is no longer an Endangered Species. It is however, still protected by the Bald and Golden Eagle Protection Act which prohibits "taking" Bald and Golden Eagles, their eggs, nests or parts without a permit. It imposes fines of up to \$100,000 (\$200,000 for organizations), imprisonment for one year or both for a first offense.

The original project area is one on which 13 Bald Eagles were documented during the survey. They come in to feed on the afterbirth of calving. The estimate that no impacts to Bald Eagles would occur is based on a statistical analysis of other projects, none of which have Bald Eagles as far as we know. It would be nice to know how many are on the Revised Project.

We urge that the mitigation measures on Page C1-22 of the FEIS be followed. A letter from the WDFW for the DEIS dated January 30, 2004 was included in the FEIS which emphasizes their concerns for potential turbine mortality to Bald Eagles and asks that conservation measures be incorporated as project requirements. (see copy of letter attached)

17-2

This letter also addresses the Habitat Mitigation Parcel for the project and points out that areas mapped and referred to as grassland are actually degraded shrub steppe and should be mitigated as such. **This issue is not addressed in the SDEIS. It still refers to Grasslands and Shrub Steppe as though they are different on the project. The Grasslands should be included in Shrub Steppe for mitigation purposes.**

This habitat is important for Sage Grouse restoration and would provide an increased area of that habitat

On the Wild Horse WPP a Sage Grouse nest was found last year, good news for the Sage Grouse.

17-3

Page 3-15 of the SDEIS, under Raptors, acknowledges that "raptor use for the Desert Claim site was slightly above average". Based on other projects "it is estimated that potential raptor mortality at the proposed Project could be higher than average." An estimate of 0-29 fatalities is estimated at one point, then 23. Since most fatalities are expected to be Red Tailed Hawk and Kestrels, which were interpreted to be very common, no significant impact was expected.

Unfortunately, the Kestrel has recently been acknowledged to be in decline. Hawkwatch International, which has a raptor migration spotting station at Chelan Ridge, has in their recent 2008 summary stated that. "At the 2007 joint meeting of the Raptor Research Foundation and Hawk Migration Association of North America in Allentown, Pennsylvania, a special symposium on American Kestrels was convened to draw

17-4

attention to evidence of widespread declines of this otherwise common and ubiquitous species." www.hawkwatch.org see "news" for the 2008 report. This section of the SDEIS needs to be revised to reflect this change. Could the project have a significant impact on these little hawks?	17-4
Raptors are still a big concern for those of us at Kittitas Audubon. The DCWPP (as well as KVVPP) is located close to a north/south migratory area which may represent a "funnel" for raptors.	17-5
It is not just Kestrels which are in decline. The 2007 Audubon State of the Birds Report makes it clear that the Western Meadowlark is also one of our common birds in decline in Washington and the whole country. It is down 60% from 40 years ago. National Audubon states "a quarter of U.S. birds need our help to keep them from slipping toward extinction" Other birds in our area such as the Evening Grosbeak (down 93%), Yellow Headed Blackbird (down 72%) White Breasted Nuthatch, Prairie Falcon, and even our beloved Western Bluebird are also birds of concern on a national watchlist. Information at www.wa.audubon.org under June 2007 State of the Birds report and Seattle Audubon website: www.birdweb.org under Species of Special Concern.	17-6
There are many factors affecting this sad situation, such as habitat destruction, window impacts and cats. Cumulative impacts of the Desert Claim Wind Power Project and the many windfarms being built across this region could be potential additives to this effect as far as we are concerned. We feel that wildlife fatality numbers and displacement (avoidance of structures etc) from wind power plants and all other sources as we mention above as well as types of habitats and their fragmentation should be studied in the context of population numbers. This is discussed in the new 2009 Oregon Columbia Plateau Windpower Guidelines on pages 33-38 under Cumulative Wildlife and Habitat Impacts Review and Recommendations.	17-7
The Oregon guidelines also call for 2 years of post construction fatality studies. We Would like to see this done on all windfarms including this one. It could contribute considerably to our knowledge of impacts. The Wild Horse WPP is going to do a 2 year study to cover the new addition as well as the original project.	17-8
We understand that road building on the Wild Horse Wind Power Project resulted in the roads being much larger than anticipated. We have heard them referred to as "I-90 width" with more habitat destroyed than the plans for the project discussed. Please make sure that this does not happen on this project if it is approved. We need to try to conserve what little Sage Brush Steppe habitat we have left.	17-9
KAS has in previous comments expressed qualified support of wind power if industrial sites are appropriately located, but we feel this one is not so located. Wind farms are best suited in areas that are essentially ecological deserts such as intensively developed farm land. We have mentioned the Klondike installation in northern Oregon as such a place-one where there are few if any residences in an expanse of land devoted to grain	17-10

production and where the residents living at some distance with whom we spoke are supportive.

Finally, we would like to say that the changes made to Desert Claim are the result of the original project having gone through the county review process and having been denied. This process involved input from many concerned citizens and our commissioners, who represent the citizens of Kittitas County and its laws.

We, as citizens of Kittitas County and the State of Washington, mourn the loss of this local process and the loss of representation.

We thank you for your attention.

Sincerely,



Tom Gauron,
President



Janet Nelson,
Conservation Committee



Detecting the Trends: Raptor Population Index

Walt Lehman remembers when HawkWatch International was known as the Western Foundation for Raptor Conservation. As HWI's volunteer lead bander in New Mexico, Walt has spent 20 years watching raptors head south over New Mexico's Manzano Mountains in the fall and return over the neighboring Sandia range in the spring. As he watches the sky for Swainson's and Cooper's Hawks, he takes satisfaction in being part of HWI's unique mission.

In June 2008, the data Walt helped collect were merged with migration data from across the continent to create *State of North America's Birds of Prey*, an in-depth analysis of long-term raptor migration data developed by HawkWatch International and partner organizations Hawk Mountain Sanctuary and the Hawk Migration Association of North America.

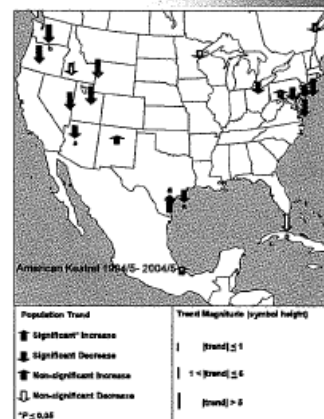
The data confirms the continued resurgence of America's national bird, the Bald Eagle, while uncovering a disturbing decline in the American Kestrel, the continent's smallest falcon. Peregrine Falcons, who, like the Bald Eagle,

were once endangered by the pesticide DDT, have also bounced back strongly.

Walt smiles when he considers how his long-term commitment to HawkWatch International's efforts has contributed to understanding these trends, and the jump start the data offer conservationists in protecting slipping populations before it's too late. "The impact HWI's work has on people is important," he says. "The years of migration data will be used to protect our natural world for generations to come."



"The impact HWI's work has on people is important," says Walt. "The years of migration data will be used to protect our natural world for generations to come."



Bildstein, K.L. et al. *The State of North America's Birds of Prey*. Fayetteville, AR: AOU Publications Office, 2008

RECEIVED

MAY 01 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

Page 5

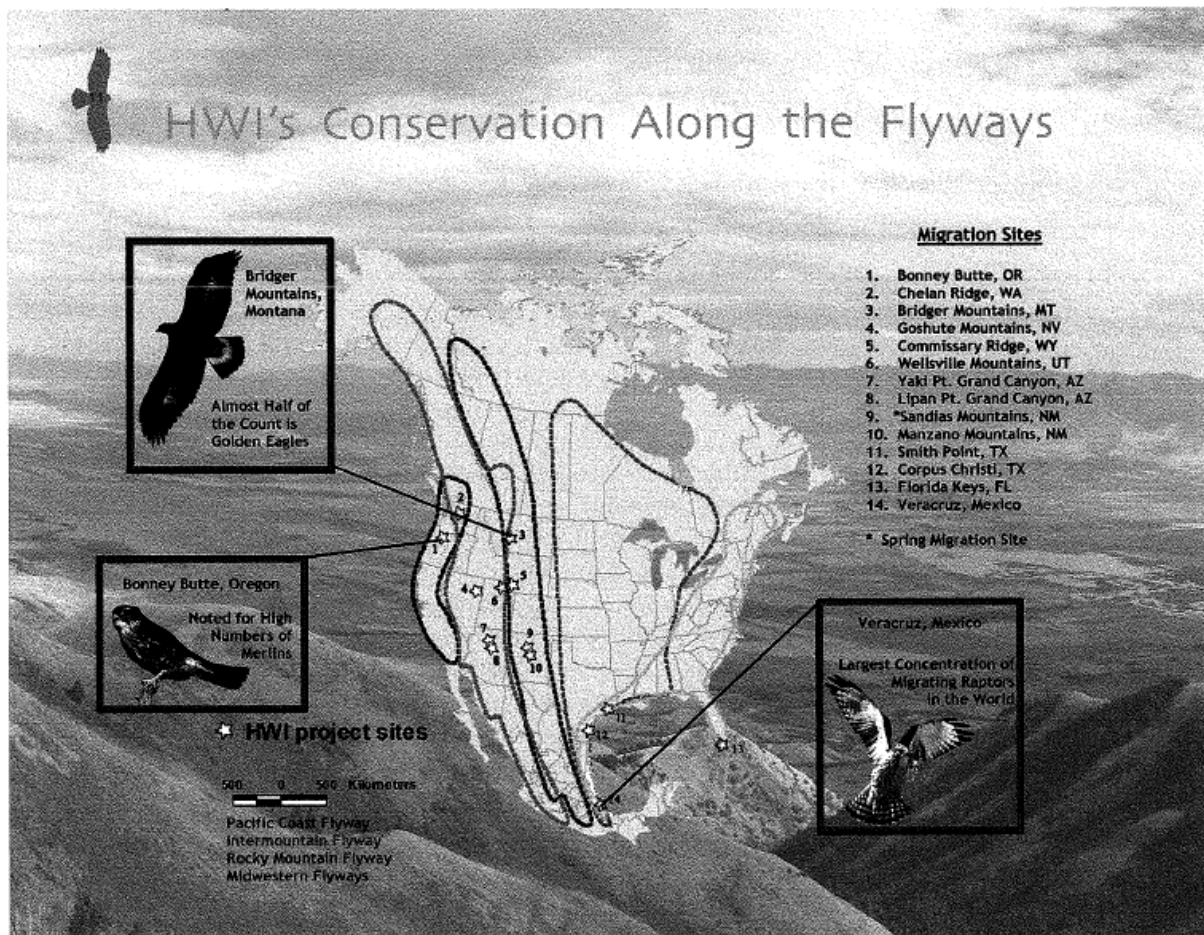
this species have been among the highest to date for the past three seasons, whereas recent Sharp-shinned Hawk passage rates have remained below those seen between 1998 and 2002 (Figure 4). The Broad-winged Hawk and American Kestrel regressions tracked similar patterns of decline through 2003, but then relatively stable patterns thereafter (Figures 5 and 7). Lastly, a significant quadratic regression continued to track a hill-shaped pattern in passage rates of adult Golden Eagles, with an increasing pattern evident during the first three years of the project but a decreasing pattern of similar magnitude evident since 2004 (Figure 6). A similar pattern is evident for non-adult Golden Eagles, except that high peaks in 2000 and 2006 precluded a significant quadratic model fit (Figure 6).

Smith et al. (2008a) present trend analyses of data collected through 2005 for most of the long-term, ongoing, autumn migration studies in western North America, including Chelan Ridge for the first time. These analyses (hereafter called the Raptor Population Index or "RPI" analyses; see <http://www.rpi-project.org>) are based on a more complex analytical approach (also see Farmer et al. 2007) than that represented in Hoffman and Smith (2003) and used herein to present analyses updated through 2008. Among other refinements, this new approach both fits polynomial trajectories to the complete series of annual count indices and allows for estimating rates of change between various periods, while also allowing for assessments of trend significance and precision. Note, however, that restrictions related to the mathematical assumptions behind the new approach precluded analyzing data for rare species, which in this case included all buteos except Red-tailed Hawk, and Prairie and Peregrine Falcons. Otherwise, with a few notable exceptions, the overall patterns of change and derived trend estimates suggested by the new modeling technique generally yielded similar inferences as those derived using the simpler methodology of Hoffman and Smith (2003) and presented herein to provide trend assessments updated through 2008.

Differences between the RPI results and those presented herein that clearly relate to addition of three more years of data include: a) replacement of marginally significant to significant linear declines for Sharp-shinned and Cooper's Hawks in the RPI results with marginally significant to significant quadratic trends illustrating sustained, recent recoveries; b) replacement of a marginally significant decline for Northern Goshawks in the RPI results with no significant overall trend, reflecting three years of improved counts from 2006–2008; and c) replacement of a marginally significant linear decline for American Kestrels in the RPI results with a significant quadratic trend reflecting a stabilizing pattern since 2003. ← No other noteworthy differences were apparent among the inferences generated by the RPI and updated Hoffman and Smith (2003) analyses.

At the 2007 joint meeting of the Raptor Research Foundation and Hawk Migration Association of North America in Allentown, Pennsylvania, a special symposium on American Kestrels was convened to draw attention to evidence of widespread declines of this otherwise common and ubiquitous species. The proceedings of this symposium are expected to be published in the Journal of Raptor Research later this year, and will include another manuscript that specifically summarizes migration trend data for the species from across the continent, including Chelan Ridge (Farmer and Smith in review). ←

Age Ratios as Indicators of Regional Productivity.—Immature : adult ratios were significantly below average in 2008 for Sharp-shinned and Cooper's Hawks, significantly above average for Northern Harriers, Bald Eagles, and Peregrine Falcons, and did not differ significantly from the long-term averages for four other species for which such comparisons were possible (Table 2). Note, however, that the overall count of Broad-winged Hawks was too low to attach much value to the comparison. For Northern Harriers, the high 2008 age ratio clearly was due to a dearth of adults rather than high abundance of immature birds. In contrast, for both Bald Eagles and Peregrine Falcons, relatively high abundance of immature birds contributed to the high age ratios for these species. For Sharp-shinned and Cooper's Hawks, high adult abundance clearly contributed to the low age ratios for these species, especially for Cooper's Hawks for which the abundance of immature birds also was above average.





State of Washington
Department of Fish and Wildlife
South Central Region - Ellensburg District Office, 201 North Pearl, Ellensburg, WA 98926
Phone: (509) 925-1013, Fax (509) 925-4702

1
P.1

ED

JAN 30 2004
KITTITAS COUNTY

January 30, 2004

Clay White, Planner
Kittitas County Community Development Services
411 North Ruby, Suite 2
Ellensburg, Washington 98926

Subject: Comments on Draft EIS, Desert Claim Wind Power Project

Dear Mr. White:

RECEIVED
JAN 30 2004
KITTITAS COUNTY
CDS

The Department of Fish and Wildlife has reviewed the Draft EIS for the Desert Claim Wind Power LLC Project. We also discussed the project with the applicant and the applicant's consultants during the past two years to provide review, comments and recommendations regarding the project and background studies. Our comments below relate to the DEIS assessment of fish and wildlife, their associated habitats and the project's potential effects on these resources.

General Comments and Concerns

We are generally satisfied with those sections of the DEIS and appendices that provide background information and those sections which review the project and the potential impacts. The background studies and information collected on fish, wildlife and their habitats, are generally consistent with our discussions with and recommendations to the proponents and their consultants. We have enclosed specific comments and clarifications regarding some of this information. These comments do not greatly alter the background information presented in the DEIS, but warrant revisions in the Final EIS.

1-1
PA-1

We are disappointed with the presentation of net impacts and specific mitigation in the DEIS. The Desert Claim project has the potential to adversely affect fish and wildlife and their habitats to a significant degree, but these impacts can be substantially avoided and mitigated by employing measures and strategies discussed in the document and appendices. Unfortunately, the DEIS is confusing as to the degree of mitigation and thus the net environmental impacts to be expected. In a number of places the DEIS identifies possible significant mitigation to avoid or reduce impacts but it does not identify which measures – if any – would actually be implemented (or else the presentation is confusing as to intent), nor alternatively, does the DEIS

1-2
PA-2

RECEIVED

MAY 01 2004

ENERGY FACILITY SITE
EVALUATION COUNCIL Page 8

Mr. Clay White
January 29, 2004
Page 2 of 3

1
P.2

identify a predictable process for selecting and implementing "potential" mitigation measures where needed. The assessment of impacts, however, is generally presented as if all the mitigation measures were incorporated in the project. From our previous discussions with the proponent we would expect that the intent is to incorporate all the mitigation measures discussed in the DEIS into project. However, the DEIS presentation is not clear on this matter. The DEIS must unequivocally describe for reviewers and decision makers what mitigation measures will be included in the project and the net effect of the project on the environment. This shortcoming of the DEIS tends to undermine the analysis and conclusions of the document.

1-2
Cont.
PA-2

We have a number of specific comments regarding the DEIS. These comments are provided on enclosed pages.

Conclusions and Recommendations

The DEIS needs to better clarify the analysis of impacts and mitigation. The document should be revised to clearly describe the mitigation elements of the project and the net environmental effect of the project when the mitigation is implemented.

1-3
PA-2

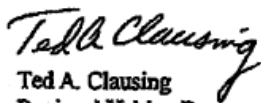
The possible mitigation measures identified in the DEIS and its appendices are substantive and appropriate for the project. We recommend that these measures be unequivocally incorporated in the Final EIS as measures that would be implemented as part of the development and operation.

Over the past year, WDFW worked with representatives of the wind power industry and proponents of renewable energy to craft state-wide guidelines for the protection of fish and wildlife resources when siting and operating wind power facilities. These guidelines are intended to support renewable wind power projects while concurrently preserving the public's fish and wildlife interests. We request that the DEIS incorporate these guidelines in the selection of mitigation measures for this project. I have attached a copy of these guidelines for your information. (A copy can also be seen at http://www.nationalwind.org/workinggroups/wildlife/washington_windpower_guide.pdf)

1-4
PA-3

Please keep us apprised of the status of this project and related Wind Development actions by your office. Thank you for the opportunity to review the DEIS. If you have questions or need additional information, please contact Brent Renfrow of my staff at (509) 925-1013.

Sincerely,


Ted A. Clausung
Regional Habitat Program Manager

Page 9

Washington Department of Fish and Wildlife Comments on Draft EIS for Desert Claim Wind Power Project

General

- **Technical Advisory Committee:** The formation of a Technical Advisory Committee to work with the proponent and the county on mitigation and monitoring is proposed as a possible mitigation measure. Such a technical committee would be a valuable asset to the project and we request that it be a requirement of the project.

1-5
PA-4

Shrub Steppe Plant Communities and Associated Wildlife – Impacts and Mitigation

- **Construction timing is an important mitigation measure:** Section 3.4.1.5 should include construction timing as a mitigation measure to avoid and minimize impacts to soils and vegetation. To the greatest extent possible, construction activities outside of the hardened footprint of the project (i.e. "temporary disturbance areas") should be done during the late spring, summer and fall when soil moisture is very low.

For most of the project area, the time of year of construction will greatly influence the amount of long-term damage to soils and plants. The shrub steppe and grassland communities identified in the DEIS are very fragile when soils are wet. Even a single day of driving equipment on these sites when wet can result in substantial permanent damage. In contrast, during summer when soils are dry they can withstand traffic with minimal soil displacement and breakage of plant roots. Moreover, vegetation is more tolerant to damage during the dry period as the period of rapid growth has ended, many plants have completed flowering and setting of seed, and many are dormant.

1-6
PA-5

Working in winter on frozen ground is possible but because the project area varies greatly in elevation and is on generally south-facing slopes, predicting frozen ground conditions will be impractical for all but work of short duration.

- **Post-Construction Restoration of Temporary Disturbed Areas - Standards for site restoration:** The DEIS should identify a reference standard (or a process to establish one) for evaluation of site restoration success. The standard could be based on a reference site selected within the project area for each vegetation type, the typical vegetation description for each soil type in the draft NRCS soil survey, or other agreed-upon standard. Post-construction restoration of temporarily disturbed areas should be sufficient to achieve site stability and agreed-upon

1-7
PA-5

similarity to the reference standard. Selection of reference standards should be done in consultation with WDFW and the Technical Advisory Committee.

Site restoration and reseeding should be done at a time of year when germination and establishment can be successful. The DEIS should specify that seeding will be done at the next suitable planting window following disturbance, and that temporary erosion control measures will be implemented as appropriate.

1-7
Cont.
PA-5

- **Clarification of Grassland Vegetation Type:** The term "grassland" as used in the DEIS is a descriptive term for shrub steppe sites where the shrub canopy has been temporarily removed by fire or other temporal disturbance. The project area does not include "true grasslands" or CRP "managed grasslands".

1-8
PA-5

- **Proposed Acquisition of Habitat Mitigation Site and Clarification of proposed mitigation ratios:** The proposed habitat mitigation site should be strategically located with respect to other shrub steppe habitat in the landscape of the Kittitas Valley and be selected to achieve the mitigation goals. Enhancement of the site should be considered (e.g. grazing management plan, weed control, selective revegetation efforts, etc.) in consultation with the TAC.

WDFW would apply the mitigation ratios presented in Section 3.4.1.5 such that "grassland" sites on this project would have the same ratio as shrub steppe. As a point of clarification, the term "grassland" as used in this DEIS is a descriptive term for shrub steppe sites where the shrub canopy has been temporarily removed. Over time the shrub canopy will recover naturally. Technically these sites are shrub steppe (refer to Daubenmire, *Steppe Vegetation of Washington*, 1970) and the mitigation ratio associated with shrub steppe should be applied. In the context of the mitigation ratios negotiated with the wind power industry, a lower ratio was established for true grasslands (such as the Palouse) and CRP grass plantings because of the relative difference in restoration success and length of time to maturity. The grassland ratios should not be applied to the Desert Claim project site.

1-9
PA-5

Wildlife - Direct Impacts and Mitigation

- **Meteorological Towers – Guyed Towers verses Free Standing:** The project proposes the installation of four meteorological towers. These towers should be free standing towers which are demonstrably less likely to result in bird mortality.

It is well documented that towers with guy wires kill birds at a significantly greater rate than free standing towers. The DEIS notes that the typical avian mortality associated with modern wind turbines at comparable sites is about 2 birds per tower per year. In sharp contrast, the guyed meteorological towers at the analogous Foote Creek Rim wind project in Wyoming had a mortality rate of about 8 birds per tower per year. Thus, if unprotected guyed meteorological

1-10
PA-6

towers were used on this project instead of free-standing towers, annual avian mortality would be expected to increase by about 14-21%. The use of bird flight diverters has been proposed but there is no information provided as to the effectiveness of bird flight diverters in reducing avian tower strikes. Bird flight diverters have been used at many places in North America to deter large waterfowl from striking transmission lines near waterways. We have not been able to find documentation of successful use of bird flight diverters on tower guy wires to prevent avian collisions during either daylight or during night-time migrations.

1-10
Cont.
PA-6

The use of free-standing towers is a demonstrated mitigation technique for reducing avian mortality. Bird flight diverters should not be used in lieu of free-standing towers unless their effectiveness can be demonstrated or their use is part of an approved adaptive management effort coordinated with WDFW and other natural resource management agencies, and the Technical Advisory Committee,

- **Ridgeline Setback for Turbines:** The project will place turbines along the ridge line above Reecer Creek in Sections 4 and 9. The DEIS identifies setting turbines back from the windward edge of the ridgeline as a potential mitigation measure to reduce potential impacts to raptors which use the updraft areas along the edge of ridges. This mitigation strategy should be incorporated into the project.
- **Bald Eagles – Potential for Turbine Mortality and Contingency Plans:** The DEIS does not include contingency measures for addressing the potential of bald eagle mortality at the project. The DEIS provides a rationale as to why the risk to bald eagles is low but also concedes that some risk remains. The DEIS points out the lack of bald eagle mortality at other wind project sites (where bald eagles are relatively uncommon) but we are not confident that this is a good predictor of bald eagle impacts in the Kittitas Valley where bald eagles are relatively common during the winter. The DEIS Appendix C, Exhibit 1 (page C1-20) includes conservation measures for managing risk to Bald Eagles. These measures should also be incorporated as project requirements.
- **Sharp-tailed and Sage Grouse Should Be Discussed in Section S.14 and Section 4.4.3.1.** Sharp-tailed grouse historically occurred in Kittitas County. Sage grouse occur in the county, though the population is a fraction of historic levels. The three proposals for wind generation facilities are sited in habitat that is suitable for one or the other of these species. Population recovery and reestablishing these two species in the state is an agency priority that may be affected by the cumulative effects of wind energy projects.
- **Management of Big Game Animals, Hunting and Control of Animal Damage on the Project, Including Lands Acquired for Habitat Mitigation:** In our scoping comments and meetings with the proponents we noted that WDFW is liable for damages caused by deer and elk. Public hunting is the primary tool

1-11
PA-6

1-12
PA-7

1-13
PA-8

1-14
PA-9

Comment 17: Kittitas Audubon Society

17-1 *Response:* The 2003 and 2009 WDFW Wind Power Guidelines do not generally recommend that project developers conduct pre-operation bat surveys. Nonetheless, as documented in the Stipulation entered into with the Counsel for the Environment, the Applicant has agreed to conduct a bat monitoring survey during the bat migration (late summer and early fall) prior to beginning commercial operation. Once in operation, the Applicant will also implement a Bat Monitoring Plan, which will include 2 years of bat fatality monitoring.

17-2 *Response:* The topic of impacts to bald eagles was thoroughly addressed in the Final EIS published by Kittitas County in 2004. In response to comments received on this issue, however, additional information was prepared for the Final SEIS and is contained in Section 3.2.3.

17-3 *Response:* The SEIS identifies habitat types based on the dominant plants currently found in the Project Area. Most of the Project Area currently consists of either grasslands or shrub-steppe habitat. In consultation with WDFW, the Applicant is developing a Habitat Mitigation Plan that will be based on the compensatory mitigation ratios outlined in the 2009 WDFW Wind Power Guidelines. To apply those ratios, the Applicant and WDFW are developing a habitat map that is based on Natural Resources Conservation Service soil maps and field investigations of the Project Area. For purposes of providing compensatory mitigation, that map may designate areas as shrub steppe even though the current dominant vegetation is indicative of grasslands.

17-4 *Response:* Although the American kestrel may be experiencing a decline in numbers, it is still one of the most abundant raptors in North America. The information referenced in the comment does not change the SEIS conclusion that impacts to the regional kestrel population will not be significant. The estimated mortality impact from the Project is not expected to be detectable above background mortality; that is, the variation in annual background mortality is greater than the estimated mortality from the Project or all the wind projects in the Columbia Plateau Ecoregion.

17-5 *Response:* The commenter's concern about raptors is noted. The topics of raptor use in the Project vicinity and potential impacts of the Project on raptors are addressed in Section 3.2.3 of the SEIS, and in Section 3.4.3 of the 2004 Final EIS. The comment does not provide any additional information that would warrant a change to analysis or conclusions in the SEIS. To the extent that there may be a migratory corridor near the Project, the influence of that corridor would already be reflected in the raptor use data discussed in the SEIS.

17-6 *Response:* The comment expresses concern about six bird species: western meadowlark, evening grosbeak, white-breasted nuthatch, yellow-headed blackbird, prairie falcon, and western bluebird. Impacts to these species are not expected to be significant.

Four of these species are not expected to be found in the Project Area. Evening grosbeak, white-breasted nuthatch, and western bluebird occupy open coniferous or deciduous woodlands, riparian areas, and edge habitats with trees. Yellow-headed blackbird occupies prairie wetlands and marshes. These species are not likely to be found in the shrub steppe and ranching grasslands of the Project Area. Furthermore, evening grosbeaks and white-breasted nuthatch have not been recorded, and western bluebird has only been recorded on two USGS Breeding Bird Survey routes within the Columbia Plateau Ecoregion over the last 10 years (Saur et al. 2008). Also, among 12 post-construction monitoring studies at wind farms in the Columbia Plateau Ecoregion, none of these four species has been recorded as fatalities (Johnson et al. 2008), indicating further low risk to these species.

Prairie falcons do occur in open plains and steppe environments. However, they typically occur where suitable cliffs are present for nesting. The Desert Claim Project is not located in such an area, and in fact, wind projects are generally not located near suitable nesting habitat due to constraints on construction in steep or cliff topography. Using data from the USGS Breeding Bird Survey, it is estimated that there are only approximately 500 breeding prairie falcons within the Columbia Plateau Ecoregion. No prairie falcon fatalities have been recorded at wind farms in the region (Johnson et al. 2008), and therefore, no fatalities are expected at the Desert Claim Project.

Western meadowlarks occupy open grassland and prairie habitats, including agricultural areas, and are common in the Columbia Plateau Ecoregion. Using data collected in the USGS Breeding Bird Survey, it is estimated that there are approximately 142,010 breeding western meadowlarks in the Columbia Plateau Ecoregion. In the monitoring studies at all of the regional wind power projects, 21 western meadowlark fatalities have been recorded; this represents approximately 4.6 percent of the total passerine fatalities observed. Assuming the percentage remains constant, approximately 13 western meadowlark fatalities are expected at the Desert Claim Project. This level of mortality would represent a very small fraction of the regional population of breeding western meadowlarks and is not significant.

17-7 *Response:* Cumulative impacts have been considered in detail in the SEIS. The cumulative impact analysis considered all 17 of the existing wind projects in the Columbia Plateau Ecoregion as well as 30 more projects that have been proposed. The SEIS evaluates potential cumulative impacts in the context of regional population numbers, as suggested in the comment.

17-8 *Response:* As documented in the Stipulation entered into with the Counsel for the Environment, the Applicant has agreed to conduct 2 years of post-construction avian and bat fatality studies.

17-9 *Response:* The SEIS presents the Applicant's best estimate of habitat impacts based on the current level of project design. The impacts associated with the final construction specifications may be different. Impacts may be greater in some locations and lesser in others. The Applicant has agreed to minimize road construction as much as practical. The Applicant

has also agreed to provide compensatory mitigation for the actual Project impacts, rather than the estimated impacts reported in the SEIS, based on mitigation ratios included in the 2009 WDFW guidelines.

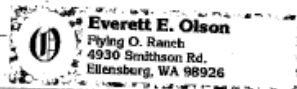
17-10 *Response:* The factors considered by wind power developers to identify sites for generation facilities are described in Section 2.3.1.2 of the Desert Claim Final EIS; these factors are summarized in the response to Comment 42-5. Please also refer to the response to Comment 7-14 regarding alternative sites. The commenter's preference regarding the type of site for locating wind power facilities is noted.

April 15 '09
Dear Sir -

Please send me all updated information pertaining to the Desert Claim Wind Power project. Since I lease land within the project area I was promised to be kept updated but have not been.

Thank you

Sincerely
Everett E. Olson



RECEIVED

APR 20 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

Comment 18: Everett Olson

18-1 *Response:* This letter does not comment upon the Draft SEIS. EFSEC has added the author to the Project mailing list.

Public Comment
DSEIS #19

Bhavnani, Monica (CTED)

From: Ginger Morrison [gingerm@directv.net]
Sent: Monday, April 27, 2009 6:04 PM
To: CTED EFSEC
Subject: Desert Claim Wind Power Project
Follow Up Flag: Follow up
Flag Status: Yellow

To Whom It May Concern:

We would like to take this opportunity to voice our approval for the Desert Claim Wind Power Project in Ellensburg, WA. There is nothing more natural than wind and Kittitas County has always had plenty of it. It is time that we use our natural resources instead of man made.

19-1

With construction in such a downward trend and very little industry around the Ellensburg area, much less income is being generated for taxes which keeps Kittitas County running. The school bond levies are going down to defeat because the tax payers do not have the funds to keep things going as it has in the past. The Wind Farms would bring full time jobs to the valley and much needed revenue to the cities, county government, schools, hospitals and private land owners where the Wind Farms will be placed.

19-2

We know longer live in Kittitas Valley but we still own land there. We moved to Deer Park, WA to be closer to our children and grandchildren but constantly keep an eye on what is happening in Kittitas Valley. The future of our children and grandchildren rely on decisions that are now being made for the better of all man kind. Clean energy is at the top of the list.

19-3

We can no longer continue to pollute the air with coal fired generators, nuclear powered reactors and fossil fuels with out suffering the extreme consequences. Wind and solar are the future for all generations. With this in mind, we give my full support to the Wind turbines in Kittitas County.

Thank you for your time.

Sincerely,
Tom and Ginger Morrison
41512 North Sherman Road
Deer Park, WA. 99006
GingerM@directv.net

5/4/2009

Comment 19: Tom & Ginger Morrison

19-1 *Response:* The comment is noted.

19-2 *Response:* The comment is noted.

19-3 *Response:* The comment is noted.

Public Comment
DSEIS #20

Bhavnani, Monica (CTED)

From: Tony Helland [helland@elltel.net]
Sent: Thursday, April 30, 2009 11:20 AM
To: CTED EFSEC
Subject: Letter in support of Desert Claim Wind
Follow Up Flag: Follow up
Flag Status: Yellow

Members of the EFSEC Council

My name is Tony Helland I live at 414 Alpine dr. Ellensburg, WA. 98926
I take this time to send a few comments about my support of the Desert Claim Wind project, I was unable to attend the recent public hearing in Ellensburg due to an unforeseen family event.

I support this project for many reasons, foremost because of the economic impact it will have in the community! In this time in our history we need this influx of money to our local economy, not only in terms of employment but in the long term effect to our schools and other local projects, roads, hospitals etc.

20-1

I have worked on 5 wind power projects so far, I started at Wild horse in 2005 and went from there to other jobs, at Wild horse we had anywhere from 250 to 300 hundred workers onsite everyday during the heaviest days of construction, at least half of these workers were local men and women! I know this to be a fact because I was the gate guard and kept track of everyone's comings and goings.

I also support this project for it's positive impact on the environment in terms of good clean renewable energy! It will have no negative impact to the site area, every job I have been on was left in better shape (environmentally) that it was in when we got there! Due to site clean up of junk and refuse left by previous land users!

20-2

In closing I would like to make the following comment about the counties implementation of the wind power corridor, I feel that they as a body have pretty much closed Kittitas County to wind power development by restricting wind farms to such a small area of the county! They (the commissioners) make the comment that they have nothing against wind farms as long as they're sited properly, I can assure you that anyone wanting to build a wind farm is not going to come in and spend hundreds of millions of dollars to site a wind farm in an area that would not get the greatest benefit of prevailing winds!

20-3

Thank You

Tony Helland
414 Alpine Dr.
Ellensburg, WA. 98926

5/4/2009

Comment 20: Tony Helland

20-1 *Response:* The comment is noted.

20-2 *Response:* The comment is noted.

20-3 *Response:* The comment is noted.

Public Comment
DSEIS #21

Bhavnani, Monica (CTED)

From: eloise kirchmeyer [Eloise1@Fairpoint.net]
Sent: Friday, May 01, 2009 10:26 AM
To: CTED EFSEC
Subject: desert claim wind project
Follow Up Flag: Follow up
Flag Status: Yellow

Mr. Allen Fiksdal:

I wish to express in words my concerns about the wind farm that is proposed in my area. I am deeply concern about our inconsistant rules regarding these wind farms. I understand the logistics but they

should consider the people not in the project FIRST! I'm definitely not being considered in this one. The 2500 ft setback is minial. This is the least they could considering that the view from this area will be destroyed! I was thinking that I would welcome the GITMO compound compared to this project!

21-1

The main concern I have is that Reecer Creek is a dead end road during six months of the year. Have you googled wind turbine fires? The result is 575,000. So what are our odds of there being a fire in this project? I haven't heard or have seen anything about fire supressors. If a fire starts on the west side of the road below my house, the whole neighborhood is trapped. There is no way out. And, it not just us, its the animals and people who are the mountain, it's our whole lives!

21-2

Sincerely,
Eloise Kirchmeyer
16281 Reecer Creek Rd.
Ellensburg, Wa. 98926

5/4/2009

Comment 21: Eloise Kirchmeyer

21-1 *Response:* A setback of at least 1,640 feet (four times turbine height) from non-participating residences is incorporated in the proposed turbine layout to reduce visual impacts. Washington State law does not require any specific distance or setback between wind turbines and adjacent residences. Additional information regarding the setback distance is provided in response to Comments 3-5 and 7-3.

The SEIS acknowledges that the greatest visual impacts will be experienced by observers closest to the turbines. It also notes that the revised configuration of the Project has significantly reduced the number of residences close to the turbines and has increased the distance between non-participating residences and the nearest turbines. The commenter's objection to the anticipated change in her view is acknowledged.

21-2 *Response:* Please see the response to Comment 3-4. Also, please note that if a Google search indicates 575,000 "hits," that is simply the number of times the components of the search term were referenced in items posted to the internet; it does not indicate there have been 575,000 cases of wind turbine fires, as the comment seems to imply. The comment also appears to raise concerns about the potential fire risks presented by the existing pattern of residential development and road design in the area, rather than risks created by the proposed Project.

Public Comment
DSEIS #22

Bhavnani, Monica (CTED)

From: Bob & Judy Corey [tdcdonks@elltel.net]
Sent: Sunday, May 03, 2009 3:48 PM
To: CTED EFSEC
Subject: Desert Claim Wind Farm proposal

Please do not approve this proposed windfarm. I don't believe there have been adequate research in regard to possible health problems to humans, as well as animals.

There are many incidents of health problems caused by wind turbines in Europe. I fear that many of the turbines in the proposed Desert Claim project are too close to existing homes and would lead to many health problems of the residents. Flicker, vibration, noise, etc. can cause many, many health problems. Please do not allow us to be subjected to this. It would lead to devaluing of property, and forcing many to sell out at a tremendous financial loss, in order to save their health.

22-1

Wind farms should not be located in this area of Kittitas County. There are adequate areas that have been approved by the County, and that is where siting should occur.

22-2

Please do not set a precedent of allowing turbines in close proximity of homes.

22-3

Thank you for your consideration.

Judy Corey
2963 Schnebly Road
Ellensburg, Wa. 98926

5/4/2009

Comment 22: Bob & Judy Corey

22-1 *Response:* Health issues fall outside the scope of this SEIS, but were addressed in the Final EIS; see Final EIS Section 3.8. Although the comment claims that wind turbines have caused health problems, it provides no documentation or references to support this claim. Studies completed in Europe have found that despite decades of wind power development, no significant health issues have been reported (for example, see information posted by the Great Britain Department of Business Innovation and Skills at <http://www.berr.gov.uk/energy/sources/renewables/explained/wind/myths/page16060.html#MythTurbinesarehealthhazard>). Several authorities have also attempted to evaluate the relative health implications of different means of generating electricity. A World Health Organization study concluded that adverse health effects from wind generation are "negligible" and that "[t]he increased use of renewable energy, especially wind, solar and photovoltaic energy, will have positive health effects" (WHO, Fourth Ministerial Conference on Environment and Health, Energy, Sustainable Development and Health, June 3, 2004, available at <http://www.euro.who.int/document/eehc/ebakdoc08.pdf>).

22-2 *Response:* Please refer to the response to Comment 7-14.

22-3 *Response:* The comment does not identify the specific nature of the concern about locating turbines in proximity to homes. All turbines will be located at least 1,640 feet (four times turbine height) away from non-participating homes. Section 2.2.2.2 of the SEIS describes the factors and setback distances the Applicant applied in determining proposed locations for the turbines. The responses to Comments 3-7, 3-9, 3-17, 7-2, 7-3, 21-1, and 22-1 include information that may be applicable to this comment.

Public Comment
DSEIS #23

Bhavnani, Monica (CTED)

From: puddin pony [puddin_pony@hotmail.com]
Sent: Sunday, May 03, 2009 4:24 PM
To: CTED EFSEC
Cc: Fiksdal, Allen (CTED); Posner, Stephen (CTED); LaSpina, Jim (CTED); Mills, Mike (CTED); Burnett, Diane (CTED); Talburt, Tammy (CTED)
Subject: Desert Claim Wind Farm
Follow Up Flag: Follow up
Flag Status: Yellow

Thom McCosh
201 Casey Drive
ELLENSBURG, WA 98926
Cell 425-750-3079
HM/FAX 509-933-1720

EFSEC committee and Gov. Christine Gregoire;

I would like to state my opposition to the Desert Claim Wind Power Project and have the following points I submit be considered.

First, on two previous occasions' attempts to locate wind farms in our area have been made. The Kittitas County Council and the voters of Kittitas County, rejected them not because of opposition to Wind Farms but to the proposed locations and the negative impacts on homeowners.

Wild Horse Wind Farm in the eastern portion of Kittitas County met with approval from the county and voters, is running with 127 turbines at this point and has the potential addition of another 26 turbines to be developed in 2009.

Also in eastern Kittitas County is a large portion of the Yakima Firing Range with several thousand acres and the potential for hundreds of wind turbines. Both Wild Horse and the Yakima Firing Range are areas within Kittitas County that both the County Council and the county residences have approved for Wind Farm development.

23-1

Apparently the siting committee has ruled these areas out because they are not contiguous Sites. By how much? What would be required to go there? The same transmission lines go through both of these areas as through the Desert Claim site.

Besides our residence at 201 Casey Drive, we own another property at 8530 Parke Creek Rd., Ellensburg, where our son lives and which is one of the 15 or 20 closest to the Wild Horse Project. We had, and still have no objection to siting more turbines in this area; none are within two miles of any residences.

Second, we are not listed as an affected property, while our next door neighbor is listed as the No. 1 affected property with a turbine located 1780 feet from his home. His house is 450' from ours, which should put us within the 2500' setback and in the area of affected properties.

23-2

We have heard of the economic advantages that this project would bring the county, I submit that these same advantages could be accomplished if the project were located in the area the county has designated for wind power development, where it would be welcome. This project only financially benefits a handful of landowners. The negative financial affects on the majority of residences not in the project should outweigh the gain for the few.

23-3

5/4/2009

Third, the site for the Kittitas Valley Wind Power Project will be directly to the NW of our home. Wild Horse Wind Power Project 21 miles to the east of us is visible from our home. I strongly urge you to not place this large industrial facility next to our home.

Finally, I wish to address the statement in the report that indicates that this area has a "somewhat memorable view" This area has a unique and spectacular view! It would be a shame to destroy this picturesque setting not just for the local residents but for all in Washington State and visitors who appreciate scenic beauty. 23-4

Respectfully Submitted,

*Thom McCosh
201 Casey Drive
Ellensburg, WA 98926*

Hotmail® goes with you. [Get it on your BlackBerry or iPhone.](#)

5/4/2009

Comment 23: Thom McCosh

23-1 *Response:* The comment is noted. The Council is aware of the previous decision made by the Kittitas County Board of County Commissioners to deny approvals for an earlier version of the Desert Claim Project. Although Kittitas County intervened in EFSEC's proceedings, the County did not submit any evidence or briefing opposing certification of the revised Project and has formally withdrawn any opposition to the Project. The Council is not aware of any vote by the citizens of Kittitas County concerning either the current or previous version of the proposed Project.

The commenter's preference for locating wind turbines in other areas of the County is noted. Additional information concerning alternatives to the proposed Project is provided in SEIS Sections 2.4 and 2.5, and in response to Comments 7-14 and 42-5.

23-2 *Response:* The Applicant reviewed the turbine layout relative to the GIS data on nearby residence locations. This GIS analysis indicated that the residence in question is 2,503 feet from the nearest turbine.

23-3 *Response:* The reports prepared by CWU and ECO Northwest that are referenced in response to Comment 7-13 describe the economic benefits expected to occur as a result of the Project. The economic impacts described in those reports that result from spending for goods and services and additional wages are not related to the specific location of the site within unincorporated Kittitas County, and would likely result from a similar project built elsewhere. However, the location of the Project would determine which local taxing districts would receive additional tax revenues. For example, the Desert Claim Project is expected to generate approximately \$340,000 a year in tax revenue for the Ellensburg School District, but a project located elsewhere in the County might generate tax revenue for a different school district instead.

The comment states that the Project will have negative financial effects on the majority of residences, but does not provide any explanation or reference any authority in support of this statement. The response to Comment 3-17 addresses the effect of wind farms on local property values.

23-4 *Response:* The commenter's characterization of views in the area is noted. Consistent with SEPA requirements, SEIS Section 3.4 provides a detailed assessment of the Project's effect on views from various locations in the vicinity.

Public Comment
DSEIS #24

Bhavnani, Monica (CTED)

From: puddin pony [puddin_pony@hotmail.com]
Sent: Sunday, May 03, 2009 7:52 PM
To: CTED EFSEC
Cc: Fiksdal, Allen (CTED); Posner, Stephen (CTED); LaSpina, Jim (CTED); Mills, Mike (CTED); Burnett, Diane (CTED); Talburt, Tammy (CTED)
Subject: Desert Claim Wind Farm
Follow Up Flag: Follow up
Flag Status: Yellow
Attachments: Hear the Wind Blow.doc

Please consider this seriously.

Insert movie times and more without leaving Hotmail@. [See how.](#)

5/4/2009

“Hear the wind blow”

Not the turbines turn

Liz Lasell-McCosh

I want to state my objections to the proposed Desert Claim Wind Power Project, as a **homeowner** and **landowner** in the area directly affected by it. I will also provide quotes from several sources to argue what should be obvious points in the location of Wind Farms. My first objection is to the name of this project, since I do not live in a desert, nor feel that this area needs to be claimed.

My home is located at 201 Casey Drive, Ellensburg, WA. I own additional property to the southwest of my home just off Reecer Creek Road, directly attached to land leased to the project. A photo showing the view from Katie Lane, the road headed to my home is displayed in **Figure 3.4-20** View SIL-SEIS Simulated View. For this study, photos were taken from roadways, not our front porches. Since our view will be compromised, I suggest that they actually show what our view is now, and what it could become if this project proceeds. Note is made that this simulated view is 1/8th of a mile east of Reecer Creek Road, and 1/8th of mile north of the project boundary. So our home is located less than 1/8th of a mile from the project.

24-1

To quote the report on Visual Assessment, View SIL “Vividness-1: *Somewhat memorable view*” Level of Visual Impact: 1.00-**High**.” My view is 360 degrees, with the hills behind and the city to the SE of us. We can see all the way to I 90. Parts of Central Washington University, the water tower in town and the traffic traveling to Yakima up the hill make up the view from our living room. From our dining room we regularly watch the elk and deer graze and move back and forth along the ridges beside our home. From our family room we watch the eagles, hawks and heron as they fly across the fields. Yes we can see the power lines, but they don’t move, so they tend to vanish into the surrounding landscape.

24-2

After extensive reading, from published reports by experts, documented statements by qualified personnel, and letters to government officials from citizens suffering from their location next to wind farms, there is a lot I could write. After EFSEC approved and the Governor agreed to site the KVVPP just over the hill from us, I have little faith that you are still reading this.

“The closer you get to the facts about wind energy, the worse wind power appears.”
— Scott Darling, wildlife biologist, Vt. Dept. of Fish & Wildlife, Oct. 4, 2007,
Middlebury, Vt”

It's not like riding a bike and leaving the car in the driveway Wind energy on the grid is more like riding a bike and having someone follow you in the car in case you get tired.
— Eric Rosenbloom, Vt

I believe in energy conservation, and the implementation of alternative energy sources. Facts on wind farms over the years have failed to show them as a viable option as a replacement for other forms of energy on an industrial level.

"Wind is one of the most difficult things to forecast ... If you're expecting the wind to blow 25 mph all day and generate 1,000 MW, and that wind drops off or doesn't occur, you have to make up for that with another plant, and that is expensive to throttle up those other, more traditional generation sources." — Bill Mahoney, National Center for Atmospheric Research

"Soon we 'celebrate' the 20,000th wind plant, without replacing even one single small plant of conventional energy. "— Ferdinand Fürst zu Hohenlohe-Bartenstein, Chairman, Bundesverband Landschaftsschutz (Federal Association for Landscape Protection), Germany

"Increased development of wind turbines does not reduce Danish carbon dioxide emissions". — Flemming Nissen, Head of Development, Elsam, Denmark
You have to know this if you are in the position to site these facilities. Your decisions have to be made on an informed level. As a private landowner, I would hope that our decision-makers are at least as informed as I am.

"Wind turbines don't make good neighbors". -John Zimmerman (Northeast U.S. Representative, Enxco

Little consideration has been given for those of us living in this area. The statement made in **Section 3.4.2.2 Viewpoints** that the changes in the Project Area and turbine layout "which is *sparsely populated, has fewer residences*, and is generally further away from Ellensburg and its concentration of population" indicates my homes value is less because of it's distance from the city. Will my taxes be less? Are there a certain number of homes that are required to prevent the project from proceeding? My neighbors may be further from the project lines, but we share the same views.

24-3

How will we be compensated for the loss of value on our property? Several studies indicate that this is a distinct probability. One study presented by a real estate expert, sets a view as part of the land value.

Living with the impact of windmills

- An overview of how land values are established
- An overview of the impact of windmills on land values

Land Values Argument

Land value can be expressed in many different ways:

- Reconstruction Value
- Appraised Value
- Liquidity Value

- Market Value
- etc.

When dealing with the OMB hearing I focused on market value since it is defined as the highest price in terms of money, that the property will bring to a willing seller if exposed for sale on the open market; allowing a reasonable time to find a willing buyer, buying with the knowledge of all the uses to which it is adapted and for which it can be legally used, and with neither buyer or seller acting under necessity, compulsion, nor peculiar and special circumstances.

There has never been a comprehensive study that looks at land values and the effect of windmills so there were no criteria to follow. As such I developed the following criteria:

- based on appraisal principals, visible structures have an impact on the value of land
- therefore, divide land where windmills are visible vs. not.

Properties inside Windmill Zones – Properties within 3nm(nautical miles) of a windmill. 3nm was used as a basis since that is the distance one can see is a straight line due to the earth's curvature when on the same horizontal spectrum of the objects in the distance.

Pilots use this as a basis for determining weather minima for the similar reason.

Properties outside Windmill Zones – These are properties a minimum of 3nm from existing windmills. If the object is not readily visible is the same horizontal plane, one can assume that there would be no impact in perceived value of the property due to the windmills.

