5. RESPONSE TO DRAFT EIS ISSUES

This chapter of the Final EIS presents responses to the substantive issues raised in the public and agency comments received on the Draft EIS. Kittitas County organized all of the comments it received, both written and verbal comments, by source, category and issue as explained below. Overall, the County received more than 940 individual comments from over 100 sources of input on the Draft EIS. Based on review and classification of the comments, the County identified 157 individual issues within 19 substantive issue categories, and an additional 24 specific issues within 3 other or non-substantive issue categories.

The Kittitas County Community Development Services Department issued the Desert Claim Wind Power Project Draft EIS on December 15, 2003. The formal review period for public and agency comment on the Draft EIS closed on January 30, 2004. All comments on the Draft EIS received by the close of business on January 30 were considered in the preparation of the Final EIS.

The County received 78 written comment letters and 30 people provided comments in the form of verbal testimony. A number of reviewers submitted written comments on the Draft EIS by letter and electronic mail. Verbal comments were submitted as testimony at a public meeting held on January 20, 2004 at the Home Arts Building on the Kittitas County Fairgrounds. Several attendees at the January 20 meeting also documented their comments on comment forms available at the meeting, and these comments were included with the written comments.

Table 5-1 provides a list of all comments received by the County on the Draft EIS, including both the written comment records and the testimony statements. The comments listed in **Table 5-1** are divided by source, broken down into: 1) comments from agencies; 2) comments from organizations; 3) comments from individuals; 4) comments from individuals using an identical form letter; and 5) verbal comments provided at the January 20, 2004 public meeting.

Many of the written and verbal comment records included numerous individual comments. **Table 5-1** lists the number of individual comments identified for each comment record.

The County used a multi-step process to organize and respond to all of the comments it received. First, the County sorted the comment records into three categories. The categories are based on whether the source of the comments was a public agency, an organization or an individual. Second, the County numbered all written comment records sequentially from 1 to 78. Based on the number of comment records in each category (i.e., public agency, organization, or individual), the comment record identifiers ranged from 1 to 4 for comments from public agencies, 5 through 10 for comments from organizations, and 11 through 78 for comments from individuals. Comment records 52 through 78 are copies from a form letter that are identical except for the signature of the sender. Third, the County sorted the verbal testimony provided at the public meeting. This testimony was recorded on audiotape, which the County used to develop a written transcript of the meeting. The County then labeled the testimony statements from the 30 speakers at the meeting T1 through T30. All of this is presented in **Table 5-1.**

As the fourth step in the process, the County reviewed all written comments and testimony provided on the Draft EIS. Specific passages from the letters and testimony that constituted comments on the Draft EIS were marked with vertical bars in the margin of the letter or statement. Portions of letters or testimony that did not constitute comments on the DEIS were not marked. All comments within a letter or

statement were then numbered sequentially, resulting in a unique two-part numerical identifier for each specific comment (e.g., "6-1"refers to the first comment identified within comment record number 6, the letter from the Kittitas County Airport Advisory Committee). Fifth, the County grouped individual comments into issue categories based on the nature of the subject matter and the section of the Draft EIS the comment addressed.

The County's process of reviewing and categorizing comments established 19 substantive issue categories and identified discrete issues within each category. Sixth, the County organized comments that represented the same or very similar thoughts into individual issues within the respective categories. It then assigned and marked alphanumeric issue identifiers alongside each comment. And last, the County established three categories of other issues that did not address the substance of the Draft EIS (i.e., EIS scope and content, alternatives, impact issues or mitigation). These categories included comments that addressed non-environmental issues that are not within the scope of a SEPA review, expressed support for or opposition to the proposed action or some aspect of the proposal, or expressed values or beliefs that did not specifically relate to the substance of the EIS. Comments falling within these categories were also marked for identification and response.

Table 5-2 represents the County's identification and organization of comments pursuant to the above process. **Table 5-2** lists all of the issues identified in the comments received on the Draft EIS. The first column in the table identifies the alphanumeric code assigned to each issue; for example, the issue coded EIS-1 is the first issue identified among those comments addressing the overall SEPA/EIS process and scope, as documented in the Draft EIS. The second column of the table is a summary statement of the issue. In some cases this statement is rather brief, while in others there are multiple discrete aspects of an issue that are noted in the table. The third column in **Table 5-2** lists all of the comments that were interpreted as representing the respective issue. These comments are listed using the County's response coding and organization system, as described above.

The text following **Table 5-2** provides the responses to the issues raised in the comments, organized by category as shown in the table. For each issue there is a brief narrative summarizing the issue and the range of comments addressing that issue, a listing of the applicable comments for that issue, and the complete response to the issue. Subheadings are used where necessary in the responses to indicate material addressing a specific aspect of an issue.

Copies of all of the written comment records and the testimony statements are included in **Appendix I**. These copies include the markings that identify the comment record, the comment numbers and the issue codes consistent with **Tables 5-1 and 5-2**. For cross-referencing purposes and to provide a complete list of all of the comments submitted to the County on the Draft EIS, **Tables 5-1** and **5-2** are repeated as **Tables I1** and **I2** in the **Appendix I**.

Table 5-1
Draft EIS Comment Log

1. Comments from Agencies

Comment Record No.	Agency	Name of Source	Date of Record	Date Received	No. of Comments
1	Washington Department of Fish and Wildlife (WDFW)	Ted Clausing Regional Habitat Program Mgr.	1-30-04	1-30-04	17
2	Washington State Department of Transportation (WSDOT)	Salah Al-Tamimi, PE Regional Planning Engineer	1-29-04	2-02-04	8
3	Kittitas County Public Works Department	Paul Bennett, PE Director of Public Works	1-30-04	1-30-04	9
4	Kittitas County Fire Marshall	Derald Gaidos Fire Marshal	1-29-04	2-02-04	10

2. Comments from Organizations

Comment Record No.	Organization	Name of Source	Date of Record	Date Received	No. of Comments
5	Kittitas Audubon Society	Keith Johnson President	1-28-04	1-30-04	16
6	Kittitas County Airport Advisory Committee	Shan Rowbotham Chairman	1-29-04	1-29-04	9
7	McCullough, Hill, Fisko, Kretschmer, Smith	Courtney Flora	1-30-04	1-30-04	2
8	The Phoenix Group	Debbie Strand, CecD Executive Director	1-30-04	1-30-04	1
9	Renewable Northwest Project	Sonja Ling Policy Associate	1-30-04	1-30-04	6
10	Residents Opposed to Kittitas Turbines	Ed Garrett	1-23-04	1-23-04	1

Table 5-1
Draft EIS Comment Log (cont'd)

3. Comments from Individuals

Comment Record ID	Individual	Date of Record	Date Received	No. of Comments
11	Loran and Judy Allen	Not indicated	1-30-04	12
12	Lee Bates	12-23-03/1-22-04	1-22-04	30
13	Jack Boyovich	1-22-04	1-22-04	1
14	Linda Brown	1-22-04	1-23-04	7
15	Emilia Burdyshaw	1-26-04	1-26-04	16
16	Lee and Chris Burtchett	1-10-04	1-20-04	15
17	Lee and Chris Burtchett	1-20-04	1-20-04	12
18	Chris Burtchett	1-25-04	1-26-04	5
19	Judy Corey	1-19-04	1-19-04	2
20	Shirley Dawson	1-10-04	1-20-04	4
21	Arthur DePalma	1-20-04	1-20-04	6
22	William Erickson	1-16-04	1-20-04	3
23	Randy Fischer	1-21-04	1-21-04	4
24	John and Barbara Foster	1-26-04	1-26-04	6
25	Ed Garrett	1-19-04	1-19-04	6
26	Ed Garrett	1-19-04	1-20-04	5
27	Ed Garrett and Rosemary Monaghan	1-29-04	1-30-04	73
28	Gene Johnson	1-29-04	1-30-04	4
29	Jill Kuhn	Not indicated	1-30-04	45
30	Eric Larsen	1-30-04	1-30-04	32
31	Janet Lee	1-19-04	1-19-04	2
32	Janet Lee	1-27-04	1-27-04	5
33	Hal and Gloria Lindstrom	1-30-04	1-30-04	8
34	Mitch Meffert	1-08-04	1-08-04	1
35	Mitch Meffert	1-19-04	1-19-04	2
36	Janet Nelson	1-29-04	2-02-04	19
37	Felicia Persson	1-20-04	1-20-04	5
38	Felicia Persson	1-25-04	1-30-04	120
39	Ray and Betty Ridenour	1-28-04	1-30-04	5
40	Mike Robertson	1-25-04	1-25-04	1
41	Michael and Elizabeth Robertson	1-19-04	1-19-04	36
42	Geoff Saunders	1-30-04	1-30-04	24
43	Linda and Charles Schantz	1-30-04	1-30-04	128
44	Al and Diane Schwab	Not indicated	1-20-04	18
45	Diane Schwab	1-22-04	1-22-04	2
46	Gloria Sharp and Boyd Rear	Not indicated	1-30-04	2
47	Jeff Slothower	1-30-04	1-30-04	12
48	Clem Staloch	Not indicated	1-29-04	9
49	Linda Waits	1-21-04	1-21-04	1
50	John Winbauer	1-30-04	1-30-04	5
51	Woody Woodcock	1-29-04	1-30-04	13