When this was done (based on a sample of 600 properties that sold in the windmill areas over a period of 3 years) the following was discovered:

- The days on market was more than double for those properties inside the windmill zones
- The sold price was on average \$48,000 lower inside the windmill zones than those outside
- The number of homes not absorbed (not sold) was 11% vs 3%¹

A court case referenced in the February 14, 2004 edition of the Daily Telegraph (UK) refers to a house near Askam in the Lakes District. The buyers were not informed of the pending installation of 4 WTGs, which were 360' tall and 550 yards from their new home. No mention was made in the seller's disclosure form, despite the fact that the seller had protested the proposed wind farm installation to the local government indicating a large loss in value to their property. The court, after listening to chartered surveyors (appraisers) for both sides, concluded that the property had suffered a 20% decline in value.²

¹ Author: Luxemburger, Chris

² Impact of Wind Turbine Generators on Property Values
David C. Maturen, SR/WA
Certified General Real Estate Appraiser
Kalamazoo County Commissioner

"Anecdotal evidence from real estate agents near Victoria, Australia indicates a 20% to 30% decrease in property values for homes near WTGs. The report of the Township of Lincoln Wind Turbine Moratorium Committee, Kewaunee, Wisconsin (2000 to 2002) notes that the Town of Lincoln building inspector compiled a list of home sales. The list compared the property's selling price as a function of the distance to an existing 22 WTG farm in the area. His conclusions were 1) Sales within 1 mile of the wind farm prior to the installation were **104%** of the assessed values and properties selling after the wind farm introduction in the same area were at **78%** of the assessed value."³

"Is the 'jury' still out on the impact of WTGs on property value? Yes, though there do appear to be several indications that a loss in value to neighboring properties is a real possibility. Can any state agency conclude that wind farms do not have the potential for causing a nuisance and devalue nearby properties and cause a 'taking'? **No.** Whatever report the Wind Working Group comes up with, it should be informational only, include the differing opinions that are out there, not be used to usurp local land use authority in regulating WTGs just like any other land use nor to deny property owners their rights. **In our quest for 'energy independence' for our society in general, let us not forget the potential for economic loss to individuals as an unintended consequence. We should be prepared to compensate adjacent owners for any property rights (value) taken as a result of the introduction of wind farms.**"⁴

"I continue to be amazed and perplexed by the thinking of some people who live in town, totally unaffected by the ravages this proposed wind turbine project will bring to the countryside and how they feel it is a sacrifice we, living in its footprint, should bear."⁵

"Turbines are getting so big and overpowering as to be outrageous in any rural context. Their impacts on the landscapes and lives of people is totally disproportionate to the minuscule contribution they make in providing renewable energy and the pitiful savings they offer in CO₂ reductions." — Peter Ogden, Council for the Preservation of Rural Wales, *Western Mail*, 5 Dec., 2006

"These are not farms, one doesn't farm wind any more than one farms water in a hydroelectric dam or farms neutrons in an atomic plant". -Nina Pierpont, Malone, N.Y

Should this project be approved, and our land lose its value, who will be responsible for compensating the landowners not in the project, but affected by its location in our neighborhood? Make these companies set up escrow accounts with funds to compensate landowners unable to sell and relocate if they are unable to live with the noise levels, or develop health issues. If there are no claims against the escrow accounts during the life of

³ Impact of Wind Turbine Generators on Property Values
David C. Maturen, SR/WA

⁴ Impact of Wind Turbine Generators on Property Values
David C. Maturen, SR/WA

⁵ Green Backlash: The Wind Turbine Controversy

the contract these funds could be returned once the turbines are decommissioned. Any company not willing to share the financial risks should not be allowed to construct wind farms.

According to Michael McCann of McCann Appraisals LLC in Chicago, Ill., “Turbines are large-scale industrial machines/projects, which surround homes, unlike any other large-scale projects. I have never seen a situation akin to wind farms where an industrial zoning ‘overlay’ encompasses and surrounds existing homes. **No other industrial, retail or other type of large-scale project gets approved without first buying out the existing residences rather than surrounding them.** A home is the biggest investment most people have in their life and deserves value protection from a new dominating land use, which generates profits for the developers and is claimed to be for the public good. It would seem that most wind energy companies are unwilling to compensate people fairly for value loss....nor buy them out.”

McCann, a Certified General Real Estate Appraiser who has qualified as an expert witness on real estate value and zoning cases in 20 states, has reviewed residential sale data for 46 transactions near the boundaries of Illinois’ first wind project, Mendota Hills, in Lee County that occurred after turbines were erected from 2003 through March 2005, “a strong market overall.” “The homes averaged a sale price of \$74.63 per square foot,” he says. A separate group of sales much further removed from the project averaged \$102.94 per square foot. Most homes were older farmstead residences and modest ranch-type homes typical of those found in rural Illinois. He says the sales data reveals that the typical home within a mile or two of project boundaries is **25 percent lower in value** than for more distant homes. Some examples range upward of **30 percent** and, in softer current market conditions, he anticipates value discounts exceeding 30 percent and perhaps as **high as 50 percent.**⁶

“What we have all thought of as an industry of benefit, may not be of much benefit. They don’t provide any jobs and now they may not provide much revenue either!”

— Judge Laura Pryor, Gilliam County, Ore.

“One thing is clear: The environmental community must view wind power projects as they would any other type of industrial development. — Martha Frey, Executive Director, Otsego (N.Y.) 2000

Project landowners are being compensated for the use of their property, adjacent landowners should be compensated for the loss of value which includes the loss of viewshed and lifestyle. The local and state government does not have the right to place a reduced value on my home for the benefit of a foreign investment company. A Company that will place these industrial monsters next to us, reap the tax incentives, and leave the area.

⁶ March 25, 2009 • U.S.

Green Backlash: The Wind Turbine Controversy

These are big structures and they do make sound. — Paul Gaynor, UPC Wind

Medical authorities are reporting health risks for those living within 2km of wind turbines. The French National Academy of Medicine has called for a halt of all large-scale wind development within 1.5 kilometers of any residence, because the sounds emitted by the blades constitute a permanent risk for people exposed to them. The U.K. Noise Association studied the issue and agreed with the recommendation of a 1-mile setback. Sound experts Rick James and George Kamperman recommend a minimum 1 km (3,280 ft) distance in rural areas. James himself suggests that 2 km is better between turbines and homes, and Kamperman proposes 2-3 km as a minimum. German marketer Retexo-RISP also suggests that "buildings, particularly **housing**, should not be nearer than 2 km to the windfarm"; and that was written when turbines were half the size of today's models.

24-4

Dr. Nina Pierpont, the preeminent expert on "wind turbine syndrome", recommends 1.25 miles (2 km). That is the minimum the Davises insist on as safe as well. In France, Marjolaine Villey-Migraine concluded that the minimum should be 5 km (3 miles).⁷

Desert Claim is promoting their increased setback of 2500 feet for most residences, not property lines, with 7 affected homes within a closer range. Our home is 562 feet (by Gmaps Pedometer) from house #1, which is 1778 feet from a turbine. The total would put us within the 2500-foot setback from a turbine, yet we are not on the list of affected homeowners. No consideration has been made for our property to the north of the project boundary. Force them to meet the min international standard of 1.5 kilometers from property lines and 2 kilometers from buildings. These large industrial structures will block our view, decrease our home value and inflict medical risks on those living in its footprint. Someone must be responsible for this situation. We are relying on you to prevent a situation that can't be governed once it is in place.

24-5

Liz Lasell-McCosh
201 Casey Drive
Ellensburg, WA 98926

⁷ National Wind Watch calls for minimum 1-mile setbacks

Comment 24: Liz Lasell-McCosh

24-1 *Response:* The viewpoints used for the visual analysis in the SEIS are publicly accessible locations, such as public roads and parks, rather than individual homes or properties. As described in greater detail in the response to Comment 42-1, public viewpoints are typically used for visual analysis, because they are indicative of impacts to larger numbers of people; as indicated in the National Research Council report submitted by Kittitas County (see attachment B of Letter 42), experts do not consider it appropriate to base visual assessments on views from individual residences. Please also refer to the response to Comment 7-3. As noted in the response to Comment 23-2, a GIS review of the turbine layout and residence data indicated that the residence in question is 2,503 feet from the nearest turbine.

24-2 *Response:* The substance of the comment appears to be consistent with the vividness and visual impact information presented in the SEIS visual analysis.

24-3 *Response:* The SEIS statement quoted in the comment characterizes the area in terms of density and proximity to Ellensburg; it does not address residential property values. The SEIS acknowledges that the greatest visual impacts are likely to be experienced by observers closest to the turbines, but also notes that the revised configuration of the Project has significantly reduced the number of residences close to the turbines and has increased the distance between non-participating residences and the nearest turbines.

The comment claims that the Project will result in a loss of property value. The comment appears to quote or paraphrase other sources, but in most cases, provides insufficient information to identify the source and, therefore, it is not possible to assess the accuracy and relevance of the anecdotal information provided. The comment does reference an analysis included in the report of the Township of Lincoln Wind Turbine Moratorium Study Committee, but it fails to quote its conclusion, "based on the available information compiled in this report, I would conclude that siting of the windmills has not had any significant negative impact on property values near them." The response to Comment 3-17 provides additional information on the effect of wind projects on property values.

24-4 *Response:* The comment contends that there are health risks associated with wind turbines, and as a result, wind turbines should be located from 1.5 to 3 kilometers away from residences. Materials referenced in this comment have been reviewed, and the following additional information is provided.

Published reports concerning the available scientific information about the health effects of wind turbines do not support claims of adverse health effects. For example, despite more than 25 years of wind power generation in Europe, the British government concluded that there have been no significant reports of health issues. (<http://www.berr.gov.uk/energy/sources/renewables/explained/wind/myths/page16060.html#MythTurbinesareahealthhazard>) After reviewing the available literature, Dr. David Colby of the Chatham-Kent Public Health Unit concluded that wind turbines would have negligible adverse health effects. Chatham-Kent

Public Health Unit, The Health Impact of Wind Turbines: A Review of the Current White, Grey and Published Literature (June 2008) (<http://www.wind-works.org/LargeTurbines/Health%20and%20Wind%20by%20C-K%20Health%20Unit.pdf>)

The World Health Organization has also completed a study evaluating the relative health effects of different methods of generating electricity. The study concluded that adverse health effects from wind generation are "negligible" and that "[t]he increased use of renewable energy, especially wind, solar and photovoltaic energy, will have positive health effects." (World Health Organization, Fourth Ministerial Conference on Environment and Health, Energy, Sustainable Development and Health (3 June 2004) available at <http://www.euro.who.int/document/eehc/ebakdoc08.pdf>.)

The comment references a recommendation that it erroneously attributes to the French National Academy of Medicine. A working group impaneled by the French National Academy prepared a March 14, 2006, report titled "The Repercussions of Wind Turbine Operation on Human Health," which recommended stopping large-scale wind development within 1.5 kilometers of any residence. However, French National Academy of Medicine never took any action to adopt the recommendation. The working group did not base this recommendation on a conclusion that turbine noise constituted a definitive health risk. In fact, the working group acknowledged that no reliable epidemiological studies of wind turbine noise effects on humans existed, and therefore also recommended that an epidemiological investigation into the possible health consequences of wind turbine noise be conducted.

Similarly, although the chair of the UK Noise Association has recommended a 1-mile setback from residences, and Rick James and George Kamperman have recommended setbacks 1 to 3 kilometers, the referenced recommendations do not include any scientific support for claims that adverse health effects are attributable to wind turbines. The references to German marketer Retexo-RISP, the Davises and Marjolane Villey-Migraine are not described in sufficient detail to identify the specific publications associated with these sources. Therefore, it is not possible to review and address the underlying publications.

The comment also references the claims of Dr. Nina Pierpont, who has created a website on what she has described as "wind turbine syndrome" (www.windturbinesyndrome.com). Dr. Pierpont has conducted some case-study research on people who have complained about health issues associated with wind turbines. The website refers readers to a forthcoming book by Pierpont that is yet to be published. Secondary references (e.g., <http://kirbymtn.blogspot.com/2009/05/wind-turbine-syndrome.html>) describing Pierpont's work indicate that her research consisted of case-study interviews of 10 families (38 total people) living near large wind turbines. It does not appear as if the results of her research have been peer-reviewed.

Pierpont evidently attributes the health effects characterized as wind turbine syndrome to low-frequency noise (noise with a frequency below 100Hz, per NAS/NRC 2007), infrasound or vibration and their associated impact on the body's vestibular system (related to balance and

its neurological connections). Multiple published studies indicate that low-frequency noise and infrasound are not problems associated with modern wind projects. For example, Bellhouse concluded "There is no evidence to indicate that low-frequency sound or infrasound [inaudible or barely audible sound at frequencies below 20 Hz] from current models of wind turbine generators should cause concern to anyone living close to a wind turbine generator or a wind farm" (G. Bellhouse, "Low Frequency Noise and Infrasound from Wind Turbine Generators: A Literature Review," June 30, 2004, available at <http://www.wind.appstate.edu/reports/040810-SoundLitReviewWTGs.pdf>). Leventhall concluded that infrasound from wind turbines is not a problem. (G. Leventhall, *Infrasound from Wind Turbines - Fact, Fiction or Deception*, 34 *Canadian Acoustics* 29 (2006) available at www.wind.appstate.edu/reports/06-06Leventhall-Infras-WT-CanAcoustics2.pdf) A report by HGC Engineering concluded that "there is no evidence to suggest that infra sound from wind turbines causes issues with respect to human perception or health" and that this conclusion is similar to studies published elsewhere. Similarly, the British government commissioned a study that concluded there is no evidence of health effects arising from infrasound or low-frequency noise generated by wind turbines (<http://www.berr.gov.uk/energy/sources/renewables/explained/wind/onshore-offshore/page31267.html>).

In summary, there is a wide range of opinion as to the appropriate setback distance from wind turbines. Additional information on the topic of setbacks is found in response to Comment 7-3. It is evident that a medical basis for such recommendations has not been clearly demonstrated. Contrary to the implication in Comment 24-5 (see below), there is no accepted (minimum international standard) and no reasonable basis for EFSEC to apply any of these suggested setback distances to the Desert Claim Project.

24-5 *Response:* The turbine layout and GIS data were reviewed and confirmed that the subject residence is more than 2,500 feet from the nearest turbine. All turbines in the proposed Project are located at least 1,640 feet (4 times the turbine tip height) from non-participating residences. Washington law does not require wind turbines to be located any specific distance from residences. The response to Comment 7-3 references several model ordinances and guidelines adopted by other states, which recommend lesser setbacks. The comment mentions an "international minimum standard of 1.5 kilometers" without providing any supporting reference. The rationale supporting the four times tip height setback is summarized in response to Comment 3-5, and is also discussed in SEIS Section 3.4.3.1.

The commenter's objection to the project's impact on her view is noted. The SEIS acknowledges that the greatest visual impacts are likely to be experienced by observers closest to the turbines, but also notes that the revised configuration of the project has significantly reduced the number of residences close to the turbines and has increased the distance between non-participating residences and the nearest turbines.

Public Comment
DSEIS #25

Bhavnani, Monica (CTED)

From: deidre link [linkdal@televar.com]
Sent: Monday, May 04, 2009 6:27 AM
To: CTED EFSEC
Subject: Desert Claim Wind draftEIS Comments

From: Deidre Link
560 Hawk Haven Rd.
Cle Elum, WA 98922
509-674-2420

To Whom It May Concern,

Thank you for this opportunity to comment on the Desert Claim Wind Project.

I am in favor of this project. I feel it has positive public benefit. The developers have done a good job reducing the number of residences impacted. This project will bring much needed revenue to school districts in Kittitas County. I do not feel there will be environmental impacts significant enough to halt the project moving forward. 25-1
25-2

The issue of property rights is a two way street. The property owners who wish to put wind turbines on their land are at odds with property owners who claim their land values will be diminished and views obscured if this project built. The electrical transmission lines were in place long before they purchased their land. The wind has always blown thru this valley and the research to use this renewable resource has been going on for over 20 years. The need to reduce our dependance on oil has been known for as many years. I liken it to people who purchase a home near an airport, as expansion of the runways occurs they complain about the noice. 25-3

Energy production must occur along transmission lines, if I were a property owner out there I would much rather see wind turbiines than a cooling tower or smoke stack. 25-4

Regards,

Deidre Link

5/4/2009

Comment 25: Deidre Link

25-1 *Response:* The comment is noted.

25-2 *Response:* The comment is noted.

25-3 *Response:* The comment is noted.

25-4 *Response:* The comment is noted.

Public Comment
DSEIS #26

Bhavnani, Monica (CTED)

From: Clear, Gwen (ECY)
Sent: Monday, May 04, 2009 9:41 AM
To: CTED EFSEC
Subject: Scoping comments for Desert Claim Wind Power Project.
Importance: High
Attachments: 394 Desert Claim Wind.pdf

Please see the attached comment letter for the Desert Claim Wind Power, LLC & EnXco Draft Supplemental EIS.
The original letter is in the mail.
Thank you,

Gwen Clear
SEPA Coordinator
WA State Dept of Ecology
Central Regional Office - Yakima
(509) 575-2012

5/4/2009



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

May 1, 2009

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

Dear Mr. Fiksdal:

Thank you for the opportunity to comment on the Draft Supplemental Environmental Impact Statement for Desert Claim Wind Power Project, proposed by Desert Claim Wind Power, LLC and enXco. We have reviewed the documents and have the following comments.

Air Quality

Wind power projects typically use crushed rock for road and concrete for turbine foundation construction. Ecology's Air Quality Program requires portable concrete batch plants to notify Ecology's Air Quality at least 30-days prior to starting portable concrete batching operations. To notify, portable concrete batch plants should fill out an application for a temporary air quality permit. Portable rock crushers are required to have coverage under Ecology's Portable Rock Crusher General Order of Approval and notify Ecology's Air Quality Program at least 10-days prior to starting rock crushing activities. For information, contact Jared Mathey at (509) 454-7845.

26-1

Water Resources

Information for the applicant:

If you plan to use water for dust suppression at your site, be sure that you have a legal right. A water right permit is required for *all* surface water diversions and for any water from a well that will exceed 5,000 gallons per day. (Chapter 90.03 RCW Surface Water Code and Chapter 90.44 RCW Regulation of Public Ground Waters) If in doubt, check with the Department of Ecology, Water Resources Program. Temporary permits may be obtainable in a short time-period. The concern of Water Resources is for existing water rights. In some instances water may need to be obtained from a different area and hauled in or from an existing water right holder.

26-2

If you have any questions concerning the Water Resources comments, please contact Brean Zimmerman at (509) 454-7647.



Mr. Fiksdal
May 1, 2009
Page 2 of 3

Water Quality

Sand and Gravel Operations: All concrete products manufacturers and property owners (or operators) of sand and gravel pits, rock quarries, asphalt and concrete batch plants are required to apply for permit coverage under the Sand & Gravel General Permit. In addition, owners of **portable** crushers, operating at sites that are not permitted for crushing under the Sand & Gravel General Permit, are required to apply for coverage. You may download the application form and instructions from the Internet at <http://www.ecy.wa.gov/programs/wq/sand/index.html>. If you do not have Internet access call Cindy Huwe at (509) 457-7105 for application materials.

Ecology must receive your application at least 180 days before the proposed date for starting operations. Mail your completed application to:

Cindy Huwe, Water Quality Permit Coordinator
Washington Department of Ecology
15 West Yakima Avenue #200
Yakima, WA 98902

After you complete sand and gravel operations, you must submit an application for a wastewater discharge permit if you will use the site for industrial uses (e.g., as a stormwater retention facility). You will also need to submit an engineering report if there will be wastewater treatment components, including piping.

Project Greater-Than 1 Acre with Potential to Discharge Off-Site

An NPDES Construction Stormwater General Permit from the Washington State Department of Ecology is required if there is a potential for stormwater discharge from a construction site with more than one acre of disturbed ground. This permit requires that the SEPA checklist fully disclose anticipated activities including building, road construction and utility placements. Obtaining a permit is a minimum of a 38 day process and may take up to 60 days if the original SEPA does not disclose all proposed activities.

The permit requires that Stormwater Pollution Prevention Plan (Erosion Sediment Control Plan) is prepared and implemented for all permitted construction sites. These control measures must be able to prevent soil from being carried into surface water (this includes storm drains) by stormwater runoff. Permit coverage and erosion control measures must be in place prior to any clearing, grading or construction.

More information on the stormwater program may be found on Ecology's stormwater website at: <http://www.ecy.wa.gov/programs/wq/stormwater/construction/>. Please submit an application or contact Lynda Jamison at the Dept. of Ecology, (509) 575-2434, with questions about this permit.

Mr. Fiksdal
May 1, 2009
Page 3 of 3

Erosion control measures must be in place prior to any clearing, grading, or construction. These control measures must be effective to prevent soil from being carried into surface water by storm water runoff. Sand, silt, and soil will damage aquatic habitat and are considered pollutants.

Any discharge of sediment-laden runoff or other pollutants to waters of the state is in violation of Chapter 90.48, Water Pollution Control, and WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington, and is subject to enforcement action.

26-4
(con't)

Best management practices must be used to prevent any sediment, oil, gas or other pollutants from entering surface or ground water.

Sincerely,



Gwen Clear
Environmental Review Coordinator
Central Regional Office
(509) 575-2012

394

Comment 26: Washington Department of Ecology

26-1 *Response:* The comment is noted. The Applicant has indicated that the construction contractor will obtain air permits if portable batch plants or rock crushers are used.

26-2 *Response:* The comment is noted.

26-3 *Response:* The comment is noted. The Applicant has indicated that the construction contractor will obtain air permits if portable batch plants or rock crushers are used.

26-4 *Response:* The comment is noted.

May 1, 2009

Mr. Allen Fiksdal, Manager
Energy Facility Site Evaluation Council
905 Plum Street SE
PO Box 43172
Olympia, WA 98504-3172

Re: Desert Claim Wind Power Project

I have been following the permitting process of the Desert Claim Wind Power Project since its beginnings in Kittitas County. Property my family and I own was part of the original project that was proposed to Kittitas County in their 2003 application.

Kittitas County issued a Final Environmental Impact Statement on that proposal in 2006. I feel that the County did a very good job on that document. It was thorough and extensive.

Now with the Supplemental Environmental Impact Statement that covers the revision, this project has been thoroughly examined. I think that the EFSEC Council should adopt this document as is.

27-1

I'm attaching two documents to this letter. The first is a guest editorial that I wrote that was published in the local newspaper, the Daily Record on January 15, 2009. At that time I urged the County Commissioners not to fight the Desert Claim Wind Power Project.

The second document is an online version of the article from the Daily Record about the decision the Supreme Court made last fall regarding EFSEC and the Governor's authority to permit wind farms. The online version enables readers to comment on news articles. You'll note that most of the comments are very positive.

As the unemployment rate in our county climbs and with the release of the economic study prepared by CWU economic professors, I feel even more strongly that this project must move through the permitting process quickly and it seems that my viewpoint is shared by many others in Kittitas County. The original project was thoroughly scrutinized by the County Commissioners and the revised project addresses most of the objections they had.

27-2

There is no reason why EFSEC shouldn't quickly make a positive recommendation to Governor Gregoire to issue a permit so that the Desert Claim Wind Power Project can be built in 2010.

27-3

Sincerely,



Chet Morrison
2607 Judge Ronald Road
Ellensburg, WA 98926

RECEIVED

MAY 04 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

Comment 27: Chet Morrison

27-1 *Response:* The comment is noted.

27-2 *Response:* The comment is noted.

27-3 *Response:* The comment is noted.

Public Comment
DSEIS #28

Bhavnani, Monica (CTED)

From: ginaalan@fairpoint.net

Sent: Monday, May 04, 2009 9:56 AM

To: independent.power@verizon.net; Marvin, Bruce (ATG); paul.jewell@co.kittitas.wa.us; Tribble, Michael (ATG); megak@perkinscole.com; CTED EFSEC; Fiksdal, Allen (CTED); Crews, Kyle (ATG)

Subject: water tables *Desert Claim*

What will happen to our water tables for our wells? Where is this stated in your environmental impact statement? | 28-1
I want compensation for all impacts since I am to be imprisoned on 3 sides of my property. | 28-2

Gina Jefferson-Lindemoen

5/4/2009

Comment 28: Gina Jefferson-Lindemoen

28-1 *Response:* Please see the response to Comment 7-4.

28-2 *Response:* The commenter's request for compensation for all impacts associated with the project is noted. It is not clear, however, what impacts the commenter contends will occur, or how this comment relates to the SEIS. If the comment is intended to reference property values, the responses to Comments 3-17 and 24-3 provide applicable information. Also please note that EFSEC has no legal authority to provide or require compensation associated with energy projects.

EFSEC
P.O. Box 43172
Olympia, Wa. 98504-3172

4/30/09
RECEIVED

MAY 05 2009

Dear Committee:

ENERGY FACILITY SITE
EVALUATION COUNCIL

This committee cannot even imagine the terrible impact the Desert Claim Project will have upon my neighbors, myself and the intended area. It is beyond belief that such actions are even considered appropriate to this part of Kittitas County.

Reading the DSEIS regarding the impact of lights is sickening. We can observe the lights from Wild Horse from over 20 miles distant. Why on earth would there not be significant impact from lights for those of us confronted with those from Desert Claim up close and way too personal?

29-1

While attending the public meeting on April 23rd here in Ellensburg, it was absolutely obvious by the camaraderie between EFSEC members and enXco members that what the public and county officials deemed not acceptable previously will be disregarded and tossed out.

This committee received volumes of testimony from our county officials, real estate professionals, health professionals and the public, all showing, with facts, the detrimental impact to public safety, land values, wildlife and domestic animal health which was disregarded as valueless since it did not show what was wanted.

29-2

There was no justification for placing turbines on Hwy 97 in a designated national scenic area and there is even less validity to placing turbines where enXco wishes. How in all good conscience can they be forced upon us within miles of our homes let alone feet. This whole attempt is so unjust and unbelievably wrong. Wild Horse has been the only reasonable valid placement away from humans but the real impact has yet to be determined.

29-3

29-4

This committee knows full well the deck was stacked with folks in favor of Desert Claim at the meeting and the bottom line is money. Altruism is far from the reason for wanting this project and only a few will benefit.

I have included information from folks who are experiencing the impacts first hand living near a wind farm. The picture is ugly, scary and having these concerns disregarded as non-factual to me, is unforgivable.

Should residents of this area develop symptoms described in the attachments, perhaps you will reflect on the part you played in how these illnesses and discomforts came to be.

Our health, safety and well being is in your hands. Do not take our concerns lightly and please read - and absorb!!! - what will be the detrimental impact to our lives.

Thank you,




Christine L. Cole
Roger Binette
7430 Robbins Rd
Ellensburg, Wa. 98926

Attachments - 10

29-5

Comment 29: Christine Cole

29-1 *Response:* Please see the response to Comment 3-13. Section 3.4.4 of the Draft SEIS indicated that the visibility of red lights on turbines from multiple wind projects would likely be perceived by residents in the area as an adverse visual impact.

29-2 *Response:* Please see the response to Comment 1-1. EFSEC considers all public testimony and comments presented in its proceedings seriously. Information that may have been presented to Kittitas County officials in the past is only considered by EFSEC if it is presented to EFSEC. However, EFSEC has adopted the Final EIS published by Kittitas County, and Kittitas County has submitted comments concerning the Draft SEIS (see Comment 42). Please refer to the responses to Comment 3-9 concerning public safety, Comment 3-17 regarding property values, and various other specific comments concerning wildlife.

29-3 *Response:* Please see the response to Comment 3-6. The comment is incorrect in referring to a “designated national scenic area;” there is no such designation applicable to Highway 97 or the area surrounding the Project.

29-4 *Response:* The opinion regarding proximity of turbines to homes and the qualified preference for the Wild Horse site are noted. The responses to several comments address questions of proximity and setbacks (e.g., Comments 3-9, 7-3, 21-1, and 22-3), while several others relate to the alternatives considered in the SEIS (e.g., Comments 7-14 and 42-5).

29-5 *Response:* The newspaper and internet articles submitted with this comment are noted and have been entered into the record. These information items are not specific to the Desert Claim Project and do not address the Draft SEIS; consistent with SEPA regulations regarding the specificity of comments (WAC 197-11-550), there are no substantive comments in the articles. While no further response to this comment is provided, please note that the various articles address topics involving noise and the concept of “wind turbine syndrome” health effects that are attributed to wind turbines in general, along with issues involving property values and wildlife impacts. The same or similar points are included in several substantive comments that address the Draft SEIS. Please refer to the responses to Comments 22-1 and 24-4, for example, with respect to noise and associated concerns. Please refer to the response to Comment 3-17 for information regarding property values.

LETTERS

YoungLife praised for work with youth

I am a mom to five kids and I have seen an impact in my kids because of YoungLife. I feel YoungLife is very positive and is wonderful to have here in Upper Kittitas County. I've noticed the change in my children's behavior, YoungLife has done that, I believe. They get to learn about Jesus and I think that's very good. I believe YoungLife provides a safe place with a positive message. Three of my kids have been to camps and my teens agree that they are awesome events. One of them has been inspired by the program and it makes me feel very happy and excited for her, now we are learning more together. I appreciate that she was given a scholarship, she really wanted to go and it helped us out. I really see the importance of camp and fundraisers for groups like YoungLife.

Rayette Martinez

Windfarms wouldn't exist without subsidies

On April 23rd, the Desert Claim Wind Power Project will present to Energy Facility Sighting Evaluation Council (EFSEC) an updated EIS after being turned down by our Kittitas County Commissioners in 2005 for a larger project. Rather than repeat facts others will publish on increased jobs and lower property taxes, I'd like to head off some of the recurring objections.

Windfarms wouldn't exist without subsidies

During the Depression, the TVA and locally BPA were Federally financed in part for jobs and in part for future electrical needs for growth. Sound familiar? Why do you think we have the lowest power rates in the county? Hydro subsidies.

The Iraq War is a direct carbon subsidy. Tack that on to a barrel of oil to compute the true cost of running your car. Add on depreciation, credits, cheap land and ocean leasing rights...you get the picture. Hydrocarbon subsidies.

In Kittitas County, we believe in Individual Property Rights

State and Federal oversight groups have been responsible for virtually all our freeways, dams, airports, power lines, train tracks, etc. Is this County so different that we should try to set an example of no facilities of this sort?

A flippant response to those opposed to the EFSEC process is "go change the law." It is in fact law. Our County Commissioners have filed for Intervenor status, giving them a seat at the table in the Ellensburg meeting. They have not chosen pro or con. Since 2005 the cost of turbines is almost triple. We as consumers end up paying that increase. A strong public showing at 7:00 p.m. on April 23, will in fact, help expedite this process, potentially bringing in tax revenue in 2010. I urge you to show up and voice your opinion.

Craig Nevil - Cle Elum, WA.

707 W 2nd Cle Elum WA 98922

30-1

RECEIVED

MAY 05 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

Comment 30: Craig Nevil

30-1 *Response:* This comment submittal consists of a copy of a letter written to a local newspaper. While the letter is noted, it does not provide a substantive comment specific to the Draft SEIS and no further response is needed.

Public Comment
DSEIS #31

May 1, 2009

Mr. Allen Fiksdal, Manager
Energy Facility Site Evaluation Council
905 Plum Street SE
PO Box 43172
Olympia, WA 98504-3172

Re: Desert Claim Wind Power Project

My name is JP Roan and I am a landowner in the project.

This project is very important to me and my family because it will enable the family ranch to remain intact. Leasing land for turbines gives me another revenue stream that is dependable. I want to leave my ranch intact for my children and grandchildren as my parents did for me, but ranching is a tough business and it is getting more and more difficult to make a profit.

31-1

My ranch is located in an open range land area. I guess the easiest way to explain what this means is to say that the cows have the right of way. This area is perfect for a wind farm since the cows don't mind the turbines.

31-2

I have three transmission lines that run right through my property. They march across my land taking power from the dams to the metropolitan areas west of the Cascades.

31-3

And, since we all know that the wind blows here, all of the requirements for a wind farm are found on my land. This land combined with that of my neighbors comprises the site for the Desert Claim Wind Power Project.

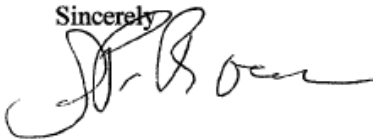
I have a bit more information that I'd like to share with you. I found out that between April 1, 2008 and November 30, 2008, the Wild Horse Wind Farm Renewable Energy Center had over 18,000 visitors and hosted over 230 groups. These visitors came from 46 different states and 28 countries. Tourism is very important to Kittitas County and some folks felt that the wind farms would hurt tourism. On the contrary, this data seems to say that the opposite is true.

31-4

I think that this project needs to move forward quickly. The review of this project has been very thorough and it's time to permit it. Let the construction begin in 2010 so we all can benefit from the project.

31-5

Sincerely



J P Roan
13991 Reecer Creek Rd
Ellensburg, WA 98926

RECEIVED

MAY 05 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

Comment 31: J.P. Roan

31-1 *Response:* The comment is noted.

31-2 *Response:* The comment is noted.

31-3 *Response:* The comment is noted.

31-4 *Response:* The comment is noted.

31-5 *Response:* The comment is noted.



Washington State Energy Facility Site Evaluation Council

COMMENT FORM

Desert Claim Wind Power Project
Draft Supplemental Environmental Impact Statement

Public Meeting - Ellensburg, Washington, April 23, 2009

Name: David O. Young
Address: P.O. Box 915 Ellensburg WA 98926
(Please include your Zip!)

Please write any comments you have about the
Desert Claim Wind Power Project Draft Supplemental Environmental Impact
Statement below.

Leave this sheet in the Comment Box tonight, or mail it to:
EFSEC, PO Box 43172, Olympia, WA 98504-3172.
Comment letters must be postmarked by Monday May 4, 2009.

The unavoidable adverse impact of night time Red
lighting for aviation safety is unavoidable. But there
is a significant night time adverse impact that is
avoidable. That impact is the increase of light
pollution, due to this project. Light pollution
is caused by poorly positioned and/or unshielded
out door lighting that allows light to shine far
beyond the intended area of illumination, onto
road ways, the countryside, or even into the sky.
Lighting at this project should be properly shielded

32-1

Use the back of this form if you need more room for your comments.

RECEIVED

For more information about EFSEC's review of this project, please contact:
Stephen Posner, Compliance Manager, PO Box 43172, Olympia, WA 98504-3172
telephone (360) 956-2063, or e-mail efsec@cted.wa.gov.

MAY 05 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

to restrict illumination light to its intended area. Lights should not be angled in an attempt to light a large area such as parking lots or substations with a few lights, which allows the light's element, and internal reflector to be seen far away. Lights on poles ~~shiny~~ shining straight down, without the use of drop lenses, in the amount needed to safely illuminate an area, should be used. Lights on the sides of buildings or over door ways should be shielded.

32-1
(con't)

The negative impact of increasing Kittitas County's light pollution due to this project can easily be avoided by the proper placement, and selection of shielded outdoor lighting.

More information on the causes and cures of light pollution, as well as links to manufactures of shielded light fixtures can be obtained through the International Dark-Sky Association at, "www.darksky.org"

Sincerely,

David Young

Comment 32: David O. Young

32-1 *Response:* The mitigation measures proposed in this comment are consistent with those proposed by the Applicant. The Revised Application, Project Description Section 6.2 indicates that the Applicant will minimize security lighting, make any ground-level security lighting motion-sensitive, and use lighting devices designed to be least visible from ground level.



Rob McKenna

ATTORNEY GENERAL OF WASHINGTON

1125 Washington Street • PO Box 40100 • Olympia WA 98504-0100

May 4, 2009

Allen Fiksdal
Energy Facility Site Evaluation Council
925 Plum Street S.E., Bldg. 3
PO Box 43172
Olympia, WA 98504-3172

**Re: Desert Claim Wind Power Project Draft Supplemental Environmental
Impact Statement: Comments**

Dear Mr. Fiksdal:

Counsel for the Environment (CFE) appreciates this opportunity to comment on the Desert Claim Wind Power Project (Desert Claim) Draft Supplemental Environmental Impact Statement (DSEIS). CFE takes no position in support or opposition to the application of Desert Claim at this time. The following comments seek to ensure that the Final Supplemental Environmental Impact Statement (FSEIS) fully captures and analyzes the proposed project's environmental impacts and possible mitigation measures.

2.1.2.2 Scope of SEIS.

The first sentence in Section 2.1.2.2 should be revised to clarify that EFSEC's decision to require preparation of a SEIS was based on an evaluation of the 2006 Application for Site Certification (the 2006 ASC), the County's FEIS, and the report analyzing the 2006 ASC and the FEIS issued by Golder Associates in February 2007. Describing the 2006 ASC as "the revised ASC" is confusing, as the Applicant submitted a "Revised Application for Site Certification" in February 2009 (the 2009 ASC). The FSEIS should clearly state that the scoping for the SEIS was based upon EFSEC's review and analysis of the 2006 ACS, not the 2009 ASC.

33-1

2.2.2.1 Wind Turbines.

Neither the DSEIS nor the 2009 ACS contain a scale diagram of the proposed wind turbines.¹ A scale diagram of a wind turbine with points of reference (e.g., existing power pylons and power poles currently on the site, an average sized adult, etc.) that allow the reader to easily comprehend their size relative to the project's surroundings should be included.

33-2

RECEIVED

MAY 04 2009

**ENERGY FACILITY SITE
EVALUATION COUNCIL**

¹ See DSEIS at 2-11, Fig. 2.2-1; 2009 ACS at Fig. 6.

ATTORNEY GENERAL OF WASHINGTON

Allen Fiksdal
May 4, 2009
Page 2

2.2.2.3 Project Electrical System.

To the extent possible, the inclusion of overhead power lines should be avoided. If the proposed power line route runs through an area where underground lines are not practical or feasible, an alternative route should be developed. If overhead lines are necessary, they should be constructed with perch guards to discourage their use by raptors and other avian species. 33-3

A best practices program for boring and bridging operations should be developed and followed. Appropriate steps should be taken to ensure that slurry and spoils from boring operations are properly disposed of and do not migrate into or otherwise degrade wetland areas. 33-4

2.2.2.5 Access Roads.

The access roads for this project appear to be undersized as compared to the access roads constructed for the Wild Horse Wind Power Project (Wild Horse) and those proposed for the Kittitas Valley Wind Power Project (Kittitas Valley). Accordingly, the CFE questions the sufficiency of the proposed road design and has concerns that Applicant has underestimated the amount of land that will be temporarily and permanently disrupted by the project.

As currently proposed, Desert Claim intends to construct approximately 27 miles of road. Straight sections will have a 15-foot wide travel surfaces. Curved sections will have a travel surface up to 20 feet wide. All roads would have two foot gravel shoulders. DSEIS at 2.2.2.5. The DSEIS further provides that the total area permanently disturbed area resulting from construction of access roads will be 71.5 acres. DSEIS Table 2.2-2. In contrast, Kittitas Valley Wind Power Project (Kittitas Valley), which has similarly sized turbines, will be installing 6.06 miles of 24-foot wide road and 14 miles of 38-foot wide road and the total permanently disturbed area due to roads is estimated at 82.6 acres. See Kittitas Valley FEIS at 2-9. The FEIS for the Wild Horse Wind Power Project (Wild Horse) states that roads between contiguous turbines in a string are 34 feet wide to accommodate the movement of large crane equipment between the turbines. Wild Horse FEIS at 2-3. General access roads at Wild Horse are 20 feet wide. *Id.* While the topography for the three projects differs in significant ways, the size of the turbines and the size of the machinery necessary to erect and maintain the turbines appear to be identical. There is no explanation in the Desert Claim FEIS, DSEIS, or 2009 ACS as to why smaller access roads can be used to access the Desert Claim project. 33-5

Having an accurate description of the amount of land temporarily and permanently disturbed is critical to assessing the magnitude of the project's environmental impact and to determining appropriate mitigation for permanently disrupted habitats. The 2009 ASC states that large cranes

ATTORNEY GENERAL OF WASHINGTON

Allen Fiksdal
May 4, 2009
Page 3

will be necessary for erecting, maintaining,² and presumably decommissioning the project³ and, accordingly, roads capable of accommodating large construction equipment will have to be maintained throughout the life of the project. The designs for the Wild Horse and Kittitas Valley access roads suggest that the 15 to 20-foot wide roads proposed by Desert Claim will not be sufficiently wide.

33-5
(con't)

This section should also identify and describe the parking facilities that will be installed next to each turbine to accommodate maintenance vehicles and cranes.

2.2.3.5 Roads and Turbine Pads.

This section estimates that "temporary disturbance" along the project's access roads will typically be between 35 to 50 feet. It explains this width is necessary to accommodate trenching for the project's power lines and access for cranes during construction. The 2009 ACS, however, recognizes that cranes will occasionally need to access the turbines in order to conduct maintenance. Cranes will also need to access the site when the turbines are decommissioned. Accordingly, CFE questions whether characterization of these disturbances as temporary is accurate.

33-6

2.2.4 Decommissioning.

The Applicant has indicated that the life of the project is expected to be 30 years, at which time the project will either be upgraded ("re-powered") or decommissioned. If the current project receives EFSEC approval, any proposal to "re-power" the project or extend the project beyond its anticipated life span should be reviewed by EFSEC and be subject to EFSEC approval. Such review should require an updated assessment of the environmental impacts posed by the upgrade or extended life of the project.

33-7

2.3 Changes to Project.

This section should summarize the differences between the proposed turbines and the smaller turbines analyzed in the FEIS. This should include a comparison of the rotor-sweep for each turbine. This section should also contain a figure demonstrating the difference in size between the two types of turbines and their foundations. All of these figures should be presented in scale drawings so that the relative difference in size can be assessed. The 2009 ASC needs to be

33-8

² Later in the DSEIS, the author notes that "use of a crane and equipment transport vehicles" will be needed on "an occasional basis." DSEIS 2.2.3.15 Functions.

³ The section discussing decommissioning mentions the possibility of "re-powering" the Project with new generators and other major turbine components. The use of a crane and other heavy equipment would undoubtedly be necessary to accomplish this. Use of such equipment would also likely be necessary to disassemble the turbines.

ATTORNEY GENERAL OF WASHINGTON

Allen Fiksdal
May 4, 2009
Page 4

revised so that the dimensions for the proposed foundations are correct.⁴ See 2009 ASC, Figures 7A and 7B.

33-8
(con't)

3.1 Water Resources.

Mitigation measures for boring should include the adoption of and compliance with best management practices governing boring operations to ensure that slurry and spoils do not degrade wetlands.

33-9

Use of above ground power lines to bridge wetlands should be minimized and should be used only in situations where no other alternative routes are available.

3.2 Plants and Animals.

Rare Plant Survey

A rare plant survey for the project area should be completed before issuance of the FSEIS and its results should be included and analyzed in the FSEIS. If rare species or species of concern are found, the FSEIS should include and identify appropriate mitigation measures. The FSEIS should also include a protocol designed to identify, protect, and preserve rare species or species of concern should they be identified during the construction or operation of the project.

33-10

Permanent Habitat Disruption

The Applicant estimates that a total of 86.4 acres of the project site will be permanently disturbed by the project and that 230.8 acres will be temporarily disturbed during construction. As discussed above, the CFE questions whether the 2009 ASC and the DSEIS underestimate the permanent disruption resulting from road construction. If this is the case, additional mitigation will be necessary to compensate for the loss of high priority grassland, shrub-steppe and grassland/lithosol habitat.

33-11

Grasslands, Shrub-Steppe, Grassland/Lithosol Habitat

Washington's Comprehensive Wildlife Conservation Strategy (CWCS) identifies Washington Eastside Grasslands as a Washington Wildlife Action Plan Priority 1 Habitat. Seventy percent of

⁴ Section 4.8 Turbine Foundations in the 2009 ACS states that two types of foundations will be used to support the wind turbines: a pile foundation and an inverted-T foundation. The dimension of the inverted-T foundation will be approximately 80 feet in diameter. The outside dimension for the pile foundation will be approximately 16 feet in diameter. Figures 7A and 7B, which illustrate both types of foundation, contain incorrect dimensions and should be revised so that they accurately depict the proposed structures.

ATTORNEY GENERAL OF WASHINGTON

Allen Fiksdal
May 4, 2009
Page 5

arid grasslands have been lost since 1889 and the remaining lands are heavily fragmented with reduced habitat value. Any permanent disturbance to grasslands caused by the project should be fully mitigated pursuant to 2009 Wind Power Guidelines.

Shrub-steppe is also a Priority 1 habitat in the CWCS. Since statehood in 1889, more than 50% of this habitat type has been lost to conversion, fragmentation, or degradation. Any permanent disturbances caused by the project should be fully mitigated pursuant to the 2009 WDFW Wind Power Guidelines.

Lithosols are a WDFW priority habitat. The DSEIS indicates that there is a relatively small amount of grassland/lithosol habitat on the project site. Lithosol habitat is difficult, if not impossible, to restore. Table 3.2-2 indicates that less than .01 acre of grassland/lithosol habitat will be temporarily disturbed. Given the difficulties in restoring this habitat, any temporary disturbance will likely result in permanent damage to the habitat. Applicant should provide full mitigation pursuant to the 2009 WDFW Wind Power Guidelines for such a loss or, if possible, take steps to avoid any disruption all together.

33-11
(con't)

The DSEIS should contain more detailed information regarding the likely outcome of restoration efforts for these three habitats. This should include a definition of successful restoration and an evaluation of the likelihood of success. If it becomes apparent that temporarily disturbed land cannot be successfully restored, provisions should be in place to reclassify this land as permanently disturbed.

33-12

All temporary and permanent habitat loss should be mitigated as set forth in the 2009 WDFW Wind Power Guidelines.

3.2.3 Wildlife (Birds and Bats).

Birds

The DSEIS indicates that the risk of destruction of a nest with eggs or young will be lower because the footprint of the currently proposed project is slightly smaller than the footprint of the project considered in the FEIS. This section, however, does not identify what species are likely to be impacted and presumes, without citing to any supporting data, that the nesting density for the new project site is equivalent to the nesting density on the original project site. This section, at a minimum, should identify what avian species are likely to be impacted by construction and explain why reliance on the avian studies conducted on the original project site is sufficient.

33-13

The conclusions in this section may also need to be revised if the estimate for the amount of permanently disturbed land attributable to access roads is revised upward.

ATTORNEY GENERAL OF WASHINGTON

Allen Fiksdal
May 4, 2009
Page 6

The DSEIS concludes that the estimated mortality rate of 23 raptors per year “will not result in any population-level consequences (e.g., within the Kittitas Valley, within the Columbia Plateau, or some larger population) for the raptor species likely to be affected.” The DSEIS, however, only analyzes population estimates for kestrels and red-tailed hawks for the entire Columbia Plateau. This analysis should be expanded to address whether the project will have a significant adverse impact on the population of these species within Kittitas County.

33-14

The first bald eagle mortality associated with a wind farm has recently been reported. The FEIS indicates that bald eagles in the project area frequent cattle grounds and calving operations. Bald eagles may also prey upon waterfowl in the project site area. While the FEIS suggests that a bald eagle mortality likelihood of a bald eagle strike is extremely low, FSEIS should include a protocol that will be followed, and mitigation measures that will be considered, should a bald eagle mortality occur.

33-15

Bats

CFE has concerns regarding the reliability of bat mortality estimates based on information reported by other wind power projects. The DSEIS concedes that little is known about local, regional or national populations of bat species. Absent such information, conducting a pre-construction monitoring study to establish population baselines should be required. Without gathering this information prior to construction and operation, there is no meaningful way to determine what, if any, impacts the project will have on bat populations or how such impacts should be mitigated.

33-16

Mitigation Measures

All mitigation measures identified in the FEIS, as well as any additional mitigation measures identified in the DSEIS, should be incorporated as conditions for the Site Certification Agreement.

Additional mitigation measures that should be considered include:

- Installation of strike sensors in turbine rotors to assist in documenting avian and bat strikes.
- Installation of technology that repels bats from rotor-swept areas.
- Evaluation of bird and bat strike data to identify conditions that pose the greatest risks to bats and avian species and develop turbine operating procedures to minimize these impacts.

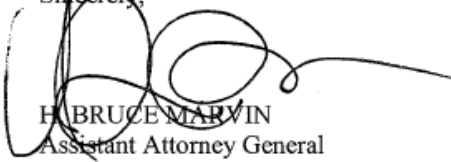
33-17

ATTORNEY GENERAL OF WASHINGTON

Allen Fiksdal
May 4, 2009
Page 7

Thank you for the opportunity to comment on the Desert Claim DSEIS. If you have any questions regarding these comments, please give me a call at (360) 586-2438.

Sincerely,



BRUCE MARVIN
Assistant Attorney General
Counsel for the Environment

HBM:da

cc: David Steeb, Desert Claim Wind Power LLC
Karen McGaffey, Perkins Coie LLP
Tony Usibelli, Director Energy Division, CTED
Alice Blado, Assistant Attorney General, Senior Counsel
Neil A. Caulkins, Civil Deputy Prosecutor, Kittitas County
Ron Criddlebaugh, Executive Director, Economic Development
Group of Kittitas County
Roger Overbeck
Linda Dalton, Senior Assistant Attorney General
Christina Beusch, Deputy Attorney General

Comment 33: Counsel for the Environment

Introductory Note: The Counsel for the Environment and the Applicant met several times to discuss the Counsel for the Environment's initial concerns about the project. Subsequent to the Counsel for the Environment submission of comments on the Draft SEIS, the Applicant and the Counsel for the Environment entered into a Stipulation that fully resolved the Counsel for the Environment's concerns about the project and expresses the Counsel for the Environment's support for project certification. Under the terms of the Stipulation, the Applicant will implement various mitigation measures, some of which are referenced in the responses to comments.

33-1 *Response:* The EFSEC decision to prepare the SEIS was made in response to the 2006 ASC, but the scoping discussion for the SEIS continued in light of the Project changes documented in the 2009 ASC. Section 2.1.2 of the SEIS has been clarified in this regard.

33-2 *Response:* Figure 2.2-4 in the Draft SEIS is a diagram illustrating the dimensions of the REpower MM92 turbine proposed for the Project, including the maximum total height, hub height, and rotor diameter/blade length. This graphic has been modified to show dimensions of the proposed turbine and shows the wind turbine that was evaluated in the Final EIS for comparative purposes. The graphic also include a typical lattice-steel transmission tower as used on one of the 230-kV transmission lines in the local area, to provide a point of reference.

33-3 *Response:* This comment is consistent with the Applicant's proposal, as described in Section 2.2.2.3, which is to use underground collection lines except where it is not reasonable to do so. The Applicant has entered into an agreement with WDFW to avoid the installation of above-ground collector lines where practical, instead installing them in or alongside roadways, in areas currently disturbed, in other areas that will be permanently disturbed by Project construction, or by directionally drilling under surface waters when practical. When it is not practical to avoid the installation of above-ground collector lines, the Applicant will consult with WDFW to determine the most practical alternative with the least adverse environmental impacts. Any above-ground collector lines will be designed to comply with the current Avian Power Line Interaction Committee Guidelines.

33-4 *Response:* Boring and bridging components of project construction activities will be addressed in several construction plans; these include a temporary erosion and sediment control plan, a construction stormwater pollution prevention plan, a construction spill prevention, control and countermeasures plan, and a construction soil management and vegetation plan. As documented in the Stipulation with the Counsel for the Environment, the Applicant has agreed to prepare these plans for EFSEC's review and approval.

33-5 *Response:* The SEIS presents the best estimate available at this time of project road widths and associated temporary and permanent habitat impacts. The actual impacts may be somewhat greater or lesser than estimated. It is possible that in some locations roads will need to be wider than originally estimated. As documented in the Stipulation with the Counsel for

the Environment and the Agreement with WDFW, the Applicant has agreed to minimize construction of new roads as much as practical and will provide compensatory habitat mitigation based on the actual impacts of project construction.

33-6 *Response:* The SEIS presents the best estimate possible at this time of temporary and permanent impacts to habitat. Actual impacts may be somewhat greater or lesser than estimated. It is possible that some impacts expected to be temporary may be permanent. It is also possible that some anticipated impacts may not occur. As documented in the Stipulation with the Counsel for the Environment and the Agreement with WDFW, the Applicant has agreed to provide compensatory habitat mitigation based on the actual impacts of project construction.

33-7 *Response:* The comment is noted. Any future proposal to repower the project would be subject to applicable EFSEC regulations and the terms of the SCA, if an SCA is issued for the Project. An updated environmental assessment may be required, depending upon the circumstances.

33-8 *Response:* Section 2.3 of the SEIS has been revised to note the differences in turbine characteristics. A graphic illustrating turbine dimensions has been added. The footnote requests correction of two figures in the Revised Application, not figures found in the SEIS.

33-9 *Response:* Please see the responses to Comments 33-3 and 33-4. Project facilities will not be located in or adjacent to wetlands. Construction-related plans will include measures designed to prevent adverse impacts. Collection lines will be located underground where practical.

33-10 *Response:* Subsequent to the Draft EIS the Applicant commissioned a rare plant survey of the Project Area. A survey for Ute-ladies tresses was conducted in July 2009, during the plant's growing season. The plant was not identified on the Project site. The survey is discussed in Section 3.2.1 of the Final SEIS.

33-11 *Response:* As documented in the Stipulation with the Counsel for the Environment and the Agreement with WDFW, the Applicant is developing a habitat mitigation plan in consultation with WDFW that will provide compensatory habitat mitigation consistent with the WDFW Guidelines.

33-12 *Response:* The Applicant is developing a Habitat Restoration and Revegetation Plan in consultation with WDFW, for submittal to EFSEC for review and approval. The Plan will require all temporarily disturbed areas to be reseeded with an appropriate mix of native, locally adapted plant species in a manner and sequence that will maximize the likelihood of successful restoration of the area and prevent the spread of noxious weeds. As documented in the Stipulation with the Counsel for the Environment, the Applicant has agreed to include in the Plan a pre-identified reference site or sites to be used to judge the success of the habitat restoration and revegetation efforts.

33-13 *Response:* Section 3.2.3 of the SEIS has been revised to clarify the discussion about impacts to birds during construction. The conclusion that impacts would be lower for the revised project was based on both a decrease in the area of disturbance and the distribution of the disturbance area among habitat types.

33-14 *Response:* According to the wildlife biologists who provided input for this portion of the SEIS, the Columbia Plateau Ecoregion is the relevant population for avian species considered in the analysis. Birds travel across county lines and there is not a biologically defined "Kittitas County" population of the bird species at issue.

33-15 *Response:* The Applicant, the Counsel for the Environment, and WDFW have had extensive discussions about the potential risk to bald eagles in light of calving operations in the Project Area and about the appropriate mitigation measures to address this risk. As a result, the Applicant, the Counsel for the Environment, and WDFW have agreed that no calving operations will take place in the portion of the Project Area owned by the Applicant, that no turbines will be located within the fenced portions of the Project Area used by ranchers for calving, and that carcasses and livestock afterbirths will be removed promptly. The Applicant will also study the behavior of bald eagles during calving operations and report the results of the study to the Technical Advisory Committee (TAC). If a bald eagle is killed by a turbine, the Applicant will report the fatality to EFSEC and the TAC, and the TAC will consider whether to recommend that additional mitigation measures be implemented.

33-16 *Response:* As documented in the Stipulation with the Counsel for the Environment, the Applicant has agreed to conduct a pre-operation bat monitoring survey during the bat migration period, and to implement a Bat Monitoring Plan, including 2 years of bat fatality monitoring, after the start of project operation.

33-17 *Response:* Subsequent to the Counsel for Environment's submission of comments on the Draft SEIS, the Applicant and the Counsel for the Environment have agreed upon mitigation measures to address the potential risks to bats. As described above and documented in the Stipulation with the Counsel for the Environment, the Applicant has agreed to conduct a pre-operation bat monitoring survey and post-operation fatality monitoring. The results of both will be presented to the TAC. If, based on the pre-operation survey results, the TAC concludes that the Project presents a significant risk to bats that is substantially greater than the risk described in the Final SEIS, the TAC may recommend to EFSEC that additional mitigation measures be implemented.

Bhavnani, Monica (CTED)

From: ginaalan@fairpoint.net
Sent: Monday, May 04, 2009 3:46 PM
To: CTED EFSEC
Subject: Desert claim

My home is approximately 1600 ft from dnr property line. My property line is 1200 ft from dnr property line. My home will be surrounded on 3 sides. I will no longer be able to look out of even one window without looking at turbines and I have no recourse or help from the company that is devaluing my home and my physical well being? I am 4 homes away from Steve Prue, number 1 on your list of homes that will be less than 2500 ft from a turbine. **Per my conversation with David Steeb on Thursday, my home and family will not be considered for any type of help or resolutions on shadow flicker, flashing lights or anything else.** I have skylights, windows 8 ft tall on 2 sides of my home and I must bear the cost all of this? I am not considered to be in the effected area???? David Steeb said that all neighborhoods have things they must deal with but what do you say to your 6 year old granddaughter when she states, "Grandma I can't come and see you when the windmills are at your house. They are scary!" This is what my granddaughter stated Saturday May 2nd.

34-1

How can my family not be considered? Can you explain this better to me and my family? David Steeb stated I have no rights for any compensation for anything that will affect me or property.

34-2

I can't say anything more and remain calm. You need to treat the people who are boxed in at the end of reecer creek the same.

We know the international standard for setbacks so why is this being allowed to be treated differently?

I want to know the distance from turbine 71, 72, and all others around my home. I am not over 2500. I need to know who decided this and prove it to me. Where are the facts on this for all of us and now that I have an engineer and access to mapping someone needs to explain this all. If a turbine can be moved 300 ft then I am even closer.

I would also like to know about medical conditions resulting from this. Who is paying out for all **medical claims**?

34-3

Gina Jefferson-Lindemoen
19000 Reecer Creek Road

5/6/2009

Comment 34: Gina Jefferson-Lindemoen

34-1 *Response:* Please refer to the responses to Comments 3-5 and 21-1 regarding views from individual residences and the response to Comment 3-17 regarding property values.

34-2 *Response:* The Applicant reviewed the GIS data on turbine and residence locations, and determined that this residence is 2,971 feet from the nearest turbine. Please see the responses to Comments 7-3 and 24-5 regarding setbacks and the response to Comment 3-17 regarding property values.

34-3 *Response:* The intent of the comment is unclear. It appears to imply that the Project may cause medical problems, but provides no explanation or support for such a claim. As explained in response to Comment 22-1, no significant health issues have been reported to be associated with wind projects, and the increased use of renewable energy, such as wind power, has been found to have positive health effects. EFSEC does not have authority to require payment for medical claims, if any such claims should arise.

Public Comment
DSEIS #35

Bhavnani, Monica (CTED)

From: Talburt, Tammy (CTED)
Sent: Monday, May 04, 2009 4:03 PM
To: CTED EFSEC
Subject: FW: desert claim comment

Monica,

Here is another desert claim comment

Tammy

360/956-2122

From: Posner, Stephen (CTED)
Sent: Monday, May 04, 2009 10:51 AM
To: Talburt, Tammy (CTED)
Subject: FW: desert claim

Please process. Thanks.

From: Fiksdal, Allen (CTED)
Sent: Monday, May 04, 2009 10:48 AM
To: Posner, Stephen (CTED)
Subject: FW: desert claim

Desert Claim comment.

Allen Fiksdal
Washington State
Energy Facility Site Evaluation Council
PO Box 43172
Olympia, WA 98504-3172
Phone: 360-956-2152
Fax: 360-956-2158
Visit the EFSEC web site at: <http://efsec.wa.gov/>

From: ginaalan@fairpoint.net [mailto:ginaalan@fairpoint.net]
Sent: Monday, May 04, 2009 9:18 AM
To: independent.power@verizon.net; Crews, Kyle (ATG); megak@perkinscole.com; Marvin, Bruce (ATG); paul.jewell@co.kittitas.wa.us; Fiksdal, Allen (CTED)
Cc: Tribble, Michael (ATG)

5/6/2009

Subject: desert claim

My home is approximately 1600 ft from dnr property line. My property line is 1200 ft from dnr property line. My home will be surrounded on 3 sides. I will no longer be able to look out of even one window without looking at turbines and I have no recourse or help from the company that is devaluing my home and my physical well being? I am 4 homes away from Steve Prue, number 1 on your list of homes that will be less than 2500 ft from a turbine. **Per my conversation with David Steeb on Thursday, my home and family will not be considered for any type of help or resolutions on shadow flicker, flashing lights or anything else.** I have skylights, windows 8 ft tall on 2 sides of my home and I must bear the cost all of this? I am not considered to be in the effected area???? David Steeb said that all neighborhoods have things they must deal with but what do you say to your 6 year old granddaughter when she states, "Grandma I can't come and see you when the windmills are at your house. They are scary!" This is what my granddaughter stated Saturday May 2nd.

35-1

How can my family not be considered? Can you explain this better to me and my family? David Steeb stated I have no rights for any compensation for anything that will effect me or property.

35-2

I can't say anything more and remain calm. You need to treat the people who are boxed in at the end of reecer creek the same.

We know the international standard for setbacks so why is this being allowed to be treated differently?

Gina Jefferson-Lindemoen

5/6/2009

Comment 35: Gina Jefferson-Lindemoen

35-1 *Response:* Please see the response to Comment 34-1.

35-2 *Response:* Please see the response to Comment 34-2.

Public Comment
DSEIS #36

Bhavnani, Monica (CTED)

From: Kurt & Jan [jkshar2@fairpoint.net]
Sent: Monday, May 04, 2009 4:37 PM
To: CTED EFSEC
Subject: Fw: newspaper articles
Attachments: CWU Observer 4 9 09.pdf; Yak Herald Editorial 11 30 08 KVVPP Supreme Court Decision.docx; Daily Record Economic Impact Study 3 11 09.docx

EFSEC,
Please accept the attached articles for the record on the Desert Claim Wind Power Project. 36-1
Jan Sharar
390 Cattail Rd.
Ellensburg, WA. 98926

(509) 925-7216

5/6/2009

Comment 36: Jan Sharar

36-1 *Response:* The information provided with this comment has been added to the record. The newspaper items state facts and opinions, but they do not include substantive comments specific to the SEIS, and no further response is needed.

**Public Comment
DSEIS #37**

Bhavnani, Monica (CTED)

From: Applegate, Brock A (DFW)
Sent: Monday, May 04, 2009 4:53 PM
To: CTED EFSEC
Cc: Fiksdal, Allen (CTED); Posner, Stephen (CTED); LaSpina, Jim (CTED)
Subject: Comments on the Draft SEIS Desert Claim Wind Power Project
Attachments: Desert Claim DSEIS Comments.doc

Dear EFSEC staff,

WDFW appreciates the opportunity to make comments to the Desert Claim Wind Power Project Draft SEIS. Please feel free to contact me if additional questions arise from this letter. This e-mail will be followed up by a signed hard copy in the mail.

Thanks again.

Sincerely, Brock

Brock Applegate
Wind Power Mitigation Biologist
Washington Department of Fish and Wildlife
201 N. Pearl St.
Ellensburg, WA 98926

(509) 925-1506
(509) 607-9957 (cell)
(509) 925-4702 (fax)

5/6/2009



State of Washington
Department of Fish and Wildlife
201 North Pearl Street, Ellensburg, Washington 98926

May 4, 2009

Energy Facility Site Evaluation Council (EFSEC)
Allen Fiksdal, EFSEC Manager
905 Plum Street SE
Olympia, WA 98504-3172

Subject: State Environmental Policy Act Document; Desert Claim Wind Power Project, Draft Supplemental Environmental Impact Statement, the project located approximately 8 miles northwest of the City of Ellensburg, Washington.

Dear Mr. Fiksdal:

The Department of Fish and Wildlife (WDFW) has reviewed the Draft Supplemental Environmental Impact Statement (SEIS) and offers the following comments for the above referenced project to the permitting agency at this time. WDFW met with Desert Claim Wind Power LLC (the proponent) on April 16, 2009 and conducted a conference call on April 28, 2009 to discuss the proposal. WDFW conducted a site visit on April 23, 2009. WDFW appreciates the proponents' many efforts to avoid environmental impacts by minimizing overhead lines at stream crossings and between substation and transmission lines. WDFW would also like to note the proponent's willingness to meet with WDFW and listen to our concerns and recommendations. WDFW encourages the proponent to protect the bald eagle (*Haliaeetus leucocephalus*) foraging area by controlling or eliminating availability of artificial winter forage in the area. WDFW appreciates the proponent's willingness to work through environmental concerns with a cooperative spirit during the DSEIS phase of the project.

37-1

WDFW's concerns with bald eagle foraging area and possible mortality:

WDFW has concerns with bald eagles foraging in the winter months, apparently created by dead livestock and afterbirth. WDFW recommends further analysis in the Final SEIS and specific mitigation measures to reduce the possible impacts to bald eagles. Please see both topics outlined below.

37-2

Through your bald eagle studies for the Final Environmental Impact Statement (FEIS), the area contains bald eagle activity and possible migration routes between roosts on the Yakima River and foraging areas probably associated with cattle operations. According to the study, bald eagles

rated as the third most common raptor during the winter (Western EcoSystem Technology, Inc., 2003). This project will overlay turbines with one of the highest concentrations of bald eagles (as compared to other wind power project areas). WDFW believes we may have a situation different from most other wind power projects and we may expect a higher chance of bald eagle mortality associated with this particular project.

Between the 2004 FEIS and the 2009 Draft SEIS, the proponent furthered analysis on many topics that changed in the project between the writing of the FEIS to the Draft SEIS. For bald eagles, the proponent did not do further analysis beyond the FEIS. As a Washington State Sensitive Species and species federally protected by the Bald and Golden Eagle Protection Act (BGEPA), bald eagles warrant further analysis beyond the Final SEIS. Additionally, the U.S. Fish and Wildlife Service (2007) has written a National Bald Eagle Management Guidelines since the proponent issued the FEIS and the guidelines mention wind power projects and foraging areas specifically in the document:

“Minimize potentially disruptive activities and development in the eagles’ direct flight path between their nest and roost sites and important foraging areas.

To avoid collisions, site wind turbines, communication towers, and high voltage transmission power lines away from nests, foraging areas, and communal roost sites,” (U.S. Fish and Wildlife Service 2007).

The project may have unavoidable significant impacts to bald eagles in the Desert Claim Project Area. WDFW recommends further analysis and mitigation measures to reduce the impacts and possible mortality to bald eagles by the project.

37-2
(con't)

Further Analysis in the Final SEIS

WDFW recommends further environmental analysis of impacts to bald eagles in the Final EIS analysis. WDFW recommends further analysis due to the changes in the condition of the project area between the 2004 FEIS and the newly issued 2009 Draft SEIS. The new project would create a greater turbine swept zone by 10 megawatts (MW) from the older project. The project location also changed and WDFW recommends that the proponent compare bald eagle winter survey locations with the new project area.

WDFW would like to see additional analysis due to the rise in bald eagle activity in the area. After years of federal listing, bald eagles have increased their numbers as they have gradually repopulated eastern Washington. Local residents commonly see bald eagles in the Kittitas Valley during winter and occasionally spot bald eagles in the spring and early summer due to new nesting territories in Kittitas County. Bald eagle nest sites did not exist in Ellensburg during the original background wildlife work for the 2004 FEIS.

WDFW recommends that bald eagles receive an analysis similar to those conducted for red-tailed hawks (*Buteo jamaicensis*) and American kestrels (*Falco sparverius*) in the 3.2.3.3 Significant Impact and 3.2.3.5 Cumulative Impacts Sections of the Draft SEIS. In addition, WDFW

recommends comparing the location of roost sites on the river with cattle operations and predicting possible flight paths between the two areas. WDFW recommends comparing the sites of winter calving operations with the turbines as well.

Another issue affecting bald eagle winter use involves the predation of the waterfowl in the area by the eagles. In the avian studies done by Western EcoSystems Technology Inc. (2003), WDFW noted the high use of waterfowl in the area. WDFW has concerns about calving operation and waterfowl flocks acting like an attractant to the bald eagles. If the proponent finds waterfowl acts as an attractant to the eagles in their analysis, WDFW recommends the Technical Advisory Committee (TAC) handle the issue and decide further management actions and possible mitigation measures.

37-2
(con't)

Recommended Mitigation Measures

WDFW has concerns about the ability to adequately mitigate for possible impacts to bald eagles. To address our concerns, WDFW recommends and asks that Energy Facility Site Evaluation Council (EFSEC) adopt the mitigation following mitigation measures in the FEIS (2004) with a few changes into the Site Certification Agreement (SCA):

“The following measures would be incorporated into the Project construction to minimize potential short term (construction) effects on bald eagles and steelhead from the project:

- minimize construction activity that occurs during the winter;
- best management practices should be employed to reduce peripheral impacts to adjacent native vegetation and habitats and to minimize the construction footprint;
- the construction footprint at all stream or water channel crossing should be strictly minimized to avoid peripheral impacts to stream habitat;
- a site management plan should be developed to, at a minimum, provide adequate on-site waste disposal, fire prevention and management, and establish erosion control procedures;
- construction equipment refueling stations should be a minimum of 100 feet from any drainage, stream, irrigation channel, or riparian area;
- adhere to the NPDES [Nation Pollutant Discharge Elimination System] permit stipulations, including erosion control measures;
- all stream and channel crossings should be designed to allow continual waterflow under all (low) conditions and insure fish passage;
- reclaim disturbed areas as soon as practical following construction.

37-3

The following measures would be employed to minimize potential long-term (operational) effects from the Project:

- establish and enforce reasonable driving speed limits within the wind plant to minimize the potential for road killed wildlife or livestock that may attract foraging bald eagles;
- provide adequate on-site waste disposal;

37-4

- remove and disposed of all [livestock afterbirths and] carcasses of livestock, big game, and other wildlife from within the wind plant that may attract foraging bald eagles;
- ensure that livestock calving areas of participating landowners remain outside the wind plant;
- install bird flight diverters on all guy wires associated with met towers [Proponent has agreed to monopole, freestanding permanent met towers];
- bury all power and communication lines on-site underground where feasible;
- install raptor perch guards on all power poles constructed for the wind plant [WDFW recommends only using perch deterrents in regards to electrocution issues. Please follow Avian Power Line Interaction Committee {APLIC} guidelines to reduce collisions and electrocutions of avian species.];
- any permanent on-site equipment fueling or maintenance stations should be established greater than 200 feet from any drainage, creek, irrigation channel, or riparian area," (Huckell/Weinman Associates, Inc. 2004).

37-4
(con't)

After conversations with the proponent on April 28, 2009, the proponent mentioned that they could not keep all livestock calving areas outside the turbine area. WDFW proposes that the proponent keep as many calving operations outside and away from the turbines as possible. To address the other calving operations within the turbine area, WDFW recommends EFSEC adds "livestock afterbirth" to the mitigation measure: "Remove and dispose of all [livestock afterbirths and] carcasses of livestock, big game, and other wildlife from within the wind plant that may attract foraging bald eagles," (Huckell/Weinman Associates, Inc. 2004).

WDFW reiterates the possibility of unforeseen significant impacts, particularly to bald eagles from this wind power project. Since the area contains a higher than normal use by bald eagles (as compared to other wind power projects), WDFW cannot predict the possible outcome of such a project in higher concentrations of bald eagles. To allow the proponent to properly mitigate and protect fish and wildlife, WDFW recommends EFSEC includes the "standard language" from the Kittitas Valley and Wild Horse Wind Power Projects SCA's in the Desert Claim Wind Power Project SCA, which reads:

"In circumstances where the Project causes a significant adverse impact on the environment not previously analyzed or anticipated by this Agreement, including wildlife impacts that significantly exceed projections anticipated in the Application and Final EIS, or where such impacts are imminent, EFSEC shall take all steps it deems reasonably necessary, including imposition of specific conditions or requirements on the Certificate Holder as a consequence of such a situation in addition to the terms and conditions of this Agreement. Such additional conditions or requirements initially shall be effective for not more than ninety (90) days, and may be extended once for an additional ninety (90) day period if deemed necessary by EFSEC; provided, however, EFSEC may impose conditions on a longer-term basis pursuant to WAC 463-36-090."

37-5

WDFW recommends that the TAC have the ability to determine significant impacts, make

Mr. Allen Fiksdal
May 4, 2009
Page 6 of 17

EFSEC aware of those impacts, and provide recommendations for management actions and/or mitigation for EFSEC's approval. In addition, WDFW asks that EFSEC adopts language into the SCA from the Wind Power Guidelines, "A TAC may reconvene to address an unforeseen circumstance outside the regular operational monitoring schedule."

2009 Wind Power Guidelines:

In 2008, WDFW negotiated guidelines with a stakeholder group for mitigation, construction, and siting of wind power projects with the wind power industry to help minimize impacts to wildlife.

WDFW encourages the proponent to contact WDFW if they have concerns regarding meeting the proposed standards set in the new guidelines as they relate to this proposal. Please find Washington's Wind Power Guidelines at the following link:

(http://wdfw.wa.gov/hab/engineer/windpower/indthe_proponent.htm). WDFW recommends that adoption of language for the Minimization of Impacts, Operations, and Mitigation sections from the Wind Power Guidelines into the SCA.

Overall, WDFW has concerns with the proposed placement of wind power turbines in or near a bald eagle foraging area. WDFW expects that a significant portion of the Final SEIS will focus on an analysis of biological impacts of the project on bald eagles. The Final SEIS should incorporate any information from early consultations including meetings, site visits, and conversations and integrate it with other project information and concerns.

WDFW welcomes the opportunity to work with EFSEC and the proponent during the design, post-construction assessment, and construction phases of the project. WDFW values our working relationship with Desert Claim Wind Power LLC and encourages future dialog as necessary. Please keep me apprised of the status of the Final SEIS and the SCA. If you have any questions or need more information from the WDFW, please call me at (509) 925-1506.

Sincerely,

Brock Applegate
Wind Power Mitigation Biologist

Cc: Harriet Allen, WDFW Olympia
Ted Clausing, WDFW Yakima
Eric Cummins, WDFW Olympia
Perry Harvester, WDFW Yakima
William Moore, WDFW Yakima
Travis Nelson, WDFW Olympia
Brent Renfrow, WDFW Ellensburg
Gregg Kurz, USFWS Wenatchee

37-5
(con't)

SPECIFIC COMMENTS CONCERNING THE DESERT CLAIM DRAFT SEIS:

Table 1.5-1 Summary of Environmental Impacts, Wildlife. The proponent noted the direct mortality due to turbine collision very well. WDFW recommends the proponent add impacts through habitat loss, disturbance, and dispersal, as well. 37-6

1.6.2.2 Wildlife. WDFW recommends that the proponent add a summary of information about the cumulative impacts on the bald eagles population here and possibly list the cumulative effects on the state candidate species: loggerhead shrike (*Lanius ludovicianus*), sage thrasher (*Oreoscoptes montanus*), and golden eagle (*Aquila chrysaetos*) as well. 37-7

1.7.1.1 Streams. WDFW requests the opportunity to review and recommend management actions to the Temporary Erosion and Sedimentation Control Plan (TESCP) and the Stormwater Pollution Prevention Plan (SWPPP). 37-8

2.2.1 Existing Project Site Conditions.

- **Project Footprint Graphic at Higher Resolution.** WDFW recommends that the proponent superimpose the construction footprint of the project (including location of turbines, roads, overhead transmission lines and underground cable trenches) over the current color aerial photography at a level of resolution sufficient to delineate areas of probable habitat impacts. Existing GIS data layers likely exist to create a base layer compatible with the work accomplished by the proponent to date. WDFW would find this information helpful for micro-siting, reviewing plans, and developing construction mitigation. 37-9

Figure 2.2-5 Proposed Turbine Locations and Project Power Collection System. WDFW recommends that the project proponent minimizes the amount of roads built to reduce their impact on species and their habitat. For example roads between turbines 41 and 35, turbines 32 and 33, and others, appear repetitive. According to the map, most of the repetitive roads lie on the west half of the project. 37-10

2.2.2.6 Operation and Maintenance Facility. Please apply motion detection devices on all project lighting. We also encourage the proponent to direct any necessary constant project lighting downward to reduce attraction to nocturnal migrating birds and bats. 37-11

2.2.3.5 Roads and Turbine Pads. WDFW recommends the proponent makes a Construction Soil Management and Project Revegetation Plan. Before ground disturbance occurs on the site, the proponent should submit, for approval by EFSEC and WDFW, a detailed construction soil management and site revegetation plan(s). Please have a company with expertise in the restoration of shrub-steppe prepare and develop the plan. The plan should identify how the proponent will conserve the soil and protect the soil from loss and erosion during construction and restoration of the site. The plan should prescribe temporary erosion controls such as application of mulch, Polyacrylamide (PAM), Best Management Practices (BMP), etc., as needed 37-12

to ensure soil protection and revegetation success. The revegetation plan shall include seed mixes adapted to each site (e.g. habitat type or ecological site) and the timing and manner of application. Seed mixes shall be comprised of locally adapted biotypes to the greatest extent possible. An aggressive weed control program shall be part of this plan. Weed control shall include BMP's for minimizing the introduction and spread of weeds on the site, weed control during construction, fall application of pre-emergent herbicides for control of cheatgrass and weeds, late winter control of cheatgrass with glyphosate as needed and spot herbicide applications where needed during the growing season. Personnel on site implementing the revegetation plan should have expertise in successful restoration of Eastern Washington native plant communities. WDFW recommend that the proponent restores and reseeds the site during the weather conditions and a time of year that guarantee better success.

37-12
(con't)

The proponent should complete post-construction restoration of disturbed areas and successful sites should achieve a robust stand of native vegetation sufficient to achieve site stability, weed control, and agreed-upon similarity to suitable reference standards. The project shall identify reference standards or sites (or a process to establish standards) within the project area for use in evaluation of site restoration success. Please consult with WDFW when selecting reference standards (sites) but reference sites must have targets no less than pre-project conditions.

2.2.4 Decommissioning. The proponent should prepare a Restoration Plan for decommissioning. As part of the Decommissioning Plan, the proponent should submit a Restoration Plan for approval by EFSEC in collaboration with WDFW and Washington Department of Ecology (WDOE) to ensure proper revegetation of the site when the project ceases operations. A company with proven expertise in restoration of shrub-steppe land should prepare and develop the plan. The final site restoration plan should provide for the return of the project site to pre-project, native shrub steppe habitat in good condition, following removal of turbines and infrastructure.

37-13

Table 3.2-1 Vegetation Types in the Project Area: The proponent has used the term "grassland" in the documents to describe shrub-steppe sites where the shrub canopy that has experienced temporary removal by fire or other temporal disturbance. The project area does not include "true grasslands" such as found in the eastern and northeastern portions of Washington, though it does include areas of managed pasture grasses and lands converted to irrigated pasture grasses. Please refer to (Daubenmire 1970) Steppe Vegetation of Washington, for a detailed discussion of native vegetation applicable to the project site). As described in the Table 3.2-1, the grassland/lithosol site resembles a scabland plant community, which Daubenmire (1970) and Franklin and Dryness (1973) both recognize as a natural vegetation type in the Columbia Basin as either Steppe or Shrub-Steppe, depending on shrub cover. WDFW has listed Steppe and Shrub-Steppe as Washington State Priority Habitats. For the purposes of impact minimization and site restoration, the proponent should treat native vegetation communities within the construction footprint of the project as shrub-steppe.

37-14

In the context of the mitigation ratios negotiated by a stakeholder group including the wind power industry and described in the WDFW Wind Power Guidelines, a lower ratio was

established for true grasslands and Conservation Reserve Program (CRP) grass plantings because of the relative difference in restoration success and length of time to maturity. The project proponent has agreed to treat the native upland plant communities (i.e. mapped as shrub-steppe and grasslands) as shrub-steppe for calculating mitigation needs for the Wind Power Guidelines (Kittitas County FEIS Vol 1, pp. 5-67).

37-14
(con't)

3.0 Mitigation Measures (in general). WDFW recommends that EFSEC add the following mitigation measures to the SCA:

- **Independent Environmental Compliance Monitor.** The proponent shall hire a Independent Environmental Compliance Monitor with appropriate expertise to: a) monitor compliance with environmental plans and permit conditions during construction and b) advise EFSEC, regulatory agencies and the project manager regarding environmental impacts during construction. The environmental monitor shall report to EFSEC and have authority to stop work on project elements that do not comply with permits and mitigation requirements. EFSEC in consultation with WDFW and WDOE shall approve the firm selected by the proponent.
- **Environmental Expertise for Project Construction Manager.** The proponent shall have an on-site environmental manager with expertise in managing construction in sensitive, arid environments. The on-site environmental manager shall a) advise the Construction Manager to ensure work is scheduled and performed in a manner that minimizes adverse environmental impacts, b) ensure that work is scheduled with consideration of site conditions including temperatures, soil moisture, precipitation, etc., and c) ensure construction complies with all environmental permits and mitigation requirements.
- **Construction-related Site Protection Plans.** The proponent shall prepare the following plans and submit them to EFSEC for approval. WDFW asks that EFSEC reviews and approves the following plans in collaboration with Kittitas County, WDFW, and WDOE:
 - Fire Protection Plan that includes measures for minimizing the likelihood of fire starts and measures to detect and quickly suppress wildfire.
 - The project's revegetation contractor with expertise in shrub-steppe restoration shall review the Construction Stormwater Pollution Prevention Plan (SWPPP).
 - The Construction Spill Prevention, Control and Countermeasures (clean up) Plan shall address spills of fuel, lubricants and other harmful materials on hardened areas of the facility and in shrub-steppe areas in a manner which minimizes long-term impacts to vegetation and wildlife habitat.
- **Technical Advisory Committee.** WDFW recommends that the proponent convenes a TAC to review pertinent monitoring and scientific data and develop appropriate responses to impacts that exceed projections for avian/bat mortality and habitat impacts. The TAC will monitor all mitigation measures and efforts and examine information relevant to assessing Project impacts to habitat, birds, bats and other wildlife. The TAC

37-15

37-16

37-17

37-18

37-19

37-20

will determine whether further mitigation measures would be appropriate, considering factors such as the species involved, the nature of the impact, monitoring trends, and new scientific findings regionally or at a nearby wind power facility. The TAC shall recommend mitigation measures to EFSEC, who shall retain the authority to require additional mitigation measures as part of the SCA, including any recommended by the TAC.

The TAC's shall ensure that monitoring data would receive consideration in a forum of independent and informed parties, who can collaborate with the proponent. The TAC shall recommend additional studies and/or mitigation to EFSEC, if they deem it necessary to address impacts not foreseen or exceed predicted impacts in the Application. In order to make recommendations, the TAC shall review and consider the results of Project monitoring studies, including post-construction avian and bat mortality surveys, impacts to habitat and wildlife, including avian and bat species, new scientific findings made at wind generation facilities as they relate with this project with respect to the impacts on habitat and wildlife. The TAC shall assess whether the post construction restoration and mitigation and monitoring programs for wildlife that have been identified and implemented merit further studies or additional mitigation, taking into consideration factors such as the species involved, the nature of the impact, monitoring trends, and new scientific findings. The TAC will coordinate with the proponent to review drafts of the Post-Construction Avian Monitoring Plan. The TAC will also review the proponent's implementation of the Post-Construction Restoration Plan.

The TAC may include, but need not be limited to, representatives from WDFW, U.S. Fish and Wildlife Service, Kittitas County, Department of Natural Resources (DNR), the Kittitas Field and Stream Club, the Audubon Society, the Farm Bureau and the proponent. EFSEC, at its discretion, may add additional representatives with appropriate expertise to the TAC. No individual representative to the TAC may be party to a turbine lease agreement, or any other contractual obligation with the proponent. EFSEC shall approve all TAC members.

No later than sixty (60) days after the beginning of construction, the proponent shall submit to EFSEC proposed Rules of Procedure describing how the TAC shall operate, including but not limited to a schedule for meetings, and a meeting procedure. The TAC will describe a process for recording meeting discussions, making and presenting timely TAC recommendations to the Council, and naming other procedures that will assist the TAC to function properly and efficiently. No later than sixty (60) days before the beginning of Commercial Operation, the proponent shall convene the first meeting of the TAC. The proponent will provide a copy of the proposed Rules of Procedure to the TAC at their first meeting for their review and comment. The TAC may suggest modifications of the plan before it receives approval by EFSEC. The TAC will remain active for the life of the Project, except that EFSEC may terminate the TAC if the TAC has ceased to meet due to member attrition or the TAC determines that the proponent has completed all pre-permitting and post operational monitoring and further monitoring is not necessary.

37-20
(con't)

The TAC members may recommend termination of the TAC as well. WDFW asks EFSEC to consider any failure of the TAC to meet and/or members to participate at any meeting, not a violation of the SCA or a conditional approval of any mitigation measure. EFSEC or a TAC member with EFSEC approval may reconvene and reconstitute the TAC at EFSEC's discretion.

37-20
(con't)

- **Restoration Plan for Decommissioning:** As part of the decommissioning plan, Permittee shall submit for approval by EFSEC in collaboration with WDFW and WDOE, a final site restoration plan to ensure proper revegetation of the site when the project ceases operations. Please have a firm with proven expertise in restoration of shrub-steppe lands prepare the plan. The final site restoration plan shall provide for the return of the project site to pre-project, native shrub steppe habitat in good condition, following removal of turbines and infrastructure.

37-21

3.1.5 Mitigation Measures. WDFW recommends that EFSEC add the following mitigation measures to the SCA:

- **Road and Utility Stream Crossings:** The proponent noted road and utility crossings of watercourses in the Draft SEIS. All of these crossings will require construction techniques that minimize channel impacts, prevent erosion, and maintain water quality when flow is present in the channels. The proponent shall obtain a Hydraulic Project Approval (HPA) from WDFW for any anticipated in-channel work and we recommend that EFSEC incorporate the HPA in the SCA. The proponent shall use "low water crossings" or fords for crossings of ephemeral streams in lieu of culvert crossings where these techniques can reduce road cut/fill (thus reducing vegetation impacts) and reduce modification of watercourses (reducing both channel and vegetation impacts).

37-22

The Draft SEIS notes that the proponent could use overhead collector lines to avoid construction impacts to watercourses and wetlands. WDFW has concerns about the use of overhead lines and the trading of wetland impacts for avian impacts. As mitigation measure, WDFW recommends, "The proponent shall install collector lines in the roadway or under the watercourses by directional drilling to avoid both aquatic and avian impacts." In addition, we noted that most watercourses and wetlands in the project area have minimal water present in late summer and/or fall. Please consult with WDFW as the proponent can use late season construction options to install conductors under wetlands and watercourses with minimal environmental impacts.

37-23

3.2.1.2 Affected Environment.

- **Habitat Mapping:** The vegetation/habitat map units and manner of presentation of the field information reflects our discussions with WEST, Inc. and associated consultants several years ago. During the original FEIS, the proponent used an adaptation of range site descriptions to create the habitat classifications. Since that time, aerial photography and soil survey information have become more readily available over the Internet. For

37-24

future projects and more detailed vegetation work on the Desert Claim Wind Project, WDFW recommends the proponent key habitat maps to the soils and "Ecological Sites" as mapped on the United State Department of Agriculture (USDA) soil survey. Using USDA soil survey maps would facilitate analysis of vegetation groups and mapping.

37-24
 (con't)

3.2.1.4 Mitigation Measures. WDFW recommends that EFSEC add the following mitigation measures to the SCA:

- **Construction timing.** The project proponent shall conduct construction activities outside of the hardened footprint of the project (i.e. "temporary disturbance areas") during the late spring, summer, and fall when soil moisture is very low.

For most of the project area, the time of year of construction will greatly influence the amount of long-term damage to soils and plants. Shrub-steppe communities are very fragile when soils are wet. Even a single day of driving equipment on these, sites when wet can result in substantial permanent damage. In contrast, during summer when soils are dry, these sites can withstand traffic with minimal soil displacement and breakage of plant roots. Vegetation can tolerate more damage during the dry period when the period of rapid growth has ended. By the dry time of the year, many plants have completed flowering and setting of seed, and have started dormancy.

37-25

To reduce impacts to habitat, we have also found it helpful to schedule trenching for collector cables in the roads at different time from the construction of the wind turbines to reduce the road width needed.

37-26

- **Disturbance limits and clearing.** The proponent shall stake all construction work limits and clearing limits for project elements/facilities before any ground disturbance, clearing, or construction. Please make stakes clearly visible to equipment operators.

Since proponent will have difficulty revegetating the shrub-steppe lands due to shallow soils and arid conditions, please limit clearing shrub-steppe vegetation (including shrub-steppe mapped as "grasslands") to the actual construction footprint within the project limits, to the greatest extent possible. Please remove vegetation (shrubs) for temporary disturbances such as laydown areas, etc. with minimal ground disturbance (e.g. mowing, cutting or shallow scalping of site). The proponent shall avoid grubbing or grading of temporary disturbance areas.

37-27

- **Construction Soil Management and Project Revegetation Plan.** Before ground disturbance on the site, the proponent shall submit, for approval by EFSEC and WDFW, a detailed construction soil management and site revegetation plan(s). Please have a firm with expertise in restoration of shrub-steppe prepare the plan. The plan shall have the contractor identify how they will conserve and protect soils from loss and erosion during construction and what methods they will employ to restore the site. The plan shall prescribe temporary erosion controls such as application of mulch, PAM, Best

37-28

Management Practices (BMP), etc., as needed to ensure soil protection and revegetation success. The revegetation plan shall include native seed mixes adapted to each site (e.g. habitat type or ecological site) and the timing and manner of application. Seed mixes shall be comprised of locally adapted biotypes to the greatest extent possible.

37-28
(con't)

It is essential to plan at least a year in advance to acquire native seed/plantings because of the time required to propagate and acquire native seed/plants. At the end of the project, WDFW encourages restoration of the site to approximate pre-project conditions or better.

WDFW recommends creating reference sites of different soil types with a representative vegetation community to aid in restoration activities. When possible, WDFW recommends drill seeding when restoring the site with vegetation to avoid any pre-treatment herbicide applied to the ground surface.

- **Noxious Weed Plan.** WDFW recommends that the proponent develop and implement an aggressive weed control program through the creation of a plan. Weed control shall include BMP's for minimizing the introduction and spread of weeds on the site, weed control during construction, fall application of pre-emergent herbicides for control of cheatgrass and weeds, late winter control of cheatgrass with glyphosate as needed and spot herbicide applications where needed during the growing season. Personnel on site implementing the revegetation plan shall have expertise in successful restoration of Eastern Washington native plant communities. Please conduct site restoration and reseeding during weather conditions and a time of year when the establishment can succeed.

37-29

The proponent shall complete post-construction restoration of disturbed areas and successful sites shall achieve a robust stand of native vegetation sufficient to achieve site stability, weed control, and agreed-upon similarity to suitable reference standards. The project shall identify reference standards or sites (or a process to establish standards) within the project area for use in evaluation of site restoration success. Please consult with WDFW when selecting reference standards (sites) but reference sites must have targets no less than pre-project conditions.

37-30

- **Restoration of Trenches for Underground Cables.** Please place trenches for underground cables into the roadway to the greatest extent possible. If the proponent must space trenches widely to accommodate circuits, please place at least two circuits in the roadway and additional circuits in the road shoulder or along previously disturbed alignments. WDFW does not recommend removing the soil from temporary impact areas. We suggest storing the soil on site and windrowing, if possible. The excavated soils contain the locally adapted, native seed source for the restoration efforts of temporary impacts. If installation of trenches and cables in rocky substrate results yields an unnaturally rocky surface that the proponent cannot revegetate, please apply soil conserved from facilities construction over the rocky trench spoil to provide a seed bed.

37-31

- **Mitigation for Temporary Impacts with Lithosol Soils.** As addressed in the Wind

37-32

Power Guidelines, WDFW recommend the proponent treat temporary impacts to lithosol soils with a 1:1 mitigation ratio and attempt restoration efforts. WDFW recommends avoiding lithosol soils, whenever possible to lessen the damage to breeding and foraging area of butterflies in the area. Lithosol soils often grow rich, diverse numbers of forbs necessary for butterfly foraging and important to other species.	37-32 (con't)
<ul style="list-style-type: none"> • Compensatory Mitigation. WDFW would like the proponent to negotiate a more specific mitigation package before the start of construction. 	37-33
3.2.2.3 Significant Impacts and 3.2.2.6 Significant Unavoidable Adverse Impacts. The proponent proposes measures to minimize impacts to wetlands. 3.2.2.1 starts out the discussions on the topic of wetlands and their buffers. WDFW recommends that the project proponent uses minimization of impact measures on wetland buffers as well as wetland themselves to help protect the integrity of the entire wetland.	37-34
3.2.2.4 Mitigation Measures. If necessary, WDFW recommends that EFSEC have the proponent develop a wetland restoration plan in consultation with WDFW.	37-35
3.2.3.3 Significant Impacts, Birds. WDFW recommends that Washington State Candidate Species: loggerhead shrike, sage thrasher, and golden eagle receive similar analysis done for red-tailed hawks and American kestrels in this section.	37-36
3.2.3.3 Significant Impacts, Raptors. WDFW recommends additional analysis for bald eagles in this section particularly wintering bald eagles. WDFW recommends that bald eagles receive the kind of analysis done for red-tailed hawks and American kestrels in the 3.2.3.3 Significant Impact of the Draft SEIS. In addition, WDFW recommends comparing the location of roost sites on the river with cattle operations and predicting possible flight paths between the two areas. Please compare the sites of winter calving operations with the turbines as well. Another issue affecting bald eagle winter use involves the foraging and following of the waterfowl in the area by the eagles. In the avian studies done by Western EcoSystems Technology Inc. (2003), WDFW noted the high use of waterfowl in the area. WDFW has concerns about calving operation and waterfowl flocks acting like an attractant to the bald eagles. If the proponent finds waterfowl acts as an attractant to the eagles in their analysis, WDFW recommends the TAC addresses the issue and decides further management actions and possible mitigation for EFSEC approval.	37-37
3.2.3.3 Significant Impacts, Waterfowl. WDFW recommends documenting the exact (or projected) use of the area as it relates to turbines placement and the possibility of winter foraging and pursuing by bald eagles on the waterfowl flocks.	37-38
3.2.3.4 Mitigation Measures. WDFW recommends that EFSEC add the following mitigation measures to the SCA:	
<ul style="list-style-type: none"> • Updating Raptor Nest Surveys. WDFW recommends adoption of the FEIS mitigation 	37-39

measure into the SCA. To have the ability to apply proper buffers and timing restrictions of construction to active raptor nests, "The proponent shall conduct a raptor nest survey the season before construction. If not done previously, WDFW shall review survey protocols and the suggested survey areas."

37-39
(con't)

- **Management of Deer and Elk in Collaboration with WDFW and Avoidance of Agricultural Damage:** The potential exists for deer and elk to use project lands as a refuge and periodically venture out to adjacent agricultural and residential land, causing damage to landscaping, crops, and irrigated pasture. WDFW remains liable for damages caused by deer and elk. WDFW recommend using Public hunting as the primary tool to minimize damage caused by game animals. WDFW requests that as a condition of project approval, the proponent collaborate with WDFW regarding management of deer and elk to prevent wildlife damage to lands surrounding the project. WDFW also requests that the proponent shall not preclude project landowners from allowing public hunting as a means of dispersing animals or reducing herd size. The proponent should allow public hunting on project lands to control big game numbers or should collaborate with WDFW to provide acceptable alternative control of big game to prevent animal damage to adjacent properties. The TAC shall review measures used to address big game damage concerns.

37-40

- **Standards for Power Facility Construction:** Permittee should ensure spacing of all overhead power line conductors to minimize the potential for raptor electrocution and collision. Overhead transmission lines and the substation should incorporate the design guidance in the APLIC guidelines ([http://www.aplic.org/SuggestedPractices2006\(LR-2watermark\).pdf](http://www.aplic.org/SuggestedPractices2006(LR-2watermark).pdf)) to minimize the risk of electrocution of birds.

37-41

- **Free-Standing Meteorological Towers Required:** During our April 28, 2009 meeting, the proponent agreed to only erect freestanding meteorological towers without guy lines on the project site. The project currently proposes the installation of four freestanding meteorological towers. Freestanding towers without guy line will less likely result in bird mortality than guyed towers.

37-42

- **Habitat Mitigation Plan:** Proponent shall prepare a wildlife and habitat mitigation plan, subject to approval by EFSEC and in collaboration with WDFW. Management of the mitigation site affects its value for fish and wildlife. The Final SEIS shall consider management and the disposition of the mitigation site upon decommissioning of the project.

37-43

The plan should primarily focus on protection and restoration of shrub-steppe habitat and maintaining ecological connectivity of shrub-steppe within the landscape. Such a plan might include acquisition of conservation easements, development rights or lands, and management of those lands in a manner that ensures protection of the habitat and perpetuation of shrub-steppe dependent wildlife for the life of the project.

- **Conservation Measures to Reduce Risk to Bald Eagles and Other Avian Scavengers.**

Project operation shall include conservation measures for managing risk to scavenging birds of prey including eagles, vultures, and ravens. Such measures shall include removal of livestock afterbirth and big game and livestock carcasses within the project boundary that could attract eagles and other avian scavengers to the project. Since bald eagles will migrate to Kittitas Valley pastures during calving because of the opportunity to scavenge afterbirth, conservation measures shall also include actions such as relocating calving operations to pastures away from turbines, removal of afterbirth, or other strategies to minimize this risk of bald eagle mortality.

37-44

- **Post-construction wildlife monitoring plan.** The proponent shall develop a post-construction monitoring plan for the project to quantify impacts to avian species and assess the adequacy of mitigation measures implemented. WDFW shall review and approve the plan. The monitoring plan shall include the following components:

- 1) Fatality monitoring involving standardized carcass searches, scavenger removal trials, searcher efficiency trials, and reporting of incidental fatalities by maintenance personnel and others, for a period of two years after the beginning of Project operation.
- 2) A minimum of one breeding season raptor nest survey of the study area and a one-mile buffer in order to locate and monitor active raptor nests potentially affected by the construction and operation of the project. WDFW recommends that the protocol for the fatality monitoring study will resemble the protocols used at the Wild Horse Wind Project.

37-45

The proponent shall develop an avian mortality tracking and reporting program, which records all bird mortalities recovered on the project by operations personnel. The proponent shall submit an annual program report to the TAC and EFSEC.

3.2.3.5 Cumulative Impacts, Raptors. In coordination with the 3.2.3.3 Significant Impact Section, WDFW recommends the proponent addresses the cumulative impacts of all wind power projects and nearby development (particularly any river side development) to the golden eagle and bald eagle population. Please predict a mortality rate percentage for both populations and duplicate the similar analysis done for red-tailed hawks and American kestrels. Please consider loss of foraging areas as well as predicted turbine strikes.

37-46

3.2.3.5 Cumulative Impacts, Other Birds. In coordination with the 3.2.3.3 Significant Impact Section, WDFW recommends the proponent addresses the cumulative impacts of all wind power projects and nearby development (particularly housing development) to the Washington State Candidate Species populations of sage thrasher and loggerhead shrike. Please predict a mortality rate percentage for both populations and duplicate the similar analysis done for red-tailed hawks and American kestrels. Please consider habitat removal as well as predicted turbine strikes.

37-47

Literature Cited

- Daubenmire, R. 1970. Steppe Vegetation of Washington. Washington Agr. Exp Sta. Tech. Bull.
- Franklin, J. F. and C. T. Dryness. 1973. Natural vegetation of Oregon and Washington. USDA For. Serv- Gen. Tech. Rep. PNW-8.
- Huckell/Weinman Associates, Inc. 2004. Desert Claim Wind Power Project Final Environmental Impact Statement, Volume 1, Kittitas County, August 2004. Prepared for: Kittitas County Community Development Services, Ellensburg, WA. 648 pp. plus appendices.
- U. S. Fish and Wildlife Service. 1997. National Bald Eagle Management Guidelines. U.S. Fish and Wildlife Service, Washington DC. 23pp.
<http://www.fws.gov/pacific/eagle/NationalBaldEagleManagementGuidelines.pdf>
- Weinman Consulting, LLC. And Tetra Tech EC. 2009. Desert Claim Wind Power Project, Draft Supplemental Environmental Impact Statement, Kittitas County, Washington. Prepared for: Energy Facility Site Evaluation Council Olympia, WA. 147 pp.
- Western EcoSystems Technology, Inc. 2003. Baseline Avian Studies for the Proposed Desert Claim Wind Power Project, Kittitas County, Washington, Final Report, July 2003. Prepared for: Desert Claim Wind Power, LLC, Ellensburg, WA. 74 pp.

Comment 37: Washington Department of Fish and Wildlife

Introductory Note: The WDFW and the Applicant have met several times to discuss the agency's comments on the Draft SEIS. The Applicant and WDFW have since entered into an Agreement that fully resolves the WDFW's concerns regarding the Project. Under the terms of the Agreement, the Applicant will implement various mitigation measures to address concerns identified in the agency's comments on the Draft SEIS.

37-1 *Response:* The comment is noted.

37-2 *Response:* Additional information about bald eagle use and potential impacts has been included in Section 3.2.3 of the Final SEIS. Please also see the response to Comment 33-15.

37-3 *Response:* The Applicant and WDFW have entered into a detailed Agreement outlining mitigation measures to be implemented during project construction. The Applicant will develop a Construction Site Management Plan, Habitat Restoration and Revegetation Plan, Construction Soil Management Plan, and Noxious Weed Control Plan in consultation with WDFW, and submit them to EFSEC for approval. The Applicant will also develop a Temporary Erosion and Sediment Control Plan, Construction Stormwater Pollution Prevention Plan, Construction Spill Prevention, Control and Countermeasure Plan, Fire Control and Protection Plan, and detailed Construction Plans and Specifications, and provide these plans to WDFW for comment and to EFSEC for approval. The Applicant will also avoid disturbance of wetlands and will not perform any in-channel construction work without WDFW's approval.