Table 5-1
Draft EIS Comment Log (cont'd)

4. Comments from Individuals (in identical form letter)

Comment Record No.	Individual	Date of Record	Date Received	Number of Comments
52	Kathleen L. Armstrong	12-31-03	1-22-04	2
53	Roy D. Armstrong	12-31-03	1-22-04	2
54	Dean Auve'	11-18-03	1-22-04	2
55	Rosemarie Auve'	11-08-03	1-22-04	2
56	Cynthia Bourasaw	11-18-03	1-22-04	2
57	David W. Bourasaw	11-19-03	1-22-04	2
58	David J. Boyovich Sr.	1-20-04	1-22-04	2
59	Patricia A. Boyovich	1-20-04	1-22-04	2
60	Keley D. Dormaier	11-24-03	1-22-04	2
61	Ellen B. Finch	11-20-03	1-22-04	2
62	Marvin G. Finch	11-18-03	1-22-04	2
63	Janet L. Gudgel	11-16-03	1-22-04	2
64	Jerry L. Gudgel	11-15-03	1-22-04	2
65	George Grigg	1-11-04	1-22-04	2
66	Karen V. Grigg	1-11-04	1-22-04	2
67	Jean L. Jackson	1-11-03	1-22-04	2
68	Robert Jackson	1-11-03	1-22-04	2
69	Eloise Kirchmeyer	12-10-03	1-22-04	2
70	Charles McCosh	12-08-03	1-22-04	2
71	Elizabeth F. Lasell-McCosh	12-06-03	1-22-04	2
72	Allison Muraites	1-11-04	1-22-04	2
73	Carl Michael	1-11-04	1-22-04	2
74	Teri Michael	1-11-04	1-22-04	2
75	Michael F. Thompson	12-06-03	1-22-04	2
76	Gaylen C. Waschell	12-23-03	1-22-04	2
77	Rozella Waschell	12-23-03	1-22-04	2
78	Gregory Willette	11-18-03	1-22-04	2

Table 5-1
Draft EIS Comment Log (cont'd)

5. Comments from January 20, 2004
Public Testimony

Comment Record No.	Individual	Number of Comments
T1	Phyllis Whitbeck	1
T2	Ginger Morrison	1
T3	Arthur DePalma	7
T4	Dwight Lee Bates	8
T5	Ed Garrett	4
T6	Jeff Howard	1
T7	Bertha Morrison	1
T8	Chris Burtchett	3
T9	Dana Lind	1
T10	David Sager	1
T11	Diane Schwab	5
T12	Jack Boyovich	6
T13	Holly Pinkart	6
T14	William Erickson	6
T15	Rocky Farrell	1
T16	Roger Weaver	1
T17	Eloise Kirchmeyer	2
T18	Michael Gossler	1
T19	Kirk Diehl	3
T20	David Lee	2
T21	Leslie White	1
T22	Linda Schantz	8
T23	Desmond Knudson	6
T24	Woody Woodcock	7
T25	Helen Wise	2
T26	Felicia Persson	3
T27	Keith Johnson	6
T28	Ron Nelson	2
T29	Chris Cole	4
T30	Dan Quinn	4

Table 5-2
Issues Based on Draft EIS Comments

Issue Code	Summary of Issue	Corresponding Comments
	PROGRAMMATIC/POLICY ISSUES	
EIS	**SEPA/EIS Process and Scope**	
1	**General adequacy of DEIS content and analysis** Multiple comments relating to the overall adequacy of the material presented in the DEIS, as opposed to comments addressing page- or section-specific technical content in the DEIS. Comments in this category generally reflect one of four themes: (1) general criticism of the content and approach in the DEIS, such as statements that the DEIS minimizes the project's effects, that conclusions were hastily made based on other wind projects, or that the DEIS lacks quantitative and qualitative information on impacts; (2) comments related to the information sources used to develop the DEIS, such as comments that the majority of the studies cited were developed by wind energy proponents and that the DEIS should use other sources with information on impacts of existing projects; (3) comments concerning the level of site-specific detail in the DEIS, generally requesting identification of impacts to individual residences or from specific turbines; and (4) comments that were complimentary with respect to the approach and content of the DEIS.	6-1, 7-1, 9-1, 15-1, 17-1, 18-2, 19-1, 25-1, 27-66, 27-72, 29-1, 30-1, 38-117, 43-120, 43-125, 43-128, 45-1, 47-2, 51-13, T7-1, T8-1, T11-1, T29-1
2	**Geographic scope and scale of analysis** Comments about the appropriate range of the impact analysis, including statements that **Section 2.2.1.3** should indicate residences within one-half mile radius of project in order to clearly indicate the number of residences impacted by the proposed project; or that analysis should include residences up to 2 miles away.	38-15, 43-40
3	**Adequacy of maps provided in DEIS** General comments about the DEIS maps, including statements that maps indicating property ownership should have been included; maps need greater detail; maps are not legible, do not depict enough of the area; difficult to determine extent of impacts; **Figure 1.1** does not indicate roads; and **Figure 3.10.2** does not show the project location.	15-12, 44-6, 44-8, T11-2
4	**Evaluation of project against Kittitas County criteria for wind farm approval** Statements about and comparison of DEIS content with the general criteria (identified in the DEIS) to be used by the Kittitas County Board of Commissioners to determine the final land use approval decision for the project; suggestion that these criteria have not been met; and objection to perceived implication that DEIS indicates criteria are met.	16-2, 16-5, 16-6, 17-3, 29-2, 29-7, 29-8, 38-3, 41-3, 43-121, 44-4, 51-1, T8-2, T24-1
5	**Responsibility of Kittitas County** Comment that Kittitas County has a responsibility to ensure that potential impacts from the project are assessed in a complete and unbiased manner, mitigation measures are required and enforced, and a system to report problems and enforce mitigation will be in place.	30-32
6	**Time needed for a decision on the project** Comments relating to the timing of the EIS and/or the County decision, including requests to not make a hasty decision, take more time to analyze data on problems from other wind farms, and stall decision until BLM finalizes an EIS on wind power in the western states. Also includes a comment that it seems senseless to go through the review of the DEIS without the approval of the appropriate zoning requirements.	18-5, 24-5, 29-3, 29-4
7	**Need for project power/power market issues** Comments that the EIS has not shown a need for the project, contains inadequate discussion of current wind power production or how much capacity utilities are seeking, or does not adequately assess market for wind energy production in the state.	23-4, 41-30, 47-1