37-4 *Response:* The Applicant and WDFW have entered into a detailed Agreement outlining mitigation measures to be implemented during project operation. These include the establishment and enforcement of a 25 mph speed limit on project roads, the avoidance of above-ground collector lines to the extent practical, designing any above-ground collector lines in compliance with current Avian Power Line Interaction Committee Guidelines, the use of permanent meteorological towers with free-standing monopole design, the use of bird markers on any temporary meteorological towers with guy lines, and the mitigation measures related to calving operations and bald eagles described in response to Comment 33-15.

37-5 *Response:* As documented in the Revised Application, the SEIS, the Stipulation with the Counsel for the Environment, and the Agreement with WDFW, the Applicant has agreed to form a TAC to advise ongoing project operations.

37-6 *Response:* Table 1.5-1 in the Final SEIS has been modified to include a brief summary of the requested impact topics. Please note that the SEIS focused on bird and bat impacts from project operation (see the discussion at the beginning of Section 3.2.3.3), based on the direction provided by the Golder report and the outcome of the EFSEC scoping process. As noted on page 3-21 of the Draft SEIS, no significant changes to impacts on other wildlife species from the revised Desert Claim project were expected. Therefore, information on these species from the 2004 Final EIS was not repeated in the SEIS.

37-7 *Response:* A statement about potential cumulative impacts to these species has been added to Section 1.6.2.2 in the Final SEIS.

37-8 *Response:* The Applicant has agreed to provide copies of the TЕСP and SWPPP to WDFW, so that it may review them and provide comments to the Applicant and EFSEC.

37-9 *Response:* EFSEC understands that WDFW does not propose that this information be included in the SEIS, but would like to have a working set of maps. Desert Claim and WDFW are working together to produce a habitat map of the Project Area to be used to evaluate final project impacts.

37-10 *Response:* The Draft SEIS shows project access roads and other infrastructure, based on the current level of project planning. Desert Claim has agreed to minimize road constriction to the extent practical. As documented in the Agreement with WDFW, Desert Claim will consult with WDFW on ways to minimize road construction and other habitat impacts before preparing final construction plans.

37-11 *Response:* In the Revised Application, the Applicant has proposed to make any security lighting motion sensitive and use lighting devices designed to be least visible. As documented in the Agreement with WDFW, the Applicant has agreed that ground-level security lighting be pointed downward.

37-12 *Response:* As documented in the Stipulation with the Counsel for the Environment and the Agreement with WDFW, the Applicant has agreed to develop a Construction Soil Management Plan, and a Habitat Restoration and Revegetation Plan in consultation with WDFW and submit those plans to EFSEC for review and approval.

37-13 *Response:* If these proceedings result in a Site Certification Agreement for the Desert Claim Project, the Applicant will be required to submit of a Initial Site Restoration Plan pursuant to the Council's rules (WAC 463-72) prior to beginning project construction. As documented in the Agreement with WDFW, the Applicant will consult with WDFW in developing the Initial Site Restoration Plan.

37-14 *Response:* The SEIS identifies habitat types based on the dominant plants found in the Project Area. Most of the Project Area currently consists of either grasslands or shrub-steppe habitat. As documented in the Agreement with WDFW, the Applicant and WDFW are developing a Habitat Map of the Project Area based on the Natural Resources Conservation Service maps of soils and ecological sites and field investigations. For purposes of providing compensatory mitigation, that map may designate areas as shrub steppe even though the current dominant vegetation is indicative of grasslands. Compensatory habitat mitigation will be provided consistent with the compensatory mitigation ratios outlined in the 2009 WDFW Wind Power Guidelines.

37-15 *Response:* As documented in the Stipulation with the Counsel for the Environment and the Agreement with WDFW, the Applicant has agreed that a full-time, on-site independent environmental monitor, operating under EFSEC direction, will monitor Project construction.

37-16 *Response:* As documented in the Agreement with WDFW, the Applicant has agreed to ensure that the construction team includes a qualified staff person or persons with experience in construction in sensitive arid environments, similar to that found in the Project Area.

37-17 *Response:* As documented in the Stipulation with the Counsel for the Environment and the Agreement with WDFW, the Applicant has agreed to prepare Fire Control and Protection plans for the construction and operation phases. As documented in EFSEC Exhibit 11 (David Steeb pre-filed direct testimony), the Applicant has also agreed to enter into a fire service agreement with the local fire district prior to beginning construction.

37-18 *Response:* As documented in the Stipulation with the Counsel for the Environment and the Agreement with WDFW, the Applicant has agreed to prepare a construction SWPPP for EFSEC review and approval. The Applicant has also agreed to provide a copy of the SWPPP to WDFW so that the agency may provide comments to the Applicant and EFSEC.

37-19 *Response:* As documented in the Stipulation with the Counsel for the Environment and the Agreement with WDFW, the Applicant has agreed to prepare a construction SPCC Plan for EFSEC review and approval. The Applicant has also agreed to provide a copy of the SPCC Plan to WDFW so that the agency may provide comments to the Applicant and EFSEC.

37-20 *Response:* As documented in the Revised Application and the SEIS, the Applicant has proposed to form a TAC to review monitoring data and make advisory recommendations to EFSEC. The Stipulation with the Counsel for the Environment and the Agreement with WDFW provide more detail on the function and operation of the TAC.

37-21 *Response:* Please see the response to Comment 37-13.

37-22 *Response:* State permits such as HPAs are not required for projects certified by EFSEC because a Site Certification Agreement takes the place of other state permits pursuant to RCW 80.50.120. However, as documented in the Agreement with WDFW, Desert Claim has agreed to consult with and obtain approval from WDFW prior to any in-channel construction work.

37-23 *Response:* As documented in the Agreement with WDFW, the Applicant has agreed to avoid the installation of above-ground collector lines where practical, instead installing them in or alongside roadways, in areas currently disturbed, in other areas that will be permanently disturbed by Project construction, or by directionally drilling under surface waters where practical. When it is not practical to avoid the installation of above-ground collector lines, the Applicant has agreed to consult with WDFW to determine the most practical alternative with the least adverse environmental impacts. The Applicant has also agreed that any above-ground

lines will be designed to comply with the current Avian Power Line Interaction Committee Guidelines.

37-24 *Response:* Please see the response to Comment 37-14.

37-25 *Response:* As documented in the Agreement with WDFW, construction activities will not be restricted to particular seasons. However, the Applicant has agreed to attempt to sequence construction activities in order to minimize temporary earth disturbances during the wet season where practical. In particular, the Applicant has agreed to avoid earth-disturbing activities that result in distinct areas of temporary habitat disturbance (e.g., cross-country trenching to install electric collector system lines) in shrub-steppe areas when soils are saturated (which commonly occurs from mid-November through April) to the greatest extent possible. If such activities are to take place during period of soil saturation, the Applicant has agreed to consult with WDFW to develop a specific plan incorporating strategies and best management practices to minimize the environmental impacts of these activities and additional restoration measures to ensure successful restoration of the disturbed habitat.

37-26 *Response:* The Applicant has indicated it will observe this recommendation as much as possible.

37-27 *Response:* As documented in the Agreement with WDFW and in Sections 2.2.3 and 3.2.1.4 of the SEIS, work and clearing limits will be staked prior to construction or ground clearing.

37-28 *Response:* Please see the response to Comment 37-12.

37-29 *Response:* As documented in the Stipulation with the Counsel for the Environment and the Agreement with WDFW, the Applicant has agreed to develop a Noxious Weed Control Plan in consultation with WDFW and submit it to EFSEC for approval.

37-30 *Response:* Please see the response to Comment 33-12.

37-31 *Response:* As documented in the Agreement with WDFW, the Applicant has agreed to consult with WDFW in developing Construction Soil Management Plan and a Habitat Restoration and Revegetation Plan. These and other recommendations from WDFW will be considered in developing those plans.

37-32 *Response:* As explained in response to Comment 37-14, the Applicant and WDFW are developing a Habitat Map of the Project Area, and compensatory mitigation will be based on the ratios outlined in the 2009 WDFW Wind Power Guidelines.

37-33 *Response:* As documented in the Agreement with WDFW, the Applicant will develop a Habitat Mitigation Plan in consultation with WDFW, and submit the plan to EFSEC for approval prior to starting construction.

37-34 *Response:* The proposed turbine layout avoids impacts to identified wetlands and their associated buffers. Micro-siting would be used to avoid or minimize impacts to any additional wetlands identified during construction.

37-35 *Response:* The Applicant has proposed to avoid temporary and permanent impacts to wetlands. However, as documented in the Agreement with WDFW, if an unanticipated disturbance to wetlands occurs, the Applicant has agreed to prepare a Wetlands Restoration Plan in consultation with WDFW and submit the plan to EFSEC for approval.

37-36 *Response:* These species were documented in the Project Area during the original baseline studies and potential impacts were evaluated in the Final EIS. For all three species, the Final EIS concluded that mortality impacts would be low or nearly zero, because of the low use of the Project Area by these species. It is likely that the species continue to occur in the area, but it is considered unlikely that the relative abundance of these species would have changed substantially since 2002. Therefore, the impact assessment would not be different and the information is not repeated in the Final SEIS.

37-37 *Response:* Additional information concerning bald eagles is included in Section 3.2.3 of the Final SEIS. This information does not include a quantitative analysis for bald eagles comparable to the red-tailed hawk and kestrel analyses, however. There have not been any recorded bald eagle fatalities at operating wind plants in the Columbia Plateau Ecoregion (including the Wild Horse project) or elsewhere in the U.S. Consequently, there is no mortality rate that can be applied to the baseline use level for the species, and no impacts to bald eagles are anticipated from development of the Project.

No bald eagle roost sites were found during the baseline studies for the Project, although the studies did not include an extensive survey along the river. If WDFW has data on known roost sites it would be a simple GIS mapping exercise to compare those locations with the locations of cattle operations. While such an analysis could augment the impact assessment, the impact conclusion would not change because the risk of collision with turbines is already acknowledged and taken into account in the analysis. Also, as documented in the Stipulation with the Counsel for the Environment and the Agreement with WDFW, the Applicant has agreed to implement additional mitigation measures to address the potential for calving operations to attract bald eagles to the Project Area.

Although waterfowl can attract bald eagles, this is not expected to be a significant concern in the Project Area. During the baseline studies (Young et al. 2003), only 28 observations of waterfowl were made in the Project Area. Twenty-four of the 28 waterfowl groups observed were flying over the study area, likely traversing between roosting area on the river or local lakes and feeding areas such as stock yards, where they feed on waste grain from cattle. Very little non-flying use of the Project Area was observed during the baseline studies, and it is unlikely that bald eagles actively hunt waterfowl in the study area as they might in areas where waterfowl are roosting in concentrations. The Applicant has agreed to the creation of a TAC,

which can consider this topic if bald eagle predation on waterfowl in or near the Project Area is observed.

37-38 *Response:* Please see the response to Comment 37-37 regarding bald eagle foraging

37-39 *Response:* As documented in the Agreement with WDFW, the Applicant will conduct a raptor nest survey during the breeding season prior to construction. The results of the survey will be used to determine timing restrictions and/or buffer distances to active raptor nests.

37-40 *Response:* As documented in the Agreement with WDFW, the Applicant will cooperate with WDFW in the agency's efforts to manage deer and elk in the project vicinity and the agency's efforts to prevent depredation of private property by big game. The Applicant will not prohibit hunting on the Project site, except when hunting would place personnel, property, or equipment in jeopardy. The private and public owners of the property in the Project Area may decide whether or not to allow hunting on their property.

37-41 *Response:* As documented in the Agreement with WDFW, the Applicant has agreed that any above-ground collector lines and electrical infrastructure will be designed to comply with the current Avian Power Line Interaction Committee Guidelines.

37-42 *Response:* As documented in the Agreement with WDFW, all permanent meteorological towers will be free-standing monopoles without guy wires. Any temporary meteorological towers with guy wires will have bird markers.

37-43 *Response:* Please see the response to Comment 37-33.

37-44 *Response:* The Applicant, the Counsel for the Environment, and WDFW have had extensive discussions about the potential risk to bald eagles in light of calving operations in the Project Area and about the appropriate mitigation measures to address this risk. As a result, the Applicant, the Counsel for the Environment, and WDFW have agreed that no calving operations will take place in the portion of the Project Area owned by the Applicant, that no turbines will be located within the fenced portions of the Project Area used by ranchers for calving, and that carcasses and livestock afterbirths will be removed promptly. The Applicant will also study the behavior of bald eagles during calving operations and report the results of the study to the TAC. If a bald eagle is killed by a turbine, the Applicant will report the fatality to EFSEC and the TAC, and the TAC will consider whether to recommend that additional mitigation measures be implemented.

37-45 *Response:* As documented in the Stipulation with the Counsel for the Environment and the Agreement with WDFW, the Applicant will develop an Avian Monitoring Plan in consultation with WDFW that will include the recommended features, and the Applicant will submit the plan to EFSEC for approval.

37-46 *Response:* Section 3.2.3.5 of the Final SEIS has been modified to more specifically address potential cumulative impacts to bald eagles and golden eagles. There have not been any recorded bald eagle fatalities at operating wind plants in the Columbia Plateau Ecoregion (including the Wild Horse project) or elsewhere in the U.S. Consequently, there is no mortality rate that can be applied to the baseline use level for the species, and no cumulative impacts to breeding bald eagles are anticipated from wind energy development in the region.

In the case of golden eagles, the baseline use of the Project Area is minimal; only 1 golden eagle was observed during the baseline studies. Based on the low use of the Project Area, the Final EIS concluded that mortality for this species would be nearly zero. Until 2009, no golden eagle fatalities were recorded in the Columbia Plateau Ecoregion monitoring studies; this suggests that the species' exposure to turbines or risk of collision is very low, due to low abundance or other factors. One golden eagle fatality was recorded at a wind project in the Columbia Plateau Ecoregion in early 2009, which suggests that there is some risk, but the risk is still very low. This low level of mortality represents a very small percent of regional breeding population, which is estimated based on USGS data to be approximately 568 breeding golden eagles. Neither the estimated project impacts, nor the estimated cumulative impacts of all wind projects in the Columbia Plateau Ecoregion are expected to be significant at the regional population level.

37-47 *Response:* Please see the responses to Comments 37-36 and 37-46. The Final EIS documented that use of the Project Area by these species was low and Project impacts would be correspondingly low. At this level of impact, there is no need to include these species in a quantitative analysis of potential cumulative impacts. Additional discussion to support this conclusion is provided below.

Sage thrashers occupy open sage brush habitats and occur in the Columbia Plateau Ecoregion. Using USGS data, it is estimated that there are approximately 43,980 breeding sage thrashers in the Columbia Plateau Ecoregion. Over all the regional wind project monitoring studies, only 2 sage thrasher fatalities have been recorded; this represents ~0.4 percent of the total passerine fatalities observed. At this rate, it is estimated that the Desert Claim Project may result in 1 sage thrasher fatality annually. Under the assumptions that the total annual passerine mortality for the Kittitas County wind farms would be approximately 1,200 birds, approximately 5 sage thrasher fatalities would be expected to occur if all four proposed Kittitas County projects are constructed. If all 6,700 MW of existing, approved, and proposed wind projects in the Columbia Plateau Ecoregion were constructed, the number of sage thrasher fatalities would be estimated at approximately 39 sage thrasher fatalities annually. This level of mortality would represent less than 0.1 percent of the total regional population of breeding sage thrashers and is not significant.

Loggerhead shrikes occupy open brush and mixed habitats and occur in the Columbia Plateau Ecoregion. According to USGS data, it is estimated that there are approximately 2,485 breeding loggerhead shrikes in the Columbia Plateau Ecoregion. Over all the regional wind project monitoring studies, no loggerhead shrike fatalities have been recorded (Johnson and Erickson 2008); this suggests that the species exposure to turbines or risk of collision is very low, due to

low abundance or other factors. No cumulative impacts to loggerhead shrikes are anticipated from wind development in Kittitas County or the Columbia Plateau Ecoregion.

Bhavnani, Monica (CTED)

From: Catherine Clerf [cclerf1341@fairpoint.net]
Sent: Monday, May 04, 2009 4:58 PM
To: CTED EFSEC
Cc: catherine.a.clerf@hotmail.com
Subject: MON 4 MAY 2009 @ 1657 PDT enXco's Desert Claim Draft EIS Written Comments

MON 4 MAY 2009 @ 1657 PDT

Re: Applicant: enXco
Project: Desert Claim, Kittitas County
Draft EIS Written Comments

To: EFSEC

In follow-up to my oral comments at the EFSEC hearing on Desert Claim of Thursday, April 23, 2009, herewith the following:

I served from September 2007 to August 2009 on the Kittitas County Land Use Advisory Committee and was its vice chairman. This committee dealt with all lands in Kittitas County there were neither designated commercial forest nor commercial agriculture or any lands inside city limits if its five incorporated towns nor any federal- or state-owned lands. Succinctly, a large chunk of the county that can be privately own are in "rural" lands.

Being a fourth generation member of a family engaged in farming and ranching in Kittitas County since the 1880s, I have more than a casual acquaintance of the county's shrub-steppe and grass range land ecosystems. The footprint of enXco's Desert Claim is above the Bureau of Reclamation canal system; hence, it does not get seasonal irrigation water. To protect the range land, stock ranchers must prudently cycle their grazing animals through the seasons year-round to protect the fragility of the plants. Wind turbines and their footprints are far less intrusive and dangerous to this fragile environment than suburban-urban density residential construction. Humans in density would destroy these approximately 6000 acres.

38-1

The USA needs electricity. Period.

38-2

Respectfully submitted,

//ss

Catherine Anne Clerf
60 Moe Road
Ellensburg, Washington 98926

Comment 38: Catherine Clerf

38-1 *Response:* The comment is noted.

38-2 *Response:* The comment is noted.

Public Comment
DSEIS #39

Bhavnani, Monica (CTED)

From: puddin pony [puddin_pony@hotmail.com]
Sent: Monday, May 04, 2009 5:08 PM
To: CTED EFSEC; Fiksdal, Allen (CTED); Posner, Stephen (CTED); LaSpina, Jim (CTED); Mills, Mike (CTED); Burnett, Diane (CTED); Talburt, Tammy (CTED); puddin pony
Subject: Desert Claim Wind

Reading through the DSEIS on the Desert Claim Wind Power Project I noticed that there is nothing about the affects on the local inhabitants in the area. Birds, bats, land, water, soil, historical sites, and aesthetics have all been addressed, but not a word about those living within the footprint of this "wind Farm". Mitigation measures are stated in place for all the above named, as well as cumulative impacts. 39-1

Is Desert Claim Wind Power LLC (Desert Claim) responsible for mitigating the cumulative impacts for the landowners not in the project, but who's lives and homes will be affected by the placement of 95 wind turbines in this rural landscape? There is no mention of mitigating any well problems that might arise with the drilling around our water table. The local wells in our area are well over 500 feet deep, and would be difficult (and expensive) to replace. 39-2

Will Desert Claim be required to place a **SURETY Bond** for the life of the project to help mitigate any claims that could arise from the loss of property value, views, and any medical problems that may develop from living next to this wind farm? Our construction company must have a Surety bond to begin a project, surely the State requires one to allow a project this size to begin. What state licenses will be required for this construction project? 39-3

" Please note that I am very mindful of the cumulative impacts of wind power projects in Kittitas County and will continue to evaluate this issue.
 Sincerely,
 Christine O. Gregoire
 Governor" 39-4

An approved wind farm 3 miles to the west of our neighborhood, another 21 miles to the east, are we beginning to have cumulative impacts in Kittitas County yet?

Liz Lasell-McCosh

Insert movie times and more without leaving Hotmail®. [See how.](#)

5/6/2009

Comment 39: Liz Lasell-McCosh

39-1 *Response:* The SEPA Rules, and EFSEC's rules that implement SEPA, set forth the "elements of the environment" that may be considered in an EIS (see WAC 197-11-444). The "environment" includes numerous issues that can affect people. Examples include air quality, noise, light and glare, land use patterns, aesthetics, transportation, and public services. The effects of the Desert Claim proposal on these aspects of the environment are thoroughly described in the Final EIS published by Kittitas County in 2004. Based on the documentation in the record at the time EFSEC began preparing the Draft SEIS, EFSEC decided to address several specific topics in this SEIS. The comment does not identify specific "effects on local inhabitants" but additional information on a variety of topics is provided in response to other comments.

39-2 *Response:* The comment refers to the "cumulative impacts for the landowners not in the project," but does not identify the specific cumulative impacts that the commenter believes will occur. In the Revised Application, the Applicant has proposed a variety of measures to mitigate potential impacts from the proposed project. The Final EIS and SEIS also identify potential measures that could be implemented to mitigate expected impacts, and EFSEC will consider whether to require the implementation of those measures. Additional information on a variety of topics, including alleged impacts on landowners in the vicinity of the projects, is provided in response to other comments.

Part of this comment mentions potential well problems. Please see the response to Comment 7-4 for additional information. Please see the response to Comment 7-4.

39-3 *Response:* A Site Certification Agreement executed by the Governor is required to construct the proposed project. Site Certification Agreements also typically require a variety of plans to be submitted to EFSEC for approval before construction may begin. Site Certification Agreements also typically require that a bond or other financial instrument be provided prior to construction to provide financial security for the decommissioning of the Project. EFSEC has not typically required certificate holders to provide a surety bond with respect to other potential claims. Multiple responses address issues concerning property values (e.g., Comment 3-17), views (e.g., Comments 3-5, 7-2, and 7-3), and health (e.g., Comment 24-4).

39-4 *Response:* The SEIS includes a discussion of cumulative impacts for each resource in Chapter 3 and an overall discussion in Section 1.6. Likewise, the Final EIS addressed cumulative impacts in a comprehensive manner.

Public Comment
DSEIS #40

Bhavnani, Monica (CTED)

From: Tanna McVicker [McVickeT@cwu.EDU]
Sent: Monday, May 04, 2009 6:39 PM
To: CTED EFSEC
Subject: WindWorks! Energy Statement

My name is Tanna McVicker and I'm a junior in the geography department at Central Washington University. As an officer for both the Geography Club and Environmental Club, I was contacted by WindWorks! to learn a little bit about their business and plans for wind energy in Ellensburg. After reading through the wind energy proposal and the knowledge I gained from geography, I feel that wind energy would be extremely beneficial to the Kittitas Valley. I attended the community meeting and discussion and many controversial points were brought up. In my opinion, the main complaint that the community had about wind energy is the "view and sound pollution." I grew up in Tri-Cities, WA basically all my life and have relatives that live within 2 miles of a wind turbine. I have also lived within sight of wind turbines and still do to this day. After talking with my family and personally observing the area, there are no complaints of any turbine noise. A scenic drive can be found on the same hill as the wind turbines in Tri-Cities and I have personally experienced what it is like to be within about 1000 feet (perhaps closer) to wind turbines. There is little noise and in my own opinion I feel that they are actually a great addition to the beauty of Tri-Cities. Wildlife and the natural environment have in no way been affected by the turbines being there. The turbines are fenced in and don't take up a lot of space. They are also located in a small enough location that the ecosystem is still able to maintain a successful habitat. Another complaint that I can recall is a statement from an older woman that claimed "Just because we have wind, doesn't mean we have to create wind energy. We also have sunlight, so why isn't anyone proposing solar energy?" My answer to this, is that Ellensburg is literally at the wrong latitude and wrong climate for solar power. Solar is a variable energy source like wind energy, but solar is one of the most expensive energy resources available. From my natural resource conservation class, I learned a lot about the pros and cons of energy resources. The number one most efficient energy that exists is hydro. However, now that dams are no longer being constructed in Washington (and the fact that we're sending some of the hydro energy to California) we need to turn to the second most efficient energy: Wind. Wind is a very inexpensive renewable energy that would be very successful in the Kittitas County. I was very excited to see that at the community discussion 20 people were for, 7 against, and 1 undecided for wind energy. The most impactful statement came from a woman who had lived in Ellensburg for 91 years and she is completely thrilled that this county would even consider wind energy. I feel that it is time to start using our available resources and wind is the most efficient (money, power, availability). Denmark is leading the world in renewable energy resources with 20%. It's time to start utilizing our own natural resources, and wind is the best option. Please consider the addition of WindWorks! wind turbine energy to grow in the Kittitas Valley. It's crucial to view every pro and con from a non-biased place. From my own personal experience, I feel that "view and sound pollution" is not a big enough concern to completely rule out an extremely valuable resource. Thank you for taking the time to read my statement and I look forward to see what the future holds for the valley.

40-1

40-2

40-3

40-4

Tanna McVicker

5/6/2009

Comment 40: Tanna McVicker

40-1 *Response:* The comment is noted.

40-2 *Response:* The comment is noted.

40-3 *Response:* The comment is noted.

40-4 *Response:* The comment is noted.

Public Comment
DSEIS #41

Bhavnani, Monica (CTED)

From: burtche@aol.com
Sent: Monday, May 04, 2009 9:33 PM
To: CTED EFSEC
Subject: desert claim wind power project

i just wanted to bring up the subject of the amount of support for the project at the hearing in ellensburg 4/23/09. None of the people who supported the project lived near the project area except for the landowners who hav leased their land and stand to gain financially. Please do not allow the size of this project to happen. At least reduce the number of turbines to 65, the same amount in the Kittitas Valley project. The same number of MW 195 should be possible. This would at least move all the turbines to north of the BPA powerlines and give the people south of the project some visual relief. The better scenario would be to dissallow the project altogether. If a revised plan is necessary then there should also be a stipulation that they couldn't come back next year⁴ for more turbines. 41-1 41-2

A Good Credit Score is 700 or Above. See yours in just 2 easy steps!

5/6/2009

Comment 41: Burtchett

41-1 *Response:* The comment is noted. Individuals providing comments during the public hearing provided their name and address. Some of the individuals speaking in support reside near the proposed project and some do not.

41-2 *Response:* The comment is acknowledged. Please note that the Desert Claim Project has been changed to reduce the number of turbines from the original proposal of 120 turbines, to the current proposal of 95 turbines (January 2009). A further reduction in the number of turbines might reduce visual effects to some degree, but it would also reduce the energy, economic, and environmental benefits associated with the Project. The comment suggests that the Applicant could use fewer larger turbines to produce the same amount of energy, but it is not clear that larger turbines would be commercially available without delaying project construction or creating other practical problems.

BEFORE THE STATE OF WASHINGTON
ENERGY FACILITIES SITE EVALUATION COUNCIL

In the Matter of)
Application No 2006-02) KITTITAS COUNTY'S
DESERT CLAIM WIND POWER, L.L.C.) COMMENTS ON DSEIS
DESERT CLAIM WIND)
POWER PROJECT)
_____)

Intervenor Kittitas County hereby submits its comments to the DSEIS in the Desert
Claim Wind Power Project.

ROADS

Kittitas County's department of Public Works has drafted a memorandum commenting
upon the road-related provisions and making suggestions related thereto, said memorandum is
attached hereto, and incorporated by reference, as Exhibit "A." Those comments and
recommendations are those of the County as to its roads.

///

///

KITTITAS COUNTY'S
DSEIS COMMENTS

1

GREGORY L. ZEMPEL
KITTITAS COUNTY PROSECUTOR
Kittitas County Courthouse - Room 213
Ellensburg, WA 98926
(509) 962-7520

STUART RANGE AS SCENIC RESOURCE

There is no acknowledgement in the applicant's SEPA document that this project is in the foreground of what is for most Kittitas County residents (those who live in Ellensburg) the County's most distinguished scenic resource-the Stuart Range. The relationship to the Stuart Range is conspicuously absent from sections 1.5-1 and 1.6.4, and is not depicted in either figures 3.4-30 or 3.4-31.

To aid in the evaluation of aesthetic and scenic resources, the County hereby submits Exhibit "B" into the record. This is a publication by the National Academy of Sciences entitled Environmental Impacts of Wind-Energy Projects. It had been reviewed (page xi) by, among others, James Walker from enXco, Inc.

The National Academy of Sciences document discusses extensively the impacts and treatment of projects that disrupt focal scenic resources. At page 101 it states "Some landscapes are more visually sensitive than others due to such factors as numbers of viewers, viewer expectations, and identified scenic values. Processes exist for determining the relative visual quality of landscape, the features that contribute to visual quality, and the sensitivity levels of particular landscape features and their uses." The National Academy of Sciences calls out criteria for evaluating visual impacts to scenic resources at page 102. These include whether "the project is located on a landform that is an important focal point that is highly visible throughout the region...Are scenic resources of local, statewide or national significance located on or near the project site? Is the surrounding landscape unique in any way? What landscape characteristics are important to the experience and visual integrity of these scenic features? Would these scenic resources be significantly degraded by the construction of the proposed

42-1

KITTITAS COUNTY'S
DSEIS COMMENTS

2

GREGORY L. ZEMPEL
KITTITAS COUNTY PROSECUTOR
Kittitas County Courthouse - Room 213
Ellensburg, WA 98926
(509) 962-7520

1 project? Would the scale of the project interfere with the general enjoyment of scenic landscape
2 features throughout the region?"

3 On page 104, the National Academy of Sciences lists considerations for evaluating
4 aesthetic impacts. These considerations include "In evaluating the aesthetic impacts of wind-
5 energy projects, the discussion should focus not on whether people find wind-energy projects
6 attractive but on the characteristics of the landscapes in which the projects will be located; the
7 particular landscape features that contribute to scenic quality; the relative sensitivity of viewing
8 area; and the degree of degradation that would result to valued scenic resources, especially
9 documented scenic values...An independent assessment of visual impacts by trained
10 professionals can provide more unbiased information than assessments provided on behalf of
11 either developers or other interested and affected parties, and can provide useful comparisons
12 with those assessments...**Problems can arise when the setting is an important regional focal**
13 **point, or when a project will be seen close to highly sensitive viewing areas where a natural**
14 **or intact landscape is important."** (emphasis added).
15

42-1
(cont'd)

16 On page 257 of the National Academy of Sciences document, it lists factors affecting
17 visual impacts to landscape. "Highly scenic views are generally those with a high degree of
18 landscape diversity, and with little or no landscape degradation (Figure D-7)...Panoramic views
19 of high scenic quality are considered to be visually sensitive. Distinct cultural or natural focal
20 points often enhance scenic quality (Figure D-8.) When a focal point exists, new development
21 will generally be more adversely perceived if it conflicts with or degrades visual quality and
22 prominence of a focal point." Diagrams D-7 and D-8, found on page 259 illustrate the type of
23 landscape that has increased scenic quality by virtue of increase visual diversity. These diagrams
24 are crucial to understanding this issue as it relates to the Stuart Range.
25

KITTITAS COUNTY'S
DSEIS COMMENTS

3

GREGORY L. ZEMPEL
KITTITAS COUNTY PROSECUTOR
Kittitas County Courthouse - Room 213
Ellensburg, WA 98926
(509) 962-7520

1 At page 264, mitigation techniques are listed. They include "Appropriate Siting: This
2 critical mitigation technique involves avoiding a site that is located on valued regional scenic
3 resources, or that appears very prominent throughout a region." On page 265, another mitigation
4 technique mentioned is "Offsets: In some cases protecting an offsite visual resource can help to
5 offset the impacts of the project if mitigation cannot be accomplished on site."

6 At page 266, the National Academy of Sciences document deals with factors used to
7 determine undue aesthetic impacts. "If the project appears to result in many issues, to involve
8 important regional scenic resources, and to significantly affect the ability of people to enjoy
9 these resources, then the project may be perceived as or judged to be unacceptable...Is the
10 project located within an area of identified scenic or cultural significance? Would the project
11 significantly degrade views or scenic resources of regional or statewide significance? **Is the**
12 **project on or close to a natural or cultural landscape feature that is a regional focal point?**
13 **Is the project in a landscape area that is visually distinct and rare or unique? Is the project**
14 **unreasonably close (usually less than ½ mile) to many residences that would be severely**
15 **affected, especially as a result of noise, shadow flicker, or by being completely surrounded**
16 **by wind turbines?"**

42-1
(cont'd)

17 The Stuart range is the emblematic scenic resource for Kittitas County. It is the most
18 prominent and photographed scenic view from the County's largest population center-
19 Ellensburg. Attached hereto as Exhibit "C" are a series of these photos taken from websites
20 devoted to Kittitas County and its tourism such as the Ellensburg Chamber of Commerce and
21 Ellensburg-video.com. Similarly, the Stuart Range is the very emblem of Kittitas County as one
22 can see from the County logo that appears on the memorandum from Public Works that is
23
24
25

KITTITAS COUNTY'S
DSEIS COMMENTS

4

GREGORY L. ZEMPEL
KITTITAS COUNTY PROSECUTOR
Kittitas County Courthouse - Room 213
Ellensburg, WA 98926
(509) 962-7520

1 attached as Exhibit "A." The view of the Stuart Range from Ellensburg is a valued regional
2 scenic resource that serves as a focal point in Kittitas County's viewshed.

3 The DSEIS does not consider the project's impact upon the important regional scenic
4 resource of the Stuart Range nor mitigation for such impact. Nowhere in the DSEIS is there
5 consideration or depiction of the project's impacts upon the view of the Stuart Range from
6 Ellensburg. The project appears to be situated in the foreground of that view, but the impacts of
7 that situation are neither considered nor depicted. Hence, the impact of this project upon that
8 aspect of the environment, cannot be determined. In the words of the National Academy of
9 Sciences document on impacts of wind-energy projects, since the project is near a local scenic
10 resource, an important regional focal point, and may degrade that resource, an independent
11 assessment of visual impacts is warranted to determine whether the project is unacceptable as
12 creating undue aesthetic impacts. Furthermore, there needs to be consideration of offsets if the
13 impacts are acceptable, yet cannot be mitigated on site. Those offsite mitigation measures could
14 take the form of purchasing development rights to protect some other County viewshed or annual
15 payments over the life of the project into a County fund that the County could administer for the
16 benefit of the County's residents as recompense for the degradation of this scenic resource.

42-1
(cont'd)

18 Similarly, the DSEIS contains no mitigation discussion, other than distance from closest
19 turbine, for non-participating land owners. The National Academy of Sciences document
20 appears to find statistical evidence both ways as to whether wind-energy projects degrade
21 neighboring property values. To try and mitigate these impacts, if there are any, and to assuage
22 the worries of these non-participating landowners, it would make sense to set up some sort of
23 valuation program akin to how road impacts are monitored. In other words, instead of
24 photographing roads before and after construction and having the developer pay for the repair for
25

42-2

KITTITAS COUNTY'S
DSEIS COMMENTS

5

GREGORY L. ZEMPEL
KITTITAS COUNTY PROSECUTOR
Kittitas County Courthouse - Room 213
Ellensburg, WA 98926
(509) 962-7520

1 evident degradation, do appraisals before and after construction to determine if in fact there is
2 any diminution in value to these properties, and then have the developer recompense those
3 owners accordingly. Some arrangement would need to be made to insure independence of
4 appraisers and to allocate those appraisal costs to the developer. If the result is akin to those
5 found by the National Academy of Sciences, then there would probably be no impact and the
6 developer would not make any payments to landowners. If there were negative impact, then it
7 would be rightful that the landowner be recompensed by the developer, otherwise a portion of
8 the public benefit of green energy would be borne on the shoulders of private landowners, and
9 nobody wants that. This seems an appropriate means to allocate risk and assuage the fears of
10 non-participating landowners with minimal risk to the developer.

42-2
(cont'd)

CUMULATIVE EFFECTS

12 The DSEIS makes no effort to consider or depict the cumulative effects of the Desert
13 Claim project with the Kittitas Valley project. Views such as 3A, 2C, and 3C should depict the
14 cumulative effect of the proposed project with the one already slated for construction, but they
15 do not. Similarly, in the narrative description of the various views, there should be consideration
16 of effects/degradation caused by the Kittitas Valley project for certain views that will then be
17 exacerbated, or perhaps made no more severe, by the proposed project. These cumulative effects
18 all occur in the foreground of the Stuart Range as seen from the County's largest population
19 center, as described above. There needs to be consideration and depiction of these cumulative
20 effects that will be experienced by the largest part of the County's population so that the
21 environmental impact of these projects can be anticipated and analyzed.

42-3

23 The National Academy of Sciences document on environmental impacts of wind-energy
24 projects discusses the need for cumulative analysis and depiction. At page 101 it states that
25

KITTITAS COUNTY'S
DSEIS COMMENTS

6

GREGORY L. ZEMPEL
KITTITAS COUNTY PROSECUTOR
Kittitas County Courthouse - Room 213
Ellensburg, WA 98926
(509) 962-7520

1 simulations "should most usefully illustrate visually sensitive viewpoints and a range of
2 perspectives and distances. They should also illustrate 'worst-case' conditions to the greatest
3 extent possible." At page 104 the document stresses the importance of considering "the potential
4 for cumulative impacts either from the location of several projects within a region, or from future
5 expansion of existing projects, could become a problem." At page 263 the document points out
6 that adjacent projects "raises concerns of both scale and overburdening a particular locality with
7 development impacts." Similarly, at page 264 it says, while discussing mitigation techniques,
8 "Selecting a site that can comfortably accommodate the number of turbines desired without
9 visually overwhelming sensitive scenic resources on or near the site and the region as a whole
10 also is important. Appropriate siting may also need to address potential issues of cumulative
11 impacts so that a particular area or landscape type is not overburdened with wind-energy
12 development."

13
14 The Kittitas Valley wind power project, in its SEPA documents at least contained some
15 cumulative depictions trying to show the effect of both it and the Desert Claim project. Attached
16 hereto as Exhibit "D" is a cumulative conditions simulation from the Kittitas Valley project's
17 SEPA document. While it is inadequate in depicting the cumulative effect upon the view of the
18 Stuart Range because the camera angle is too low, it at least makes an attempt of showing what a
19 certain view will look like with both of these projects. The Desert Claim applicant needs to
20 create such a series of cumulative depictions, and discuss the cumulative effects of having both
21 projects next to each other so that both the community and EFSEC can anticipate and evaluate
22 those cumulative impacts.

23 ///

24 ///

25
KITTITAS COUNTY'S
DSEIS COMMENTS

7

GREGORY L. ZEMPEL
KITTITAS COUNTY PROSECUTOR
Kittitas County Courthouse - Room 213
Ellensburg, WA 98926
(509) 962-7520

42-3
(cont'd)

QUALITY OF SIMULATIONS

The quality of the simulations does not present the impacts adequately. The National Academy of Sciences document discusses the importance of quality simulations. At page 104 it states that "Accurate and detailed information about visual appearance of all aspects of a proposed project is extremely important. Incomplete or inaccurate information often results in public mistrust...[Simulations] should illustrate sensitive or scenic viewpoints as well as 'worst-case' situations such good weather conditions and the most scenic perspectives." The document describes appropriate lenses and camera angles, as well as recommending simulations be created by two independent parties at page 247. The simulations should be reproduced at "a minimum image size of '10x12'" as recommended on page 250.

42-4

Attached hereto as Exhibit "E" is a photo of a portion of the Wild Horse wind power project in Kittitas County believed to be taken from a distance of eight to ten miles. This is a similar distance to simulations 1B, 2C, and 3C, yet the wind towers appear much more distinct than in the simulations. Similarly, all of us who were on the site tour will remember that, at the farthest point to the west, when we looked east at Wild Horse, the turbines were clearly visible, and even the turning of the blades was clearly discernable, even though we were over 20 miles from them. The simulations from closer distances seemingly should depict the towers as being more distinct than they do in the proffered simulations. Additionally, as recommended by the National Academy of Sciences, these simulations should be in 10"x12" format, not the 4x6 that is presented, to aid in evaluation of visual impacts.

ALTERNATIVES NOT CONSIDERED

1.4.4 and 2.5 admit that alternative locations were not really considered and misrepresent Kittitas County's wind farm overlay zone. Both Wild Horse and the Vantage projects were sited

42-5

KITTITAS COUNTY'S
DSEIS COMMENTS

8

GREGORY L. ZEMPEL
KITTITAS COUNTY PROSECUTOR
Kittitas County Courthouse - Room 213
Ellensburg, WA 98926
(509) 962-7520

1 after the Desert claim project began, and so, up until very recently, could have been considered
2 as alternative sites (particularly the Vantage project which was just sited by the County last
3 winter) but never were considered.

4 Attached hereto as Exhibit "F" is a map showing Kittitas County's wind farm overlay
5 zone and the location within it of the Wild Horse and Vantage wind power projects, as well as
6 the Yakima Training Center and the state-owned wildlife areas. As can be seen, portions of both
7 the Wild Horse and Vantage wind power projects are located on wildlife areas. Hence, the
8 applicant's proposition (section 2.5) that these two are mutually exclusive is simply incorrect.
9 Indeed, much of the Desert Claim project is on DNR land which has an affirmative obligation to
10 manage that land for the benefit of the state's school fund. Similarly, it can be seen that there
11 remain large tracts of land still undeveloped as wind farms in this overlay zone. The applicant's
12 contention that multiplicity of ownerships poses an insurmountable burden to wind farm
13 development also makes no sense in light of the multiple ownerships involved in this project,
14 which the applicant was able to surmount.
15

16 The proposition found at section 1.4.4 that the applicant's lack of lease or property rights
17 to an area precludes its consideration as an alternative site is circular and guts the purpose of the
18 alternative site consideration requirement. If one can only do alternative site analysis on lands
19 that the applicant has leases upon, then no alternative site analysis will be done because
20 applicants will never expend money on multiple leases. A trigger point for alternative site
21 analysis cannot be the presence of lease rights in another parcel, because it makes no business
22 sense for an applicant ever to obtain superfluous leases and options. If alternative site analysis
23 can only go forward if the applicant has rights in another parcel, then that analysis will never
24
25

42-5
(cont'd)

KITTITAS COUNTY'S
DSEIS COMMENTS

9

GREGORY L. ZEMPEL
KITTITAS COUNTY PROSECUTOR
Kittitas County Courthouse - Room 213
Ellensburg, WA 98926
(509) 962-7520

1 happen because they do not acquire such rights and will not acquire them, if for no other reason
2 than to avoid conducting cumulative analysis.

42-5
(cont'd)

3 Dated this 4th day of May, 2009.

4
5 

6 Neil A. Caulkins WSBA #31759
7 Civil Deputy Prosecutor for
8 Intervenor Kittitas County
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

KITTITAS COUNTY'S
DSEIS COMMENTS

10

GREGORY L. ZEMPEL
KITTITAS COUNTY PROSECUTOR
Kittitas County Courthouse - Room 213
Ellensburg, WA 98926
(509) 962-7520

EXHIBIT A



KITTITAS COUNTY DEPARTMENT OF PUBLIC WORKS

Kirk Holmes, Director

MEMORANDUM

TO: Neil Caulkins, Deputy Prosecutor
FROM: Christina Woliman, Planner *CW*
DATE: April 29, 2009
SUBJECT: Desert Claim Wind Farm Draft SEIS Comments

The Department of Public Works has reviewed the Draft SEIS for the Desert Claim Wind Farm and has the following comments:

2.2.2.5 Access Roads

The applicant shall video monitor the roadway and provide a roadway pavement analysis prepared by an engineer to document the condition of the pavement and the quantity and severity of pavement distresses. The video and analysis shall document roadway and shoulder conditions before and after construction and shall include Smithson Road, Reecer Creek Road, Lower Green Canyon Road, and any other county roads to be used for construction access. If construction of the project results in the degradation of the existing pavement or shoulders, the applicant shall be responsible for repairing the roadway to be equal or better than its previous condition.

42-6

The internal access roads shall be constructed to meet the minimum conditions of the 2006 International Fire Code and Kittitas County's Low-Density Private Road standards. Roadways shall be built to a minimum of 20-feet and have an all-weather surface.

42-7

As noted by the applicant, access road connections will be built to Kittitas County standards and details will be finalized after micro-siting of the turbines. All approaches onto County roads shall be paved and constructed to commercial standards.

42-8

2.2.2.7 Visitor Facilities

If tourist facilities are planned, the locations shall be approved by Kittitas County and approaches built to Kittitas County standards. The applicant shall be responsible for mitigating tourism impacts at any point during the lifespan of the project.

42-9

2.2.3.5 Roads and Turbine Pads

The internal access roads shall be constructed to meet the minimum conditions of the 2006 International Fire Code and Kittitas County's Low-Density Private Road standards. Roadways shall be built to a minimum of 20-feet and have an all-weather surface.

411 North Ruby Street, Suite 1
Ellensburg, WA 98926

TEL (509) 962-7523
FAX (509) 962-7663

2.2.3.14 Transportation and Access Management

In addition to a Construction Traffic Management Plan, a Road Signage Plan that conforms to the most recent edition of the Manual on Uniform Traffic Control Devices shall be prepared. The Construction Traffic Management Plan and Road Signage Plan shall be submitted to the Department of Public Works and WSDOT prior to construction for review. Building permits will not be issued until the plan has been approved.

When slow or oversized wide loads are being hauled, appropriate vehicle and roadside signing and warning devices shall be deployed per the Traffic Management Plan. Pilot cars shall be used as WSDOT dictates, depending on load size and weight. The applicant shall employ flaggers as necessary to direct traffic when large equipment is exiting or entering public roads to minimize risk of accidents.

42-10

The applicant shall provide detour and warning sign plans to the Department of Public Works in advance of any traffic disturbances. When temporary road closures cannot be avoided the applicant shall post "To Be Closed" signs and place a legal notice in the newspaper a minimum of five working days prior to the closing. The types and locations of the signs shall be shown on a detour plan. A detour plan must be prepared and submitted to the Department of Public Works at least ten working days in advance of the proposed closure, and approved prior to closing any County roadway. In addition, the contractor must notify, in writing, local fire, school, law enforcement authorities, postal service and any other affected persons as directed by the Department of Public Works at least five working days prior to the closing.

Comment 42: Kittitas County

Introductory Note: On August 13, 2009, Kittitas County filed a pleading with EFSEC in which it formally withdrew any opposition to the Desert Claim Project.

42-1 *Response:* The comment's initial claim that the visual analysis in the Draft SEIS did not address the Stuart Range is not correct. Numerous photographs and simulations presented in the Draft SEIS, and reproduced in the Final SEIS, were taken from the south looking north, northeast or northwest, and the Stuart Range is clearly visible in the background. The location and direction of viewpoints is shown on Figure 3.4-4. The majority of viewpoints are, in fact, oriented towards the Stuart Range. Similarly, the description of individual Visual Assessment Units in Section 3.4.3 clearly identifies where mountain views are present, although the Stuart Range is not identified by name.

The viewpoints used in the SEIS were selected to reflect representative views from publicly accessible locations such as area roads or parks; the selection of locations was not designed to either magnify or minimize views of the mountains. A 50mm lens was used in the simulations, to reflect the typical field of view of human vision. (The question about camera lens focal length is addressed in detail in the response to Comment 13-1.) The photographs show what a typical viewer would see and demonstrate how wind turbines would relate to views of the mountains. The methodology used for the visual impact assessment is discussed in more detail below.

The next portion of this comment suggests that the Stuart Range is a "focal scenic resource," a "scenic resource of local significance," or "an important regional focal point." These terms do not reflect any official designation. Although mountain ranges may be considered to have a scenic quality, views of mountain ranges are not granted any particular legal or regulatory protection.

Views of the Stuart Range, in particular, have not been accorded any particular status under state or local law. Section 3.7.2 of the Final EIS examined numerous plans and regulations and identified no visual resources that those plans or regulations recognize or designate as having a special status. Those and other plans, policies, and regulations were reviewed again to respond to this comment: none recognize, designate, or regulate the Stuart Range as a unique scenic resource for any purpose.

The Kittitas County Comprehensive Plan, for example, does not specifically mention the Stuart Range, or views of the Stuart range as special, unique, or scenic. In addition, the Comprehensive Plan does not include any general policies that seek to protect views. In contrast, the Snoqualmie Pass Sub-Area Plan Element of the County's Comprehensive Plan does identify scenic vistas and view corridors for that sub-area, and includes goals and objectives to protect these visual resources.

Nor have views of the Stuart Range been provided any special degree of legal protection. Title 17 of the Kittitas County Code, for example, does not include any regulations to preserve views in any zoning district, including the Agriculture-20 and Forest and Range zones applicable to the Project site. Similarly, the Utilities chapter of the Code, which generally regulates energy facilities, does not contain any regulations that deal with scenic resources.

The final portion of this comment addresses visual assessment methodology and describes the methodology recommended by the National Research Council of the National Academy of Sciences (NAS/NRC 2007) in the report entitled “A Visual Impact Assessment Process for Evaluating Energy Projects” submitted as Exhibit B of this comment. The methodology used in the SEIS is consistent with the procedures recommended in the NAS/NRC Report. The methodology recommended in the NRC report includes the following components:

- documenting project visibility and landscape context, using photo simulations (50mm camera lens recommended);
- identifying scenic resource values and sensitivity levels;
- assessing impacts (including determination of “acceptable” or “undue” aesthetic impacts); and
- mitigation techniques.

The NAS/NRC report suggests that an inventory be compiled of views from public viewpoints within a 10-mile radius, with a focus on views from parks and recreational areas, designated scenic roads, areas with panoramic views, town centers, state and federal highways, and residential areas (but not single residences). In regard to “potentially sensitive sites” – which are defined as areas of scenic values recognized in planning documents – the report notes that “it is not a problem for wind energy projects to be visible from these areas; rather it is how they are seen and the extent to which they can degrade the views of these landscapes by visitors and residents that is critical.”

The report establishes principles to determine scenic quality and to assess impacts. These include visual diversity, intactness, focal points, and uniqueness.

The visual assessment methodology used for the Desert Claim analysis is described in Section 3.4.2.1 of the SEIS, and includes the following steps:

- categorize visual resources into landscape units and document the existing condition and visual quality. (This corresponds to Step 1 in the NAS/NRC report).
- identify viewpoints that reflect typical views of the project from public roads and highways, parks, and residential areas; photograph viewpoints using a 50mm lens. (Part of Step 1 in the NAS/NRC report).
- characterize the landscape units based on vividness, intactness, and unity. (This corresponds to Step 2 in the NAS/NRC report. As noted in the first portion of this

response, the Stuart Range is included in numerous photos and discussed in the assessment.)

- create photo-simulations superimposing wind turbines on the existing landscape. (Part of Step 1 of the NAS/NRC report.)
- evaluate the degree of visual exposure, characterize the sensitivity of viewers, and assess the overall quality of the existing view. (Part of Step 3 in the NAS/NRC report.)
- evaluate the level of change or impact caused by the project. Impacts are categorized as low, medium, and high. (Part of Step 3 in the NAS/NRC report. While impacts are ranked in terms of degree, they are not characterized as “acceptable” or “undue” by the SEIS analyst. This determination will be made by EFSEC as part of its adjudicative process); and
- identify mitigation measures. (Step 4 in the NAS/NRC report.)

A comparison of the two methodologies indicates that they are functionally equivalent. In addition, David Blau, an expert in visual assessment, concluded that the methodology used in the SEIS is consistent with that commonly used by professionals in the visual assessment field to identify and evaluate visual impacts for a wide range of types of projects. (See pre-filed testimony Exhibit 18)

42-2 *Response:* As explained in the response to Comment 3-17, SEPA does not require an EIS to address the potential effect of a project on property values, and this is not a topic addressed by the SEIS. The response to Comment 3-17 provides detailed information regarding this issue, however. Based both on a review of existing studies and site-specific analysis by a professional appraiser of the properties in the vicinity of the Desert Claim Project, the effect of the Project on the value of surrounding property is expected to be neutral or positive. Requiring mitigation would not be appropriate because the alleged impact is entirely speculative.

42-3 *Response:* Section 3.4.4 of the SEIS has been modified to include additional visual simulations depicting potential cumulative impacts and assessment of those impacts.

42-4 *Response:* The SEIS presents numerous photographs of existing conditions paired with simulations showing the same view after turbines are erected. Although some readers may find larger photographs easier to evaluate, the size selected allows the reader to easily compare before and after views on the same page. The reproduced simulations are of suitable size and quality for inclusion in an EIS with standard 8 1/2 x 11 pages. The simulations may also be viewed on EFSEC’s website (www.efsec.wa.gov), however, which allows the viewer to use the computer’s zoom feature to enlarge the photographs if desired.

The comment appears to question the photo simulations based on a comparison with those included in the EIS for the Wild Horse Project. The methodology for producing the simulations is described in Section 3.4 of the SEIS, and additional information is provided in response to Comment 13-1.

42-5 *Response:* As explained in the response to Comment 7-14, the primary purpose of an alternative in an EIS is to provide the decision maker with comparative information about environmental effects. SEPA does not require that every conceivable site be evaluated; only a reasonable number of reasonable alternatives need be evaluated. In addition, SEPA does not require an EIS to consider hypothetical or speculative alternatives. A reasonable alternative must be consistent with the proponent's objectives and result in a reduced level of environmental impact. Although the Final EIS and the SEIS did not consider every conceivable alternative, they considered a reasonable set of alternatives.

This comment also relates to some of the factors that are commonly considered by wind power developers when they evaluate different sites as potential locations for energy facilities. These factors are discussed in the Desert Claim Final EIS (Section 2.3.1.2) and include environmental constraints, access to transmission facilities, zoning and land use, available land, and wind resource. A developer tries to identify sites that have the best combination of these factors. In a given situation, any of these factors – particularly wind resource and available land – may influence whether a site is desirable or feasible. Without sufficient wind resource or available parcels of land on which to locate wind turbines, a commercial wind power project would not be viable.

With respect to environmental constraints, a site with fewer natural resource constraints is more desirable than a site with greater constraints. The Applicant, Desert Claim, has testified that it prefers to select and propose sites without significant known environmental constraints, such as wetlands, streams, endangered species habitat, and wildlife refuges (refer to the Prefiled Testimony of David Steeb, Exhibit 11). While the WDNR portion of the Desert Claim Project Area may reflect some wildlife values, it does not have the same character or sensitivity as a site that has been formally designated by a State agency as warranting protection of wildlife and habitat. Likewise, while it may be possible to develop a wind project in a designated wildlife protection area, the additional challenges and permitting constraints often lead developers to prefer to locate in other areas.

Contrary to the implication of this comment, the Final EIS and SEIS did not limit the range of alternatives to sites for which the Applicant possessed lease rights. The Desert Claim Final EIS evaluated both the Wild Horse and Springwood Ranch sites, yet neither was the subject of an agreement with the Applicant. As described in Section 1.4.4 of the SEIS, it was the other factors described above – including environmental constraints, lack of contiguous large parcels, and lack of wind resource – rather than the absence of lease rights, that were the major reasons that an alternative site was not identified within the pre-identified wind farm area. However, the availability of land for development is also a relevant consideration in identifying and evaluating potential alternative sites.

42-6 *Response:* As documented in the pre-filed testimony of David Steeb (Exhibit 11), the Applicant has agreed to this suggested mitigation measure.

42-7 *Response:* The desire for wider roads is acknowledged. Please note that this objective conflicts with a desire identified by WDFW, the Counsel for the Environment, and others to minimize the disturbance impacts of the Project. EFSEC will weigh both points of view in formulating a decision on the application.

42-8 *Response:* The comment indicates the Applicant intends to construct the access to County road to County standards.

42-9 *Response:* The Applicant does not propose to provide a tourist facility.

42-10 *Response:* As documented in the pre-filed testimony of David Steeb (Exhibit 11), the Applicant will develop a Construction Traffic Management Plan and Road Signage Plan, and submit those plans to EFSEC for approval prior to construction.



**Washington State
Department of Transportation**
Paula J. Hammond
Secretary of Transportation

**Public Comment
DSEIS #43**

South Central Region
2809 Rudkin Road, Union Gap
P.O. Box 12560
Yakima, WA 98909-2560

(509) 577-1600
TTY: 1-800-833-6388
www.wsdot.wa.gov

April 30, 2009

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

Attention: Allen J Fiksdal, Manager

Subject: Z-2003-01; enXco, Inc. – Desert Claim Wind Power, LLC
Wind Project – Reecer Creek Area
I-90, Exit 106 (US 97/West Ellensburg interchange) vicinity
US 97, MP 133.90-142.08 (I-90 to Smithson Road) vicinity
MP 134.16 (Dolarway Road/Cascade Way Extension) intersection
MP 142.08 (Smithson Road) intersection

We have reviewed the proposed project and have the following comments.

- | | |
|---|------|
| 1. The project sites are not adjacent to any WSDOT-maintained roads, but U.S. Highway 97 and Interstate 90 will be used for access and delivery. I-90 is a rural interstate with a posted speed limit of 70 miles per hour. | 43-1 |
| US 97 is an Urban - Principal Arterial in the vicinity of the I-90 ramps and the Dolarway Road/Cascade Way Extension intersection, and is a fully-controlled limited access facility. North of the intersection area, US 97 is a Rural – Principal Arterial. Access to US 97 from the sites is proposed via existing public road intersections. | 43-2 |
| 2. All loads transported on WSDOT rights-of-way must be within the legal size and load limits, or have a valid oversize and/or overweight permit. | 43-3 |
| 4. The proponent is advised that there is an over height restriction on eastbound I-90 at Exit 62. All loads over the legal height (14'0") are required to exit at the eastbound ramp and reenter the interstate via the eastbound on ramp. | 43-4 |

RECEIVED

MAY 08 2009

**ENERGY FACILITY SITE
EVALUATION COUNCIL**

Allen J, Fiksdal, Energy Facility Site Evaluation Council – Desert Claim Wind Project
April 23, 2009
Page 2

5. The applicant proposes mitigating their construction traffic impacts by developing a Construction Traffic Management Plan. WSDOT will review and comment on this plan as it pertains to our highways.

43-5

Thank you for the opportunity to review and comment on this proposed project. If you have any questions regarding our comments, please contact Rick Holmstrom at (509) 577-1633.

Sincerely,



Bill Preston, P.E.
Regional Planning Engineer

BP: rh/jmh
cc: File #2, US 97 (2009)
Rick Gifford, Traffic Engineer
Terry Kukes, South Central Area 1 Maintenance Supervisor

p:\planning\devrev\sr97\kittco_enxco_desert claim wind_deis_4-7-09_decrsd_turbines.doc

Comment 43: Washington State Department of Transportation

43-1 *Response:* The comment is noted.

43-2 *Response:* The comment is noted.

43-3 *Response:* The comment is noted.

43-4 *Response:* The comment is noted.

43-5 *Response:* The Construction Traffic Management Plan will be provided to WSDOT for review and comment.



WINDTOWER MANUFACTURING
www.katana-summit.com

1990 Fairchild Avenue
Post Office Box 309
Ephrata, WA 98823
509-754-5600
509-754-5602 fax

April 21, 2009

To Whom It May Concern;

In 2005 Katana Summit set up business in Ephrata Washington, a small town of approximately 7300 people. Katana Summit builds the steel towers for wind turbines. The towers are between 8 and 16 feet in diameter and as long as 90 feet per section. There can be up to 4 sections in a tower. Katana Summit is located in Ephrata, next to the Ephrata Airport. We currently employ 121 people from the area including, Ephrata, Moses Lake, Wenatchee and beyond. The economic impact we have had on this community and the surrounding area are immense. The Port of Ephrata alone estimates that the rail shipments have increased from 40 to 380 because of Katana Summit.

We purchase supplies for our towers from as many local companies as possible. Because of the current trend in the economy we have had to lay off employees. This in turn affects more than just our employees. The community and surrounding areas are also affected.

Our goal is to add long term and positive value to our customers, employees and communities. As a leading supplier of Wind Towers in North America, our desire is to supply our customers with cost effective, quality wind towers. A US built tower is a good tower. Codes are tighter in the United States than what some of our foreign competitors are required to meet.

We have read that enXco, a company we have recently worked for, is looking to build a 95-turbine wind farm in Kittitas County. It is our understanding that they will be using towers built in an Asian country. We are currently building this exact tower for an enXco project in Indiana. We feel that the economic stimulus funds for the proposed wind farm, the Desert Claim Wind Power Project will be using, would be better spent in the United States rather than abroad.

44-1

We encourage you to pressure enXco to purchase their towers locally.

Respectfully,

Darrell Lehmann
President/CEO
Katana Summit LLC

Comment 44: Darrell Lehmann, Katana Summit

44-1 *Response:* This letter does not appear to be intended as a comment on the Draft SEIS, and does not relate to the topics included within the scope of the SEIS. enXco and its affiliates rely upon a wide range of companies to supply the components and materials used to construct wind power projects. Although the commenter's company may not ultimately supply components for the Desert Claim Project, the company has supplied components for other enXco projects in Washington and elsewhere. By subsequent letter dated June 8, 2009, the commenter clarified that he strongly urges approval of the Desert Claim Project.



**Comments on the Proposed Desert Claim
Wind Farm**

**Stephen R. Prue,
B.Sc., C.Eng., MIGEM, NSPE, ASTM, ASME**

April 30th 2009

RECEIVED

MAY 04 2009

ENERGY FACILITY SITE
EVALUATION COUNCIL

1.0 Introduction

I live at 71 Casey Drive, Ellensburg, WA 98926, which is property number 1 of the affected non-participating properties. I should say at the outset that I am not against any form of alternative energy but I am seriously concerned over the manner in which local residents are being denied their wishes and by the way local democratically elected officials decisions are being overturned if they do not conform to the big business view on the way things should be.

These comments are mine, based on my own research, observations, qualifications and training. I do not have the luxury of being able to spend money on surveys by qualified personnel nor have consultants prepare this response.

I would like to address my concerns in three parts a) Personal – the way in which this development will affect me and mine; b) Environmental – addressing concerns over the Environmental Impact Statements produced thus far and; c) Business and Political – the way and manner in which this development is taking place, irrespective of the jobs it may or may not bring to the valley but where the profits for this venture will end up.

My initial comment is the very name of the development itself "Desert Claim". This gives the reader the impression that the development is using land that is useless for anything else (reclaiming the desert). Anyone who knows the area will know that the land is in addition to being residential, farmland and grazing land and not sagebrush scrubland as the name would suggest.

45-1

2.0 Personal

I live at 71 Casey Drive, Ellensburg, WA 98926, which is property number 1 of the affected non-participating properties. (Shown right of center in Photograph 1, below).

Of the proposed turbines, the closest will be at 1778 ft, with the next at approximately 2470 ft, another at 2700 ft, two at 2970 ft, and another at 3260 ft. Turbines will be situated in a viewing arc from 032 degrees to 281 degrees (0 degrees being north) basically at every angle that the sun is above the horizon.

2.1 Value of Residence

The contention that these turbines will not affect the value of this property are in my mind, seriously erroneous.



Current outlook....Photograph from the SDEIS – (Photograph 1)

45-2



(Photograph 2) Figure 3.4-20. View S1L – SEIS Simulated View
 Note: This is a new viewpoint that was not included in the Final EIS.

At a time when property values have depreciated significantly, the construction of this wind farm would depreciate land values still further.

45-2
 (con't)

***From the Submission to Legislative Committee on bill 150:
 Speaking Truth to "Wind" Power***

4) Industrial Wind Turbines Have Adverse Effects on Adjacent Property Values

A three-year study of 600 property sales near the Melancton wind turbine developments north of Shelburne, Ontario showed that property values decreased by 20% to 25% (an average of \$48,000), were on the market more than twice as long as properties in adjacent areas, and a large number (four times those that did sell) could not be sold at any price. While wind developers deny that industrial wind turbines have any effect on property values of neighbouring residents, simple common sense suggests otherwise: how many readers familiar with this development would be prepared to buy recreational or retirement homes in this area, even at sharply discounted prices? In a recreational area that promotes its scenic attractions, like Grey

Highlands, these effects on property values are likely to be even more pronounced. Refusal by either wind developers or the provincial government to provide legally enforceable guarantees of compensation for property value losses warrants further skepticism over the claim that there will be no such losses. (Michael J. Trebilcock Professor Law and Economics, University of Toronto, Faculty of Law, April 7, 2009)

There has been no discussion with residents concerning any measures to mitigate the impact of these turbines nor any measures to compensate residents for the obvious market loss of the value of our assets we possess – namely our property. The contention that there are only seven affected properties suggests that some form of compensation to mitigate current and future losses in property value could surely have been made or at least discussed.

45-2
(con't)

The contention that land values have remained steady are based on the fact that the land with turbines (and thus an income) rise whereas the ones immediately surrounding area fall – but on **average** the value of ALL the land in the area remains steady. In other words, what one landowner gains, another loses.

2.2 Visual Impact

I quote from the SDEIS....

View S1L: Figure 3.4-20 shows a simulated view looking south east across the Northwest Valley Visual Assessment Unit from 1/8 mile east of Reecer Creek Road, 1/8 mile north of the Project boundary.

Vividness—1: **Somewhat memorable view**—large scale and quantity of turbines detract from the intrinsic qualities and features of the long, cross-valley view.

Intactness—1: Turbines break up the view of the Manastash Ridge and foothills in the distance, and decrease the openness of the middleground pastureland. (Comment – It also break the view of Mt Rainier in the distance – not shown in this photograph)

Unity—1: **The turbines appear as a large scattered group, encompassing the entire scene and disrupting the strong horizontal character of the landscape.**

Overall Visual Quality: 1.00—Low.
Level of Visual Impact: 1.00—High.

Photograph 2 shows the proposed turbines as viewed from the end of Katie Lane. The photograph is supposed to depict what the turbines would look like but the photograph, **when corrected for scale show the turbines to be only 150ft to the center of the blades and only 220ft at the blade's tallest point** (Measurements are approximate) This is only (approximately) half the scale of the finished product. These actual measurements are 258ft and 410 ft respectively. (Figure 2.2-4 of the DSEIS). Even with errors in reading photographs, the difference in the measurements gives me serious concern for the accuracy of the depiction. The rotor diameter from this depiction is only 140ft as opposed to the actual 304 ft.

45-3

So with that data, I will be surrounded, closely, by six wind turbines, double the size in the depiction and no mitigation nor compensation suggested. It seems as if we residents have less of a voice than local wildlife.

I would suggest that Desert Claim should contact local residents with a compensatory offer for loss of value. This should be agreed before any approval of the proposals takes place. The offer would only be available to current residents and not any subsequent purchaser.

45-4

Flicker - The contention that the turbines will be turned off if flicker affects any property is, in my mind, far fetched, due to economic factors. I suggest that any resident affected by flicker would NOT be able to pick up the phone and have the turbine turned off but would have to be involved in a long and expensive court battle to have their wishes granted – if at all.

45-5

Overhead Cables – The SDEIS states that cables will be placed underground but gives specific exclusions whereby the cables would go above ground. One of the conditions for overhead cables is "Rocky Terrain". A lot of the ground in the area could be classed as rocky terrain and would therefore have cables above ground. This is even more likely when considering the economics of underground vs. above ground installations.

45-6

I would suggest any subsequent approval should state that ALL cables will be installed underground.

The inclusion of flicker and the above ground installation of cable would further detract from any property value we currently enjoy.

Satellite Communication – Other wind farms have interfered with the satellite reception of local residents and have installed cable to these residences. Again nothing has been done, said, or offered to local residents to mitigate any satellite communication interference.

45-7

Even if one thinks (contrary to my views), that wind turbines are a good idea environmentally and economically, there is a simple solution to the impact on rural residents, who are being conscripted to bear most of the burden of solving a problem they mostly did not create. Ensure that set-backs from residences conform to international standards as endorsed by renowned medical and scientific bodies that have closely examined the health and environmental risks. The French Academy of Medicine recommends 1.5 km, pending further research on health effects of persistent exposure to low-intensity noise. (Michael J. Trebilcock Professor Law and Economics, University of Toronto, Faculty of Law, April 7, 2009)

It is surprising that a company owned by a French parent company does not comply with their own country's setbacks recommended by their Academy of Medicine and not the 1600 ft as proposed. (Note 1.5km approx equals 1 mile)

45-8

Alternatively, the government could concentrate wind farms in more remote or sparsely populated areas, as has been done in Quebec and much of Europe. These measures would also minimize negative impacts on property values. But these are modest palliativesdo not address industrial wind power's failure to reduce significantly carbon emissions and its exorbitant cost to taxpayers and consumers. (Michael J. Trebilcock Professor Law and Economics, University of Toronto, Faculty of Law, April 7, 2009)

I would suggest that the setbacks for this project conform to the international standards as set forth by the French Academy of Medicine – at 1 mile (or 5280ft) and that these setbacks are enforced from property lines and not residences. There are plots of land currently purchased without any residence yet built and installation of these turbines may well designate much of these areas of land, unbuildable.

There are vast tracts of land in Kittitas County with NO RESIDENTS within miles and surely any proposed developments could be sited in these areas. The local County has designated areas for the purpose of

45-9

wind farms. The objections to these are economics, but the same economics are dictating that this proposal surround existing residences. Is it a case of lets embrace renewable energy (so long as it doesn't cost us anything)?

45-9
(con't)

Until recently Desert Claim has not had any contact with me for several years and I find that to be objectionable. The total disregard for local non-participating residences further reinforces my belief that a turbine shut-down due to flicker is words and nothing more. Further the contention by the company that they would work with the local community was negated by their disregard of the decision of the duly elected local government, but decided to take the decision away from the local community and placed in the hands of a non-representative body far remote from the proposed development.

Kittitas Valley has already had wind farms approved (and constructed) and additionally there is a solar project in the valley. How much more land are wind farms going to take before someone says enough is enough?

3.0 Environmental Issues

3.1 Birds

Bald and Golden Eagles – Bald Eagles winter in the valley, in this area in particular. Most days travelling through the proposed development area there are many Bald Eagles. These raptors not only feed off carrion but also the rodent/vermin population, as do other raptors. Golden Eagles are here year round and there is one in close proximity to my home which is in the middle of several turbines. Both the Bald and Golden Eagles are protected species by the "Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then.



Photograph 3 – Bald Eagle in a field off Reecer Creek Road – one of five in that field.



Photograph 4 – Bald Eagles in a field off Reecer Creek Road – two of the others in that field.

The Act prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof."

The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

For purposes of these guidelines, "disturb" means: "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding,

feeding, or sheltering behavior."



Photograph: Decapitated Golden Eagle head on a wind farm

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

A violation of the Act can result in a fine of \$100,000 (\$200,000 for organizations), imprisonment for one year, or both, for a first offense. Penalties increase substantially for additional offenses, and a second violation of this Act is a felony.

I would ask who will be the responsible party for subsequent legal action following deaths of Bald and Golden Eagles?

45-10

The construction of these turbines, from the SDEIS, will increase eagle mortality as it is admitted in the EIS that these and other raptors fly at the height of the rotating turbine blades and deaths are expected.

"Thousands of Deaths Every Year

Thousands of wind turbines were built in Northern California's altamont Pass region during the 1980s in response to activist groups' call for greater reliance on renewable energy sources. Construction of the wind turbines, however, has made the region one of the most deadly places in the world for a large variety of birds. Literally thousands of birds are killed by the turbines each year, including roughly 1,000 annual kills of such valued birds of prey as golden eagles, red-tailed hawks, and burrowing owls.

Complicating matters, Altamont Pass is a major migration route for birds of prey in North America. The federal Migratory Bird Treaty Act makes it illegal to kill migratory birds without permits. According to Benito Perez, special agent in charge of the U.S. Fish and Wildlife Service's Portland, Oregon, office of law enforcement, every killing of a migratory bird by the Altamont Pass wind turbines is a violation of federal law.

Moreover, the Bald and Golden Eagle Protection Act prohibits the killing of eagles. Yet in Altamont Pass, home to the nation's largest concentration of golden eagles, wind turbines kill hundreds of the majestic birds every year.

"Altamont has become a death zone for eagles and other magnificent and imperiled birds of prey," said Jeff Miller, a spokesman for the Center for Biological Diversity. "Birds come into the pass to hunt and get chopped up by the blades."

45-11

Construction of this wind farm on other unpopulated scrubland in the county would negate this concern as there would be neither carrion in sufficient quantities nor roosting places to attract these and other raptors.

45-11
(con't)

Owls – Although not much is said about owls, there are many in existence within the project area as any drive around during the late dusk, early twilight will show. Owls spotted in the proposed development area include Barn Owls, Great Horned Owls, Spotted Owls and Western Screech Owls. Both the Great Horned Owl and Western Screech Owl inhabit areas from open woodlands, streamside groves deserts, suburban areas and parks. In other words any of the land in this part of the valley.

45-12

I suggest that a subsequent, more in depth, independent study should be made of the bird population of the proposed project area

Wildfowl – Many of the vernal and permanent pools are resting points for migratory wildfowl birds are well as being home to many permanent residents. Construction of these turbines will affect the bird's flight and glide lines into the resting areas and will cause fatalities.

45-13

Construction of this wind farm on other unpopulated scrubland in the county would negate this concern as there would be neither permanent nor vernal pools and ponds to attract these birds.

Other birds – Many of the other birds of this area have either been neglected or appear to have been demoted to a reduced perceived level.

Some of these birds are as follows, but not limited to:

- Sharp Tailed Grouse
- Barn Swallow
- Black-Capped Chickadee
- Martins
- Tree Swallows
- Killdeer – many of these running around my yard!
- Blue Heron
- Common Snipes
- Red-Winged Blackbirds

45-14

Robins
Oregon Junco
Black-Billed Magpie

45-14
(con't)

As I stated there appears to be many more of these birds than the EIS would suggest (Appendix C)

Again I would suggest that a subsequent, more in depth, independent study should be made of the bird population of the proposed project area. In addition there should be some independent studies of avian deaths in existing wind farm project areas.

Wind developers minimize the risk turbines pose to birds by pointing out that more birds are killed each year by cars, cats, buildings, etc. than turbines. What they don't point out is that there are many millions of cars, cats and buildings, while there are only thousands of turbines currently operating in the world. With the rush to slap up turbines before the tax credits run out, the statistics will soon change. And as Mark Duchamp points out, *"buildings and windows don't kill golden eagles, swans and geese."*

The avian mortality problem of wind power is different from bird mortality from stationary objects. As explained by the CEED Study, p. 2-15: 'Wind farms have been documented to act as both bait and executioner -- rodents taking shelter at the base of turbines multiply with the protection from raptors, while in turn their greater numbers attract more raptors to the farm.'" See also 3.2 below.

And from the USFWS....

"You asked if the Service is studying the possible cumulative effects of the expanding domestic wind industry on migratory birds and other wildlife. In our letter... dated July 13, 2004, we indicated that the Service is not currently conducting independent studies related to wind energy impacts on migratory birds or bats in the Northeast. Instead, we have been requesting information from project proponents on the temporal and spatial use by migratory birds and bats of commercial grade wind energy sites in the Northeast. However, the wind industry has been generally reluctant to conduct studies and provide such information. Without such pertinent information, and adequately trained field staff, project impacts on migratory birds and bats are difficult to adequately assess, and we are not able to perform our regulatory and advisory roles in licensing domestic wind energy

projects on land in the Northeast." —USFWS Regional Director Marvin Moriarty.

Below is the New York State Department of Environmental Conservation's response to an avian risk assessment done for Chautauqua Windpower LLC. The strong response also leads me to question the validity of the studies done in and around our project area. As I pointed out above, many species seem to be missing or under represented in the study done – a study done for Desert Claim and not an independent study.

***New York State Department of Environmental Conservation
responds to Avian Risk Assessment***

In a letter dated December 31, 2004 and addressed to David Perri, Executive Vice President of Chautauqua Windpower LLC, the New York State Department of Environmental Conservation (NYSDEC) issued a scathing response to the Avian Risk Assessment put forward by Chautauqua Windpower LLC and their consultants.

What follows is a brief summary of the NYSDEC response to the Chautauqua Windpower LLC Avian Risk Assessment.

Summary of the NYSDEC Response

The New York State Department of Environmental Conservation (DEC) identifies several "fundamental flaws" and refutes the conclusions of the Draft Avian Risk Assessment study of the proposed wind power development site in Ripley and Westfield (Chautauqua County), New York. The DEC calls the proposed wind turbine project area an "extremely important bird/raptor migration area" and indicates that it "ranks as the third most significant New York spring raptor migration site in terms of annual numbers of raptors moving through."

The Draft Avian Risk Assessment, issued in June, 2004, was prepared by Chautauqua Windpower, its attorneys and environmental consultants, including Ecology & Environment, a Buffalo-based environmental consulting firm. Findings of the Draft Avian Risk Assessment indicate that the proposed wind power project will pose a negligible risk to birds.

The 31-page DEC letter disputes the study's conclusion, stating that staff "strongly believe that the mortality expected from a completed

Chautauqua project will be significantly higher" than that predicted in the Draft Avian Risk Assessment.

The letter enumerates the flaws in the methodology and assumptions that form the basis of the study as outlined below:

- **"Extremely limited" data were collected:** The DEC finds that the data used as the foundation of the study "were undertaken for a very limited period of actual sampling time, failed to sample a vast amount of airspace... and appear to have missed the actual peak periods of migration for passerines." These data limitations may have lead to under-counting of birds and under-estimation of risk.
- **Bird mortality risk was inappropriately estimated:** The DEC also finds fault with the study's estimate of bird mortality risk based on two previous bird mortality studies – one from a wind turbine facility in Spain and the other from a facility in Oregon. DEC states that these mortality studies conducted at distant locations "are of questionable relevance to a study of wind development in western New York."
- **The potential impact on bald eagles was misstated:** The DEC refutes the Draft Avian Risk Assessment's claim that bald eagles and other protected species are not at significant risk, stating that "bald eagles and other protected species do and can be expected to use the project area," and that "this project could be biologically significant to one member of the four adult bald eagles breeding in the area." The DEC and the United States Fish and Wildlife Service had both expressed serious concern about the proximity of the proposed wind turbine project site to nesting bald eagles in separate letters to the developer in early 2004.
- **An evaluation of the risk to bats is omitted:** despite previous DEC requests for information on resident and migrating bats, the Draft Avian Risk Assessment does not specifically include this information. The DEC states that at a West Virginia wind turbine facility "bat mortality rates may have been higher than those of birds," and requests that information on bats at the proposed Westfield-Ripley wind turbine site be provided.
- **Inappropriate "apples and oranges" comparisons are "done freely"** in the Draft Avian Risk Assessment. For example:
 - The study uses bird fatalities at a 300-foot stationary communications tower as one basis for predicting the risks posed by a 450-foot high wind turbine with a 253 foot diameter disk at the top whirling at close to 200 miles per hour at the blade tip

- *Bird mortality at wind turbine projects in areas with dissimilar species, geography, and turbines (Tarifa, Spain and Stateline, Oregon) are used to estimate bird mortality at the proposed Westfield and Ripley project area.*
- *The Draft Avian Risk Assessment compares bird mortality from existing wind turbine projects to other sources of avian mortality such as collisions with cars, buildings, etc., stating that the mortality from wind turbine projects is 'minor' in comparison. The DEC calls this comparison "fallacious" citing that sufficient comparative studies have not been done, and that this comparison is not being made on a unit for unit basis (e.g.: the number of bird fatalities from cars is not stated in context of the number of cars on the roads).*

The DEC also indicates that there are numerous examples throughout the Draft Avian Risk Assessment in which Chautauqua Windpower has "slanted the discussion in favor of their proposal."

The letter indicates that DEC "supports and strongly encourages wind energy as a potential source of renewable, clean energy" but it concludes that "staff's critical review of the ARA [Draft Avian Risk Assessment] finds its conclusions are unreliable" and that it "cannot endorse the use of the ARA to determine the impact or risk to avian resources from the Chautauqua Wind Project."

*Appendix C of the original EIS states "The possibility of short-term (due to construction activity) mortality effects from the project is considered negligible and very unlikely to occur. Bald eagles in the area during the construction period are unlikely to occur within the construction zones due to noise and high human and equipment presence, and therefore are unlikely to be at risk of construction related mortality." Is this not the disturbance as defined in the act? Which defines disturbance as: "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, **feeding, or sheltering behavior**, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."*

*The appendix goes on to state "but there have been no documented bald eagle fatalities at wind plants (Erickson et al. 2001)." **I would ask how many wind farms were in existence in Bald Eagle***

habitats when the data was collected for Erikson's 2001 published data?

The article by the NYDEC seems to gain more credence.

From Appendix C

"6. Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts that would occur to state or federally listed threatened, endangered, proposed or candidate species from implementation of the project.

I suggest this is incorrect as there WILL be avian deaths due to the turbines.

3.2 Reduction in the Raptor/Owl/Buteo/Accipiter Population

With the (admitted) reduction in the level of predators and the disturbance of the remaining birds, there will be a reduction in the level of predators taking vermin/rodents.

Once the natural balance has been upset, will come an increase in the vermin/rodent population, which will become a problem due to the frequency of breeding of these mammals. As we residents come to terms with dealing with a blight on the landscape of the valley, we shall also have to deal with the increase in rodents, their spoiling and eating of animal food and subsequent health concerns.

45-15

I would suggest that some form of rodent mitigation is included in any approval of this project.

3.3 Bats

There appears to be no mention of bats anywhere in the document. Did they all move out?

"The cumulative impacts on bat populations from proposed and/or constructed wind farm developments, especially in the eastern United States, may lead to further population declines, placing multiple bat populations at serious risk of extinction." — Dr. Thomas Kunz, Director of the Center for Ecology and Conservation Biology, Boston University

45-16

I would suggest a further (independent) study be done regarding the concentration and effects on the bat population of the area, before any approval is given.

3.4 Water and Water Courses.

The recent rapid thaw in snow at these higher elevations has given rise to some serious doubts to the depth to which surface water run-off has been addressed by the EIS and SDEIS.

The change in temperature and rapid thaw sent much of the surface water cascading across the landscape and created its own waterways, damaging dirt/graveled roads as well as many asphalted roads in the county.

The construction of many miles of this type of unsurfaced roads will lead to water being diverted into new watercourses causing surface erosion and potential undermining of constructed structures.

From the EIS Intermittent Streams

Fourteen intermittent streams were mapped and characterized in the project study area. Intermittent streams (seasonal streams) are dry for a large part of the year. Flow generally occurs for weeks and/or months in response to seasonal precipitation and groundwater recharge. One of these streams is also counted under perennial streams, as it has sustained flow in a different reach within the project area.

45-17

Ephemeral Streams

Ephemeral streams were not mapped and characterized in the project area. Ephemeral streams convey runoff for only brief periods during or after rainfall events. These drainages typically have unconsolidated beds of silt, sand, gravel, cobble, or a combination of these substrate types. In general, mapped washes were characterized by a defined bed and bank and were either vegetated or un-vegetated along their banks.

Irrigation Ditches

Many of the streams discussed above convey water to irrigation ditches located throughout the project area. These ditches are particularly prevalent on the Roan, White/Wade, and Nelson properties. Several stock ponds are also present within the project area. Detailed information regarding these features was not collected during the field surveys.

It is concerning to read the phrase "Detailed information regarding these features was not collected during the field surveys"

I would suggest that before any approval is given to this project, a detailed hydrological survey be undertaken.

45-17
(con't)

Similarly the Army Corps of Engineers seems not to have commented on the proposals and with a project of this scope and magnitude, an Army Corps of Engineers Permit will be required (as it is for other far smaller projects).

45-18

I would suggest that the views of the ACoE be obtained before granting any approval to a project of this magnitude.

Aquifers – No details has been given to the effects on the underground aquifers feeding properties in the affected areas. In fact no details have been given to any form of foundations for these monstrosities other than broad “it may be this” type of information.

How can one comment on either the EIS or SDEIS without details of the proposed method of construction of these foundations and any cut and fill requirements around each of the turbine bases?

I would suggest that no approval be given to the project until such information is available and a geological survey has been undertaken at each site.

45-19

The EIS Appendix B details that the valley is made up of “up to 100ft of unconsolidated” material. Are the “go-by” foundations sufficient for this type of geologic environment, without detailed information? I think not.

Again I would suggest that no approval be given to the project until detailed information has been obtained for each of the turbine sites, for geological foundation factors and proposed cut and fill requirements for each resulting engineered design at each of the locations. A subsequent EIS would then be required to assess the detailed engineered designs, rather than bland statements as at present.

No assurances have been given to any of the residences for impacts on their aquifers/wells supplying their properties. If a penetration is made to the underground water retention system, and the existing wells dry up due to the construction activities, what recourse do we have to address and fix this problem. Again the residents are having to absorb the risk of construction activities without any recourse, mitigation or compensation guarantees.

45-20

I would suggest that language be included in any approval guaranteeing the existing wells as well as detailing any compensatory measures in case of failure to take due care and consideration.

45-20
(con't)

3.5 Health Issues

Probably the most contentious issue of all.

The following is from the Northern Maine Medical Center:-

Health concerns and the need for careful siting of wind turbines

March 4, 2009 by Medical Staff, Northern Maine Medical Center

Summary:

At its monthly meeting held Tuesday, March 3, 2009, the Medical Staff of Northern Maine Medical Center unanimously approved the release of the following statement:

For Immediate Release: Members of Northern Maine Medical Center's medical staff endorse the use of alternative energies.

We echo the concerns of the Medical Staff of Rumford Community Hospital as regards an increasing body of literature and reports from Canada, the USA, and particularly from Europe suggesting that the deployment of industrial wind facilities in close proximity to places where people live, work or attend schools results in negative health effects, including and especially sleep deprivation and stress. We know, as physicians, that sleep deprivation and chronic stress can result in many consequential negative health effects, some of them serious, over the long term.

These effects arise not only from audible noise frequencies but also from persistent inaudible low frequency noise waves of a cyclical nature which are felt, but not heard. There are a growing number of scientific observations and studies suggesting that people living up to 2 miles away from these industrial wind farms may be affected. Many European nations with more than two decades of experience with industrial wind factories have now implemented regulations stipulating setbacks of 1-1.5 miles.

In light of these growing, serious medical concerns, we propose a moratorium on the building of any such "wind farms" until more

research is done on the health impact that such facilities will have on the communities surrounding such technology. These communities and the Maine DEP and Health Services must be allowed time to study and learn from the European and Canadian experiences, as well as from the many affected families in Mars Hill, Maine, and put into place appropriate regulations and ordinances, prior to expanding the wind industry in the State of Maine.

The State of Maine has a vast, unpopulated hinterland. There is little need to site industrial wind developments in proximity to residential communities if there is a risk of negative health effects. Quality of life, quality of place, and a healthful environment should be the right of all residents of Maine, including those of the rural north.

*Signed,
Medical Staff, Northern Maine Medical Center*

Is the "Quality of life, quality of place, and a healthful environment should be the right of all residents of Maine, including those of the rural north" applicable to the residents of Kittitas Valley? Or is the seven or so affected properties a "sacrificial lamb" that the State are willing to offer up?

Misquoting from Michael Trebilcock's excellent article,

My wife and I (like many other residents) chose to live where we do because it is one of the scenic treasures of Kittitas Valley.

Now, however, the residents are threatened with the prospect that its landscape will be blighted by 400 foot, 35-story high industrial wind turbines that cause documented health and environmental risks, dramatically lowering property values and impacting one's quality of life.

Also from Michael Trebilcock...

Industrial Wind Turbines Cause Insufficiently Researched Health Effects

A growing body of scientific and medical evidence suggests that the health effects on those subjected to long and frequent periods of

45-21

pulsating, low-frequency noise associated with wind turbines include sleep disturbances leading to depression, chronic stress, migraines, nausea and dizziness, exhaustion and anger, memory loss and cognitive difficulties, cardiac arrhythmias, increased heart rate and blood pressure. Kamperman and James list no fewer than 13 studies that show noise from wind turbines at night can disturb residents more than 2 km away. Those living close to the source of noise can develop what has been termed "Vibroacoustic Disease (VAD). Noise from wind turbines exhibit the characteristics of noise experienced in various occupations (aircrews, aircraft maintenance workers, ship workers and an islander population exposed to environmental infra and low frequency noise) and has been shown to lead to VAD. Complaints from people living near wind turbines are the same as those from persons who have developed VAD. Also, flicker from turbines at a minimum are disruptive and annoying. Flicker poses a potential risk of photosensitive seizures.

It would be very interesting to see if the State government will require a "full independent environmental assessment, including assessments of health effects, of (this or) any wind turbine project," as not doing so "undermines the credibility of claims that there will be no such negative effects."

45-21
(con't)

There is growing evidence from home and abroad that these medical effects DO exist. The parent company – French based – has its own medical academy recommending a minimum setback of approximately 1 mile (1.5kms) and Maine recommending 1-1.5 miles as a minimum.

I would suggest that the minimum setback as proposed in the SDEIS is nothing more than an attempt to push through this project. No accounting for these studies has been done but the company follows the line that there are no adverse health effects. (They increased the distance of the nearest wind turbine to my residence, by a few feet)

I suggest that if the project be approved, a minimum setback of 1 mile (1.5km) is adopted, from any non-participating property lines.

For a resulting (suggested) project modification with these setbacks, please refer to 5.0 Conclusions.

4.0 Business and Political Issues

The Case Against Industrial Wind Turbines

4.1 Industrial Wind Turbines Have Minimal Impact on Carbon Emissions

There is no evidence that industrial wind power is likely to have a significant impact on carbon emissions. The European experience is instructive. Denmark, the world's most wind-intensive nation with more than 6,000 turbines generating 19% of its electricity, has yet to close a single fossil fuel plant. It requires 50% more coal-generated electricity to cover wind power's unpredictability, pollution and carbon dioxide emissions have risen (by 36% in 2006 alone). Flemming Nissen, the head of development at West Danish generating company ELSAM (one of Denmark's largest energy utilities) tells us that "wind turbines do not reduce carbon dioxide emissions."

The German experience is no different. Der Spiegel reports that "Germany's CO2 emissions haven't been reduced by even a single gram,"[2] and additional coal and gas-fired plants have been constructed to ensure reliable delivery. Indeed, recent academic research shows that wind power may actually increase greenhouse gas emissions in some cases, depending on the carbon-intensity of back-up generation required because of its intermittent character. On the negative side of the environmental ledger are adverse impacts of industrial wind turbines on birdlife and other forms of wildlife, farm animals, wetlands, and viewsheds. (Michael J. Trebilcock Professor Law and Economics, University of Toronto, Faculty of Law, April 7, 2009)

45-22

The same would be true here in Kittitas Valley. I have not had the opportunity to review the data that Desert Claim has on the winds logged throughout the project area but I do have the average wind speeds recorded at Bowers Field (a little closer than Yakima as some of the data in the EIS) Timing has only given me the chance to look at three winters – 2003/4, 2004/5 and 2005/6 a period of the year where there is high electrical demand. Most residents will already have guessed the content of this data as we have cold clear winter days on the hills and fog down in the valley. Fog – by its very nature does not exist where there is wind of any quantity.

The data is as follows:

Table 1: Average Wind Speeds (mph) for the weeks November to March

Week	Winter 2003/4	Winter 2004/5	Winter 2005/6
1	2	7	6
2	6	2	6
3	7	8	6
4	5	6	4
5	4	3	4
6	2	7	3
7	5	4	3
8	3	7	2
9	2	2	6
10	1	2	2
11	2	9	4
12	3	2	3
13	6	1	5
14	4	7	3
15	3	3	5
16	4	5	6
17	3	2	12
18	7	3	3

Data from Weather Underground

Now giving Desert Claim the benefit of any doubt, we will assume the winds all occurred within 1/3rd of the day and week, so for the turbines to be working and producing ANY electricity the wind speed would need to be in excess of 4mph average.

The resulting weeks where energy of any level would be produced are highlighted above. This totals 22 weeks out of 54. Of those 22 weeks only 2.33 days would be producing any electricity each week.

Therefore we have (statistically) 51.26 days production out of 378 days. Well less than the 1/3rd required days to be economical. So the question then becomes why would anyone want to do, what would be, an uneconomical project? Draw your own conclusions.

As in the above examples, carbon dioxide producing power stations would need to be running, as now, to take up the slack when these turbines are not producing. Therefore the carbon dioxide emissions would not be reduced one gram.

This is also bourn out by the data from the Department of Energy's National Renewable Energy Laboratory which shows, on the Washington State Map of wind quality that wind of the good or better

45-22
(con't)

categories all occur SOUTH of the 500kV electrical transmission line (see map) and that land north of the 230-287 kV transmission line is only fair to marginal. This is the area of the project.

45-22
(con't)

So the turbines would be uneconomic, and in an area of poorer wind quality than other available areas of the valley. Again one has to question why?

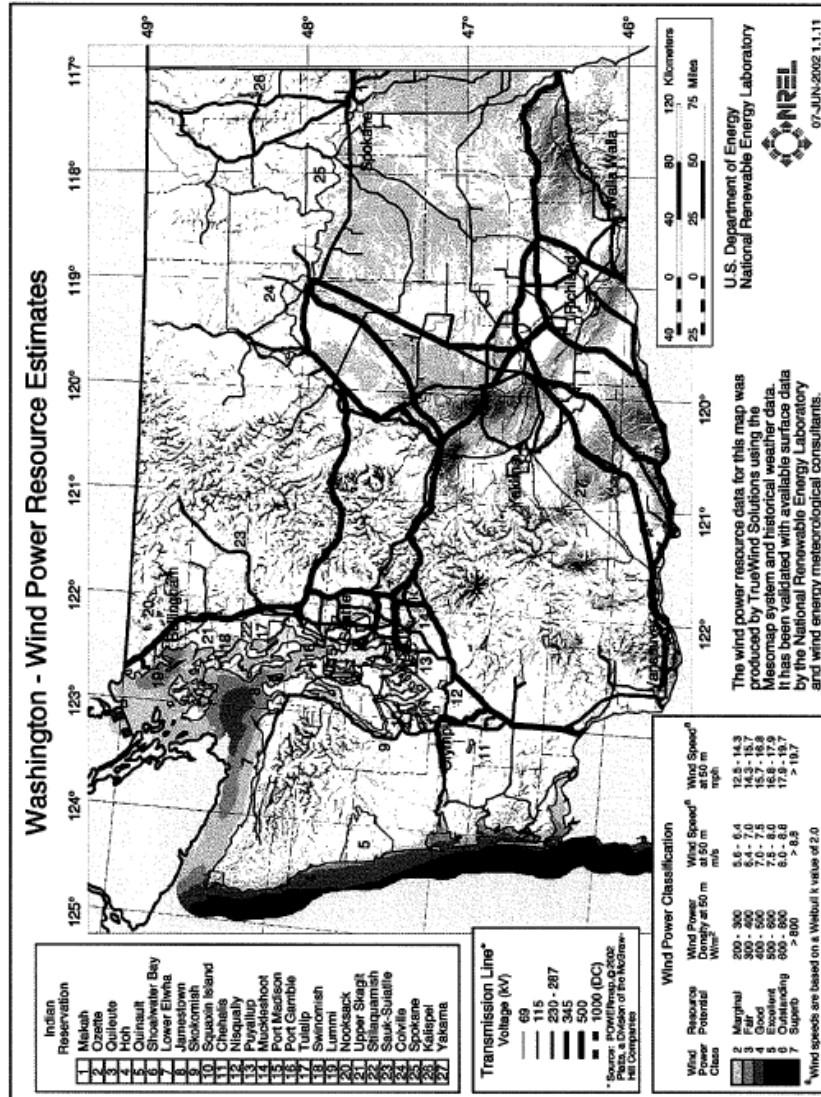
Industrial Wind Turbines Are Uneconomic

Industrial wind power is not a viable economic alternative to other energy conservation options. Again, the Danish experience is instructive.

Its electricity generation costs are the highest in Europe (15 cents/kwh compared to Ontario's current rate of about 6 cents). Niels Gram of the Danish Federation of Industries says, "windmills are a mistake and economically make no sense." Aase Madsen , the Chair of Energy Policy in the Danish Parliament calls it "a terribly expensive disaster." The U.S. Energy Information Administration reported in 2008, on a dollar per MWh basis, the U.S. government subsidizes wind at \$23.34 - compared to reliable energy sources: natural gas at 25 cents; coal at 44 cents; hydro at 67 cents; and nuclear at \$1.59, leading to what some U.S. commentators call "a huge corporate welfare feeding frenzy."

45-23

The Wall Street Journal advises that "wind generation is the prime example of what can go wrong when the government decides to pick winners." The Economist magazine in a recent editorial, "Wasting Money on Climate Change" notes that each tonne of emissions avoided due to subsidies to renewable energy such as wind power would cost somewhere between \$69 and \$137, whereas under a cap-and-trade scheme the price would be less than \$15. Either a carbon tax or a cap-and-trade system creates incentives for consumers and producers on a myriad of margins to reduce energy use and emissions that, as these numbers show, completely overwhelm subsidies to renewables in terms of cost effectiveness.



Note on the above – Ellensburg is 120.5° W and 47° N

The Ontario Power Authority advises that wind producers will be paid 13.5 cents/kwh (more than twice what consumers are currently paying), even without accounting for the additional costs of interconnection, transmission and back-up generation.

As the European experience confirms, this will inevitably lead to a dramatic increase in electricity costs with consequent detrimental effects on business and employment. From this perspective, the government's promise of 55,000 new jobs is a cruel delusion. A recent detailed analysis (focusing mainly on Spain) finds that for every job created by state-funded support of renewables, particularly wind energy, 2.2 jobs are lost. Each wind industry job created cost almost \$2 million in subsidies. (Michael J. Trebilcock Professor Law and Economics, University of Toronto, Faculty of Law, April 7, 2009)

Here follows another item from Brad and Linda Jones, Parish Hill, Naples, New York State.

The Inconvenient Truths about Wind Power

After attending a number of town meetings early last year about windfarm proposals, and reading portions of various Environmental Impact Statements, we concluded that the issues surrounding windfarms were far more complex than we had imagined and that we really did not understand them very well.

We shared this concern with some friends and neighbors and found that they had similar feelings as well. On a beautiful June afternoon we all came together to talk about what we might be able to learn if we worked together. We divided up the pertinent sections of the DEIS for Windfarm Prattsburgh among the dozen or so participants with each agreeing to conduct some independent research and report on their findings. Since that first meeting many hundreds of hours of study and analysis have been carried out, and we have learned a great deal about the realities of commercial windfarms. It was with dismay that, time after time, we found that the claims made by the wind energy industry were either overstated or just plain false. Here is a summary of some of our findings.

Claim #1: wind will reduce reliance on foreign oil.

The fact is that only 3% of our electricity is oil-generated, and much of that oil is domestically sourced. So, if wind were able to displace all of our oil-fired plants the impact would be less than 2%. However, since the unreliability of wind requires an equivalent amount of available conventional back-up capacity there would likely be no offset at all.

Claim #2: wind will reduce carbon dioxide emissions and slow global warming.

With no reduction in fossil fuel usage (see above), there will be no reduction in CO2 emissions. Regarding global warming, what if it turns out that CO2 is only a minor factor in climate change? What if the current warming trend is being caused by natural cycles? This is perhaps the most significant of the inconvenient truths.

In September of 2005, the National Center for Policy Analysis, a non-profit non-partisan public policy research institute, published a report entitled "The Physical Evidence of Earth's Unstoppable 1,500-Year Climate Change". The author of this report, which can be found at www.ncpa.org/pub/st/st279, is S. Fred Singer, a well-credentialed environmental scientist. This report provides a wide range of clear and compelling evidence that climate change is not due to carbon dioxide emissions but that is a recurring natural cycle that is going to occur regardless of what we do. So wind energy will have no effect on global warming.

Claim #3: wind energy is abundant, safe, clean and renewable.

First of all, wind energy is not abundant, at least in this area where winds tend to be light and variable. It is projected that useful electricity generated by turbines in the central Finger Lakes will be less than 10% of nameplate capacity. Regarding safety, there are a host of safety concerns associated with commercial windfarms. The one that we find most compelling is the potential adverse effect on the health of our citizens, particularly children and the elderly. Public health studies in Europe and much anecdotal information from the US indicate that low frequency noise (LFN) from spinning rotors may degrade human health at distances of up to two miles. There are also legitimate concerns regarding the effect of LFN on unborn children, particularly in the early stages of pregnancy. Until more research is conducted it is not prudent to risk an increase in fetal abnormalities or stillbirths. As responsible grandparents we would never permit our little ones to live anywhere near wind turbines. If these projects are built, we will not be living near them, we will be living among them.

Windfarms are a relatively clean source of power, but it takes about seven years for them to pay back for the pollution caused by turbine manufacture and windfarm construction. Wind is also a renewable source of energy but since it does not displace other generating sources it adds no incremental value.

Claim #4: windfarms cause minimal harm to wildlife.

The truth is that there have been no valid studies on the potential impact on wildlife. Studies paid for by the wind energy industry conclude, not surprisingly, that harm to wildlife is minimal. However, close examination of the study methodology and reported data shows that the studies are fatally flawed, and in many cases it looks as if the data was just made up. Developers have consistently refused to allow legitimate third party experts to conduct studies at existing windfarms because they really do not want to know just how significant the impact may be. The US Fish and Wildlife Service estimates that stationery communication towers, on average, kill 1,000 birds, bats and raptors every year. It is logical to assume that the 500 turbines planned for this area will each kill a similar number or more. Of particular concern is our local bald eagle population (in DEC Region 8, there were 22 young bald eagles fledged this year). We have resident eagles that are seen daily over Naples, Prattsburgh, Italy, and Cohocton. The developers maintain that these majestic raptors do not exist.

Claim #5: wind power will reduce electricity costs.

This is nonsense. Even the developers admit that wind power costs more than any other source. In Europe, which pioneered the production of wind power, one country after another is eliminating wind subsidies because of the adverse effect expensive wind power was having on economic development. High electrical costs are one of the most serious barriers to economic development in Upstate New York. Wind power will only raise those barriers.

Claim #6: wind power will promote economic development.