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

8	**Need for subsequent environmental review** Includes a request to correct Fact Sheet to indicate that subsequent environmental review may be required, and statement that DEIS does not mention future expansion of the proposed project while the Desert Claim application leaves the door open for expansion.	27-5, 51-8
9	**Description of the applicant and/or its objectives for the proposed action** Comments addressing the DEIS description of the applicant; about existence of buyer for the power; whether energy from project would remain in Pacific Northwest; reference to site-specific criteria identified as needed for a wind facility; inclusion of statements considered to be marketing projections or political positions; lack of federal or state requirements to purchase wind power.	27-6, 38-4, 41-2, 42-1, 42-3
10	**Approach to mitigation in the DEIS** Comments relating to the general approach to mitigation as discussed in the DEIS, such as statements that contingency measures should be in place if the EIS is wrong about impacts; measures are not long-term in focus, do not obligate the applicant to corrective actions after construction; need comprehensive mitigation before construction; include a 24-hour hotline to address residents' concerns and impacts. Also editorial comments to use prescriptive wording on mitigation, replace certain words in the DEIS.	27-58, 27-67, 38-34, 38-118, 43-67, 44-16, 51-12, T11-5
11	**Number of wind farms proposed** Question why so many wind farms are proposed for this area, as impact would be significantly less with just one proposed.	36-4
12	**Unique aspects of the proposed project configuration** Comments that the disassociative properties of Desert Claim make it incomparable to either of the alternatives or the Kittitas Valley Wind Power Project, and create need to address impacts to "captive" properties.	37-5, T26-3
13	**Cost and accessibility of the DEIS** Comments about cost of hardbound copy of DEIS, how cost was derived, who paid the production/printing cost; difficult to analyze document on CD, but printed document was too costly to purchase.	11-12, 38-2, 51-3
14	**Selected EIS terminology** Requests to replace "wind farms" with "wind factories," "non-participating land owners" with "unwilling landowners" or "captive landowners."	37-4, 38-1, 43-122
15	**Editorial correction on page 5-2** Comment that DEIS incorrectly identifies project location as "King County" (p.5.2)	38-115
16	**Comments on Kittitas Valley EIS** Comment presented in testimony at the Desert Claim DEIS public meeting that was actually based on content of the Kittitas Valley Wind Power Project EIS.	T18-1
ALT	**Alternatives**	
1	**Definition of the No Action Alternative** Comments addressing the No Action Alternative as defined in the EIS. These comments generally fit one of three types: (1) consideration of other energy-supply actions that might be undertaken if the Desert Claim project were not developed; (2) characterization of future land use and development conditions in the vicinity of the project area if the project were not approved; and (3) objections to specific aspects of and/or requested specific changes to the EIS description of the No Action Alternative, including requests to strike specific entries.	5-4, 9-2, 9-3, 27-10, 27-11, 27-12, 27-17, 29-13, 30-4, 38-5, 38-7, 38-10, 42-6, 43-49, 44-1, 47-4, T11-1, T27-2
2	**Scale of Proposed Action** Question regarding determination of wind turbine quantity for proposal and suggestion that a smaller-scale project be considered.	14-6, 36-5

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

3	**Adequacy of Alternative 1** Comment that Alternative 1 is not a practical alternative.	29-11
4	**Adequacy of Alternative 2** Comments that Alternative 2 is not practical or viable; can't be evaluated.	29-12, 29-14
5	**Alternative generation technologies** Comments that DEIS does not, but should, discuss alternatives to wind power that could cut greenhouse emissions and reduce dependence on foreign oil (e.g., restructuring the power grid, conservation, solar power, hydrogen power, homeowner incentives).	36-1, 36-6, T14-5, T27-1, T29-4
6	**Alternative sites** Comments that EIS should consider other sites for the project where impacts to residents may be less, or alternative sites with potentially suitable wind (including several specific areas). Also includes more general comments that a proper location would be out of view or in an unpopulated area, and comments expressing skepticism that the proposed area provides adequate wind to support a project.	39-1, 48-1, 48-6
7	**Proximity to transmission lines** Comments that no alternate site was provided that was not already near existing transmission lines; offsite alternative locations that involved incurring the cost of transporting the power produced were not included.	41-4, 41-29, 41-31
PD	**Project Description**	
1	**General comments on specificity of construction description** Request for clarification of construction actions (e.g., use of blasting for foundations, earthwork, assembly of turbines); include cubic yards of earth disturbed/removed.	11-1, 43-43
2	**Description of operation and maintenance activities and schedules** Request for clarification regarding turbine operation and maintenance schedules; meaning of "controlling turbine operations to meet scheduled power deliveries." Also comment that O&M activities should include a process for complaint resolution and a wildlife monitoring program.	14-4, 27-4, 38-28
3	**Project decommissioning** Comments relating primarily to decommissioning of the project, including questions regarding decommissioning plan or responsibility for decommissioning; comments that decommissioning plan is not shown, need a plan with provisions for accelerating decommissioning if impacts are more adverse than contemplated, and a bond should be required; statement that re-powering should not be permitted without a formal process.	12-22, 14-7, 24-4, 38-31, 38-119, 51-4, T4-2, T28-2
4	**Specific quantities and locations for project facilities** Comments that the project description should include specific numbers for turbine heights, length of overhead cable, number and location of met towers, area of graveled roads; question why **Table 2-1** includes turbines larger than 1.5 MW; 23 miles of access roads should be included in permanent impact acreage; access road connections to public roads should be on **Figure 2.12**; and proposed connections to the Kittitas Reclamation District (KRD) access road are not clear.	16-3, 38-16, 38-20, 38-21, 38-91, 43-42, 44-3
5	**Energy production capacity of the project** Comments requesting revisions to statements regarding the capacity of the proposed wind energy facility, including that DEIS overestimates actual production by using the nameplate capacity of 180 MW, as actual production is usually less than 30 percent of capacity, and that project will, at best, only contribute 60 MW of intermittent power.	27-1, 27-8, 29-28, 30-3, 41-1, 42-2

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

6	**Disposition of project output** Comments that project does not have a buyer for the energy; references to buyer and location should be revised; DEIS should state that power contracts do not exist; power will not go to Kittitas County; purchase agreements should be required for the EIS.	27-2, 27-3, 27-7, 27-9, 29-10, 42-4
7	**Use of hazardous materials** Comments that DEIS should list hazardous materials to be used, address their impacts.	43-45, T13-3
8	**Project power collection system and related facilities** Comments that DEIS should clearly identify location of transformers, electrical equipment, substations and O&M facility; identify location of collection lines and whether they encroach on adjacent property; explain cable installation on non-leased property; lines for communication network should be underground; concern regarding size and visual impact of collection lines; difference between Fact Sheet and Chapter 1.	27-51, 38-18, 43-41, 43-46, 50-3
9	**Configuration of the proposed project area** Comments that alternatives in DEIS do not realistically represent the project; project is unique in its patchwork appearance, is identified as 5,237 acres but encompasses many more acres; project is actually 4 or 5 micro-sites that surround unwilling landowners.	37-3, 38-14
10	**Description of Kittitas County objectives** Comment that only the County objectives specifically contained in KCC17.61A.010 or its appendices should be referenced in the DEIS (re page 2-41).	38-32
11	**Transmission interconnection point** Comment that DEIS identifies potential interconnection point at Woldale substation. Additional development, potential impacts and mitigation for this should be addressed.	38-19
12	**Project visitor center** Comments that DEIS does not address location and potential impacts of visitors center.	38-22, 43-44
13	**Phasing of project construction** Concern regarding potential for greater impact should the project be constructed in phases, and statement that option to construct project in phases should be removed.	38-23
14	**Use of local resources for project construction and operation** Comments that use of local contractors and suppliers should be quantified, as DEIS is vague on this point, and DEIS should provide actual number of local O&M staff.	38-24, 38-29
15	**Timing of restoration plans** Comment that plans for restoration should be determined prior to commencement of the project, and that reasonable deadlines and maximum impact limits should be set.	38-25
16	**Project traffic management plan** Comments that waiting for completion of project to repair roads is not acceptable; applicant should maintain roads in pre-construction condition throughout project construction; traffic plan should stress that community access cannot be compromised.	38-26, 38-27
	ELEMENT/RESOURCE ISSUES	
ER	**Earth Resources**	
1	**Impacts on Ellensburg Blue agate** Comment that DEIS does not mention impact on blue agate specific to area west of Ellensburg.	27-59
2	**Erosion impact analysis and conclusion** Comment disagreeing with the methods and/or conclusion of the erosion impact analysis.	29-15