The way that the wind projects are designed, there will be some positive economic value in the form of PILOT, lease payments, and a small number of jobs. However looking at the broader picture and drawing on studies from other areas it is our conclusion that the total economic impact will be decidedly negative. We estimated for Windfarm Prattsburgh that the net cost to the community over a twenty-year operating life would be \$141,000,000. The components of that loss are negative impacts on tourism and property values, avian mortality, resident health and safety costs, and unfunded decommissioning. Since there were some negative factors that could not be quantified we believe that our estimated loss is very conservative.

In addition to spending tens of millions in lobbying dollars, the wind industry has put together a very expensive and convincing marketing

campaign that appeals to many noble motives of our citizenry. It really is a shame that much of what they claim does not pass objective review and analysis. For those hoping to make hundreds of millions in profits from the industrialization of our region, these certainly are inconvenient truths.

*Brad and Linda Jones
Parish Hill
Naples NY 14512*

Much is being made about the pro-wind farm lobby, but as one example consider the School Board. They are in favor of the farm – why? Because the tax revenue would offset the severe cuts in the education budget recently announced by the State. Of course they would be in favor of the wind farm. They are affected minimally – if at all – but are set to gain, financially, from the project. Not so the residents who are having to bear the brunt of all the disadvantages of wind farms.

Why Wind Power?

Why is wind power being considered? It is uneconomical and dependent on the vagaries of the wind, which is minimal in the winter season when power is most required, leading to the same, if not more as populations increase, of the carbon dioxide emitting power stations. Could it be that all the tax breaks make this not so much a “green” solution as a business investment with quick returns and profits? How many businesses would invest in such a marginal investment especially in today’s economic climate?

45-24

I suggest that EFSEC takes a good hard long look at the financial aspects of the project.

As if to add insult to injury – enXco’s parent company is French. France - a country not noted for its support of the United States and its policies, but it appears that it is quite acceptable for them to accept all the taxpayers grants and subsidies, and it is in France where all the profits of the project would end, when constructed and sold off.

5.0 Conclusions

Further to all detailed above I am vehemently opposed to the project to erect this wind farm in its current form, and suggest that EFSEC may want to address several of the points raised before even considering approval.

The EIS and SDEIS are alright as far as they go, but they are incomplete as they are missing several important aspects for a full and proper determination to be made. Some of the studies are incomplete, sparse or lacking and should be undertaken, using independent sources where suggested to ensure that the resulting data is trusted and reliable. Some quoted data is badly out of date. A lot of the weather data was based on Yakima information. Yakima and Ellensburg weather can be widely different. Yet wind data has been logged from the Met towers. Why couldn't other data have been collected at the same time? Or is it a case that such information did not support the targeted conclusions. I find this suspicious.

In detail:

1. "Desert Claim" gives the reader the impression that the development is using land that is useless for anything else (reclaiming the desert). Anyone who knows the area will know that the land is in addition to being residential, farmland and grazing land and not sagebrush scrubland as the name would suggest.
2. Desert Claim should contact local residents within 1 mile of any turbine, with a compensatory offer for loss of value. This should be agreed before any approval of the proposals takes place. The offer would only be available to current residents and not any subsequent purchaser.
3. Any subsequent approval should state that ALL cables will be installed underground – without exception. If large diameter gas transmission lines can be installed underground then there is no reason why cables of much lesser size cannot.
4. Setbacks for this project conform to the international standards as set forth by the French Academy of Medicine (and many others) – at 1 mile minimum (or 5280ft) and that these setbacks are enforced from property lines and not residences. There are plots of land currently purchased without any residence yet built

and installation of these turbines may well designate much of these areas of land, unbuildable.

5. The responsible party for subsequent legal action following deaths of Bald and Golden Eagles should be named.
6. Consideration should be given to the construction of this wind farm on other unpopulated scrubland in the county to mitigate any potential bird of prey deaths. It would also be in areas which do not have pond/pools waterways for migratory and permanent waders, geese and ducks.
7. A more in depth, independent study should be made of the bird population of the proposed project area. In addition there should be some independent studies of avian deaths in existing wind farm project areas.
8. I would ask how many wind farms were in existence in Bald Eagle habitats when the data was collected for Erikson's 2001 published data? As quoted in the original EIS.
9. Some form of rodent mitigation should be included in any approval of this project.
10. A further (independent) study be done regarding the concentration and effects on the bat population of the area, before any approval is given.
11. Before any approval is given to this project, a detailed hydrological survey must be undertaken.
12. The views of the ACoE should be obtained before granting any approval to a project of this magnitude.
13. No approval should be given to the project until detailed information has been obtained for each of the turbine sites, for geological foundation factors and proposed cut and fill requirements for each resulting engineered design at each of the locations. A subsequent EIS would then be required to assess the detailed engineered designs, rather than bland statements as at present.

14. Language should be included in any approval guaranteeing the existing wells, as well as detailing any compensatory measures in case of failure.
15. The project should be relocated into an area where the wind quality is better from the point of view of electrical generation. (As per the DoE Wind Quality Map)
16. All weather data should be based on Ellensburg's weather and not somewhere miles away. More specifically the weather data should come from the met towers as it can be clear on the hills and foggy in the valley – for example.

Some facts to ponder:

- Industrial Wind Turbines Are Uneconomic
- Industrial Wind Turbines do not reduce reliance on foreign oil.
- Industrial Wind Turbines do not reduce carbon dioxide emissions and slow global warming.
- Industrial Wind Turbines is not abundant, safe, clean and renewable.
- Industrial Wind Turbines do not cause minimal harm to wildlife.
- Industrial Wind Turbines do not reduce electricity costs.
- Industrial Wind Turbines do not promote economic development.

And finally:

I suggest that EFSEC takes a good hard long look at the financial aspects of the project, to see where all the money is going.

Possible Alternatives

Do Nothing

An obvious alternative is to do nothing. This merely pushes the problem away from us for the time being but the issue of energy still needs to be resolved.

45-25

Solar Power

This is the best alternative of all. Solar power is abundant in the valley as can be seen from the data from the City of Ellensburg's solar plant along the I-90 corridor. In addition, solar power IS available in winter and in fact electricity is still produced when the solar plant is shrouded in fog. (Sun is not necessary) With the amount of scrubland in the county, solar plants would be a good alternative. These low lying structures cause little, if any, visual impact, have minimal effects on wildlife, have no moving parts, are almost maintenance free, require no massive engineering works, excavations etc., and have no reported

45-26

adverse effects on health. ***This alternative is the most reasonable if clean, renewable energy is the real issue and not profits. I would welcome this alternative right up to my property line.***

45-26
(con't)

Resubmit the Project in a Modified Form

By utilizing the 1 mile setbacks from property lines the proposed project could be modified. Using these setbacks would eliminate approximately 46 turbines from the project area, but by utilizing Vesta 3MW nacelles instead of the 2MW as proposed, this would lead to a 22% reduction in generating capacity (147MW). If the original 190MW was the targeted production, 15 turbines could be added at the southwest corner of the project area in the unoccupied land there, away from residences. This change would negate many of the above comments regarding health.

45-27

Respectfully

Stephen R. Prue

Comment 45: Stephen Prue

Introductory Note: Subsequent to the submission of these comments on the Draft SEIS, the Applicant met with the author to address the identified concerns. By letter to EFSEC dated July 31, 2009, the author of Comment 45 stated that he had learned more about the Project, was no longer concerned about the Project, and wished to withdraw the earlier comments and the objection to the Project. Notwithstanding that communication, specific responses to the comments in the original letter are provided below.

45-1 *Response:* The Applicant named the project Desert Claim because portions of Kittitas County were originally settled by "desert claims" authorized a federal land claim program enacted as part of the Homestead Act in 1862. The Revised Application and SEIS explain that the Project Area is used primarily for feed crop production and ranching.

45-2 *Response:* Please see the response to Comment 3-17.

45-3 *Response:* Please refer to the responses to Comments 7-1 and 13-1.

45-4 *Response:* Please refer to the response to Comment 3-17 regarding questions over property values.

45-5 *Response:* The opinion expressed in the comment is noted. EFSEC is confident that it can efficiently address such concerns on a case-by-case basis if they arise.

45-6 *Response:* Please see the response to Comment 37-23.

45-7 *Response:* Based on the documentation already in the record at the time EFSEC began preparing the Draft SEIS, the topic of communications interference was not included within the scope of the SEIS. This issue was addressed thoroughly in the Final EIS published by Kittitas County in 2004, and this information is not repeated in the SEIS; see Final EIS Section 3.8.2.2. The Final EIS presented information indicating that wind turbines had the potential to interfere with various types of communications within close range of the turbines, but that such impacts were not expected in light of the substantial setbacks proposed.

45-8 *Response:* There are no consistent or widely accepted international standards on setbacks, particularly with regard to setbacks based on concerns over exposure to noise. In the U.S., various states have adopted setback guidelines ranging from 1 to 2 times the turbine height (see the response to Comment 7-3). The Applicant proposes to locate turbines no closer to residences than four times the turbine height. In addition, the Project would be required to comply with Washington regulations concerning noise levels.

As noted in the response to Comment 24-4, the French Academy of Medicine has not adopted the recommendation referenced in the comment that was issued by a 10-member working

group. Significantly, even the working group noted that no reliable epidemiological studies of wind turbine noise effects on humans existed.

45-9 *Response:* Please refer to the response to Comment 7-14 regarding consideration of alternative sites. The preference for siting wind power facilities in unpopulated areas is noted.

45-10 *Response:* The U.S. Fish and Wildlife Service is charged with enforcing this federal statute.

45-11 *Response:* As noted in the response to Comment 3-2, it is widely acknowledged that the Altamont Pass experience is not indicative of avian impacts expected from wind projects proposed today. The Altamont Pass project used older wind generation technology and was sited in a particularly high avian use area. The SEIS discusses avian impact information gathered from 12 wind power projects currently operated in the Pacific Northwest, which are believed to provide data much more representative of the likely impacts at the Desert Claim Project. The SEIS includes information specific to potential impacts on bald eagles and golden eagles; please see the responses to Comments 33-15, 37-2, 37-36, 37-38, and 37-46 for additional discussion applicable to these species.

45-12 *Response:* The Final EIS issued in 2004 provided a comprehensive assessment of existing use and expected impacts for avian and other wildlife species, including owls. As documented in the Final EIS, the great horned owl was the only owl species observed during the baseline surveys at the project site. There were only 7 great horned owls observed during the surveys, accounting for 0.2 percent of total observed bird use and representing mean overall use of 0.045 great horned owls per 30-minute survey period. No owls were observed flying through the rotor-swept-area. The Final EIS documentation indicates the project risk to owls is minimal.

45-13 *Response:* Potential impacts to waterfowl were addressed in Section 3.2.3.3 of the Draft SEIS. Waterfowl were also addressed thoroughly in the Final EIS.

45-14 *Response:* Potential impacts to other birds, primarily passerines, were addressed in Section 3.2.3.3 of the Draft SEIS and in the Final EIS.

45-15 *Response:* Please see the response to Comment 7-10.

45-16 *Response:* The comment is incorrect. Bats are addressed in Section 3.2.3.3 (impacts of the Desert Claim Project) and in Section 3.2.3.5 (cumulative impacts) of the Draft SEIS.

45-17 *Response:* Water resources in the Project Area have already been inventoried and documented. The hydrology of the Project Area is discussed in Section 3.3 of the Desert Claim Final EIS. Updated information concerning groundwater and wells is provided in the responses to Comments 7-4 and 7-6. During project construction, the Applicant will prepare and implement a Temporary Erosion and Sediment Control Plan and Stormwater Pollution

Prevention Plan, and the Application will prepare and implement a Stormwater Pollution Prevention Plan during project operations.

45-18 *Response:* As documented in the Revised Application and the SEIS, the Project would not result in temporary or permanent impacts to wetlands. Therefore, the Applicant is not required to obtain a Section 404 permit from the U.S. Army Corps of Engineers. The U.S. Army Corps of Engineers received a copy of the Draft SEIS but did not submit comments.

45-19 *Response:* Please refer to the responses to Comments 7-4 and 7-6 regarding geology and hydrology, and Appendix A of the Final SEIS. As explained in the Revised Application, a Washington-registered engineer will select an appropriate foundation design for each turbine based on site-specific information on geotechnical conditions, and will review and approve final foundation designs. The foundation designs will conform to State and County requirements and standard industry practices.

45-20 *Response:* Please see the responses to Comments 7-4 and 7-6.

45-21 *Response:* Please see the response to Comment 24-4 and 45-8. Both the size and the validity of the body of evidence suggesting there are health effects from long-term exposure to low-frequency noise from wind turbines are open to question. There are multiple, countervailing published studies indicating that neither low-frequency noise nor infrasound are problems associated with modern wind projects. For example, see G. Bellhouse, "Low Frequency Noise and Infrasound from Wind Turbine Generators: A Literature Review," June 30, 2004, available at <http://www.wind.appstate.edu/reports/040810-SoundLitReviewWTGs.pdf>), and the Hayes McKenzie study from Britain, available at <http://www.berr.gov.uk/energy/sources/renewables/explained/wind/onshore-offshore/page31267.html>. The McKenzie report also documented that vibration levels 100 meters from wind turbines were a factor of 10 lower than the safety requirements for modern laboratories. Contrary to the suggestion in the comment that shadow flicker poses a potential risk of photosensitive seizures, the report from the working group of the French National Academy of Medicine concluded that there are no such risks posed by wind turbines (see the response to Comment 24-4).

45-22 *Response:* The opinions stated in the comment are noted. It has been widely documented that the use of fossil fuels to generate electricity produces a significant share of the carbon emissions in the U.S. Authorities at the national and state levels agree that decreasing the amount of carbon emissions associated with electricity generation is an important step toward reducing carbon emissions.

In general, every kilowatt-hour of electricity generated from wind avoids carbon emissions that would otherwise result from burning fossil fuels to generate electricity. The American Wind Energy Association estimated total wind energy generation in the U.S. for 2006 at approximately 24 billion kWh (http://www.awea.org/faq/wwt_environment.html). If that much electricity had been generated using the average utility fuel mix, air emissions would have been 15 million tons of carbon dioxide, 76,000 tons of sulfur dioxide, and 36,000 tons of nitrogen

oxides. In Washington state alone, there are 13 electricity generation facilities estimated to emit 25,000 metric tons or more per year of carbon dioxide equivalent (http://www.ecy.wa.gov/climatechange/docs/20090520_GHGsources.pdf)

The Revised ASC addresses the wind resource at the Project site in Section 2.2 and the expected operating pattern for the Project in Section 5.5. The application notes that meteorological data collected over 7 years confirm the existence of a sufficient wind resource to support commercial wind generation, and that the proposed Project is expected to be in operation approximately 60 percent of the time. The Project is expected to operate at a capacity of between 28 to 32 percent, which is a typical range for northwest wind projects.

45-23 *Response:* The opinions stated in the comment are noted. Based on the applicable laws and regulations, the economic viability of wind power and the merits of subsidies to wind energy or other forms of energy supply are not topics within the scope of EFSEC review of project applications, nor are they required topics for review of a project under SEPA. Nevertheless, EFSEC notes that a current market clearly exists for wind power, as documented in the pre-filed testimony of James Litchfield (Exhibit 13). In addition, State energy policy favors renewable energy development and State law requires utilities to use renewable power to serve a share of their load.

45-24 *Response:* Please see the response to Comment 45-23. The financial aspects of proposed projects are not within the scope of EFSEC review and are not required elements of review under SEPA.

45-25 *Response:* The comment is noted. The No Action Alternative is addressed in the SEIS.

45-26 *Response:* The opinion stated in the comment is noted. An EIS must consider a reasonable range of reasonable alternatives that are consistent with the Applicant's objectives. In this instance, the Applicant's objective is to develop a wind power facility in central Washington. A solar facility would not be consistent with that objective and, therefore, is not a reasonable alternative that should be considered in the SEIS; please refer to the response to Comment 42-5.

45-27 *Response:* The preferences for a 1-mile turbine setback and fewer turbines are noted. Please refer to the responses to Comment 3-5 and 24-5 for additional information about setbacks. Although a project with fewer turbines and greater setbacks might have less aesthetic impact, it would also generate less renewable power and have fewer economic and environmental benefits. The comment suggests that the Applicant could use fewer larger turbines to produce the same amount of energy, but it is not clear that larger turbines would be commercially available without delaying project construction or creating other practical problems.

In the Matter of)
Application No. 2006-2)
DESERT CLAIM WIND POWER, LLC) DEIS Public Meeting
DESERT CLAIM WIND POWER PROJECT) Pages 1 - 57
)

★ ★ ★ ★ ★

MR. TAYER: Jeff Tayer from the Department of Fish

1 and Wildlife.

2 MR. FRYHLING: Dick Fryhling from the Department
3 of Community Trade and Economic Development.

4 CHAIR LUCE: And to my immediate right is
5 non-EFSEC member but an invaluable EFSEC person and that's
6 Bob Wallis our Administrative Law Judge who will preside
7 over the adjudicative hearings we have. To his immediate
8 right is Kyle Crews, our Assistant Attorney General.

9 Next?

10 MS. McDONALD: Mary McDonald, Department of
11 Natural Resources.

12 MR. ELLIOTT: Ian Elliott representing Kittitas
13 County.

14 CHAIR LUCE: Thank you. We have some staff
15 members present with us tonight. If you could identify
16 yourself, please.

17 MR. FIKSDAL: Allen Fiksdal.

18 MR. POSNER: Stephen Posner.

19 CHAIR LUCE: And in the back we have Tammy
20 Talbert, a very important person who you want to offer
21 comments to, and she controls the sign-up sheet so pay Tammy
22 all the respect that she is due which is a lot.

23 The purpose of tonight's meeting is to receive
24 comments on the Supplemental EIS. We have with us tonight
25 the Applicant Mr. David Steeb, and I'm going to call on

1 David to give a very brief, very brief oversight of the
2 project, and he'll be available to answer questions later.
3 David.

4 MR. STEEB: Thank you, Chair Luce. Welcome,
5 Members of the Council. Hopefully we've all warmed up since
6 our tour this afternoon.

7 Short comments. I'd like to just put in context
8 of where we've been, where we are. In 2006, the Desert
9 Claim Project was presented to EFSEC at that time. It was
10 accepted in and there were several meetings. We started the
11 process through the early part of 2007. Part of that
12 process was reviewing the EIS, and the documentation we
13 provided, and EFSEC reviewed that and came back and said
14 there were pieces that need be to done during the
15 Supplemental EIS.

16 Since that time it has been a long time, but part
17 of that has very specific reasons. We've been able to
18 reconfigure some of the sites as we continue to try to
19 address many issues that we've heard about the site or the
20 project that we've put back before EFSEC and we've started
21 this past March or February we accomplished several things.

22 The project that you see before you now is 5,200
23 acres, 5,200 acres. It has some DNR land, about two and a
24 half sections, and the rest is private land, 5,200 acres.
25 Part of reconfiguring the project is that we were able to

1 reduce the number of homes that are within 2,500 feet of the
2 project from I think it was 29 to 7, but at the same time we
3 were actually able to add five more turbines to the project
4 going from 90 to 95. So the project that is before you, the
5 project that's in the SEIS that people have and will be
6 commenting on tonight that's a brief summary of the project.
7 I'm here to hear as you are what the comments are from the
8 public. I'll also be available after the meeting to talk
9 tonight to anyone.

10 CHAIR LUCE: Thank you very much. We appreciate
11 that. As you noted on April 2nd we issued, EFSEC issued a
12 Draft Supplemental Environmental Impact Statement using a
13 submittal from Weinmann Consulting on behalf of Desert
14 Claim. The analysis was undertaken to meet the requirements
15 of the State Environmental Policy Act and EFSEC rules. The
16 Draft Environmental Impact Statement supplements information
17 contained in the Final EIS published by Kittitas County in
18 2004 for a larger but similar Desert Claim project as
19 Mr. Steeb has explained that's now differently configured
20 and a somewhat different project.

21 Tonight we're going to accept written comments or
22 oral comments. Written comments must be submitted to the
23 EFSEC office. If you don't have the address or the e-mail,
24 I'm sure Tammy will give it you. To be considered comments
25 must be postmarked by May 4, 2009. Please submit your

1 comments tonight if you have them. If you have any
2 questions about the EFSEC application process, you can talk
3 to Mr. Fiksdal or Mr. Posner or Tammy or any of the members
4 of EFSEC staff who are here tonight. You can also contact
5 and consult Mr. Bruce Marvin.

6 Bruce, would you stand up, please.

7 Bruce is the Counsel for the Environment. Counsel
8 for the Environment is the statutory position created by
9 statute. The Counsel for the Environment my choice of words
10 represents the interests of the environment, not the
11 individual but the interest of the environment.

12 Bruce, do you have anything you want to say by way
13 of a short introduction of yourself?

14 MR. MARVIN: I just look forward to working with
15 you all in the process. I will be available tonight, and if
16 you need to contact me at some point other than tonight, I
17 am listed on the Attorney General's website as the Counsel
18 for the Environment. If you Google that, you'll probably
19 get my name. By all means if you have issues you would like
20 to raise or would like me to consider, I'd be happy to take
21 a look at them and you can either contact me by e-mail or
22 give me a call in Olympia, and my number is 360-586-2438.

23 CHAIR LUCE: Thank you, Counselor.

24 Tonight's comments are going to be part of the
25 Council's SEPA process. As I said, it's on the record. So

1 when people speak please be observant and silent and allow
2 them to be heard by the Council and by other members of the
3 group here tonight. I guess what I would say is we will
4 begin by calling on individuals. I have a sign-up sheet
5 here now of 14 people. I'd ask people to limit their
6 comments to four minutes, if that's possible, not to
7 duplicate. If someone has said what's already on your mind,
8 it's okay to say, "Thank you very much I agree with the
9 previous speaker." And so I would encourage you to do that.

10 We'll call three witnesses up at a time, three
11 people to speak. We'll have one in the box so as to say,
12 and we'll have two on the ready, and we'll get started right
13 now. When you come up, it's very important for our court
14 reporter that you state your full name, you spell your last
15 name, and give your mailing address.

16 As I said, this is a recorded proceeding tonight.
17 It will be part of our record and we need to know who spoke
18 and what they had to say and to be able to reach out to them
19 in the future if necessary.

20 So I will start oral comments now, and the first
21 speaker will be Marshall Madsen. Is Marshall here?
22 Marshall come on up. Some people's handwriting is almost as
23 challenging as my own. Anita Boyum and Theresa Petrey. Why
24 don't you two ladies come up and stand right behind
25 Marshall, and we'll get ready to go, and, Marshall, you're

1 on.

2 COMMENTS BY MARSHALL MADSEN

3 Members of the Council, good evening. My name is
4 Marshall Madsen. I represent the Chamber of Commerce here
5 in Ellensburg located at 609 North Main Street.

6 CHAIR LUCE: And the spelling of your last name
7 is?

8 MR. MADSEN: M-a-d-s-e-n.

9 CHAIR LUCE: Thank you.

10 MR. MADSEN: With respect to the environmental
11 impacts and setbacks and tower heights and those kind of
12 things, the Chamber leaves those issues to more qualified
13 entities. In terms of wind farm support, the Chamber
14 conducted a survey and of those responding over 90 percent
15 supported wind farms. Thank you.

46-1

16 CHAIR LUCE: Thank you very much.

17 Anita.

18 TESTIMONY BY ANITA BOYUM

19 Anita Boyum, 130 Lookout Mountain Drive. I'm a
20 member and chair of the Ellensburg School Board. I'm also
21 chair of the Washington School Director's Trust Land. I've
22 even been on the task force. I'm also on the Board of
23 Directors of the Children's Land Alliance for the schools.

24 The Ellensburg School Board passed a resolution
25 that has stated that we support Desert Claim as a business

47-1

1 located within the boundaries of the Ellensburg School
2 District and because of its potential benefits the taxpayers
3 within the school district.

4 The only way a school district has its funding
5 from a levy or a bond is by property tax, and additional
6 business within the district would broaden the tax base thus
7 lowering the property tax for everyone. We want to be
8 proactive by supporting additional paying entities that
9 would broaden the tax base that would support future school
10 levies and bonds.

11 As a trust lands chair, the Department of Natural
12 Resources manages a variety of trust lands. The school
13 people here we are most interested in common school trust
14 lands. Part of this project is on the common school trust.
15 The money generated is used for matching funds for K-12
16 construction projects. When a school district passes a
17 school construction bond the taxpayers pay part of it, and
18 they get matching funds from the school construction funds.
19 A majority of our trust lands are in timber so it's a good
20 thing to diversify in our lands because they are managed for
21 the financial benefit for school children in the state of
22 Washington. Having a wind farm would provide that diversity
23 and potential income for the trust.

24 CHAIR LUCE: Thank you very much.

25 Theresa, would you come up and we'll have Dan

47-1
(con't)

47-2

1 Morgan and Bernice Best come into the ready chairs.

2 And Theresa.

3 COMMENTS BY THERESA PETREY

4 My name is Theresa Petrey. That's T-h-e-r-e-s-a
5 P-e-t-r-e-y. I reside at 312 East Manitoba, Ellensburg,
6 Washington 98926. I'm a practicing attorney here in
7 Ellensburg. My practice involves business law, probate,
8 estate litigation, estate planning. I work a lot with local
9 businesses, as well as many people who are both new- and
10 long-term residents of the area. I myself have been here
11 for possibly seven years now. I came here as a stay-at-home
12 mom. I had the opportunity to move into a career
13 establishing my own law practice during that time.

14 I'm a long-term supporter of wind here in the
15 valley. I have supported this enXco project from the very
16 beginning and have seen it grow and consolidate and change,
17 and a long-term commitment by enXco to try to meet the
18 requirements that this community has asked it to meet. I
19 have seen nothing but a good faith effort. The benefits of
20 this project to our community will be substantial and
21 sustained, and I urge both the Governor and EFSEC and any
22 other party who have not raised their voice yet to support
23 this project to do so. Thank you.

24 CHAIR LUCE: Thank you very much.

25 Dan.

1 Helen Wise, you can come up and assume the ready
2 chair.

3 Thank you, Dan.

4 COMMENTS BY DAN MORGAN

5 Thank you. My name is Dan Morgan, M-o-r-g-a-n,
6 Post Office Box 999, Ellensburg. I own Morgan & Son Earth
7 Moving, a local excavation company. I'm the third
8 generation to follow to own and operate that company. Very
9 much in support of the wind farm. We have been employed by
10 some of the other wind companies, and myself and several of
11 my employees are certified by the state in sediment and
12 erosion control. We've been employed to take care of those
13 issues at the existing farms, and I'd like to say that I've
14 observed first hand that these lands are managed better than
15 they were before. We left them much better than when we got
16 there.

17 And my employees are all local which they support
18 many local families. Those dollars go back into our economy
19 and it stays here. The companies we've worked for have
20 lived up to their promises of hiring locals and I have no
21 reason to believe that this will be any different. Thank
22 you.

23 CHAIR LUCE: Thank you very much. Bernice Best
24 and Catherine Ann Clerf, if you can come up and sit next to
25 Helen.

1 COMMENTS BY BERNICE BEST

2 My name is Bernice best. Last name is B-e-s-t. I
3 live at Tomahawk Lane, Ellensburg, which is located just
4 almost directly in the middle of not only the Kittitas
5 Valley project but the proposed site for the Desert Claim.
6 As a private landowner of 180 acres we welcome this project
7 with open arms, and we urge EFSEC to approve this as quickly
8 as possible. Thank you.

50-1

9 CHAIR LUCE: Thank you very much.
10 Helen.

11 COMMENTS BY HELEN WISE

12 I'm Helen wise, W-i-s-e, 1106 East Third Avenue,
13 Ellensburg. I've lived in this valley for over 55 years,
14 and there's no place that is a better place in the world as
15 far as I'm concerned. As many of you are aware I have been
16 supporting wind farms for -- what is it? -- seven years now.
17 I have submitted a letter so I won't go into any detail
18 here, but I do think I want you to know that I think the
19 SEIS is a very thorough document and certainly I have read
20 it with the critical eye that I have developed over the
21 seven years.

51-1

22 It's very important for us to have this sited and
23 signed by the Governor as soon as possible because, well, we
24 want the energy, of course, but also in effect this is a
25 stimulus package. It's shovel ready and the difference

51-2

1 instead of taxpayers putting up the money for this stimulus
2 package is it's private enterprise. It's investors who are
3 putting this money into our valley. The sooner those
4 turbines are turning, the sooner they will be on the tax
5 roll, and we would be very happy for that also because it's
6 a big boost to our county as far as tax revenues is
7 concerned. Thank you.

51-2
(con't)

8 CHAIR LUCE: Thank you, Helen.

9 Catherine and next we'll have Jan Sharar and Chris
10 Burtchett. So both come up and assume the ready seats.

11 COMMENTS BY CATHERINE ANNE CLERF

12 Catherine Anne Clerf. Catherine is spelled
13 C-a-t-h-e-r-i-n-e A-n-n-e C-l-e-r-f. Residence address 60
14 Moe Road, Ellensburg, Washington 98926.

15 Ladies and gentlemen, how nice to see you again.
16 This is the third iteration of the original wind farm that
17 first came to my own county. For the benefit of people who
18 may be attending a hearing for the first time, I'll give you
19 a little brief history. I'm a fourth generation cattleman
20 ranching family in this valley. My great grandfather and a
21 couple of brothers and cousins came here in the early 1800s.
22 We at one time one were of the largest ranchers in the
23 county, actually in Grant. My family has always been
24 supportive of what is good for the community first. My
25 personal family, the Ellensburg branch, gave up a Figure 2

1 ranch, 400 approximate acres, both underwater and up above
2 Priest Rapids Dam, and my local PUD has a beautiful picture
3 of what remains of it. If you go out to the PUD office
4 there's a stunning view looking up over the dam and then
5 you'll see what used to be the highest point.

6 We have a very historic history like many farmers
7 and ranchers in the three-county area. We gave up land to
8 be the firing range, and this was the era of Imminent
9 Domain, at least in my family. I can't speak for others but
10 my great grandfather didn't come here from Grevenmacher,
11 Luxembourg to first speak German, French, or Schlemish
12 again, and that was part of what we needed to do for the
13 common good.

14 For some odd reason the county commissioners when
15 I was a small child did not take advantage of being a 50/50
16 owner of two of the most profitable hydroelectric dams in
17 the entire North American continent. For people that are
18 always screaming why Kittitas County pays a fortune compared
19 to Grant County, we don't have a dam. We do get to, get to
20 buy some of the power from Priest Rapids and Grant County
21 PUD.

22 So here I am 55 years old. I come home four and a
23 half years ago. I didn't learn how to hoe wheat, stack hay,
24 ride a horse, garden, play Cowboys and Indians with my
25 friends, my neighbors, and my family unless the wind blew

1 and it might not be in my imagination. I remember when we
2 were in fourth grade we tracked over 300 days of the year,
3 and I can go find the box somewhere that I can prove that.
4 We put a gold star on that piece of paper for everyday the
5 wind blew when we came to school, and we were all suppose to
6 track it on vacations and when we were at home on summer
7 break.

8 I want to speak directly on the EIS. I was on the
9 Land Use Advisory Committee appointed by the Board of
10 Commissioners from September of '07 until I was not quite
11 unceremoniously kicked off. I think I'm the only
12 person who ever got fired from a volunteer position. My
13 problem is this. I tried to address the issue of rampant
14 rural residential construction that was hereby destroying
15 the very natural resources that my county has been endowed
16 with since before my family and other farmers and ranchers
17 first came to this county.

18 I happen to have an extensive background in
19 energy. I'm a corporate officer of a multinational global
20 company. We do deal in energy and we also deal in renewable
21 energy. We're trying to sell products for the Department of
22 Defense, and what most people don't know our federal
23 congress mandated several years ago that 25 percent of all
24 energy is to be renewable energy, whether it's electricity
25 or jet fuel or bunker seed fuel, energy to go fixing those

1 Iraq trucks.

2 The point is my federal government mandated that
3 25 percent of all federal government, the largest energy
4 user in the world, is suppose to be 25 renewable by 2025.
5 So we need to start facing up to the fact that this country
6 has backed itself into a corner.

52-1

7 Now, I know there's all sorts of things floating
8 around about why renewable is expensive. Well, what do you
9 do when you still have a 67-year-old coal-fired plant and
10 you can't get a permit? If it's hard to get a wind permit,
11 clean energy sustainable, nobody wants to build any clean
12 coal technology power plant in this county. We stick them
13 across the border in another country like Mexico and we
14 recover the refinery.

15 But if we don't start addressing our issues, we're
16 not going to have an economy because you have to have
17 energy, and we can't solve the water problems on my side of
18 the state. Actually I lived in Seattle for 25 years and I
19 had to do water rationing. You need cheap power to create
20 water, whether it's chemically injected or desalination.

21 So the point is this EIS has been decisively and
22 completely and complexly revised and revised to appease a
23 very small group of people, and my only message to them is
24 you came to a county with wind. You chose to purchase land
25 because it was cheap within sight of minor towers which by

52-2

FLYGARE & ASSOCIATES, INC. - 1-800-574-0414

1 the way need to be about 60 percent more of them in the next
2 five years and triple that in the next 12 years. We're
3 going to have a jolt of what electricity is going to cost.
4 If you want an idea go look at Schedule 91 of Puget Sound
5 Energy's Tariff Sheet, add two cents, and that's what you're
6 going to pay for retail. So if we don't address this issue
7 we're not going to have it anymore. We're going to all be
8 buying everything and we'll be begging at the feet of two
9 countries called China and India who are leapfrogging
10 undertaking American patent technology and then putting in
11 everything new and we're being left with aging
12 infrastructure that is holding back our economy. Thank you.

13 CHAIR LUCE: Thank you very much.

14 Jan.

15 COMMENT BY JAN SHARAR

16 Thank you, Mr. Chairman and Members of the
17 Council. My name is Jan Sharar, S-h-a-r-a-r. I reside at
18 390 Cattail Road, Kittitas County, and I speak to you
19 tonight as a resident of the Desert Claim project area. I'm
20 a land use planner, a taxpayer, and a proponent of clean
21 renewable energy. My home is approximately three-quarters
22 of a mile from the location of the nearest turbine, and I
23 believe that's the furthest southwest turbine. The tax
24 benefits to various jurisdictions, the addition of much
25 needed jobs from construction for the short term and ongoing

52-2
(con't)

53-1

53-2

1 operation and maintenance for the long-term benefit everyone
2 in Kittitas County. The project as presented is also good
3 planning.

4 Using one of our most predominant natural
5 resources the wind in an area where I for one certainly
6 don't need scientific instruments to tell me it blows a lot
7 up there makes good sense. These are resource lands and in
8 our professional and personal opinion the resources should
9 be used for the benefit of many. This county has a wealth
10 of resources: prime agricultural ground, timber, rivers,
11 lakes, and streams to name a few. This county has often
12 been referred to as the Saudi Arabia of wind as I'm sure you
13 have heard.

14 Wind and solar resources are two that can make a
15 real positive difference in energy generation for a long
16 time and can keep up with developing technology to maintain
17 and increase efficiency of the resources they capture. The
18 location of the project in the existing electrical grid is
19 another benefit of the Desert Claim project. Our
20 preferential county policies for placement of major wind
21 projects in areas far from the existing grid make very
22 little sense to me. Thank you for this opportunity to
23 testify. I appreciate it.

24 CHAIR LUCE: Thank you very much. If you want to
25 provide a copy of your written comments, Tammy, Ms. Talbert

1 will get this into the record as well as the court reporter.

2 MS. SHARAR: Okay. Thank you.

3 CHAIR LUCE: That goes for anyone else that's
4 here. We are taking written comments as well.

5 Chris and then I'll call up behind Chris, Patty
6 Kinney, and Mary Scott so you might be ready.

7 COMMENTS BY CHRIS BURTCHETT

8 Thank you. My name is Chris Burtchett. I live
9 at 12611 Reecer Creek Road. I'm not far from the project
10 area.

11 I guess I'm first tonight to state that I am truly
12 opposed to this project. I've been opposed from the start.
13 I think that the DEIS that enXco has asked us to consider is
14 deeply flawed. The photography of the selected areas were
15 edited for content. It's a sales pitch. The visuals of the
16 area using 35 and 50 millimeter lens the only difference is
17 their simulation of the wind towers. The towers are faded
18 out in the pictures, incorrectly adjusted for size, and do
19 not show any of the main residences in and around the
20 project area. It's states that the land is sparsely
21 populated and consists of pasture land and sagebrush.

22 I brought a copy of the project area map. On the
23 map in black I have mark residences of people who live near
24 the project area. I was able to map them through a visual
25 drive around the area. As you can see there are hundreds of

54-1

54-2

1 people who will have their views destroyed. There are many
2 more that are not on the project area map, but they will
3 still be affected by the wind farm, even though people they
4 are more than 2,500 feet from the wind towers. But in many
5 parts of the country people are protected from having their
6 views obstructed and ruined. The people who live above the
7 highland canal depend on natural resource to irrigate and
8 water their livestock. We don't have any source to the
9 canal water.

54-3

10 EnXco claims that the destruction will be
11 temporary and minimal. Who are they kidding? How can they
12 build access roads that cross and criss-cross streams, blast
13 and excavate paths and pour the equivalent of 180,000 cubic
14 feet of concrete without causing a disruption of ground
15 water? The entire project is temporary by their standards,
16 30 years they said. Well, I'm 63. I'm sorry but for me
17 that's the rest of my life.

54-4

18 They claim that the bird mortality is acceptable.
19 It won't impact the species. How generous of them. 14,000
20 birds and 8,000 bats will die every year in the whole
21 Columbia basin. There is no mention of the bald eagle
22 population or how many of them will die. Movement of earth
23 will increase rodent population, mosquito infestation. On
24 that note the vibration of the towers will cause, will
25 likely drive the mice, rats, and moles out of the area.

54-5

1 Maybe they'll go to town. It's safer there.

2 Much has been said of the economic boom to this
3 county. It seems to be the driving force. Do you really
4 believe that three-quarters of a million dollars will be
5 generated by tourist shopping here? That is what they
6 claim. Our property taxes pay for schools, fire rescue,
7 county roads, and the hospital. Property taxes will be paid 54-6
8 by the landowner who in turn will get their money from
9 enXco. The business and operations tax bill will go to
10 Olympia and the money to the Department of Natural
11 Resources, well, probably to the general fund. The power
12 will be sold to the highest bidder.

13 For those of you reading the paper, PSE sold all
14 of their power from the Wild Horse to a facility in
15 California for the next two years. What we get are wind
16 towers that are huge, inefficient, expensive, and totally
17 dependent on the perfect weather and the government
18 handouts. We will have destroyed one of the best
19 recreational areas of the state, lost our share of a 4.8 54-7
20 billion dollar industry that hunters, archers, and
21 snowmobiles will find somewhere else to spend their money.
22 I urge you to think seriously before you make this decision.
23 You are affecting the lives of hundreds of citizens. Thank
24 you.

25 CHAIR LUCE: Thank you very much.

1 Patty Kinney.

2 COMMENTS BY PATTY KINNEY

3 My name is Patty Kinney, K-i-n-n-e-y. I live at
4 2362 Smithson Road, Ellensburg. I was going to pick just a
5 couple things to talk about on the Environmental Impact
6 Statement. First was the visual, and I think Chris
7 addressed that very well so I won't go into that part in
8 detail in that.

55-1

9 But I also wrote a letter to EFSEC that probably
10 you should have gotten already that details my concern about
11 the photographs and how unambiguous the focal length of the
12 lenses that were used in some parts. There's one part where
13 they say they used a 50 millimeter lens, but I really don't
14 think they did. I'm not sure if they got mixed up or what.
15 But as a photographer I went out and I replicated some of
16 the views by my home, and I have to use a 31- or
17 32-millimeter focal length on my lens.

18 And so I really hope that you'll take a look at
19 the protocol that they used for the visual simulations, and
20 if need be redo them using a 50-millimeter focal length lens
21 and make it explicit on each photo the focal length that was
22 used. I've just been reading research recently that states
23 the best focal length for estimating or actually recreating
24 vertical height at a distance is a 70-millimeter lens, and I
25 think that has some credence because when I shot the

55-2

FLYGARE & ASSOCIATES, INC. - 1-800-574-0414

1 pictures near my house to replicate these pictures I had to
2 use a 58 millimeter focal length lens on my Nikon camera so
3 I think there's credence to that. But I know that everybody 55-2
4 thinks that a 50-millimeter lens is the standard lens (con't)
5 knowing that maybe even the turbines will still appear
6 smaller than in reality, you know, that would be acceptable
7 to me I guess.

8 The second thing that concerns me is the sound
9 levels, and when the project was reconfigured there wasn't
10 any background sound noise level tests that were done, and
11 the chart that was used in the statement starts with 40
12 decibels as a background noise. And I think that's just way
13 too high for this area, and I would like -- I mean if a 55-3
14 project of this magnitude is going to be done why can't we
15 have some actual sound testing of the background levels to
16 establish a baseline instead of just making a baseline of 40
17 decibels, 50 decibels, or 60 decibels. I think that's just
18 really minimizing the impact of the sound level of the
19 turbines for nearby homes, and there are quite a few nearby
20 homes.

21 I do have a summary of a report that you might
22 find interesting on sound. It's called Why Noise Criteria
23 Are Necessary For Proper Siting of Wind Turbines by
24 Kapperman and James. It was written in November of 2008 so
25 I would like to leave you a copy of this summary, if that

1 would be all right.

2 CHAIR LUCE: That would be very helpful. Give
3 that to Ms. Talbert, please.

4 MS. KINNEY: Thank you.

5 CHAIR LUCE: Thank you so much.

6 Mary Scott, and after Mary, David Crane, and Randy
7 Richmond.

8 COMMENTS BY MARY SCOTT

9 Yes, Mr. Chairman, and Members of the Council. My
10 name is Mary Scott, S-c-o-t-t. I live at 10810 Thorp
11 Highway North, in Thorp, and I also own 35 acres of forest
12 land here in Kittitas County. I want to speak in strong
13 support of this wind energy project. I have reviewed the
14 revised EIS, and I believe that accommodations have been 56-1
15 made to reasonably respond to and address concerns that were
16 previously raised. I won't speak to the technicalities of
17 it.

18 I support very strongly moving towards increased
19 use of alternative renewable energy resources, and I think 56-2
20 that we all have a strong responsibility to more and more
21 participate in and take advantage of it, and I guess I'll
22 say bear the consequences as some of the previous speakers
23 have said of supplying our own energy consumption need
24 instead of relying on coal farmers and our coal miners in
25 West Virginia and the hydropower people. There's an

1 economic impact and there's an environmental impact for
2 every type of fuel that we need, and I think it is blatantly
3 unfair for people in counties such as ours to say, oh, I
4 don't want my view spoiled but we'll let Wyoming or Alberta
5 or any other place bear the brunt of that. I think we need
6 to become independently sustainable as a community and we
7 can either cut back our own consumption and energy needs or
8 live within what we in our regional geographic area supply.

9 I won't go into I support the economic viability
10 of this and the needs that our community and county has, and
11 I believe that this would be a strong support to our county.
12 I have over the years been I'll say somewhat dismayed at our
13 county's attitude toward not looking openly at wind power
14 projects. I hope that that's going to change.

15 I guess that's why I personally find proliferation
16 of housing in our rural area a far greater plight than wind 56-3
17 power. When you consider all of the rampant development
18 that's been going on and carving up our farm land here and
19 even now the forest areas with small five-acre plots or
20 three acres with the housing, automobiles, the roads that
21 are required, I would rather look at some nice tall majestic
22 wind towers than seeing housing all over there.

23 I guess I just think that so many of the arguments
24 that opponents make it really boils down to not in my back
25 yard, and I think that we have to get over thinking in that

1 manner. That we all have a responsibility. Thank you.

2 CHAIR LUCE: Thank you very much.

3 Mr. Crane.

4 COMMENTS BY DAVID CRANE

5 David Crane. I have my name on a lot of plumbing,
6 C-r-a-n-e. I'm a ten-year resident of the city of
7 Ellensburg. I became involved in the discussion about wind
8 power after I listened to the discussion for a long time.
9 I strongly favor the plentiful availability of electric
10 power and I think we all do. Wind power is universally
11 acknowledged the need for it, the value of it, and the fact
12 that it is environmentally friendly.

57-1

13 I personally have gone to over 200 homes in this
14 town and circulated a petition about wind farms, and I
15 believe that in my area that it was a strong 80 percent of
16 the people who really did favor having a wind farm here, and
17 there was some discussion about location.

57-2

18 The project under consideration, Desert Claim
19 project, I believe has been carefully planned. It will be a
20 great benefit to our city and our county. I believe that it
21 has as I said a huge majority of people supporting it here
22 in the town. I appreciate the wise professional work that
23 the people have done at enXco, and I am hopeful of a soon
24 and smooth approval of the Desert Claim project, especially
25 in view of the fact that we need the income because of the

1 economic downturn. I think that's about all I have to say.
2 Thank you very much.

3 CHAIR LUCE: Thank you very much, Mr. Crane.
4 Mr. Richmond.

5 COMMENTS BY RANDY RICHMOND

6 I'm Randy Richmond, R-i-c-h-m-o-n-d. My address
7 is 6120 Ellensburg Ranches road in Ellensburg.

8 I call myself a wind rancher because I myself have
9 a ten-kilowatt wind generator on my property that supplies
10 the needs for my home and one other home. My own personal
11 experience with my wind generator is that actually with a
12 22-foot wingspan is way nicer than the ones I've witnessed
13 at the Wild Horse Wind Farm. In my area I've seen no issues
14 that have impacted the wildlife. I still have as many deer
15 as before. Unfortunately I have as many mice as before, and 58-1
16 I've not seen any evidence of any bird kill or anything like
17 that.

18 I also recognize that to put up a wind farm
19 there's several criteria. One of them is you need wind and
20 certainly Kittitas Valley has that. Another is you need to
21 have willing participants, landowners, and I believe that
22 most of the landowners in this project the vast majority are 58-2
23 willing, and you also need ease of connection to the power
24 grid. And it seems like this project fits all those
25 criteria ideally, and there's not many places that could fit

1 all those criteria, and our nation is in need of extra
2 power. So I personally encourage you, EFSEC, to approve
3 this project. Thank you.

4 CHAIR LUCE: Thank you. We'll start from the
5 second sheet. Melanie Garrod, Kevan Smith, and Dana Lind,
6 if you could come up and, Melanie, we'll start with you.

7 COMMENTS BY MELANIE GARROD

8 Good evening. My name is Melanie Garrod,
9 G-a-r-r-o-d. My address is 2102 North Walnut Street, 161.
10 I live in University Court Apartments right by the campus.

11 I just wanted to come and show my support for this
12 project. I'm the president of the CWU Environmental Club
13 here on campus, and I feel this would be very beneficial to
14 Kittitas County. We have the wind. I mean we have more
15 wind than other counties that would like to do this. We
16 should take advantage of this.

59-1

17 I mean there are going to be -- I have things
18 prepared to say and I think that it's probably better that I
19 just speak and tell you kind of what I think from what other
20 people have said. Yes, there's going to be disruption to
21 the views, but they're not very wide, first of all, the
22 turbines. They're more tall than they are wide, and they
23 preserve the wild lands which preserves the wildlife and
24 that's something that we don't have enough of. What's going
25 to be built instead of that? Homes. And those are going to

59-2

1 destroy the wildlife. So for that reason alone it's great.

2 And as mentioned before it generates income tax
3 and people who can't afford to keep their lands that want to
4 protect it they can put a wind farm on there and make money
5 from that. So I think there's a few reasons that we should
6 have this and I know there's a lot of stuff that we have to
7 consider first. And everyone's opinions and comments are
8 viable so I would like you to please consider it and I know
9 it's a difficult decision. And thank you for letting me
10 speak. That is all

11 CHAIR LUCE: Thank you. If you have written
12 comments that you want to submit to Ms. Talbert, please do.
13 Kevan.

14 COMMENTS BY KEVAN SMITH

15 My name is Kevan Smith, S-m-i-t-h, and I'm a
16 resident of Ellensburg, and I just want to say that I'm in
17 favor of the project. Most of my points have already been
18 made, but I will say that I think financially it would be an
19 excellent opportunity for Kittitas County.

20 CHAIR LUCE: Thank you.

21 Dana Lind, and after Dana Lind we'll have Roger
22 Overbeck and Desmond Knudson.

23 COMMENTS BY DANA LIND

24 I thank you for giving me an opportunity to speak
25 tonight. It's been a long bout. It's been six,

1 seven years. It's kind of pitted neighbor against neighbor.
2 I happen to think, you know, wind generation is great. I
3 think solar generation is great. I'd like to see it on a
4 small scale maybe on my house, my neighbor's house, small
5 towers. We can maybe get off the grid, lower over our
6 bills. These big towers of energy so far it seems like it's 61-1
7 going to be sold to the highest bidder.

8 In 2002 I was a volunteer fire fighter attempting
9 to protect my sister-in-law's home located at 4261 Robbins
10 Road. Actually that's where I live now, six years later.
11 Just a coincidence they moved out of the valley. During
12 that time DNR used both helicopters and retardant airplanes
13 to try to control the fire. The wind was blowing as hard as
14 I've ever seen it blow, and I will tell you it was going so
15 fast that there was no way the ground-based equipment could
16 keep up with that fire so all they could do was water down
17 the barns and the homes to keep the fire from burning my
18 in-law's place up. 61-2

19 Years ago I asked Mr. David Steeb here how would
20 they protect these places during a similar fire in the
21 future, and I think his reply was something like we'll
22 follow DNRs guidelines and let it burn. I guess that means
23 homes and barns and perhaps unlucky individuals in that path
24 of the fire. You think about those towers and the way
25 they're sited. By the way, I don't really know. If you

1 look at the map, I guess if you did the math and the access
2 and the way they lay out all those towers and actually know
3 where they could go. We don't really know exactly where
4 they could go. I don't have access to any of your plan.
5 Right? I haven't seen a plan. I don't really know where
6 they're going to go.

7 I'm really against the location of this, not wind
8 farms. People think I'm against wind farms or green
9 generation. It's about the location. A lot of people live
10 out there and I just think it's the wrong place to site
11 these towers, and I don't want to say where because I don't
12 want to push that effect on someone else. But it seems like
13 they found some good location out at Wild Horse. It seems 61-3
14 like that's a good area that hasn't been very controversial.
15 But years ago it seemed like this was one of the first
16 proposal sites, and they said this is the only place they
17 could go and since then they've built two or three. So it
18 seems like there's other areas. Now, I don't want to say
19 where those areas are. It just seems like there's maybe a
20 better spot.

21 And once they put these towers up we have the low
22 frequency noises and light flicker. I'm not really 61-4
23 concerned about the visual part of it because I think I
24 could deal with that. It's just there's so many unknowns
25 about them. Once they're up, I can't see them taking them

1 down. They might just put one or two up if they're going to
2 do this, and then let's take a look at this project. If
3 you're going to give them a blank check to build all these
4 towers and then they put them in a circle and they left the
5 middle out, and then they're going to build all those, and
6 then they're going to link these all the way up to that Wild
7 Horse project. This won't be the end of it, of the deal. I
8 guess we'll just have to wait and see. Thank you very much
9 for letting me speak tonight.

10 CHAIR LUCE: Thank you.

11 Mr. Overbeck.

12 COMMENTS BY ROGER OVERBECK

13 This is Roger Overbeck, 5160 Lower Green Canyon
14 Road, 98926, Ellensburg.

15 I just thought I would throw out a couple ideas
16 here that was not depicted in any of your material. This
17 concerns the healthy environment with which we live, and it
18 also reflects the SEPA impacts and project impacts.

19 Number one is fire protection. I haven't seen any
20 bilateral contracts. I haven't seen any insurance
21 endorsements or any mitigated costs to the taxpayers of
22 Kittitas County and its private citizens. Why should we
23 have to pay for their project if fires occur? And we have
24 seen many fires in that geographical area.

25 Next item, wells. They're talking 35, 50 feet

62-1

62-2

1 down. Their material says they won't have to blast. Okay.
2 You have X amount of towers, 410 feet tall, concrete has to
3 hold it. Now, what about our aquifers? Because everything
4 drains towards us and I'm only a mile or so from the
5 dedicated property. How many wells will it affect? We
6 still don't see any endorsement or any insurance, anybody
7 who will assume the liability for this project.

62-2
(cont)

8 Next item, construction equipment. How much
9 construction equipment impacts the ingress and egress of
10 roads on Smithson Road, Lower Green Canyon, and Reecer
11 Creek, and Upper Green Canyon? I haven't seen any
12 mitigation money put up by this site certification to
13 eliminate the taxpayers having to repave, of which the
14 county does every seven years with a little bit of rock on a
15 little bit of oil, and our roads are substandard anyways.
16 We have no shoulders. We have a bunch of rock on the roads.
17 So who's going to pay for this: the taxpayers who live in
18 the geographical area?

62-3

19 The next is wells. We talked about two acres for
20 a substation. Point 5 acres is a 350-gallon well according
21 to the Department of Ecology. 5,000 gallons is a commercial
22 well. I don't see any permits being taken in, not only for
23 protection but for usage.

62-4

24 Safety measures. Who pays for the aid car: the
25 taxpayers or do they? Do they mitigate it for someone to

62-5

1 come up and remove the individuals who are hurt? What about
2 the hospitals? We pay for that. I don't see any insurance
3 provided or certificates of insurance for a bilateral
4 contract between them and the county.

62-5
(con't)

5 Fire hazards. This heavy equipment rolling up and
6 down the road, we get the winds, we get our hay fields.
7 Spark comes from one of the trucks will they assume the
8 liability?

62-6

9 Next thing is open range land. Everything north
10 of Clark Road is open range. I haven't heard anybody talk
11 about this yet. What if we want to drive 100 cows down the
12 road and we've got all these towers going up on Lower Green
13 Canyon Road? It's open range land. It's going to impede
14 their delivery time.

62-7

15 The zoning notification is under the zoning code
16 Title 17. We thought there would be more notification, more
17 than the 300 or 600 feet that they usually do on the short
18 plats or formal flats. There was no notification. They
19 said everything was done by newspaper, by radio, by
20 computer.

62-8

21 And will Kittitas County if this destroys our
22 property values or if the county has to come up with
23 additional funds to support their ingress and egress will
24 the taxpayers have to pay for it?

62-9

25 One of our main concerns reading through their

1 documentation is the use of calcium chloride on the roads.
2 Now calcium chloride is one of the most corrosive materials
3 around. It not only kills the vegetation, but it destroys
4 equipment. And we see this depicted as we drive over the
5 mountain passes, and the Department of the Natural Resources
6 has sent to Chris at the Department of Transportation a
7 letter stating they will cease and desist using calcium
8 chloride because it has destroyed the trees and the
9 vegetation not only on Bluett Pass but on Snoqualmie, but
10 they continue to use it.

62-10

11 These are just some of the items I thought I would
12 touch on right now because they affect us now and in today's
13 world. Thank you.

14 CHAIR LUCE: Thank you. Just one quick question,
15 Mr. Overbeck. Your comments indicated you represent some
16 group, and I think it would be helpful if we knew who that
17 was.

18 MR. OVERBECK: No, it's not a group. I said
19 they're individual people who have spoken to me.

20 CHAIR LUCE: All right. I just wanted to clarify
21 that.

22 MR. OVERBECK: I did clarify that earlier and the
23 judge referred to me as pro se which is fine. No problem
24 there at all.

25 CHAIR LUCE: Thank you.

1 Mr. Knudson.

2 COMMENTS BY DESMOND KNUDSON

3 Good evening, group. Long time no see. I guess
4 we're all waking up to the fact that global warming is
5 hitting us. Most importantly we're all waking up to the
6 point that we're kind of in a slump now. We need jobs
7 around here, and this county will benefit from these jobs
8 both during construction and during maintenance.

63-1

9 Beautiful location. You toured it today. It's
10 really nice when you guys come up here and every time it
11 seems to be blowing like heck. This is what it usually does
12 around here. That's why wind farms want to be located here.
13 Most importantly it's right around the transmission
14 corridors, transmission towers. You have seen how big they
15 are. You probably drove underneath them. You looked at
16 them. That's what's there. That's what we need to hook to.
17 Most importantly it's the impacts it will give this county
18 with little or no environmental impact.

63-2

19 I've read the book. I've even read the final what
20 you're going to issue here fairly soon. The impact has been
21 mitigated. We need to move forward so Kittitas County
22 taxpayers and citizens that have lived here more than five
23 years know that they can get some benefit from this wind
24 that we're used to. Most of the people that are opposed to
25 this are people that have not lived here longer than ten

63-3

FLYGARE & ASSOCIATES, INC. - 1-800-574-0414

1 years.

2 Let me tell you after ten years the wind starts
3 nagging on you and that is a fact. We are one of the best
4 locations of the nation for wind. You've seen it again
5 today and you toured it and you've seen it. Tax revenue it
6 does not diminish. It stays there. It comes every year.
7 We are looking forward to it.

8 Last but not least I will submit into evidence a
9 little DVD and I'm even in it. So I wish you would review
10 it during your deliberations and listen to what is said from
11 the citizens that lived here and live here. We're not
12 talking a year or two. Everybody in this video has lived
13 here more than 40 years. We were born and raised here. We
14 are used to the wind. We like it and we'll stay here.
15 Thank you very much.

16 CHAIR LUCE: Thank you.

17 Liz McCosh and Paula Thompson.

18 COMMENTS BY LIZ MCCOSH

19 Here I am again. My name is Liz McCosh. You
20 probably drove out by my property. I live out 201 Casey
21 Drive off of Reecer Creek. If this project if it comes to
22 pass I will live in a U-shaped area surrounded by these wind
23 turbines. Gee, aesthetics. Some degree of visibility is
24 inherent in a wind power facility. The wind turbines are
25 large objects and cannot be made invisible from all

64-1

1 locations. Residents living closest to proposed turbines
2 may experience the changes in the visual environment to be
3 adverse and significant. Wind turbines would be visible in
4 varying degrees and with a lower degree of impact from other
5 locations more distance from the project site.

6 Okay. Imagine. I'm looking at the picture that's
7 in here that's taken from my site I counted 26 without
8 turning my head. You think that's not an impact? Yeah, I
9 am selfish. I really don't want them in my back yard.
10 Thank heavens they're just in my side yard, my front yard
11 and my other side, not my back yard. I'm not opposed to
12 wind power. I'm not going to tell you where to put them,
13 but, gee, I can see all the ones over at Wild Horse from my
14 house, almost all of them. That's 26 miles away on
15 Mapquest. I don't think I need them 2,500 feet from my
16 house. You know the wind may blow here, but the sun shines
17 too, and I don't see anybody coming up and wanting to put in
18 solar panels to help save the energy crisis.

19 I could say a lot more, but I hope you do as much
20 reading as I did to get information about health impacts and
21 property values. Yeah, I haven't lived here for 40 years.
22 I moved from an intersection that went from 400 car trips a
23 day to 10,000 car trips a day and was here five days and
24 somebody walked up and said, "What do you think of these God
25 Damn windmills coming in?" And I felt like saying had I

64-1
(con't)

64-2

1 known I would have gone to Omak.

2 CHAIR LUCE: Thank you.

3 Paula Thompson

4 COMMENTS BY PAULA THOMPSON

5 I'm Paula Thompson. I live at 551 Goodman Road,
6 Thorp, Washington. I've worked for 11 years as a
7 professional range manager for the U.S. forest Service in
8 Idaho, specifically in this type of range land such as
9 involved with the project. Also now I'm a local
10 veterinarian and have actually been on this property, the
11 property that's in the area.

12 I just want to address probably a little aspect of
13 the cattle grazing, like Mr. Rowen's grazing operation and
14 how he uses his land and how this would fit into his program
15 to keep this in the family, the family ranching operation
16 for generations to come. Maybe not necessarily for his
17 family but maybe they could be eased out and kept in a large
18 enough parcel that we will keep our ranching and grazing
19 industry in this valley.

20 Basically in the Kittitas Valley we have our
21 irrigated lands that are range land are above the canals
22 which do not have adequate water to irrigate so they're
23 using them for grazing and other activities such as wildlife 65-1
24 habitat and such. This allows Mr. Rowen and other
25 participating landowners another crop so to speak to be

1 moved from the property and gain income to help support
2 their ranching operations during periods of time when cattle
3 prices are down such like that. Also as far as for the
4 community in general you keep that land in large parcels for
5 benefits for aesthetics as far as wildlife habitat open
6 space. Also it allows two income streams to come off that
7 property. First would be grazing and cattle and all the
8 ancillary benefits that brings to the community as far as
9 supporting industries, as far as the local feed stores and
10 that sort of thing also will get the income and the tax
11 benefits from the wind power being generated. So the county
12 and the state will also benefit that income stream. This
13 allows multiuse of this property and allows diversification
14 that will allow them to remain in business and be a benefit
15 to the county.

65-2

65-3

16 As far as some person mentioned open range, that
17 is kind of a lost aspect in this county. People don't
18 realize how important that is for our ranchers and farmers
19 to be able to remain in business because they have to
20 basically the range allows their cattle to have the right of
21 way above the canals in certain areas. So cattle grazing
22 allows them not to be worried about being sued if a cow is
23 hit on the road. The way the county has been going in the
24 last ten years allowing more and more residential homes out
25 in the rangeland areas and such would put pressure on the

FLYGARE & ASSOCIATES, INC. - 1-800-574-0414

1 county commissioners to remove that open range designation
2 as more and more people are traveling on those roads. This
3 allows, the wind farm would allow Mr. Rowen and some of the
4 other ranchers and landowners to keep grazing going and
5 perhaps keep that open range aspect continuing in this which
6 is very important.

7 The other aspect is about setbacks. I find it
8 interesting on Kittitas County's property at Rye Grass they
9 have several turbines that they located on that project
10 which Invenergy had applied for and was approved here
11 recently which are less than a quarter mile from residents
12 in that area. I believe this project has done an excellent
13 job of expanding out the project and needing more land
14 available to mitigate and reduce among the affected
15 residences to I think it is seven or something like that
16 down from 20 or something like that. So I believe that they
17 have mitigated quite well in the Environmental Impact
18 Statement, and if you compare the no-action proposal to
19 their wind farm proposal, you will find that their impacts
20 are basically about the same because eventually you have no
21 wind farm going there so you're going to have houses.
22 You're going to have more impact on that rangeland and
23 impacts on wildlife and traffic, roads, neighbors, that sort
24 of thing. Thank you.

25 CHAIR LUCE: Thank you very much.

65-4

1 Ms. Talbert, do we have any other people signed up
2 to speak?

3 MS. TALBERT: No, sir.

4 CHAIR LUCE: Do we have anyone else in the
5 audience who would like to come up and offer comments?
6 Please come forward, state your name, your address, spell
7 your name.

8 COMMENTS BY ELLEN FINCH

9 Good evening. My name is Ellen Finch, F-i-n-c-h.
10 I live at 18480 Reecer Creek Road, Ellensburg.

11 I guess I'm one of the silent minority, majority,
12 whatever you want to call it. I live up on Reecer Creek
13 Road. My house is probably not within 2,500 feet of the
14 windmills but it's damn close. I look out my window and I
15 am surrounded by windmills. My house is not much further
16 than R-1 on the map on page 2.9 of the study.

17 I believe in windmills. I believe in alternate
18 wind power. I think it is a good thing, but I think
19 location is very important too. We came to this valley
20 because we've been coming to this valley for over 30 years,
21 camping, visiting friends. We liked the location. It was
22 similar to where we were raised originally. We made an
23 investment in the valley. We bought our home and then we
24 heard about the wind farms. And I'm sorry. I'm not a
25 public speaker and I'm just doing this off the top of my

66-1

1 head.

2 CHAIR LUCE: You're doing well.

3 MS. FINCH: But we bought our home for our
4 retirement and an investment. I'm terribly afraid that our
5 number one investment has no more value or very little value 66-2
6 anymore. We've got many houses up in our area that have
7 been for sale for several years and they have not sold, and
8 it's because people have heard of the wind farms coming in.
9 I got the study and I haven't studied it completely, but I
10 have gone over it, and I have many concerns. They say
11 they're going to put in 27 miles of roads. I'm 64 years
12 old, I've had cancer. I understand they're going to be
13 using chemicals to keep down the dust and everything. I
14 worry about my health. I have allergy problems and
15 especially this time of year when the farmers are doing
16 their farming I have to take medication because of all the
17 dust and the stuff in the area. The wind blows things 66-3
18 around. So I have that. I have been fighting that, but
19 with all this other disturbance in the ground I'm concerned
20 about my health.

21 I've got grandchildren that come to visit and stay
22 with us occasionally. Being the ages they are from 10 to 14
23 if all this construction is going on what's the safety of my 66-4
24 grandchildren? I know they like to go in and see the things
25 that are going on in the area. Well, will it be harm to

1 them? If the windmills are constructed what kind of
2 protections will they have to keep ordinary people away so
3 they're not wandering into the area? Maybe you get some
4 fool that's out joyriding some night and they decide to
5 climb one of those towers. Is there something to keep them
6 off the towers? I looked at the photos in the book, and I
7 think photos are very deceiving. We can see the Bonneville
8 power lines distinctly from our house. They are very much a
9 part of the landscape, and these windmills that they plan to
10 put up are going to be twice as tall as they are and there's
11 going to be many of them in the area. That's going to
12 affect our view, and we have an excellent view. We have a
13 360-degree view and we are going to be surrounded on three
14 sides by wind towers if they go in.

66-5
(con't)

15 One of my husband's favorite past times is to sit
16 by the window and look at the birds flying by, the hawks,
17 the eagles, the quail. What's it going to do to them?
18 Somebody mentioned the mice problem. Yeah, we got a mice
19 problem out there. Once they start disturbing the ground
20 what's it going to do to the mice problem? I think there's
21 a lot of concerns out there and I hope you listen to them.
22 I plan to put more organized thoughts on paper and send them
23 to you. Thank you for your time.

66-6

66-7

24 CHAIR LUCE: Thank you very much. Is there anyone
25 else who wishes to speak this evening?

1 Yes, please come forward, state your name, and
2 spell it for the record, give your address.

3 COMMENTS BY ELOISE KIRCHNEYER

4 My name is Eloise Kirchneyer. I live at 16281
5 Reecer Creek Road. My last name is spelled
6 K-i-r-c-h-n-e-y-e-r.

7 I hadn't planned on speaking, but I've heard so
8 many things that are to me deceiving. Which one of you led
9 the tour to the site?

10 I saw one car. That's a tour?

11 Another thing I would like to mention is the
12 international setback for windmills is 1.5 kilometers. Has
13 anybody heard that? Are we not following the international
14 law?

67-1

15 Another thing about the fire problem, during
16 spring and up until about June Reecer Creek is a one-way
17 road. There's only one way out of there. If there's a fire
18 on the west side, there is no way you're going to control
19 it. You're not going to get there fast enough. You're
20 going to be there with a hose and you're just still not
21 going to be fast enough. I'm trapped. I am surrounded by
22 windmills. Thank you.

67-2

23 CHAIR LUCE: Thank you very much. Anyone else
24 wish to speak this evening?

25 ///

1 COMMENTS FROM NOEL VAN GIESEN

2 Hi, I'm not from around here. My name is Noel Van
3 Giesen.

4 CHAIR LUCE: Can you speak up just a little bit so
5 the court reporter can hear.

6 MR. VAN GIESEN: I'm not from around here. My
7 name is Noel Van Giesen. I'm from Port Angeles.

8 CHAIR LUCE: Spelling of your last name.

9 MR. VAN GIESEN: V-a-n G-i-e-s-e-n.

10 CHAIR LUCE: And your address?

11 MR. VAN GIESEN: 1415 South Oak Street, Port
12 Angeles, Washington.

13 CHAIR LUCE: Thank you.

14 MR. VAN GIESEN: I've been observing over here
15 working a little bit in the area trying to learn a little
16 bit more about wind power on this side of the mountains.
17 We've been working on a number of the projects on the west
18 side of the mountains and on the coast working with Native
19 American tribes, and your project is an inspiration. I see
20 some problems and I definitely can empathize with some of
21 the people who have these in their back yards.

68-1

22 I have been here working on local privately owned
23 wind turbines and have learned a lot, and I can't quit
24 looking at the things. It's just amazing to me how it
25 works, and I've worked around other ones on the coast. You

1 guys have such an amazing positive. There's so many
2 positives to your guys' project compared to the projects
3 that I've worked on surveys on the coast. I've not seen any
4 raptor kills here on the coast. We say raptor kills,
5 different species of birds in migratory patterns, things of
6 that nature. We're involved in a raptor setting on the
7 coast and they've actually shot down many of the projects on
8 the west coast. But I've seen the raptor studies on the
9 east of the mountains and in comparison we don't see them.
10 I don't know why. The birds don't seem to, the species
11 don't seem to be bothered by them.

12 I also see so many other positives. I mean
13 obviously the location of the grid and the wind is so much
14 more. I mean we get calls all the time from people in our
15 private business of renewable energy collection that want to
16 do private systems and they don't have nearly the wind you
17 guys have. They have gusts that are things that cause other
18 problems. You guys have an amazing energy to harvest, and
19 this project would not just inspire or would inspire others
20 to maybe look into other means to see the success of this
21 project. The success of this project goes beyond this
22 community. It goes outside the community, and I'd like to
23 see that and I would support the project very much so.
24 Thank you.

25 CHAIR LUCE: Is there anyone else who would like

68-2

1 to speak?

2 COMMENTS BY BERTHA MORRISON

3 My name is Bertha Morrison, M-o-r-r-i-s-o-n, and
4 I've lived here for 91 years. My dad took up a homestead in
5 1906, and it is close to the property and some of the
6 property that the windmills is on. And I believe the
7 windmills will really help the ranchers. We run cattle up
8 there and they're not going to bother our cattle in any way.
9 We still own a lot of property up there, and I feel that
10 windmills are going to help the whole valley, not just one
11 person but everybody with electricity, and I think we need
12 the windmills. We've got the wind. We need the windmills.
13 Thank you.

14 CHAIR LUCE: Thank you very much.

15 I will ask again is there anyone else who wishes
16 to speak this evening?

17 COMMENTS BY DAVID YOUNG

18 David Young, 1788 Vantage Highway. Formally I
19 live in Roslyn. I'm employed at the Wild Horse Wind Farm as
20 a service technician. I've been there two and a half years,
21 and I am for this project. I think it's a really good thing
22 for the county. Unfortunately people nearby it's probably a
23 lesser experience for them. I live within five miles of the
24 Wild Horse site so I'm not too close, but I can see them
25 from my place. I actually have my own personal residential

69-1

1 windmill.

2 But I know that it has brought more money into the
3 county in various ways. I know the guys that work there
4 they either own a house and paying for it or they rent. We
5 get our tires fixed in town. We just do a lot of things
6 here that helps the economy. And I know just from my
7 personal experience wildlife that I could tell doesn't seem
8 to be very effected, the elk, deer. The deer lay in the
9 shade of the wind turbines while they're running. We often
10 come upon them just laying there in the shade. As PSE will
11 tell you, Puget Sound Energy, there are birds and bat kills
12 to some degree. There's some number. They keep track of
13 that. But I know from personal experience I've seen a lot
14 of birds killed like on Interstate 90 from traffic.
15 Vehicles hit them of all kind: raptors, kind of birds, not
16 to mention, deer, elk, bear, coyotes. But nobody seems to
17 be the saying let's lower the speed limit on Interstate 90
18 to save the birds. It seems to be, you know, like a concern
19 when it comes to wind farms, but not when it comes to the
20 traffic corridor. So I think like the, you know, interstate
21 traffic is more of a hazard to some wildlife. Like the
22 wildlife up at the wind farms there will be some, but I
23 think it's an acceptable amount. We seem to accept that on
24 the highways. And for the benefits we get from it. So
25 anyway I support this project, and I thank you.

70-1

70-2

70-3

FLYGARE & ASSOCIATES, INC. - 1-800-574-0414

1 CHAIR LUCE: Thank you very much. Anyone else
2 wish to comment this evening? We have another commenter.
3 The gentleman in the yellow shirt come forward, state your
4 name, spell your name, give us your address.

5 COMMENTS OF AARON ZIMMERMAN

6 Aaron Zimmerman, 810 East Seattle Avenue.
7 Listened to --

8 CHAIR LUCE: Which city?

9 MR. ZIMMERMAN: Ellensburg, sorry. Listened to
10 both sides of the argument, either for or against. Wish
11 there was a way to make everybody happy out of all of this,
12 just can't do it. So keep my comments to three areas.

13 I believe this project would be a benefit to the
14 community. Economic benefits to the community will carry
15 down the line for some time. This will also keep ag land in
16 ag and ag is important to this community. And as a prior
17 service active duty U.S. Army soldier I believe this will
18 keep cash circulating in America and out of the hands of the
19 people who want to kill us. Thank you.

20 CHAIR LUCE: Thank you. Any other comments? All
21 right. I've got the gavel in my hand. I'm going 1, 2, 3
22 here so if anybody else wants to speak, speak now or forever
23 hold your peace unless you want to submit written comments
24 in which case we need to -- we've got one more. All right.
25 ///

71-1

71-2

1 COMMENTS BY LINDA JOHNSON HUBER

2 Hello. My name is Linda Johnson Huber, P.O.
3 Box 924, Kittitas. I'm speaking to you tonight as a former
4 county commissioner. I was an interim county commissioner
5 last year for eight months but unfortunately was not
6 successful in my bid for reelection, but I also was not one
7 of the commissioners that actually opposed EFSEC or filed
8 suit against the Governor I'm happy to say. I'm in support
9 of wind farms and wind energy not only for the renewable
10 source of energy, but mostly for the economic impact it
11 makes in the area.

12 The Wild Horse project was a completely successful
13 project. It generated over 10 million dollars during the
14 construction phase that was spent here in this county. The
15 long-lasting effects the first year I believe it was
16 1.6 million dollars in direct tax revenue. A portion went
17 to the state, of course, but to the county general fund, to
18 the county road fund, to the fire district in which it was
19 located, and to the hospital district. It also makes a huge 72-1
20 benefit impact to the school district. I'm a resident of
21 the Kittitas school district, and the revenue from the wind
22 farm for the tax revenue the first year literally paid off
23 the bonds for the new high school in Kittitas two years
24 earlier than it did so therefore it lowered my property
25 taxes for that reason.

FLYGARE & ASSOCIATES, INC. - 1-800-574-0414

1 Some of the complaints about the mitigation,
2 worried about the fire districts and what the affects it
3 will have on county roads, those things can actually be
4 mitigated with the tax revenue that comes back to the county
5 to the fire district and to the county road fund to enable
6 the project to go on. I too am sorry for the people that
7 are individually affected by and personally they feel
8 they're adversely affected. Unfortunately, they are a
9 minority in this section. I also would like to talk just a
10 little bit about the people that will benefit, the citizens
11 that will benefit from the actual lease system themselves.
12 They turn around and they spend money in the community. Oh
13 and also the Wild Horse Wind Farm in the end has 30
14 permanent sustainable jobs, full-time family wage jobs.
15 That's getting to be probably one of the biggest industries
16 here. There is not very many organizations that have over
17 30 full-time jobs. So I'm very much in support of the
18 project. Thank you.

19 CHAIR LUCE: Thank you. Is there anyone else who
20 wishes to speak? I think the gentleman come forward, state
21 your name, spell it, plus your address.

22 COMMENTS BY ERIC GUSTAFSON

23 My name is Eric Gustafson. I'm not local, but I
24 do work for a number of workers that live here in Kittitas
25 Valley. I live in Edmonds, Washington. I just came to

72-2

1 speak not in favor of the project or against. We do have a
2 lot friends that live here that are experts in the field of
3 construction. They erect structural steel, they place rebar
4 for the reinforcement footings. I just wanted to talk for a
5 minute about we've moved quite a ways from the environmental
6 impacts so I figured since the door is open perhaps I should
7 speak to that, to other issues that are involved. They do
8 partly impact environment.

9 My friends who are in the same association as I am
10 do most of their work on the west side of the mountains.
11 The reason they work on the west side of the mountains is
12 because that's where our work is. It a good thing for them
13 if this project moves forward provided the jobs pay living
14 wages. I took the time to look over Professor Mack's
15 analysis of what these jobs should pay during the
16 construction process. The number I came up with over a
17 nine- to ten-month period which was projected for the
18 construction process comes to \$25,000 a year per that nine- 73-1
19 to ten-month process per man, per person. Some of our
20 members are women by the way. I'm not sure that \$25,000
21 over a nine- to ten-month period is necessarily living wage.

22 We do favor this project and projects like it. We
23 favor wind power, but we do have some resistance to the idea
24 that every time there's a need in our country for a new
25 industry that it becomes a vehicle for removing wealth from

FLYGARE & ASSOCIATES, INC. - 1-800-574-0414

1 the working people to those who make all the big plans. I
2 just think that everybody in the audience, and the panel
3 should consider the possibility that there should be a
4 benefit for the workers, as well as this is a hazardous
5 industry and does require some expertise. I appreciate that
6 consideration. Thank you.

7 CHAIR LUCE: Thank you very much.

8 All right. I'm going to draw this meeting to a
9 close unless there's anyone else who wishes to speak. Is
10 there anyone else who wishes to speak?

11 All right. With that, I would point out Mr. David
12 Steeb is here, the project applicant, and he's available to
13 answer questions. Mr. Fiksdal is available from the EFSEC
14 staff. He's available to answer questions or other members
15 of the EFSEC staff. I'll remind members of the public that
16 Council members are not going to be able to talk with you
17 individually. We are acting as I'll use the word generally
18 speaking judges in this process so we need to maintain a
19 judicial appearance and reserve our thoughts to ourselves
20 based on the testimony we hear on the record. So when
21 I'm going to adjourn this meeting, we won't be on the
22 record; therefore, our ability to take comments individually
23 from you is not something we will be able to do.

24 So thank you all for coming tonight. It's an
25 evening meeting. Evening meetings are not always easy.

1 They demonstrate that people are really interested in their
2 community, and I appreciate that a great deal, and I know
3 that all of the members do and thank you again. The meeting
4 is adjourned.

5 * * * * *

6 (Public meeting is adjourned at 8:30 p.m.)
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1	I N D E X	
2	PUBLIC COMMENTS	PAGE
3	MARSHALL MADSEN	7
4	ANITA BOYUM	7
5	THERESA PETREY	9
6	DAN MORGAN	10
7	BERNICE BEST	11
8	HELEN WISE	11
9	CATHERINE ANN CLERF	12
10	JAN SHARAR	16
11	CHRIS BURTCHETT	18
12	PATTY KINNEY	21
13	MARY SCOTT	23
14	DAVID CRANE	25
15	RANDY RICHMOND	26
16	MELANIE GARROD	27
17	KEVAN SMITH	28
18	DANA LIND	28
19	ROGER OVERBECK	31
20	DESMOND KNUDSON	35
21	LIZ MCCOSH	36
22	PAULA THOMPSON	38
23	ELLEN FINCH	41
24	ELOISE KIRCHNEYER	44
25	NOEL VAN GIESEN	45

1	I N D E X (Con't)	
2	PUBLIC COMMENTS	PAGE
3	BERTHA MORRISON	47
4	DAVID YOUNG	47
5	AARON ZIMMERMAN	49
6	LINDA JOHNSON HUBER	50
7	ERIC GUFTASON	51
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

In re: Desert Claim Wind Power Project

A F F I D A V I T

I, Shaun Linse, CCR, do hereby certify that the foregoing transcript prepared under my direction is a full and complete transcript of proceedings held on April 23, 2009, in Ellensburg, Washington.

Shaun Linse, CCR 2029

DSEIS HEARING TRANSCRIPT

Comment 46: Marshall Madsen, Chamber of Commerce

46-1 *Response:* The comment is noted.

Comment 47: Anita Boyum, Ellensburg School Board

47-1 *Response:* The comment is noted.

47-2 *Response:* The comment is noted.

Comment 48: Theresa Petrey

48-1 *Response:* The comment is noted.

48-2 *Response:* The comment is noted.

Comment 49: Dan Morgan

49-1 *Response:* The comment is noted.

49-2 *Response:* The comment is noted.

Comment 50: Bernice Best

50-1 *Response:* The comment is noted.

Comment 51: Helen Wise

51-1 *Response:* The comment is noted.

51-2 *Response:* The comment is noted.

Comment 52: Catherine Clerf

52-1 *Response:* The comment is noted.

52-2 *Response:* The comment is noted.

Comment 53: Jan Sharar

53-1 *Response:* The comment is noted.

53-2 *Response:* The comment is noted.

53-3 *Response:* The comment is noted.

Comment 54: Chris Burtchett

54-1 *Response:* Please see the responses to Comments 7-1 and 13-1.

54-2 *Response:* Please see the responses to Comments 7-2 and 7-3.

54-3 *Response:* Please see the responses to Comments 3-5 and 7-3.

54-4 *Response:* Please see the response to Comment 7-4.

54-5 *Response:* Please see the responses to Comments 3-3 and 7-7.

54-6 *Response:* Please see the responses to Comments 3-10 and 7-13 concerning tax revenues and economic impacts, respectively.

54-7 *Response:* Please see the response to Comment 7-16.

Comment 55: Patty Kinney

55-1 *Response:* Please see the responses to Comments 51-1 and 51-3.

55-2 *Response:* Please see the response to Comment 13-1

55-3 *Response:* Based on the documentation already on record at the time EFSEC began preparing the Draft SEIS, the topic of noise was not included within the scope of the SEIS. Noise issues were addressed extensively in the Final EIS published by Kittitas County in 2004, however, and background noise monitoring was conducted for that analysis. See Final EIS Section 3.9.1.

Comment 56: Mary Scott

56-1 *Response:* The comment is noted.

56-2 *Response:* The comment is noted.

56-3 *Response:* The comment is noted.

Comment 57: David Crane

57-1 *Response:* The comment is noted.

57-2 *Response:* The comment is noted.

Comment 58: Randy Richmond

58-1 *Response:* The comment is noted.

58-2 *Response:* The comment is noted.

Comment 59: Melanie Garrod

59-1 *Response:* The comment is noted.

59-2 *Response:* The comment is noted.

59-3 *Response:* The comment is noted.

Comment 60: Kevan Smith

60-1 *Response:* The comment is noted.

Comment 61: Dana Lind

61-1 *Response:* The comment is noted.

61-2 *Response:* The comment discusses experience with previous fires in the area and concerns over protection of homes and barns during future fires; those are baseline conditions, as opposed to an issue or impact specifically associated with the proposed Project. Please see the response to Comment 3-4 regarding fire mitigation measures associated with the Applicant's proposal.

61-3 *Response:* Please see the responses to Comments 7-14, 17-10, and 42-5.

61-4 *Response:* The topics of low-frequency noise and shadow flicker fall outside the scope of the SEIS, but were addressed extensively in the Final EIS published by Kittitas County in 2004; see Final EIS Sections 3.8.2.3 and 3.9.2. The Final EIS noted that low-frequency noise is not an issue associated with the modern upwind turbine design used in current wind projects. Modeling and analysis of shadow flicker expected from the Desert Claim Project (see the GEC report in the Revised Application) indicates that nearby residences are unlikely to experience any noticeable shadow flicker. Furthermore, if nearby residences do experience shadow flicker, the Applicant has agreed to shut down turbines during periods of shadow flicker.

Comment 62: Roger Overbeck

62-1 *Response:* Please see the response to Comment 3-4 regarding fire mitigation measures associated with the Applicant's proposal.

62-2 *Response:* Please see the response to Comment 7-4.

62-3 *Response:* As documented in the prefiled testimony of David Steeb (Exhibit 11), the Applicant has agreed to use video to document the condition of county roads (Smithson Road, Reecer Creek Road and Lower Green Canyon Road) before and after construction, and the Applicant has agreed to make any repairs necessary to ensure that these roads are returned to as good or better condition after construction as they were before construction.

62-4 *Response:* The comment appears to address permits for water supply to the Project during operation. As indicated in the Revised Application and Section 2.2.2.6 of the SEIS, the Applicant's proposal includes possible development of a well for domestic water supply to the O&M building. Water use would be considerably less than 5,000 gallons per day; under Washington water law, individual wells producing less than 5,000 gallons per day are exempt from the requirement to obtain a water right. Please also see the response to Comment 7-4.

62-5 *Response:* Based on the documentation already in the record at the time EFSEC began preparing the Draft SEIS, the topic of public services was not included within the scope of the SEIS. Public services were addressed thoroughly in the Final EIS published by Kittitas County in 2004, and this information does not need to be repeated in the SEIS; see Final EIS Section 3.14. The Final EIS presented information indicating that Project demands for emergency medical service during construction and operation were not expected to be significant and would be within the current service capability of the respective providers. The Final EIS also noted that any increased demands on public services would be more than offset by tax revenues associated with the Project.

62-6 *Response:* Please see the response to Comment 3-4 for a discussion of fire hazards and mitigation.

62-7 *Response:* Although the comment raises an issue of which construction crews should be aware, it does not appear to be a comment concerning the Draft SEIS. It is acknowledged that Kittitas County considers the subject area to be "open range," indicating that ranchers are allowed to drive cattle on the roads. The Applicant has proposed to prepare a Construction Traffic Management Plan that will address all necessary traffic-related issues and submit it to EFSEC prior to commencing construction. The Applicant also notes that the participating landowners in the Project are the primary users of the open range near the Project site and are willing to work with the Applicant on this aspect of the plan.

62-8 *Response:* This does not appear to be a comment concerning the Draft SEIS. The Desert Claim proposal is being considered by EFSEC, not by Kittitas County. Kittitas County's notice provisions, therefore, are not applicable.

62-9 *Response:* Please refer to the response to Comment 3-17.

62-10 *Response:* As documented in the Stipulation with the Counsel for the Environment, the Applicant has agreed not to use calcium chloride for dust suppression. Instead, the Application will use water or a water-based, environmentally safe dust palliative such as lignin, for dust control on roads during project construction.

Comment 63: Desmond Knutsen

63-1 *Response:* The comment is noted.

63-2 *Response:* The comment is noted.

63-3 *Response:* The comment is noted.

Comment 64: Liz McCosh

64-1 *Response:* Please see the responses to Comments 7-3, 21-1, and 24-5.

64-2 *Response:* Please see the response to Comment 24-4.

Comment 65: Paula Thompson

65-1 *Response:* The comment is noted.

65-2 *Response:* The comment is noted.

65-3 *Response:* The comment is noted.

65-4 *Response:* The comment is noted.

Comment 66: Ellen Finch

66-1 *Response:* Please see the responses to Comments 7-3 and 34-1.

66-2 *Response:* Please see the response to Comment 3-17.

66-3 *Response:* The Applicant proposes to use water or a water-based dust palliative to control dust during construction.

66-4 *Response:* As with any construction site, standard safety procedures would require access to the Desert Claim construction site to be restricted to people with authorized construction purposes.

66-5 *Response:* Please refer to the responses to Comments 3-5, 21-1, and 24-5.

66-6 *Response:* Wildlife issues, including potential impacts to the bird species mentioned in the comment, are addressed extensively in the SEIS and in the 2004 Final EIS.

66-7 *Response:* As discussed in Section 3.2.3 of the SEIS and Section 3.4.3 of the 2004 Final EIS, project construction could result in fatalities and habitat loss for small mammals. Impacts are expected to be low and insignificant. Given the 5,200 acre size of the Project Area, there is no reason to think that the temporary or permanent disturbance of approximately 400 acres associated with project construction would displace mice to homes located more than 1/4 mile away. Please also see the response to Comment 7-10.

Comment 67: Eloise Kirchneyer

67-1 *Response:* Please refer to the responses to Comments 7-3, 21-1, and 24-5.

67-2 *Response:* The comment addresses fire risks and a concern about evacuation during a fire that are based on existing conditions in the local area, and are not linked to a change attributable to the project. Please also see the responses to Comments 3-4 and 21-2.

Comment 68: Noel Van Geisen

68-1 *Response:* The comment is noted.

68-2 *Response:* The comment is noted.

68-2 *Response:* The comment is noted.

Comment 69: Bertha Morrison

69-1 *Response:* The comment is noted.

Comment 70: David Young

70-1 *Response:* The comment is noted.

70-2 *Response:* The comment is noted.

70-3 *Response:* The comment is noted.

Comment 71: Aaron Zimmerman

71-1 *Response:* The comment is noted.

71-2 *Response:* The comment is noted.

Comment 72: Linda Johnson Huber

72-1 *Response:* The comment is noted.

72-2 *Response:* The comment is noted.

Comment 73: Eric Gustafson

73-1 *Response:* The comment is noted.

5.0 REFERENCES CITED

- Alberti, Leone Batista, Cosimo Bartoli, Giacomo Leoni. 1755. *The Ten Books of Architecture*: Book 8, Chapter 6, p. 173. Dover Publications, New York.
- American Wind Energy Association. 2009. *Wind Energy Basics*. Available online at http://www.awea.org/faq/wwt_basics.html.
- British Wind Energy Association (BWEA). 2005. *BWEA Briefing Sheet: Public Attitudes to Wind Energy in the UK*. Available at www.bwea.com.
- Bumenfeld, Hans. 1953. *Scale in Civic Design*. In *Town Planning Review*, Volume 24, April 1953. pp. 36-37.
- Cade, T. J. 1982. *Falcons of the world*. Cornell Univ. Press, Ithaca, NY.
- Central Washington University. 2009. *Kittitas County Economic Impacts from Proposed Desert Claim Wind Power Project*. Ellensburg, Washington.
- Chatham-Kent Public Health Unit. 2008. *The Health Impact of Wind Turbines: A Review of the Current White, Grey and Published Literature*. Available online at <http://www.wind-works.org/LargeTurbines/Health%20and%20Wind%20by%20C-K%20Health%20Unit.pdf>.
- County of Essex. 1973. *A Design Guide for Residential Areas*. County Council of Essex, England. P. 65.
- ECONorthwest. 2009. *Economic Impacts of the Desert Claim Wind Project: A Report to the enXco Company*. Portland, Oregon. EFSEC. 2007. *Kittitas Valley Wind Power Project: Final Environmental Impact Statement*. Olympia, Washington.
- Energy Facility Site Evaluation Council (EFSEC). 2005. *Kittitas Valley Wind Power Project, Draft Environmental Impact Statement Addendum*. Olympia, Washington.
- Erickson, W.P., B. Gritski, and K. Kronner, 2003b. *Nine Canyon Wind Power Project Avian and Bat Monitoring Report*, August 2003. Technical report submitted to Energy Northwest and the Nine Canyon Technical Advisory Committee.
- Erickson, W.P., D. Young, G. Johnson, J. Jeffrey, K. Bay, R. Good, and H. Sawyer. 2003c. *Wildlife Baseline Study for the Wild Horse Wind Project. Summary of Results from 2002-2003 Wildlife Surveys May 10, 2002-May 22, 2003*. Draft report prepared for

Zilkha Renewable Energy, Portland, Oregon. Prepared by Western EcoSystems Technology, Inc. (WEST), Cheyenne, Wyoming. November 2003.

Erickson, W.P., G.D. Johnson and D. Young, Jr. 2005. A Summary and Comparison of Bird Mortality from Anthropogenic Causes with an Emphasis on Collisions. General Technical Report PSW-GTR-191. U.S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station. Albany, California.

Erickson, W.P., G.D. Johnson, D.P. Young, Jr., M.D. Strickland, R.E. Good, M. Bourassa, K. Bay. 2002. Synthesis and comparison of baseline avian and bat use, raptor nesting and mortality information from proposed and existing wind developments. Technical Report prepared for Bonneville Power Administration, Portland, Oregon.

Erickson, W.P., G.D. Johnson, M.D. Strickland, and K. Kronner. 2000. Avian and bat mortality associated with the Vansycle Wind Project, Umatilla County, Oregon: 1999 study year. Technical Report prepared by WEST, Inc. for Umatilla County Department of Resource Services and Development, Pendleton, Oregon. 21pp.

Erickson, W.P., G.D. Johnson, M.D. Strickland, D.P. Young, Jr., K.J. Sernka and R.E. Good. 2001. Avian collisions with wind turbines: A summary of existing studies and comparisons to other sources of avian collision mortality in the United States. National Wind Coordinating Committee Publication. Available at <http://www.nationalwind.org/pubs/default.htm>

Erickson, W.P., J. Jeffrey, K. Bay and K. Kronner. 2003a. Wildlife Monitoring for the Stateline Wind Project. Results for the Period July 2001, December 2002. Technical report prepared for the Stateline Technical Advisory Committee and the Oregon Office of Energy.

Erickson, W.P., J. Jeffrey, K. Kronner, and K. Bay. 2004. Stateline Wind Project Wildlife Monitoring Final Report, July 2001 – December 2003. Technical report peer-reviewed by and submitted to FPL Energy, the Oregon Energy Facility Siting Council, and the Stateline Technical Advisory Committee.

Erickson, W.P., J.D. Jeffrey, and V.K. Poulton. 2008. Puget Sound Energy Wild Horse Wind Facility Post-Construction Avian and Bat Monitoring: First Annual Report, January – December 2007. Prepared by WEST, Inc. for Puget Sound Energy, Ellensburg, WA.

Erickson, W.P., K. Kronner, and K.J. Bay. 2007. Stateline II Wind Project Wildlife Monitoring Report, January – December 2006. Technical report submitted to FPL Energy, the Oregon Energy Facility Siting Council, and the Stateline Technical Advisory Committee.

- Fecht, Karl R., Stephen R. Reidel, and Ann M. Tallman. 1987. Paleodrainage of the Columbia River System on the Columbia Plateau of Washington State - A Summary. In: *Selected Papers on the Geology of Washington*, edited by J. Eric Schuster, pp. 219-248. Washington Division of Geology and Earth Resources, Olympia, Washington.
- Fishman Ecological Services, LLC. 2003. Carcass survey results for SeaWest Windpower, Inc., Condon Site, 2002-2003. Prepared for SeaWest WindPower, Inc., Condon Wind Project, Gilliam County, Oregon.
- Franklin, Jerry F. and C. T. Dyrness. 1973. Natural Vegetation of Oregon and Washington. Pacific Northwest Forest and Range Experiment Station, US Forest Service, United States Department of Agriculture, Washington, D.C.
- Gipe, P.B. 2002. "Design As If People Mattered: Aesthetic Guidelines for a Wind Power Future." In: *Wind Power in View: Energy Landscapes in a Crowded World*, M.J. Pasqualetti et al. (editors), Academic Press, New York.
- Glauert, Earl T. and Merle H. Kunz (editors). 1976. *Kittitas Frontiersmen*. Ellensburg Public Library, Ellensburg, Washington.
- Great Britain Department of Business Innovation and Skills. 2009. Available online at <http://www.berr.gov.uk/energy/sources/renewables/explained/wind/myths/page16060.html#MythTurbinesarehealthhazard>.
- Hodges, Charles M., Christian Miss, and Johonna Shea. 2003. Cultural Resources Survey for the Desert Claim Wind Power Project, Kittitas County, Washington. NWAA Report WA 03-39 prepared for Huckell-Weinman Associates, Kirkland, Washington.
- Hoen, B and R. Wiser. 2007. The Impacts of Wind Facilities on Residential Property Values: What We Know and Don't Know. Lawrence Berkeley National Laboratories, Electricity Markets and Policy Group, Energy Analysis Department. Ongoing Study. Preliminary Report November 1-2, 2007.
- Huckell Weinman Associates. 2003. Review of Literature on Wind farms and Property Values. Kittitas County department of Community Development Services. Ellensburg, Washington.
- Johnson, G.D. 2004. Analysis of Potential Wildlife and Habitat Impacts from the Klondike II Project, Sherman County, Oregon. Technical report prepared by WEST, Inc., for CH2M HILL and PPM Energy.
- Johnson, G.D. 2005. A review of bat collision mortality at wind-energy developments in the United States. *Bat Research News* 46:45-49.

- Johnson, G.D., and W. P. Erickson. 2008. Final Report, Avian and Bat Cumulative Impacts Associated with Wind Energy Development in the Columbia Plateau Ecoregion of Eastern Washington and Oregon. Prepared For: Klickitat County Planning Department. Western EcoSystems Technology, Inc., Cheyenne, Wyoming. October 30, 2008.
- Johnson, G.D., W.P. Erickson, and J. White. 2003. Avian and bat mortality at the Klondike, Oregon Phase I Wind Plant. Technical report prepared for Northwestern Wind Power by WEST, Inc.
- Johnson, G.D., W.P. Erickson, K. Bay, and K. Kronner. 2002. Baseline Ecological Studies for the Klondike Wind Project, Sherman County, Oregon. Final report prepared for Northwestern Wind Power, Goldendale, Washington, by Western EcoSystems Technology, Inc. (WEST) Cheyenne, Wyoming, and Northwest Wildlife Consultants, Inc. (NWC), Pendleton, Oregon. May 29, 2002.
- Johnson, G.D., W.P. Erickson, M.D. Strickland, M.F. Shepherd and D.A. Shepherd. 2000. Avian Monitoring Studies at the Buffalo Ridge Wind Resource Area, Minnesota: Results of a 4-year study. Technical report prepared for Northern States Power Co., Minneapolis, MN. 212pp.
- Kerlinger, P., L. Culp, and R. Curry. 2005. Post-Construction Avian Monitoring Study for the High Winds Wind Power Project, Solano County, California. Year One Report. Prepared for High Winds, LLC and FPL Energy.
- Kerlinger, P., R. Curry, L. Culp, A. Jain, C. Wilkerson, B. Fischer, A. Hasch. 2006. Post-construction avian and bat fatality monitoring study for the High Winds Wind Power Project, Solano County, California: Two Year Report.
- Kerns, J. and P. Kerlinger. 2004. A Study of Bird and Bat Collision Fatalities at the Mountaineer Wind Energy Center, Tucker County, West Virginia: Annual Report for 2003. Technical Report prepared for FPL Energy and Mountaineer Wind Energy Center Technical Review Committee. Curry and Kerlinger, LLC. 39 pp.
- Kittitas County Centennial Committee. 1989. *A History of Kittitas County, Washington - Volume I*. Taylor Publishing, Dallas, Texas.
- Kittitas County. 2004. Desert Claim Wind Power Project, Final Environmental Impact Statement. Kittitas County, Department of Community Development Services. August 2004. Ellensburg, Washington.
- Kittitas County. 2007. Kittitas County Code, Title 17A Critical Areas. Revised 1977. Ellensburg, Washington.

- Kronner, K., B. Gritski, and S. Downes. 2008. Big Horn Wind Power Project Wildlife Fatality Monitoring Study: 2006 – 2007. Final report prepared for PPM Energy and the Big Horn Wind Project Technical Advisory Committee by Northwest Wildlife Consultants, Inc. (NWC), Mid-Columbia Field Office, Goldendale, Washington. June 1, 2008.
- Kronner, K., B. Gritski, Z. Ruhlen, and T. Ruhlen. 2007. Leaning Juniper Phase I Wind Power Project, 2006-2007 Wildlife Monitoring Annual Report. Unpubl. report prepared by Northwest Wildlife Consultants, Inc. for PacifiCorp Energy, Portland, OR.
- Kunz, T.H. 1982. Silver-haired Bat, *Lasionycteris noctivagans*. *Mammalian Species* 172:1-5.
- Leventhall, G., 2006. Infrasound from Wind Turbines - Fact, Fiction or Deception, 34 Canadian Acoustics 29. Available online at www.wind.appstate.edu/reports/06-06Leventhall-Infras-WT-CanAcoustics2.pdf.
- Moorehouse, A, M., Hayes, S. von Hernerbein, B. Piper and M. Adams. 2007. Research into Aerodynamic Modulation of Wind Turbine Noise: Final Report. Department for Business, University of Salford, Manchester, United Kingdom.
- National Academy of Sciences/National Research Council (NAS/NRC). 2007. Environmental Impacts of Wind Energy Projects. ISBN: 0-309-10831-4. The National Academies Press. Washington, D.C. National Audubon Society. 2006. The Christmas Bird Count Historical Results [Online]. Available <http://www.audubon.org/bird/cbc>
- National Park Service. 1990. How to Apply the National Register Criteria for Evaluation. National Register Bulletin. U.S. Department of the Interior, Washington, D.C.
- Nicholson, C.P. 2003. Buffalo Mountain Windfarm bird and bat mortality monitoring report: October 2001-September 2002. Tennessee Valley Authority, Knoxville, Tennessee.
- NWC and WEST. 2007. Avian and bat monitoring report for the Klondike II Wind Power Project, Sherman County, Oregon. Unpubl. report prepared by Northwest Wildlife Consultants and WEST, Inc. for PPM Energy, Portland, OR.
- Palladio, Andrea. 1570. The Four Books of Architecture: Book 1, Chapter 16, p. 193. Translated and published by Isaac Ware (London 1738 from I quattro libri dell'architettura, Venezia 1570; facsimile of 1738 edition Mineola New York: Dover Publications, 1965).
- Pierpont, N. 2009. Wind Turbine Syndrome. Nina Pierpont's Research. Available online at <http://www.windturbinesyndrome.com>.