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

3	**Landslide hazards and mitigation** Comments that landslide hazard discussion should be clarified; include site-specific geotechnical study and removal of turbines if risk cannot be acceptably mitigated.	29-16, 38-35, 38-36, 38-99
4	**Ongoing baseline impacts on earth resources** Comment that impacts of the proposed project neglect to include the same ongoing impacts addressed in the No Action Alternative (see also **Table 1-1**).	38-6
AQ	**Air Quality**	
1	**Dust impacts during operation** Concern that turbine operation would create/disperse dust clouds and pollen down wind.	12-30, 51-5, T9-1, T24-6
2	**Air quality impacts during construction** Comments relating primarily to dust from project construction, including comments that construction dust will adversely affect air quality; potential for cumulative impacts could be significant; impact would be major if mitigation does not work; request to remove statement referring to construction dust relative to other activities.	29-17, 38-40, 38-100, 43-50
3	**Mitigation for dust impacts** Comments that there is no mention of dust mitigation during construction or if turbine action results in increased dust; watering of road and soil surfaces during construction should be included; include reduction in speed limit to 20 mph; include more specifics on dust mitigation and indicate source for water needed for dust control.	38-37, 38-38, 43-26, 43-47, 43-48
4	**Greenhouse gases from backup power source** Comment that DEIS had no discussion of backup power that would be required to be on line when wind farm not producing electricity, resulting in more greenhouse gases.	36-3
5	**Air quality impacts under No Action Alternative** Comment that text should note current land use is both agricultural and residential, possible development of some other energy facility is remote and should be removed.	38-39
WR	**Water Resources**	
1	**Impacts on surface water resources and water supplies** Comments primarily concerning impacts of road and utility crossings of watercourses, including construction-related Best Management Practices (BMPs); potential to significantly impact residents' use of water for irrigation and stock; information on water use and discharge. Includes comments on permits related to surface water, i.e., that Hydraulic Project Approval (HPA) required from Washington Department of Fish and Wildlife (WDFW) and whether Washington Department of Ecology (WDOE) approval required for relocation of ephemeral or intermittent streams.	1-15, 15-3, 16-4, 29-18, 38-42, 43-51, T13-2
2	**Mitigation for potential surface water or groundwater impacts** Comments that DEIS does not address mitigation for impacts to groundwater and wells from blasting, other construction activities or operation; compensation should be provided; need 2000-foot setback; address mitigation for potential loss of water quality/quantity from crossings over watercourses; identify which water quality protections will be in place. Includes requests for assurances that water flow will not be changed from current conditions, turbine placement would not occur in areas where it would impact groundwater, and that blasting would not have adverse impacts on wells.	11-2, 27-39, 29-19, 42-22, 43-1, 43-2, 43-3, 43-52, 43-54, 43-56, 43-59, T12-2

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

3	**Groundwater impact analysis** Comments indicating concern regarding analysis of potential groundwater impacts; well locations indicated on maps are not accurate, should be verified prior to turbine placement and blasting; need more information; disagreement with conclusion of no significant impacts; need to evaluate potential for concrete to leach minerals into the groundwater.	27-40, 38-41, 38-44, 42-23, 43-27, 43-55, 43-58, T8-3, T12-1
4	**Use of stream water for dust control** Comment that use of stream water for dust control should not be allowed.	43-53
5	**Impacts of surface water disturbance on wildlife** Questioning DEIS assertion of temporary disruption to priority habitat (p. 3-47).	38-43
PA	**Plants and Animals**	
1	**General adequacy of studies and information on plants and animals, particularly avian studies** Multiple comments primarily related to the overall adequacy of the plants and animals studies and analysis documented in the DEIS, particularly with respect to birds. One comment expressed general satisfaction with background studies and information collected on fish, wildlife and habitats, while most were critical. Multiple comments reflected a theme that the avian studies were inadequate to determine level of avian use of the project area and provide sufficient base for estimation of impacts. Some made general statements about the adequacy of the avian studies, such as the surveys were cursory and incomplete, models are inaccurate and expanded analysis should be done. Some comments questioned mortality estimates based on comparison with other projects due to inaccurate data for the other projects. A number of comments addressed specific aspects of the avian studies, including comments that a 2-year study period is needed; the study did not include nocturnal use or migratory pathways; area residents were not surveyed; use of radar to determine spatial and temporal distribution; aerial observations for active raptor nests are insufficient; DEIS fails to analyze weather conditions that could affect mortality; and there should have been an assessment of rodent populations. This issue includes comments relating to accountability for the studies and whether the studies should be redone.	1-1, 5-10, 5-15, 12-1, 12-3, 12-18, 15-5, 15-7, 15-10, 25-3, 26-2, 27-13, 27-15, 27-34, 27-68, 29-22, 30-5, 30-21, 30-24, 33-5, 36-10, 36-12, 38-47, 38-49, 38-102, 41-6, 41-10, 41-22, 41-32, 42-7, 43-5, 43-28, 43-60, 43-66, T5-2, T13-4, T27-3
2	**Determination of net impacts and associated mitigation** Comments that DEIS has inadequate presentation of net impacts and specific mitigation; project impacts can be substantially mitigated by employing measures discussed in the document, but confusion as to degree of efficacy which undermines conclusions in DEIS; revise analysis to clearly describe the net effect on the environment and unequivocally address which mitigation measures will be implemented.	1-2, 1-3
3	**Resource agency guidelines for wind projects** Request that DEIS incorporate WDFW guidelines for wind power projects. Also comments relating to U.S. Fish and Wildlife Service (USFWS) recommendations for wind projects, such as statement that project does not meet 6 of 10 USFWS criteria; project violates at least three guidelines; should state Desert Claim's level of compliance with USFWS guidelines.	1-4, 27-14, 41-11, 42-8, 43-123
4	**Role of Technical Advisory Committee in mitigation and monitoring** Comments addressing the Technical Advisory Committee (TAC) identified as a possible mitigation measure, including support for TAC; request that the formation and role of TAC be a binding measure; requests that TAC be in place for life of the project, and to describe authority and budget source, and indicate if data gathered by TAC would be available to public on request; request for membership in TAC.	1-5, 27-42, 30-28, 38-51, T27-6

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

5	**Vegetation/habitat restoration and mitigation** Comments relating to restoration of habitat disturbed by project construction and/or measures to mitigate impacts through replacement habitat. Issue includes requests to include construction timing as mitigation to minimize impacts to soils/vegetation; conduct activities outside of project footprint during dry periods or on frozen ground if possible. Also includes comments that the DEIS should identify a standard for evaluation of site restoration success, specifications on seeding, temporary erosion control measures and a long-term protocol for establishing plant communities while excluding invasive species. Also includes comments relating to mitigation ratios for replacement habitat, based on existing vegetation types; location of mitigation site; enhancement on mitigation site. Also requests that the plan to acquire replacement habitat be explained in detail, and to consider use of the site for farming to replace area used by project roads and turbines.	1-6, 1-7, 1-8, 1-9, 5-7, 27-41, 43-4
6	**Mitigation for potential avian impacts** Comments relating to project design or siting features to mitigate avian mortality, including statements that met towers should be freestanding; reliability of bird flight diverters is questionable; recommendation to set turbines back from the windward edge of the ridgeline; and comment that the only mitigation is not to build turbines.	1-10, 1-11, 12-2, 27-44
7	**Post-construction adjustments in response to avian mortality** Comments that DEIS does not include contingency measures to address bald eagle mortality; should require conservation measures in App. C; concern that corrective action (e.g., removal of a turbine) in event of avian mortality may not be possible during operation; plan for post-construction adjustments was needed.	1-12, 5-9, 36-16, T27-5
8	**Additional upland bird species** Comment that sharp-tailed grouse and sage grouse should be discussed in the EIS.	1-13
9	**Big game impacts and mitigation** Support for management of big game and control of animal damage on project land; public hunting is WDFW's primary tool for minimizing damage by game animals; could include access control and weapon restrictions; measures to address game damage should be approved by TAC. Also comments that DEIS should provide more analysis of big game habitat, migration and displacement; impact estimates are not sufficient; address shadow flicker effects on deer and elk; include more mitigation measures. Comment that project studies using helicopters could have scattered elk and deer herds.	1-14, 11-3, 14-3, 15-9, 16-10, 17-10, 29-24, 30-22, 41-14
10	**Presence of fish species in project area waters** Comments that map inaccuracies exist and WDFW actually expects fish are present in Currier Creek and Reecer Creek and possibly their tributaries at times; comment that project must affect summer steelhead, but DEIS does not address presence or mitigation.	1-16, 29-25
11	**Impacts to wetlands, streams and riparian areas** Comments that wetland and watercourse impacts should be minimized; proposed access roads and foundations would affect native vegetation and wetlands; micro-siting should be used to reduce impacts; where impact cannot be avoided, turbine should be removed; discuss wildlife impacts near wetland and riparian areas; streambeds are critical areas, setbacks are required and filling/ relocating should not be permitted; show total wetland acreage for project area, as well as the percentage temporarily or permanently altered; comment expressing surprise that wetland impacts would be allowed.	1-17, 15-2, 29-21, 36-14, 38-46, 38-101
12	**Take of species protected under the Bald and Golden Eagle Protection Act** Comments that project could result in take of species protected under the Bald and Golden Eagle Protection Act (BGEPA) and/or the Migratory Bird Treaty Act (MBTA), including points that USFWS must authorize take level; DEIS does not say whether take	5-3, 5-11, 11-4, 16-9, 17-9, 27-33, 27-43, 29-23,

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

	application has been filed; DEIS should contain assurances against potential take. Includes questions why bald eagles were only species addressed and who would be the *enXco* official prosecutable under BGEPA if an eagle is killed.	36-15, 42-9, T5-4
13	**Mortality assessment for raptors, particularly bald eagles** Comments noting the potential for bald eagle and/or raptor mortality in general; wind farms should not be built in known eagle habitat; questions on reliability of comparative mortality statistics for other wind project sites; no discussion of raptor presence along ridgelines, other than in mitigation; reference to roosting areas and potential for multiple flights through the proposed site; displacement impacts; calving will continue to attract raptors and could threaten their safety. Also includes requests to strike statements that no bald eagle fatalities have been reported at wind farms in U.S.	5-14, 25-4, 26-4, 26-5, 27-32, 30-20, 38-48, 38-103, 41-5, 41-7, 43-62, 43-63, T12-3, T27-4, T29-3
14	**Impacts to non-endangered avian species** Comments addressing impact analysis and/or conclusions for non-endangered avian species, including concern for protection provided for non-endangered species present on the site; objection to characterization of estimated 220 bird kills per year as not significant; concern for known presence of great horned owl; and question whether the impact addresses the total or local avian population.	5-8, 12-4, 14-2, 17-7, 27-60, 38-50, 43-61
15	**Impact analysis methods and results for bats** Multiple comments relating to study methods and conclusions for bats, including request for thorough study of risk to bats; information from nocturnal studies; evidence of bat mortality at other wind facilities; estimates are not sufficient for determining significant adverse impacts would not be expected; no analysis of potential bat activity in relation to nearby forested area; assess bat populations using appropriate technology; reference to wind turbine project in Appalachians that caused a record number of bat kills.	5-12, 15-8, 33-6, 36-11, 38-52, 38-104, 42-10, 43-64
16	**Indirect avian impacts, particularly potential for viral outbreaks** Comments addressing possible indirect impacts of avian mortality, primarily questioning growth of mice or mosquito population and corresponding potential for viral outbreaks (e.g., hantavirus, West Nile virus).	15-6, 16-8, 17-8, 41-8, 43-65, T13-5
17	**Impacts to shrub-steppe vegetation and lithosols** Comments that primary vegetation in project area is shrub-steppe, which is in critical state of survival; loss of shrub-steppe could undermine habitat value; shrub-steppe habitat obligates bird species occupy this region during the breeding season; concern that lithosols would be disturbed; concern that project could impact plant communities used by raptors to hunt visible prey.	5-5, 5-6
18	**Vegetation and wildlife impacts in general** Comments expressing general concern over impacts of the project on existing vegetation, or impacts to wildlife without respect to specific wildlife types or guilds.	20-3, 29-20
19	**Impacts to threatened and endangered species** Comment questioning the acceptability of the DEIS conclusion of no significant impacts to threatened and endangered species.	29-26
20	**Monitoring of post-construction conditions** Comments addressing post-construction monitoring, including points that monitoring should be done by an impartial body; adequate monitoring and mitigation should be in place to document bird fatalities; project of this size could change overall ecology, so there should be monitoring of a test installation first; DEIS does not include follow-up studies of other wind farms to determine if they change the 'overall' ecology of a site.	30-25, 41-9, 41-25, 43-6
21	**Impact of turbine safety lights on avian mortality** Concern that lights on turbines could attract night migrating birds and should not be used since they are not required by the FAA.	36-13

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

22	**Adequacy of entries in Table 1-1** Comments that **Table 1-1** provides inaccurate comparisons between Desert Claim and White Horse, and fails to include the County's "zero net loss" policy on wetlands.	37-2, 38-8, 38-9, T26-2
23	**Classification of vegetation types** Comment that DEIS should include all uses of vegetative areas in **Section 3.4.1.1** or only include uses in the Land Use section.	38-45
ENR	**Energy and Natural Resources**	
1	**Impact of project on the supply and price of electricity** Comments that DEIS fails to evaluate potential impact on the broader energy picture, or disagreeing with **Section 3.5** conclusions about the project's effect on price and availability of electricity.	27-16, 27-35, 29-27, 38-11, 42-5
2	**Relative energy importance of the project and wind power in general** Comments addressing contribution of the project and/or wind power generally to energy supply, including statements that this and other proposed projects in the area would generate minuscule amount of power; include discussion of the relative importance of these wind projects to the whole energy picture; conservation could accomplish the same savings; there is no competent national energy policy; compare wind energy to hydroelectric power. Also objections to specific statements or comparisons in the DEIS addressing the amount of energy the project would produce.	12-19, 33-4, 36-17, 38-53, 38-105, 41-23, 48-3
3	**Scope of EIS energy analysis** Comment that discussion of other potential energy developments is outside EIS scope; project would not eliminate other energy facility proposals in local area or elsewhere.	38-54
4	**Quantification of resource use** Comment that DEIS should list quantities of resources to be removed or displaced.	43-69
5	**Energy loss through transmission** Statement that wind energy is best used in areas in close proximity to consumers, and concern regarding energy loss through long-distance transmission of power.	48-4
CR	**Cultural Resources**	
1	**Mitigation for cultural resource impacts** Comments that DEIS should provide specific mitigation that would be required; turbine or road sited in identified area of concern should be relocated; mitigation of retrieving scientific or cultural information from its location is unacceptable; would not be permissible to unearth artifacts; mitigation involving removal of artifact(s) would result in significant unavoidable adverse impacts.	29-29, 38-56, 38-57, 38-106, 43-72
2	**Nature and extent of cultural resource impacts** Comments specific to impacts, such as statements that DEIS is incomplete on cultural resource impacts; DEIS refers to possible transmission connection and actual impacts should be determined; six cultural sites are identified as potential impact areas.	12-16, 38-55, 43-71
3	**Impacts and consultation regarding traditional cultural properties** Comments that DEIS contains little information on cultural resources; suspects little consultation with Yakama Nation; need to include area(s) of the site pertaining to the Yakama Nation that would be affected and their value; need supplemental EIS per Section 106 of National Historic Preservation Act (NHPA); private property use is not identified, cannot be assumed.	12-17, 43-29, 43-70