- Preston, C. R. and R. D. Beane. 1993. Red-tailed Hawk (*Buteo jamaicensis*). In *The Birds of North America W*.
- Thayer, R. L., and Carla Freeman. 1987. "Altamont: Public Perceptions of a Wind Energy Landscape," *Landscape and Urban Planning*, 14: 379-398.
- Ray, Verne F. 1936. Native Villages and Groupings of the Columbia Basin. *Pacific Northwest Quarterly* 27:99-152.
- Sauer, J. R., J. E. Hines, and J. Fallon. 2006. The North American Breeding Bird Survey, Results and Analysis 1966 - 2006. Version 6.2.2006. [U.S. Geological Survey, Patuxent Wildlife Research Center](#), Laurel, MD.
- Sauer, J. R., J. E. Hines, and J. Fallon. 2008. The North American Breeding Bird Survey, Results and Analysis 1966 - 2006. Version 10.13.2007. [U.S. Geological Survey, Patuxent Wildlife Research Center](#), Laurel, MD.
- Schuster, Helen H. 1975. Yakama Indian Traditionalism: A Study in Continuity and Change. Unpublished Ph.D. Dissertation, Department of Anthropology, University of Washington, Seattle.
- Shump, Jr., K.A. and A.U. Shump. 1982. Hoary bat, *Lasiurus cinereus*. *Mammalian Species* 185:1-5.
- Sims, Sally and Peter Dent. 2007. Property Stigma: Wind Farms are Just the Latest Fashion. *Journal of Property Investment and Finance*. 25(6), pp. 626-651.
- Sterzinger, G., Beck, F., and Kostiuk, D. 2003. The Effect of Wind Development on Local Property Values. Renewable Energy Policy Project. May. Accessed on December 6, 2006. Available online at: http://www.repp.org/articles/static/1/binaries/wind_online_final.pdf.
- Thayer, Robert and Hansen, Heather, "Wind on the Land", *Landscape Architecture* (March 1988), pp. 68-73.
- Waitt, Richard B. 1979. Late Cenozoic Deposits, Landforms, Stratigraphy, and Tectonism in Kittitas Valley, Washington. *Geological Survey Professional Paper 1127*. U.S. Geological Survey, Washington, D.C.
- Walsh, Timothy J., Michael Korosec, William Phillips, Robert Logan, and Henry Schasse. 1987. Geologic Map of Washington - Southwest Quadrant. Map GM-34. Washington Division of Geology and Earth Resources, Olympia, Washington.

- Washington State Tourism. 2009. Scenic Resources and Byways. Available online at www.experiencewa.com.
- Western EcoSystems Technology, Inc. (WEST). 2006. Diablo Winds Wildlife Monitoring Progress Report, March 2005 – February 2006. Prepared for Alameda County, California.
- Western Regional Climate Center (WRCC). 2007. Ellensburg, Washington (45250). Period of Record Monthly Climate Summary [Online WWW]. Available at: <http://www.wrcc.dri.edu>.
- Whitley, Edward C. 1949. Agricultural Geography of the Kittitas Valley. Unpublished Master's Thesis, University of Washington, Seattle.
- Woodward-Clyde International-Americas, (WCIA) and Western EcoSystems Technology, Inc. (WEST). 1997. Avian Baseline Study for the Vansycle Ridge Project - Vansycle Ridge, Oregon and Wildlife Mortality Studies, Vansycle Wind Project, Washington. Prepared for Esi Vansycle Partners, L.P., North Palm Beach, Florida.
- World Health Organization. 2004. Fourth Ministerial Conference on Environment and Health, Energy, Sustainable Development and Health. Available online at <http://www.euro.who.int/document/eehc/ebakdoc08.pdf>.
- Yakama and Neighboring Groups. 1998. In: *Handbook of North American Indians, Volume 12: Plateau*, edited by D. Walker, pp. 327-351. Smithsonian Institution Press, Washington, D.C.
- Young, D. P. Jr., W. P. Erickson, K.J. Bay, J.D. Jeffrey, B.G. Lack, and H.H. Sawyer. 2003a. Baseline Avian Studies For the Proposed Desert Claim Wind Power Project, Kittitas County, Washington, March 2002 – March 2003. Prepared For Desert Claim Wind Power, LLC, Ellensburg, WA. Prepared By Western EcoSystems Technology, Inc., Cheyenne, WY.
- Young, D.P. Jr., Johnson, G. D., W. P. Erickson, M. D. Strickland, R. E. Good and P. Becker. 2003b. Avian and bat mortality associated with the initial phase of the Foote Creek Rim Wind Power Project, Carbon County, Wyoming: November 1998 – June 2002. Tech. Report prepared by WEST, Inc. for Pacific Corp, Inc., SeaWest Windpower Inc., and Bureau of Land Management. 35pp.
- Young, D.P. Jr., W.P. Erickson, K. Bay, J. Jeffrey, E.G. Lack, R.E. Good, and H.H. Sawyer. 2003d. Baseline Avian Studies for the Proposed Hopkins Ridge Wind Project, Columbia County, Washington. Final Report, March 2002 - March 2003. Prepared for RES North

- America, LLC., Portland, Oregon, by Western EcoSystems Technology, Inc.(WEST), Cheyenne, Wyoming. April 30, 2003.
- Young, Jr., D.P. and V.K. Poulton. 2007 Avian and Bat Cumulative Impacts Analysis, Shepherds Flat Wind Project, Gilliam and Morrow Counties, Oregon. March 2007. Prepared For: LifeLine Renewable Energy, Inc. Western EcoSystems Technology, Inc., Cheyenne, Wyoming.
- Young, Jr., D.P., J.D. Jeffrey, W.P. Erickson, K. Bay, K. Kronner, B Gritski, and J. Baker. 2005. Combine Hills Turbine Ranch Wildlife Monitoring First Annual Report, March 2004-March 2005. Technical report prepared for Eurus Energy America Corporation, Umatilla County, and the Combine Hills Technical Advisory Committee.
- Young, Jr., D.P., W.P. Erickson, J.D. Jeffrey, and V.K. Poulton. 2007. Puget Sound Energy Hopkins Ridge Wind Project Phase 1 Post-Construction Avian and Bat Monitoring First Annual Report, January - December 2006. Technical report for Puget Sound Energy, Dayton, Washington and Hopkins Ridge Wind Project Technical Advisory Committee, Columbia County, Washington. Western EcoSystems Technology, Inc. Cheyenne, Wyoming, and Walla Walla, Washington. 25pp.
- Young, Jr., D.P., W.P. Erickson, J.D. Jeffrey, K. Bay, and M. Bourassa. 2003c. Avian and Sensitive Species, Baseline Study Plan and Final Report, Eurus Combine Hills Turbine Ranch, Umatilla County, Oregon. Technical Report for Eurus Energy America Corporation and Aeropower Services, Inc. Prepared by: Western EcoSystems Technology, Inc., Cheyenne, Wyoming.

6.0 DISTRIBUTION LIST

Federal Agencies

Bonneville Power Administration
Bureau of Indian Affairs
Bureau of Land Management
Bureau of Reclamation
Federal Aviation Administration
Federal Communications Commission
National Oceanic and Atmospheric Administration, Fisheries
U.S. Army, Corps of Engineers
U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service
U.S. Forest Service
Cantwell, Maria – U.S. Senate
Murray, Patty – U.S. Senate
Baird, Brian – U.S. House of Representatives
Dicks, Norman – U.S. House of Representatives
Hastings, Doc – U.S. House of Representatives
Inslee, Jay – U.S. House of Representatives
Larsen, Rick – U.S. House of Representatives
McDermott, Jim – U.S. House of Representatives
McMorris Rodgers, Cathy – U.S. House of Representatives
Reichert, David G. – U.S. House of Representatives
Smith, Adam – U.S. House of Representatives

Indian Tribes

Colville Confederated Tribes
Spokane Tribe
Wanapum Tribe
Yakama Nation

State Agencies

Department of Commerce
Department of Ecology
Department of Fish and Wildlife
Department of Health
Department of Natural Resources
Department of Transportation
Department of Archeology and Historic Preservation
Office of the Governor
State Parks and Recreation Commission
State Patrol
Washington State Library
Attorney General, Counsel for the Environment

Legislators

Holmquist, Janea – Washington State Senate

Hinkle, Bill – Washington State House of Representatives

Warnick, Judy – Washington State House of Representatives

Local Government Agencies

Kittitas County departments/staff:

Board of Commissioners

Communications (KITTCOM)

Development Services Department

Environmental Health

Fire Marshal

Prosecutors Office

Public Works Department

Sheriff

Kittitas County Conservation District

Kittitas County Fire District No. 2

Kittitas County Hospital District No. 1

Kittitas County Noxious Weed Control Board

Kittitas County Public Utilities District

Kittitas Reclamation District

City of Cle Elum

City of Ellensburg

City of Kittitas

City of Roslyn

Town of South Cle Elum

Ellensburg School District

Libraries

Carpenter Memorial Library, Cle Elum

Central Washington University Library, Ellensburg

Ellensburg Public Library

Kittitas Public Library

Roslyn Library

Yakima Valley Regional Library, Yakima

Newspapers

Ellensburg Daily Record

Northern Kittitas County Tribune

Yakama Nation Review

Yakima Herald-Republic

Energy News Data

Organizations and Individuals

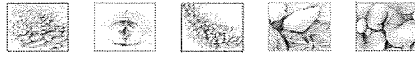
Geoff Saunders
Dwight Lee Bates
David Crame
Mark Braun
Chris & Lee Burtchett
Helen Wise
Craig Johnson
Jan Sharar
Windworks! Northwest
Patty Kinney
Thom McCosh
Kittitas Audubon Society
Everett Olson
Tom & Ginger Morrison
Tony Helland
Eloise Kirchmeyer
Bob & Judy Corey
Liz Lasell-McCosh
Deidre Link
Chet Morrison
Gina Jefferson-Lindemoen
Christine Cole & Roger Binette
Craig Nevil
J.P. Roan
David O. Young

Catherine Clerf
Tanna McVicker
Darrell Lehmann
Katana Summit
Stephen Prue
Ellensburg Chamber of Commerce,
Marshall Madsen
Theresa Petrey
Dan Morgan
Bernice Best
Mary Scott
Randy Richmond
Melanie Garrod
Kevan Smith
Dana Lind
Roger Overbeck
Desmond Knutsen
Paula Thompson
Ellen Finch
Noel Van Geisen
Bertha Morrison
Aaron Zimmerman
Linda Johnson Huber
Eric Gustafson

APPENDIX A

GROUNDWATER SUPPLY REPORT

Associated Earth Sciences, Inc.



Celebrating 25 Years of Service

Technical Memorandum

Date: July 16, 2009

To: Mr. Richard Weinman
Weinman Consulting, LLC
9350 SE 68th Street
Mercer Island, Washington 98040

Project Name: Desert Claim
Wind Power

From: Michael S. August
Curtis J. Koger, P.G., P.E.G., P.Hg. *CK*

Project No: KG030316F

Subject: Location of Ground Water Users Within or
Adjacent to the Western Expansion Area

Associated Earth Sciences, Inc. (AESI) is pleased to present the results of our ground water users update as a supplemental to our initial services for the "Water Resources" portion of the "Desert Claim Environmental Impact Statement" (EIS), (AESI, 2004). The information was focused on properties located within or adjacent to the revised project area (Western Expansion Area), and was based on records obtained during our review of water well log and water right information from the Washington State Department of Ecology (Ecology).

Ground Water Supply

Location of Ground Water Users Within or Adjacent to the Western Expansion Area

Water well logs obtained from Ecology were reviewed and compiled for the expansion area located west of the original Desert Claim project site. Specifically, the expanded search area included Sections 18, 19, the northern half of Section 30 of Township 19N, Range 18E, and the northeast quarter of Section 25 of Township 19N, Range 17E, and Sections 12, 13, 24, and 36 of Township 19N, Range 17E. The wells were located to the nearest quarter-quarter section, or by address when available, and a database was created to compile and retrieve pertinent drilling and well construction information. The well locations are shown on Figure 1, "Water Well Location Map."

Based on the tools and methods used by the sources reporting the well logs and the standard practice of reporting well locations only to the nearest quarter-quarter section, the locations shown on Figure 1 should not be considered highly precise; location inaccuracies in the well logs are relatively common. Figure 1 shows both the original project limits and the current project boundaries.

Identified Water Wells

No water well logs were identified from Ecology's database within Sections 18, 19, or the northern half of Section 30 of Township 19N, Range 18E, nor were any wells identified in Sections 12, 13, 24, or 36 of Township 19N, Range 17E. Five wells were identified west of the expansion area (NE quarter of Section 25 of Township 19N, Range 17E) in the northwest quarter of Section 25 of Township 19N, Range 17E. All five wells are used for single-family domestic use (according to well logs and water rights claims). Copies of the water well logs are included as an attachment to this technical memorandum.

As reported in the Final EIS for the initial project site, a study of the hydrology of Kittitas Valley and a review of well logs for this study indicate that well yields average 20 to 23 gallons per minute (gpm) in the Desert Claim project vicinity (Owens, 1995). The study concludes that ground water yield and flow in the Kittitas Valley is largely dependent on stratigraphic and structural controls and high well yields do not necessarily correlate to depth, although average yield increases with depth. Grande Ronde Basalt aquifers tend to produce higher yields than the Ellensburg Formation aquifers, probably because Grande Ronde Basalt aquifers are generally confined and have a larger recharge area in the mountains north and south of Kittitas Valley (Owens, 1995).

Drilled depths of the five wells ranged from 125 to 380 feet. Static water levels ranged from 40 to 65 feet below ground surface (bgs), except in well 171, which had a reported water level of 270 feet bgs. Based on the driller's description and well yield data, it appears likely wells 170 and 171 are completed in bedrock. Wells 167 through 169 are interpreted to be completed in Pleistocene sediments. This interpretation is consistent with the geologic and hydrogeologic information presented in the EIS.

Domestic water wells may use up to 5,000 gallons per day (gpd) of water as allowed by Ecology for exempt wells. However, Ecology estimates that typical use for a single-family home is about 300 gpd (AESI 2004). Assuming typical water use, the 5 existing domestic wells adjacent to the Western Expansion Area withdraw approximately 1,500 gpd of water. All of the homes in the area use on-site septic systems to discharge waste water; therefore, a large portion of the water used is returned to the shallow subsurface.

Water Well Log Database Update

AESI has updated the Final EIS "Water Well Log Database" to include information obtained during our data review. Ground water user data, including owner information, ground surface elevation, total depth, and water level records, and other relevant information are summarized in the attached Table I, "Water Well Database."

Review of Water Right Information

Water rights data obtained from Ecology indicate that there are three records pertaining to active water rights within the proposed Western Expansion Area. The water right information describes

two wells and one spring owned by Pat Burke. Based on Ecology's records, the wells and the spring are located in the western portion of the expanded site area. One well is located in Section 25 of Township 19N, Range 17E, while a spring and a well are located within Section 30 of Township 19N, Range 18E. According to Ecology's records, the spring well is utilized for stock watering and irrigation, while the two wells are categorized as irrigation and general domestic use. No water well logs were identified for the wells and spring during our search of Ecology's water well log database. Available water right information is included in the attached Table II, "Water Right Information."

Environmental Impacts of the Proposed Action

This section briefly summarizes the geology and potential environmental impacts to ground water resources from the proposed Western Expansion Area. Excerpts from the Desert Claim Wind Power Final EIS are presented in the following sections for reference.

Desert Claim Project Area Geology (3.1.1.3)

"Geologic conditions of the Desert Claim project area were evaluated using data obtained from field explorations by Associated Earth Sciences, Inc. (AESI) and AESI's review of regional geologic maps and publications...[d]etailed exploration logs documenting the findings of the field studies are available for review from Kittitas County."

The surficial geology of the project area consists of Recent-age postglacial alluvial fans and other stream deposits that overlie and carve into older Pleistocene-age sidestream glacial outwash (Kittitas Drift) and Pliocene-age sidestream alluvium (Thorp Gravel). Erosion by the younger streams has carved distinct terraces in the older deposits. Miocene-age Grande Ronde Basalt underlies the sediments described above and the entire project area."

Ground Water Supply (3.3.2.2)

"A limited amount of ground water would be needed for long-term operation of the project. This would be provided either by a participating landowner or through development of an exempt well, per the Washington State Water Code, Chapter 90.03 RCW. Less than 5,000 gpd would be extracted for domestic use for the O&M building, as allowed by Ecology for an exempt well. Restroom and kitchen facilities would drain into an on-site septic system, recharging the ground water in the vicinity of extraction. No quantifiable impacts to ground water supply would result from this usage."

Ground Water Conclusions (3.3.2.2)

"Potential impacts to ground water from the proposed project include disruption to ground water flow, recharge, or discharge, depletion of ground water supply, or lowering of ground water quality. Impervious surfaces would be created by the project, but they are limited in size and extent across the project area and are expected to have minimal impacts to recharge, discharge or ground water flow if recommended mitigations are followed. Impacts to ground water supply are not

not expected from the proposed project. Localized impacts to ground water quality are possible from wastewater and petroleum product spills, but can be avoided if recommended mitigations are followed. Minor short-term turbidity due to water level fluctuations in wells from blasting vibration is a potential water quality impact, but would be minimized by following the applicable regulations. Overall, the project is not expected to result in the potential for significant adverse impacts to ground water flow, recharge or discharge, ground water supply or ground water quality."

Summary

The review of water well logs and water rights information has revealed no new potential impacts to ground water supply or resources within or adjacent to the Western Expansion Area. Therefore consistent with the findings and conclusions presented in the Desert Claim Wind Power Final EIS, it is our professional opinion that the current project is not expected to result in any impacts to ground water supply or resources within or adjacent to the Western Expansion Area.

Attachments: Table I: Water Well Database
Table II: Water Right Information
Figure 1: Water Well Location Map
Water Well Logs

Table I. Water Well Database

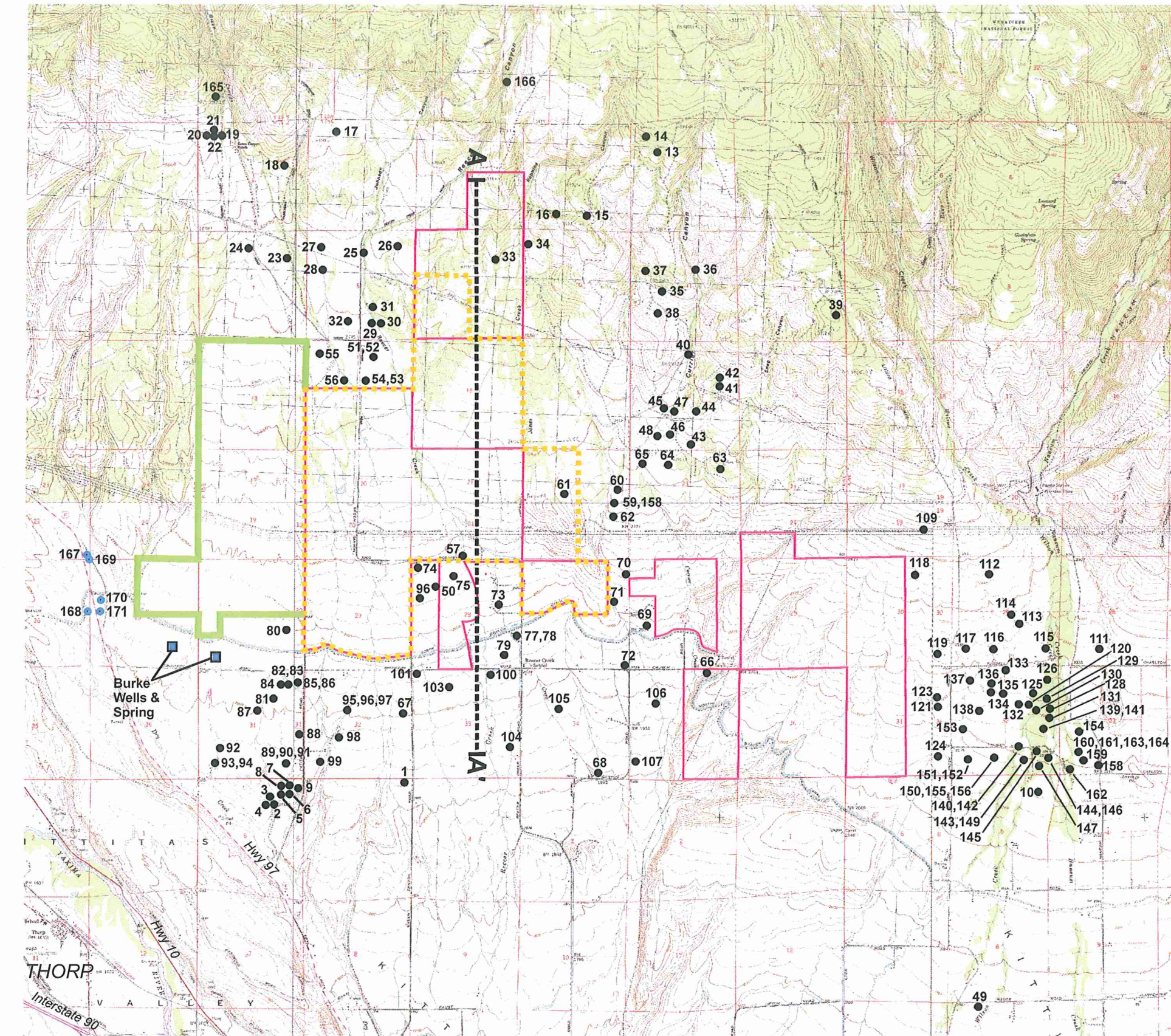
Well ID	Owner's Name		Date Completed	Log Avail?	USE	GS Elev.	Total Depth	Well Depth	Static WL	WL Elev.	Aquifer Test		
	First	Last									Q (gpm)	s (ft)	t(hr)
19/17/25/D167	Fred	Norman	11/3/95	Y	Dom	2090	165	165	60	2030	8		1
19/17/25/D168	Gerard	Wanechuck	4/20/00	Y	Dom	2080	210	210	65	2015	17		2
19/17/25/D169	Glenn	Parker	3/15/06	Y	Dom	2090	125	125	40	2050	11	120	1
19/17/25/D170	Paula	Hake	4/27/94	Y	Dom	2060	300	290	40	2020	3	295	1
19/17/25/D171	Rob	Grossman	6/20/00	Y	Dom	2050	380	318	270	1780	1	270	2

Table II. Water Right Information

File #	Owner	Status	Doc	Purpose	County	TRS	Source
G4-300075CL	Burke, Pat	Active	Claim	IR,DG	KITTITAS	19.0N 17.0E 25	Well
G4-097559CL	Burke, Pat	Active	Claim Long	ST,IR	KITTITAS	19.0N 18.0E 30	Spring
G4-300074CL	Burke, Pat	Active	Claim	IR,DG	KITTITAS	19.0N 18.0E 30	Well

Purpose - IR=Irrigation, DG=Domestic General, ST=Stock Watering

03316 desert claim wind power03316-overall_expansion.cdr page1 landscape 11x17



LEGEND

168 • Approximate location of newly identified water well, well locations based on 1/4-1/4 section description or address

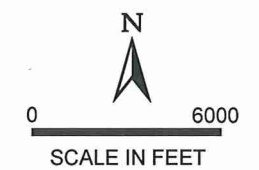
1 • Approximate location of water well, well locations based on 1/4-1/4 section description or address

Western Expansion Area

Current Project Area

Original Project Area

A-----A' Cross Section location



REFERENCE: TOPO MAP FROM DELORME.

Associated Earth Sciences, Inc.



DATE 6/09
PROJ. NO. KG030316F

DESERT CLAIM WIND POWER KITITAS COUNTY, WASHINGTON

Figure 1
Water Well Location Map

WATER WELL REPORT

Start Card No. W064312
 Unique Well I.D. # ABX024
 Water Right Permit No.

STATE OF WASHINGTON

(1) OWNER: Name **NORMAN, FRED** Address **1061 NOTCHO LN. ELLENSBURG, WA 98926-**

(2) LOCATION OF WELL: County **KITTITAS** - NW 1/4 NW 1/4 Sec 25 T 19 N., R 17 W

(2a) STREET ADDRESS OF WELL (or nearest address) **PARCEL#19-17-2520-0010-00.**

(3) PROPOSED USE: **DOMESTIC**

(4) TYPE OF WORK: Owner's Number of well (If more than one) **NEW WELL** Method: **NOTARY**

(5) DIMENSIONS: Diameter of well **6** inches
 Drilled **165** ft. Depth of completed well **165** ft.

(6) CONSTRUCTION DETAILS:
 Casing installed: **6** " Dia. from **+2** ft. to **105** ft.
STL CAS/PVC **4** " Dia. from **-5** ft. to **105** ft.
 " Dia. from ft. to ft.

Perforations: **YES**
 Type of perforator used **SKILL SAW**
 SIZE of perforations **1/8** in. by **6** in.
102 perforations from **145** ft. to **165** ft.
 perforations from ft. to ft.
 perforations from ft. to ft.

Screens: **NO**
 Manufacturer's Name
 Type Model No.
 Diam. slot size from ft. to ft.
 Diam. slot size from ft. to ft.

Gravel packed: **NO** Size of gravel
 Gravel placed from ft. to ft.

Surface seal: **YES** To what depth? **15** ft.
 Material used in seal **BENTONITE**
 Did any strata contain unusable water? **NO**
 Type of water? Depth of strata ft.
 Method of sealing strata off **OVERBORE**

(7) PUMP: Manufacturer's Name
 Type H.P.

(8) WATER LEVELS: Land-surface elevation
 above mean sea level ... ft.
 Static level **60** ft. below top of well Date **11/03/95**
 Artesian Pressure lbs. per square inch Date
 Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
 Was a pump test made? **NO** If yes, by whom?
 Yield: gal./min with ft. drawdown after hrs.
 Recovery date
 Time Water Level Time Water Level Time Water Level

Date of test / /
 Bailer test gal./min. ft. drawdown after hrs.
 Air test 7-9 gal./min. w/ stem set at ft. for 1 hrs.
 Artesian flow g.p.m. Date
 Temperature of water Was a chemical analysis made? **NO**

(10) WELL LOG
 Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
HARD LOAM	0	2
HARD CEMENTED GRAVEL	2	27
CEMENTED GRAVEL BOULDERS	27	69
CEMENTED GRAVEL CLAY	69	97
SANDY CEMENTED GRAVEL	97	165

Work started **11/02/95** Completed **11/03/95**

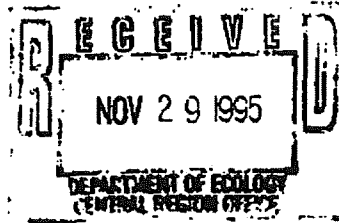
WELL CONSTRUCTOR CERTIFICATION:
 I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME **PODEROSA DRILLING**
 (Person, firm, or corporation) (Type or print)

ADDRESS **2-6410 BROADWAY**

[SIGNED] *[Signature]* License No. **2060**

Contractor's
 Registration No. **PO-WD-BI-248JE** Date **11/06/95**



File Original with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W123585
UNIQUE WELL I.D. # AFH 483
Water Right Permit No. _____

D168

(1) OWNER: Name Gerard Waneche K Address 620 Clark Rd Ellensburg

(2) LOCATION OF WELL: County Kittitas SW 1/4 SW 1/4 Sec 25 T 19 N.R. 17E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) Hwy 97

TAX PARCEL NO.: _____

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal
☐ Irrigation ☐ Test Well ☐ Other
☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New Well Method:
☐ Deepened ☐ Dug ☐ Bored
☐ Reconditioned ☐ Cable ☐ Driven
☐ Decommission ☒ Rotary ☐ Jetted

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 210 feet. Depth of completed well 210 ft.

(6) CONSTRUCTION DETAILS

Casing installed:

☒ Welded 6 Diam. from 12 ft. to 198 ft.
☐ Liner installed Diam. from _____ ft. to _____ ft.
☐ Threaded _____ Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Material placed from _____ ft. to _____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 20 ft.

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

(8) WATER LEVELS: Land surface elevation above mean sea level _____ ft.

Static level 65 ft. below top of well Date 4/20/00

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time Water Level Time Water Level Time Water Level

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

Date of test _____

Ballot test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 17 gal./min. with 0 ft. drawdown after 2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Top Soil	0	2
Cemented gravel	2	11
Brown Clay & gravel	11	138
gravel & water	138	148
5-6 gpm		
Brown Clay & gravel	148	198
Soft Sand Stone & water	198	210

Work Started 4/18/00 Completed 4/20/00

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Mitch Mathias License No. 1267
(Licensed Driller/Engineer)

Trainee Name _____ License No. _____

Drilling Company MATHIAS Drilling

(Signed) Mitch Mathias License No. 1267

(Licensed Driller/Engineer)

Address 2317 Rd 10.2 NE Moses Lake

Contractor's Registration No. MATHEPC117654/20 00

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

Please print, sign and return to the Department of Ecology



Water Well Report

Original - Ecology, 1st copy - owner, 2nd copy - driller

Construction/Decommission

- ☐ Construction
☐ Decommission

ORIGINAL INSTALLATION Notice
 of Intent Number 143693

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal
☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one)
☒ New well ☐ Reconditioned Method: ☐ Dug ☐ Bored ☐ Driven
☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 125 ft.
 Depth of completed well 125 ft.

CONSTRUCTION DETAILS

Casing ☒ Welded 6 " Diam. from 12 ft. to 83 ft.
 Installed: ☒ Liner installed 4 " Diam. from 12 ft. to 125 ft.
☐ Threaded " Diam. from " ft. to " ft.

Perforations: ☒ Yes ☐ No
 Type of perforator used skill saw
 SIZE of perfs 7 in. by 2 in. and no. of perfs 200 from 85 ft. to 125 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____
 Manufacturer's Name _____
 Type _____ Model No. _____
 Diam. _____ Slot size _____ from _____ ft. to _____ ft.
 Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____
 Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 22 ft.

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☐ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____
 Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 40 ft. below top of well Date 3-15-06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____
 (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 11 gal./min. with stem set at 120 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

Current Notice of Intent No. W170957

Unique Ecology Well ID Tag No. ALF 393

Water Right Permit No. D

Property Owner Name Wynn Parker

Well Street Address Nacho Lane

City ELL. Bellevue

Location NW 1/4-1/4 174 Sec 15 17 17 EWM or WWM ☐ circle one

Lat/Long (s, t, r) Lat Deg 25 Lat Min/Sec _____

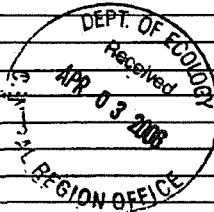
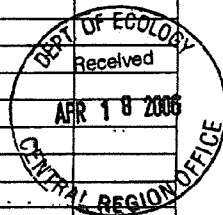
still REQUIRED) Long Deg _____ Long Min/Sec _____

Tax Parcel No. 1917250200008

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS, IF NECESSARY.)

MATERIAL	FROM	TO
top soil	0	2
Brown coble	2	12
Brown gravel Hard	12	45
Brown gravel 1:1:1 clay	45	75
Brown gravel & sandstone	75	105
Brown gravel & water	105	125
Only pump		
clean 9-10 gal/s.m.		



Start Date 3-14-06 Completed Date 3-15-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Mike Morefield

Driller/Engineer/Trainee Signature Mike Morefield

Driller or trainee License No. 2361

IF TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

Drilling Company Waterman Well Drilling

Address PO Box 246

City, State, Zip Seattle WA 98142

Contractor's Registration No. WATERW0022DB3/22/04

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

WATER WELL REPORT

Start Card No. W36927

STATE OF WASHINGTON

Unique Well I.D. #
Water Right Permit No.

(1) OWNER: Name HAKE, PAULA D.		Address P.O. BOX 125 ELLENSBURG, WA 98926-	
(2) LOCATION OF WELL: County KITTITAS		- SW 1/4 NW 1/4 Sec 25 T 19 N. R 17 W	
(3a) STREET ADDRESS OF WELL (or nearest address):			
(3) PROPOSED USE: DOMESTIC		(10) WELL LOG	
(4) TYPE OF WORK: Owner's Number of well (If more than one) 1 Method: ROTARY		Formations: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.	
(5) DIMENSIONS: Diameter of well 6 inches Drilled 300 ft. Depth of completed well 290 ft.		MATERIAL FROM TO	
(6) CONSTRUCTION DETAILS: Easing installed: 6 " Dia. from +2 ft. to 176 ft. WELDED 4 " Dia. from -5 ft. to 290 ft. " Dia. from ft. to ft.		SILT 0 3 SAND GRAVEL CLAY 3 11 SAND GRAVEL 11 20 CEMENTED SAND GRAVEL 20 60 SAND GRAVEL CLAY 60 75 SAND GRAVEL WITH WATER 75 113 CEMENTED SAND GRAVEL 113 125 SAND GRAVEL WITH WATER 125 135 CEMENTED SAND GRAVEL 135 176 SAND GRAVEL WITH WATER 176 180 CEMENTED SAND GRAVEL 180 220 SANDY CLAY 220 245 SANDSTONE 245 269 SANDSTONE WITH WATER 269 275 SANDSTONE 275 300	
Perforations: YES Type of perforator used SKILL SAW Size of perforations 1/4 in. by 7 in. 30 perforations from 180 ft. to 200 ft. 30 perforations from 270 ft. to 290 ft. perforations from ft. to ft.			
Screens: NO Manufacturer's Name Type Diam. slot size Diam. slot size		Model No. from ft. to ft. from ft. to ft.	
Gravel packed: NO Gravel placed from ft. to ft.		Size of gravel ft. to ft.	
Surface seal: YES Material used in seal BENTONITE Did any strata contain unusable water? NO Type of water? Depth of strata ft. Method of sealing strata off OVERBORE			
(7) PUMP: Manufacturer's Name Type H.P.			
(8) WATER LEVELS: Land-surface elevation Static level 40 ft. above mean sea level ... ft. Artesian Pressure lbs. per square inch Date 04/27/94 Artesian water controlled by		Work started 04/21/94 Completed 04/27/94	
(9) WELL TESTS: Drawdown is amount water level is lowered below static level. Has a pump test made? NO If yes, by whom? Yield: gal./min with ft. drawdown after hrs. Recovery data Time Water Level Time Water Level Time Water Level		WELL CONSTRUCTOR CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief. NAME PONDEROSA DRILLING (Person, firm, or corporation) (Type or print) ADDRESS E 1810 BROADWAY LICENSED [Signature] License No. 1544 Contractor's Registration No. PD-MD-EI-248JE Date 04/29/94	
Date of test / / Bailer test gal./min. ft. drawdown after hrs. Air test 3 gal./min. w/ stem set at 295 ft. for 1 hrs. Artesian flow g.p.s. Date Temperature of water Was a chemical analysis made? NO			

File Original with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W 123 592UNIQUE WELL I.D. # AFH 492

Water Right Permit No. _____

(1) OWNER: Name Rob Crossman Address 2402 Hannah Rd Ellensburg(2) LOCATION OF WELL: County Kittitas SW 1/4 NW 1/4 Sec 25 T 19 N R 17E WM(2a) STREET ADDRESS OF WELL: (or nearest address) Hwy 97

TAX PARCEL NO.: _____

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal
☐ Irrigation ☐ Test Well ☐ Other
☐ DeWater(4) TYPE OF WORK: Owner's number of well (if more than one) _____
☒ New Well Method: ☐ Dug ☐ Bored
☐ Deepened ☐ Cable ☐ Driven
☐ Reconditioned ☐ Rotary ☐ Jetted
☐ Decommission(5) DIMENSIONS: Diameter of well 6 inches
Drilled 380 feet. Depth of completed well _____ ft.

(6) CONSTRUCTION DETAILS

Casing Installed:

☒ Welded 6 Diam. from 12 ft. to 318 ft.
☐ Liner installed 5 Diam. from 12 ft. to 240 ft.
☐ Threaded _____ Diam. from _____ ft. to _____ ft.Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Diam. _____ Slot Size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Material placed from _____ ft. to _____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 35Material used in seal BentoniteDid any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____

Static level 270 ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____

(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time Water Level Time Water Level Time Water Level

Date of test _____

Baker test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 1 gal./min. with 270 ft. drawdown after 2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
TOP Soil	0	4
Brown Clay & gravel	4	82
Sandy Clay & water (1/2 GPM)	82	86
Sticky Brown Clay	86	147
gray Clay & gravel	147	206
gray Sand Stone	206	232
Sand & water about (1 GPM)	232	236
gray clay & gravel	236	257
Gravel & Sand	257	275
Sand Stone	275	297
gray Clay & Sand	297	380

Work Started 6/10/00 Completed 6/20/00

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Mitch Mathews License No. 1267
(Licensed Driller/Engineer)

Trainee Name _____ License No. _____

Drilling Company MATHews Drilling(Signed) Mitch Mathews License No. 1267
(Licensed Driller/Engineer)Address 2317 Rd 10.12 NE M.L. WaContractor's Registration No. MATHews 117B Date 6/26/00

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

APPENDIX B

RARE PLANT SURVEY REPORT



ecology and environment, inc.

International Specialists in the Environment

Seattle Office

720 Third Ave, Suite 1700

Seattle, Washington 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

October 7, 2009
Mr. David Steeb
Desert Claim Wind Power LLC
P.O. Box 4
Woodinville, WA 98072

**RE: Rare Plant Survey
Desert Claim Wind Power Project, Ellensburg, Washington**

Dear Mr. Steeb,

From July 28th to 30th, 2009, Ecology and Environment (E & E) ecologists conducted a rare plant survey in proposed Desert Claim wind energy project area (Figure 1). This 5,200-acre area is made up of both privately and publicly owned land in sections 4, 9, 16 – 18, 19, 20 – 22, 27, 29, and 30 in Township 19 North, Range 18 East, approximately 8 miles north of the City of Ellensburg in Kittitas County.

Species considered for this rare plant survey included those listed as Threatened, Endangered, or Candidate for listing under the federal Endangered Species Act (ESA) and as either Threatened or Endangered by Washington State. Regarding State-listed Threatened and Endangered species, onsite habitat requirements for these species were not met. The absence of requirements is indicated by unsuitable site elevation, lack of suitable vegetation communities, or the project site is outside historical ranges in Kittitas County for these species. Therefore, surveys were not conducted. Based on E & E's literature review and discussion with resource agencies, one listed species was identified as likely to occur in or around the project area; the Ute ladies'-tresses (*Spiranthes diluvialis*; Appendix A).

The project area is comprised predominately of upland environment that can be described as open shrub-steppe. Typically, the dry environment of eastern Washington limits wetland areas to the immediate vicinity of perennial streams, seeps, and springs. The Ute ladies'-tresses is typically found in broad, open wetland complexes.

Rare Plant Species Ecology

Ute ladies'-tresses is a perennial, terrestrial orchid listed as a State "Endangered" species and federally "Threatened" species. This species is known to occur in eight states, including Washington. In Washington, only four known populations have been positively identified in Okanogan and Chelan counties.

Although no documented occurrences have been recorded in Kittitas County, Mr. Joseph Arnett, a rare plant botanist at the Washington Department of Natural Resources' Natural Heritage Program, indicated in an electronic mail exchange with E & E that state-wide surveys were incomplete and appropriate habitat to support this plant may exist around the project area.

Ute ladies'-tresses are typically found in low-elevation intermontane valley plains with sufficient moisture, such as moist meadows, adjacent to sagebrush-steppe, as well as stream or river banks, irrigated hay meadows, and wetlands associated with springs, streams, lakes, irrigation ditches.

As this plant generally grows to be only 8 to 20 inches tall, Ute ladies'-tresses prefers locations with low vegetation cover and is commonly associated with redtop (*Agrostis stolonifera*), St. John's wort (*Hypericum perforatum*), western mountain aster (*Aster occidentalis*), Canada bluegrass (*Poa compressa*), and white sagebrush (*Artemisia ludoviciana*). This plant is in bloom from approximately mid-July through August, during which time the easily distinguishable white, gaping flowers facilitate identification.

One of most significant threats to Ute ladies'-tresses is the impact to riparian and wetland habitats that support this species. Impacts may include stream channelization, water diversion, conversion of riparian/floodplain lands to agricultural uses, and grazing.

Using this information, E & E surveyed the proposed Desert Claim project area during the optimal flowering period to identify the potential presence of this plant in the project area, focusing survey efforts predominantly on moist lowlands with minimal vegetative cover.

Field Survey

In addition to contacting Mr. Arnett Prior, E & E also conducted a review of the Natural Heritage Program database to determine if Ute ladies'-tresses had been previously documented in Kittitas County. The general habitat characteristics of the project area were evaluated prior to initiating field surveys.

E & E conducted field surveys for the Ute ladies'-tresses from July 28th to 30th, 2009. During field surveys, if little or no appropriate Ute ladies'-tresses habitat occurred at a particular location, a preliminary survey was conducted. If no plant occurrences were detected, no additional surveys were completed. If appropriate habitat was identified, more intensive visual inspections of the area were conducted.

More intensive surveys of appropriate habitat included visual inspection by one to two E & E ecologists. During these surveys, each ecologist carried a handheld Geographic Positioning System unit for mapping any observed plant specimens. If a plant was located, all surveyors would halt and conduct a detailed survey in the vicinity of the located individual or population for additional plants. To the extent possible, photographs of Ute ladies'-tresses, showing diagnostic floral characteristics, were to be taken.

No individual Ute ladies'-tresses or any other species of *Spiranthes* were observed during E & E's survey.

Conclusions and Recommendations

Although the project area contains the appropriate habitat of Ute ladies'-tresses, no occurrences of Ute ladies'-tresses were observed during the E & E field survey effort.

While it is possible, but unlikely, that this rare plant is present on the project area due to lack of field observations and the ongoing cattle grazing activities. As the proposed Desert Claim wind farm will be designed to avoid disturbing the water features that may provide any Ute ladies'-tresses with necessary habitat, E & E does not anticipate the project actions will negatively impact this species.

If you have any questions or comments regarding these findings, please contact me at 206-624-9537 or at cfisher@ene.com.

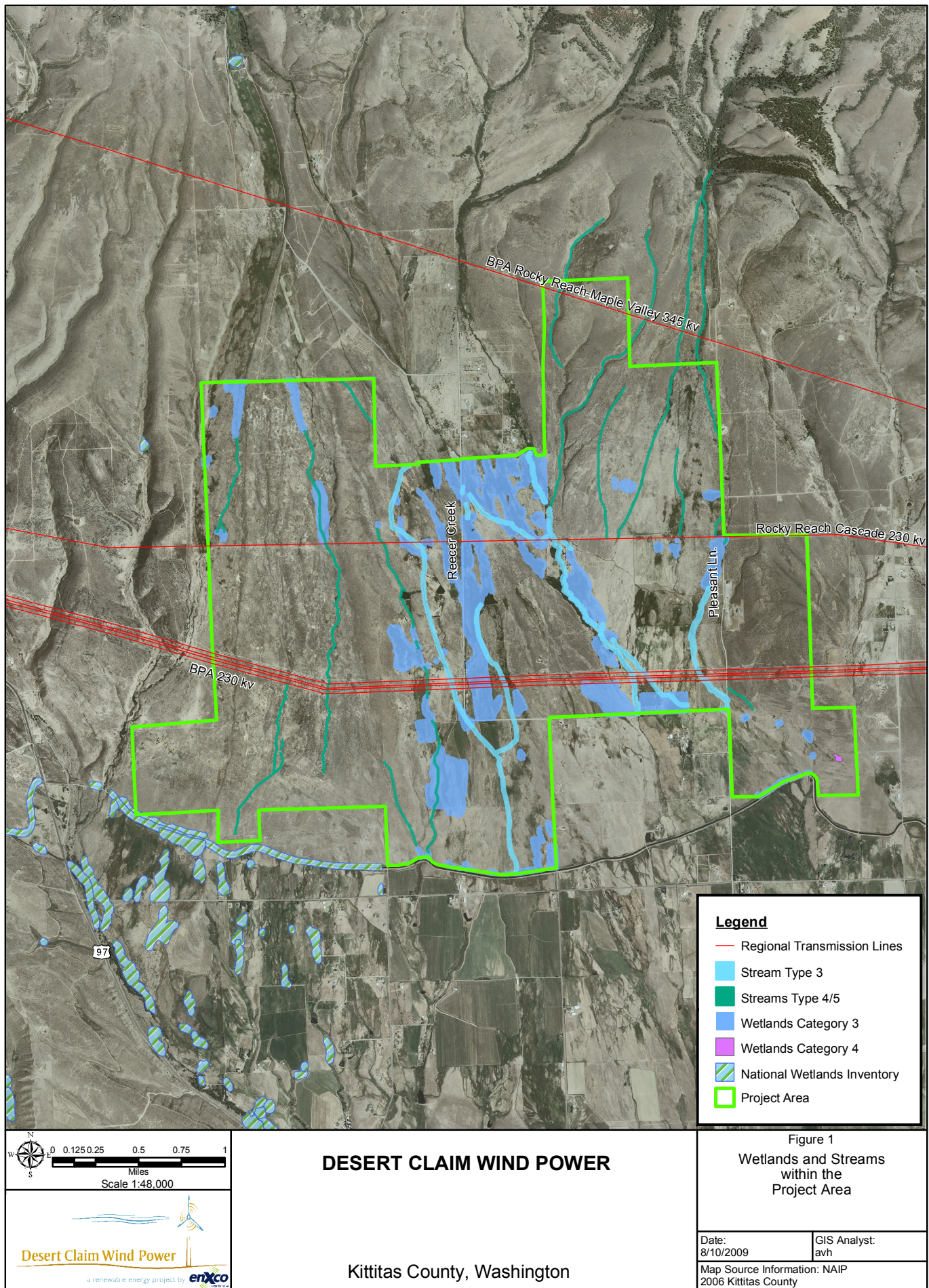
Sincerely,
ECOLOGY AND ENVIRONMENT, INC.

A handwritten signature in black ink, appearing to read 'C. Fisher', with a stylized flourish at the end.

Cameron Fisher, Senior Biologist
E & E Seattle

Attachment

Cc: W. Richards, E & E Seattle
R. Weinman, Seattle



Appendix A

USFWS Endangered, Threatened, and Candidate Species List for Kittitas County

KITTITAS COUNTY

Updated 7/24/2008

LISTED

Endangered

Gray wolf (*Canis lupus*)

Threatened

Bull trout (*Salvelinus confluentus*) – Columbia River distinct population segment

Grizzly bear (*Ursus arctos horribilis*)

Canada lynx (*Lynx canadensis*)

Marbled murrelet (*Brachyramphus marmoratus*)

Northern spotted owl (*Strix occidentalis caurina*)

Spiranthes diluvialis (Ute ladies'-tresses), plant

Designated

Critical habitat for the northern spotted owl

Critical habitat for the Columbia River distinct population segment of the bull trout

CANDIDATE

Fisher (*Martes pennanti*) - West Coast distinct population segment

Greater sage grouse (*Centrocercus urophasianus*) – Columbia Basin distinct population segment

Yellow-billed cuckoo (*Coccyzus americanus*)

SPECIES OF CONCERN

Animals

Bald eagle (*Haliaeetus leucocephalus*) (delisted, monitor status)

Black swift (*Cypseloides niger*)

Burrowing owl (*Athene cunicularia*)

Ferruginous hawk (*Buteo regalis*)

Larch Mountain salamander (*Plethodon larselli*)

Loggerhead shrike (*Lanius ludovicianus*)

Long-eared myotis (*Myotis evotis*)

Northern goshawk (*Accipiter gentilis*)

Olive-sided flycatcher (*Contopus cooperi*)

Pacific lamprey (*Lampetra tridentata*)

Pallid Townsend's big-eared bat (*Corynorhinus townsendii pallescens*)

Peregrine falcon (*Falco peregrinus*) (Delisted, monitor status)

Pygmy whitefish (*Prosopium coulteri*)
Redband trout (*Oncorhynchus mykiss*)
River lamprey (*Lampetra ayresi*)
Sagebrush lizard (*Sceloporus graciosus*)
Sharptail snake (*Contia tenuis*)
Townsend's ground squirrel (*Spermophilus townsendii*)
Western brook lamprey (*Lampetra richardsoni*)
Western gray squirrel (*Sciurus griseus griseus*)
Westslope cutthroat trout (*Oncorhynchus clarki lewisi*)
Wolverine (*Gulo gulo*)

Vascular Plants

Astragalus columbianus (Columbia milk-vetch)
Cypripedium fasciculatum (Clustered lady's-slipper)
Delphinium viridescens (Wenatchee larkspur)
Lomatium tuberosum (Hoover's desert-parsley)
Phacelia minutissima (Least phacelia)
Pinus albicaulis (Whitebark pine)
Silene seelyi (Seely's silene)
Tauschia hooveri (Hoover's tauschia)

Mosses

Orthotrichum praemorsum

5.0 REFERENCES CITED

- Alberti, Leone Batista, Cosimo Bartoli, Giacomo Leoni. 1755. *The Ten Books of Architecture*: Book 8, Chapter 6, p. 173. Dover Publications, New York.
- American Wind Energy Association. 2009. *Wind Energy Basics*. Available online at http://www.awea.org/faq/wwt_basics.html.
- British Wind Energy Association (BWEA). 2005. *BWEA Briefing Sheet: Public Attitudes to Wind Energy in the UK*. Available at www.bwea.com.
- Bumenfeld, Hans. 1953. *Scale in Civic Design*. In *Town Planning Review*, Volume 24, April 1953. pp. 36-37.
- Cade, T. J. 1982. *Falcons of the world*. Cornell Univ. Press, Ithaca, NY.
- Central Washington University. 2009. *Kittitas County Economic Impacts from Proposed Desert Claim Wind Power Project*. Ellensburg, Washington.
- Chatham-Kent Public Health Unit. 2008. *The Health Impact of Wind Turbines: A Review of the Current White, Grey and Published Literature*. Available online at <http://www.wind-works.org/LargeTurbines/Health%20and%20Wind%20by%20C-K%20Health%20Unit.pdf>.
- County of Essex. 1973. *A Design Guide for Residential Areas*. County Council of Essex, England. P. 65.
- ECONorthwest. 2009. *Economic Impacts of the Desert Claim Wind Project: A Report to the enXco Company*. Portland, Oregon. EFSEC. 2007. *Kittitas Valley Wind Power Project: Final Environmental Impact Statement*. Olympia, Washington.
- Energy Facility Site Evaluation Council (EFSEC). 2005. *Kittitas Valley Wind Power Project, Draft Environmental Impact Statement Addendum*. Olympia, Washington.
- Erickson, W.P., B. Gritski, and K. Kronner, 2003b. *Nine Canyon Wind Power Project Avian and Bat Monitoring Report*, August 2003. Technical report submitted to Energy Northwest and the Nine Canyon Technical Advisory Committee.
- Erickson, W.P., D. Young, G. Johnson, J. Jeffrey, K. Bay, R. Good, and H. Sawyer. 2003c. *Wildlife Baseline Study for the Wild Horse Wind Project. Summary of Results from 2002-2003 Wildlife Surveys May 10, 2002-May 22, 2003*. Draft report prepared for