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

LU	Land and Shoreline Use	
1	**Direct land use impacts/compatibility with existing uses** Comments addressing primarily the DEIS discussion of direct land use impacts and compatibility of the project with existing land uses. Comments reflect several common themes, including compatibility of the project with existing residential land use and lifestyle, particularly for residences within one-half mile; that the project represents an industrial use; and disagreement with the approach, accuracy and content of the analysis, including comments that the DEIS downplays impacts on residents, should provide evidence that impacts to existing activities are not expected, and that data on number of residences is inaccurate, inconsistent or incomplete. One comment stated that cumulative impact on all residences with a view was not adequately addressed in the DEIS.	15-15, 25-2, 25-5, 27-18, 27-61, 27-70, 29-5, 29-30, 38-58, 38-64, 38-107, 38-108, 38-110, 42-11, 43-74, 43-76, 43-78, 43-84, 43-91, 44-2, 44-5, 46-1, 47-12, T22-5
2	**Indirect land use impacts** Comments appearing to relate primarily to the DEIS discussion of indirect land use impacts, such as potential future effect on residential development near the project and/or continued agricultural use. Includes comments relating to compatibility with residential development and growth of Ellensburg. One comment stated the zoning change for project could indirectly result in increased bird mortality and destruction of shrub-steppe habitat.	5-13, 29-6, 36-8, 43-81, T22-7
3	**Possible relocation of existing area residents** Comments relating to the DEIS statement that area residents may choose to relocate if the project conflicted with their lifestyles, including general objection to or questioning of that statement or a similar statement that wind production is compatible with rural resources. Includes comment that for relocation option to be viable, property value analysis and mitigation would be necessary to give residents financial ability to relocate.	11-8, 12-28, 27-36, 30-26, 38-60, 43-83, 44-7, T4-8
4	**Compensatory mitigation for land use impacts** Comments that insufficient mitigation is proposed to protect rights of landowners; mitigation should include property purchase or other form of compensation.	11-9, 15-16, 27-47, 38-109, 43-80
5	**Setbacks from residences and property lines** Comments relating to land use aspects of turbine setbacks addressed in the EIS, such as objection to proposed setbacks from residences and/or property lines; setbacks relative to residences adjacent to central portion of the site; concern over potential limitations on use of land on adjacent properties within setback limits; statement that land use will be changed if setbacks do not address all potential impacts.	16-12, 17-6, 20-1, 25-6, 27-45, 38-63, 43-7, 43-30, 43-79, T22-6, T24-4
6	**Project consistency with Kittitas County Comprehensive Plan** Comments offering opinions on whether the project would be consistent with one or more provisions of the County comprehensive plan, including specific comments that every turbine would need to be located within industrial-zoned land; project would allow industrialization of scenic valley landscape; comment that if all three proposed wind farms are built, over 10,000 acres of land would be used for turbine development; disagreement that project would be consistent with the plan. Includes comments that project is not consistent with or does not discuss specific policies in the plan; project would violate "zero net loss" policy on wetlands; DEIS fails to consider the definition of rural lands and the type of activities compatible with this use classification.	27-19, 29-31, 30-7, 32-5, 33-2, 38-65, 38-67, 42-14, 47-3, 47-10
7	**Consistency of project with Growth Management Act** Comment that DEIS discussion of consistency with GMA is flawed by inaccurate conclusion that proposal would not involve significant amounts of buildings, structures, or impermeable surfaces, as development of 120 structures is considered significant.	38-68

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

8	**Compatibility of agricultural and residential uses** Comments objecting to DEIS statements on potential for conflicts between existing agricultural and residential uses, including statements that DEIS does not show such conflicts exist; suggestion that residential users compete with agriculture is not accurate; statement that agricultural activities would continue in project area is unsubstantiated.	38-12, 38-61
9	**Proximity of project site to transmission lines** Comment that DEIS statement indicates a means of transmission connection has been determined, which is not the case, and proximity of transmission lines is irrelevant.	38-59
10	**Impacts of power collection lines** Comments that off-site overhead power collection lines would increase adverse impacts to non-participating landowners; comment that one power collection line would adversely affect a specific property.	38-66, 50-4
HS	**Health and Safety**	
1	**Fire hazards** Comments relating primarily to the discussion of fire hazards in DEIS **Section 3.8.** Comments within this category generally addressed one or more of three primary topics, including the existing level of fire hazard in the project area, the fire hazards associated with construction and/or operation of the proposed project, and the possible mitigation measures related to fire hazards. Specific comments typically noted that the proposed project site is in an extreme high fire hazard area, expressed concern that the project itself could cause fires or expressed dissatisfaction with the DEIS coverage of fire hazards, or included statements that proposed fire mitigation measures were insufficient and/or that a fire fighting plan was needed.	4-1, 10-1, 11-6, 12-5, 12-29, 22-2, 23-1, 24-3, 27-21, 27-22, 29-33, 29-35, 38-72, 42-16, 43-24, 43-25, 43-92, 43-96, 43-105, 43-110, T14-2, T29-2, T30-1
2	**Impacts of mechanical hazards from machinery/structure failures** Comments primarily addressing possible mechanical hazards (other than fire) associated with wind turbines. Includes general statements, such as that turbines present health and safety hazards or impacts will drive property owners away, and comments more specific to technical analysis of blade throw and tower collapse provided in the DEIS.	12-11, 15-13, 27-48, 29-32, 43-8, 43-93, 43-94
3	**Ice throw impact analysis and mitigation** Comments similar to those in HS-2, but specifically related to the DEIS ice throw analysis and mitigation discussion, including statements that ice throw probability is not remote; comment that Bowers Field icing information could be used; question regarding period of record for icing conditions; comment that mitigation language in DEIS is inadequate; and several comments relating to potential use of ice sensors.	12-13, 27-50, 38-71, 43-104, T23-2
4	**Hazard mitigation through prescribed setbacks** Comments primarily addressing specific distances considered as setbacks to mitigate for mechanical hazards, such as general objections to distances contained in DEIS; suggestion that greatest setback distance determined for any hazard should be applied for all potential impacts; and various suggestions for specific setback distances ranging from 435 feet to 2,500 feet.	12-12, 12-14, 12-26, 15-14, 27-20, 38-17, 38-78, 41-35, 42-15, 42-17, 43-13, 43-95; 43-103, 43-108, 51-6, T4-6
5	**Potential interference with telecommunications** Comments that study should be required to address emergency responder communication and study of impact on TV and radio reception and mitigation needs to be conducted.	4-2, 11-5, 32-3, 43-99

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

6	**Electrical hazards, including lightning** Comments pertaining to safety-related electric hazards, including general statements that DEIS does not address electrical hazards, health hazards of electromagnetic fields or lightning impacts and several comments addressing potential issue of stray voltage.	29-36, 38-79, 43-10, 43-89, 43-90, 43-97, 43-98, 43-106, 43-109, 43-127
7	**Shadow flicker impact analysis and conclusion** Comments addressing methods used in analysis of potential shadow flicker impacts and/or the results of that analysis. Includes comments that DEIS contains insufficient assessment of impacts; does not assess traffic-related impacts; shadow flicker causes health problems; no site-specific assessments; shadow flicker impacts are unacceptable, are not unavoidable; nuisance trespass would occur to existing residences; and graphs do not provide substantive information. Also comments on specific aspects of analysis, such as definition of "receptor" and whether all potential receptors have been included, and model assessment of shadow flicker relative to fog or cloud conditions.	12-9, 27-23, 29-37, 30-8, 30-10, 38-73, 38-75, 38-76, 43-31, 43-100, 44-13, 44-14, T25-1
8	**Mitigation for shadow flicker impacts** Comments focusing on mitigation of shadow flicker impacts, including comments that inadequate mitigation for shadow flicker impacts is identified; EIS places burden of impacts on affected residents but it should be on applicant; turbines should not be allowed or should be removed where shadow flicker occurs; suggesting that residents be confined to their homes when shadow flicker occurs is not practical; and that **Table 1-1** conflicts with Chapter 3 regarding mitigation for shadow flicker.	12-10, 27-52, 30-9, 30-29, 37-1, 38-13, 38-74, 38-80, 38-114, 43-12, 43-32, 43-101, 43-107, 43-126, T26-1
9	**Spill/accident remediation** Request to contract for environmental remediation services, in the event of an incident.	4-3
10	**Liability for damage from hazards** Recommendations that applicant assume liability for any impacts as a result of project-related fires, as a condition for approval, or for project-related electricity damage.	22-3, 23-2, 43-11
11	**Need for engineering review** Comment that engineering review of design and construction standards be part of DEIS.	27-49
12	**Potential hazards from viral exposure** Comments addressing possible project relationship to viral hazards in reference to **Section 3.8**, including statements that DEIS does not analyze potential increased human exposure to hantavirus; disagreement with conclusion about hantavirus risk; no analysis provided for potential increased exposure to West Nile Virus.	38-77, 41-12, 41-13
13	**Description of existing hazard conditions** Comments about DEIS information on existing hazards in project area, including statements that paragraphs on residential and household electrical hazards should be removed and existing land uses listed in **Section 3.8.1.3** should include rural residential.	38-69, 38-70
NOI	**Noise**	
1	**Noise impact analysis methods, results and/or conclusions** Multiple comments relating to some aspect of the DEIS noise analysis. Includes general objections to/concerns over potential noise impacts and comments that the DEIS contains insufficient assessment of impacts; no statement that residents will experience increased noise; concern regarding potential for inaccurate noise calculations; suggested additional study; noise from wind farms is not comparable to existing rural noise sources. Also comments about specific noise components in the analysis, such as equipment running simultaneously, sound effect of turbine braking system, blasting and	12-21, 20-2, 27-24, 28-2, 38-30, 38-83, 38-84, 38-86, 38-111, 42-19, 43-33, 43-34, 43-111, 43-113, 43-115, 43-117,

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

	tonal noise; comments taking exception to conclusions about noise impact levels; comments addressing specific inputs to model analysis, including measuring noise at receptor's level (not based on a 5,200-acre site), using more than 4-8 mph wind speeds, using wind data from previous 2 years and that DEIS selected only 4 areas for noise modeling.	44-11, 44-12, 50-5, T11-4, T22-2
2	**Setbacks for noise mitigation** Multiple comments relating to what should be considered adequate setbacks to mitigate project noise impacts, including general statements that setbacks from properties should be increased and DEIS should look at other wind projects to assure adequate setback, and comments mentioning specific figures such as 2,000 feet or 2,500 feet, or basing the setback to ensure a maximum sound level of 35 decibels or 40 decibels at residences.	27-25, 29-38, 38-85, 41-36, 42-18, 43-14, 43-112, 43-114, 51-7, T22-4
3	**Other (than setbacks) mitigation for noise impacts** Comments involving noise mitigation other than setbacks, such as statements that DEIS does not include contingency measures if noise impacts are greater than projected; request that project be decommissioned if unbearable noise occurs; include soundproofing or buying out impacted owners; TAC should log noise complaints and resolve issues, including potential purchase of properties impacted.	27-53, 27-54, 30-12, 30-30, 43-35
4	**Noise standards appropriate to project/project area** Comments pertaining to the regulatory standards used in the noise impact analysis, including statements that industrial/agricultural noise standards should not apply or should be reduced, and to adopt noise standards based on actual use.	30-11, 38-81
5	**Impacts of low-frequency sound** Comments that DEIS should address low-frequency sound, which can only be mitigated by placing turbines well away from homes; cumulative effect increases with number of turbines; reference to article on effects on residents near turbines in the UK.	30-13, 40-1, 41-15, 41-27, 41-34, 43-15, 43-36
6	**Affected environment description** Comment that project area uses listed in **Section 3.9.1.3** should include residential.	38-82
ALG	**Aesthetics/Light and Glare**	
1	**General nature and magnitude of visual impacts from the project** Comments expressing concern over the visual impacts of the project or noting the magnitude of those impacts, including statements that view impacts would affect residents and visitors; do not want to see turbines; wind farms should not be located near Highway 97; painting turbines gray will not help; local views would be destroyed; quality of life (as interpreted visually) would be affected; large changes to rural landscape are unacceptable; world-class scenic views would be adversely impacted. Several comments specifically reference contribution of turbine lighting to visual impacts, mentioning impacts of flashing red lights; light pollution in Ellensburg and the valley; lighting impacts on stargazing and residents at higher elevations. One stated that change in visual character would be in direct opposition to Kittitas County's objectives.	12-6, 12-7, 12-8, 12-20, 14-1, 14-5, 21-3, 21-5, 30-16, 33-7, 38-88, 38-112, 41-17, 43-16, 43-17, 44-18, T1-1, T3-3, T19-3, T22-2
2	**Adequacy of the visual impact analysis and displays presented in the DEIS** Multiple comments relating to the visual impact methods and information materials documented in the DEIS. Many are comments critical of the photos and visual simulations, including statements to the effect that the photos and simulations are not accurate and/or are distorted, views selected were not appropriate and do not show turbines in front of the Cascades or views from affected residences. This category includes comments critical of the graphics and similar aspects of **Section 3.10**, including specific figures and tables, use of subjective scales in the analysis, the number of residents impacted, and presentation of conclusions about impact levels.	24-1, 26-3, 27-26, 27-69, 29-39, 30-15, 36-7, 38-87, 41-16, 41-18, 41-33, 43-118, 44-9, 47-5, 47-6, 51-9, T5-3, T17-2

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

3	**Blade glint and glare impacts** Comments that blade glint, glare impacts to road safety should be addressed; glare from multiple angles and surrounding turbines cannot be minimized; objection to impacts.	27-27, 29-40, 30-18, 42-20
4	**Mitigation for aesthetic impacts** Comments that DEIS does not provide adequate mitigation for visual effects or light and glare impacts; recommend moving turbines 20 miles away; inadequate guidance on mitigation; use of curtains and trees as mitigation is inadequate; use of screening vegetation. Several comments addressed compensation. One comment questioned whether it was possible to mitigate the visual impacts of the project.	27-55, 30-17, 30-31, 41-28, 43-37, 44-10, 47-8, 50-1, T11-3
5	**Source of shadow flicker** Comment on DEIS statement that shadow flicker can arise within or near houses.	38-89
RC	**Recreation**	
1	**Recreation impacts and mitigation** Comments relating to direct or indirect recreation impacts and/or mitigation, including comments disagreeing with assertion that project would not impact recreation; expressing concern regarding hunting rights; noting impact on snowmobiling, biking and other activities or impacts to non-participating landowners; or stating DEIS should reflect research done with realtors to reveal greater level of recreational benefit.	16-7, 17-4, 27-28, 27-56, 29-41
2	**Tourist interest in the project** Comment questioning a DEIS statement about the level of tourist interest in the project.	29-42
3	**Traffic disruption during construction** Comment noting that DEIS identifies traffic impacts to residents and visitors, and stating that traffic plan needs to address resident access as a priority.	38-90
GT	**Ground Transportation**	
1	**Baseline transportation conditions** Comments with additional information or clarifications to DEIS content on existing road network, including statements about highway classifications for I-90 and US 97, legal size and load limits and permits, an over-height restriction on eastbound I-90 at Exit 62, and upcoming WSDOT projects that might affect project-related transportation.	2-1, 2-2, 2-4, 2-7, 2-8
2	**Potential use of SR 970** Comment that if SR 970 is used for transportation of project components, this must be included in EIS with additional supporting analysis.	2-3
3	**Project-related transportation plans** Requests for WSDOT review of construction and tourism management plans as they pertain to WSDOT facilities, and a comment that tourism plan should be required prior to construction and be designed to minimize impacts to the environment and community.	2-5, 2-6, 38-92
4	**Emergency access route** Request that applicant construct a west-east road from Smithson Road to allow for improved fire control, emergency, and maintenance and operations access.	3-8
5	**Project tourist facilities** Comment that applicant should build, operate tourist kiosk along SR 97 or Smithson Rd.	3-9
6	**Road maintenance conditions** Comment that roads be maintained in current condition throughout construction process.	38-93
7	**Mitigation of construction dust impacts** Comment that DEIS makes no mention of mitigation of dust impacts from construction.	43-18

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

AT	Air Transportation	
1	**Potential impacts on VFR traffic pattern** Comments primarily addressing the potential project conflict with the Visual Flight Rule (VFR) traffic pattern identified in the DEIS, including specific statements that impacts to VFR airspace would be excessive; comment requesting clarification of reason for dramatic alteration of the CAT A&B airspaces; use of Bowers Field by 185 flight students, which results in 44,000 airport operations.	3-1, 43-19
2	**Mitigation options for VFR traffic pattern issue** Multiple comments primarily addressing mitigation measures for VFR traffic pattern conflict discussed in the EIS, including requests to confirm minimum possible change with FAA, clarify that reduction in airspace would be temporary, and include a condition for contingent removal of turbines. Also includes statements about the acceptability of the measures, such as impact on progress by Airport Advisory Committee and County to address airport planning concerns; modification of traffic patterns is not acceptable; project should not take priority over Bowers Field; remove 27 turbines or lower their heights; mitigation for air transport issues is unresolved.	3-2, 6-4, 12-25, 27-29, 27-57, 27-63, 29-43, 38-94, 42-21, 43-20, 43-21, 43-38, 43-119, T4-4, T22-1
3	**Potential impact on IFR operations** Comments about instrument flight operations, including that DEIS fails to address IFR operations with supporting documentation; analyze approved and proposed IFR operations; perform an Obstacle Evaluation; account for circle-to-land maneuvering; applications for new approaches have been submitted, are being designed by FAA.	3-3, 3-5, 6-5, 6-7, 6-8
4	**Status of air traffic review for Wild Horse project** Comment that DEIS incorrectly indicates FAA approval of the Wild Horse project, which is used throughout the DEIS to substantiate non-significant impact.	3-4, 6-6
5	**Resolution of air transportation issues** Comment that issues have not come to a reasonable determination, while additional research and discussions with FAA could resolve issues.	3-6
6	**Turbine lighting plan** Request for clarification on intent of shielding; concerns over lighting impacts.	3-7, 38-95, 43-22
7	**Additional air transportation issues** Comments relating primarily to aspects of air operations other than VFR traffic pattern and IFR procedures, including concern regarding impact on operational capability of the airport; inaccuracies regarding operation of the four runways; aircraft operating for other purposes than arriving, departing, operating in traffic pattern or executing instrument approaches; agricultural aircraft, helicopters or the CWU flight program; training and practice areas, minimum safe altitudes and margins of safety; small landing strip close to turbines; small plane activity.	6-2, 6-3, 6-9, 12-23, 12-24, 43-39, 44-15, 48-7, T4-3
PSU	**Public Services and Utilities**	
1	**Water supply for fire fighting** Request to provide a water supply for fire fighting beyond fire district boundaries.	4-4
2	**Fire protection service and coordination** Comments related to fire protection service to the project in operation, including several requests regarding fire service coordination, training, service agreements and plans for fire risk reduction; requests for information on fire fighting plans; comments regarding use of aircraft for fire fighting; and question on cost responsibility for fighting fires.	4-5, 4-6, 4-7, 4-8, 4-9, 4-10, 11-7, 29-34, 43-9, 43-23, T13-1, T23-4
3	**Fire station location** Comments noting DEIS error on location of Fairview Fire Station.	22-1, 38-96, T14-1

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

4	**Project impacts to water supplies** Concern over impact to water supply from wells and lack of consideration for irrigation.	29-44
5	**Law enforcement services** Concern over increased calls to police as result of trespass by curious visitors.	41-20
PHE	**Population, Housing and Employment**	
1	**Project effects on tourism** Comments relating to **Section 3.15** discussion of project influence on tourism, involving expanded literature review and evidence of positive or negative effects on tourism.	27-30, 42-12
2	**Significance of population, housing and employment impacts** Statement that conclusion on population, housing and employment impacts in **Section 1.9.15** conflicts with those described for aesthetics, light and glare in **Section 1.9.10**.	27-64
3	**Housing impacts during construction** Comment that meeting the housing demands of construction workers would be difficult.	29-45
4	**Consideration of economic impacts** Comment that DEIS appears slanted, as only some economic impacts are considered.	38-113
FIS	**Fiscal Conditions**	
1	**Tax revenue benefits of the project** Comments relating to influence of the project on local government tax revenues and/or rates, including comments that DEIS sufficiently captures potential economic benefits, and additional information on new construction tax base and reduction in tax rates.	8-1, 9-4, T2-1, T23-3
2	**Time scope of fiscal analysis** Comments relating to the time scope of the fiscal analysis in the DEIS, including statements to include a full 30-year depreciated tax base analysis, and that accelerated depreciation leads reader to assume that tax revenue would be greater than in actuality.	27-31, 30-19, 41-21, 51-11
3	**Overall adequacy of the fiscal impact analysis** Comments relating to aspects of the fiscal analysis other than the time scope, primarily adverse impacts to local tax base and/or economy, such as fiscal impact of no action alternative; benefits of a wind plant vs. a fossil fuel plant; revenue loss from foregone home construction; need to consider property value increases and decreases; impacts to tax base/economic health if residential growth in project area is slowed or stopped.	9-5, 29-9, 31-1, 38-98, 43-82, T14-3, T20-2
4	**Project impact on utility rates** Comments to include estimates of increased utility rates to County residents; that savings in property tax rates would be lost by these increases; skepticism project would generate enough revenue to offset costs or that County would derive income from project tax base.	41-24, 48-2
	OTHER ISSUES	
NS	**Non-SEPA Issues**	
1	**Impact of proposed project on area property values** Comments addressing relationship of the project to values of property near the project area, primarily comments that property values would be adversely affected and/or that property values should be considered in the EIS. This category includes statements such as concern over housing resale value; DEIS contains insufficient discussion; potential domino effect could result in lower home sales, rodeo attendance and business revenues; should monitor impacts on property values; project will impact values of residential, agricultural and recreational lands; examine impact to property value for every home in	7-2, 12-27, 15-11, 16-11, 17-5, 18-4, 20-4, 24-2, 26-1, 27-71, 28-1, 30-2, 32-4, 36-9, 38-33, 38-62, 38-97, 39-3, 43-

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

	Northwest Valley areas 1A and 1E. Includes comments that DEIS should address compensation for loss in property values, and statement that groups who promote agenda of wind developers performed property value studies cited in the literature summary.	86, 47-7, 50-2, 51-10, T3-5, T4-7, T5-1, T16-1, T19-2, T22-8, T23-5, T24-5, T30-2
2	**Impact on the quality of life** Comments that the project would diminish the quality of life for the entire area.	21-4, T3-6
3	**Wind energy business practices and tax status** Comments that wind developers engage in unfair business practices; should be more affordable for individuals to engage in green energy; lawsuits against wind developers for take of species protected under the MBTA and for unfair business practices.	30-23, 34-1, 36-2
4	**Cost-benefit analysis** Comment that DEIS is inadequate on cost-benefit analysis and cumulative impact costs.	47-9
5	**Potential for legal action** Comments addressing possibility for lawsuits against County or applicant related to the project, with reference to aircraft accidents, land values and compensation fund.	35-2, 48-8
6	**Stress on residents and associated impacts** Comment that DEIS does not mention the unending stress already placed on non-participant residents by the proposal and the potential impacts, medical or otherwise.	30-27
S/O	**Support/Opposition**	
1	**Renewable energy** Comment expressing support for renewable energy systems in general.	5-1
2	**No Action Alternative** Comments expressing support for the No Action Alternative and/or requesting the County select this alternative.	5-16, 17-12, 36-19
3	**Wind energy** Comments referencing the benefits of wind energy, stating need for wind energy, or expressing support for wind energy over other energy sources.	9-6, T25-2, T30-4
4	**Alternative 1** Comments expressing support for Alternative 1, including statements that the Wild Horse wind farm in the Whiskey Dick area is more appropriate for this type of industrial development; this site has a greater area to accommodate project; Alternative 1 will not intrude on the lives of so many people; wind farm should be in a lightly populated area, such as east of Ellensburg.	13-1, 16-14, 27-38, 28-4, 43-57, 43-68, 43-73, 43-77, 43-87, 43-88, 43-102, 43-116, 43-124, T12-6
5	**Proposed Action/Desert Claim project/applicant** Comments expressing opposition to or support for the proposed Desert Claim project and/or to the DEIS as it relates to the project location, including statements that urge decision-makers to consider their decision as if the turbines were proposed near their homes; "we don't want you here, you are not welcome"; do not allow project at this location; no reason for wind turbines to be located in populated areas such as the greater Ellensburg area.	16-15, 17-2, 17-11, 21-2, 23-3, 24-6, 27-73, 28-3, 32-1, 35-1, 39-5, 42-24, 46-2, T3-1, T4-1, T10-1, T13-6, T14-6, T15-1, T20-1, T21-1, T28-1

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

6	**Wind turbines in Kittitas County** Comments expressing opinions about the general acceptability of locating wind turbines in Kittitas County, including statements opposing wind turbines anywhere in the County, supporting wind turbines in the right place and suggesting all wind farms be located away from populated areas and out of view.	19-2, 52-1 (also letters 53 through 78), T6-1, T17-1, T24-7
V/B	**Value/Belief Statements**	
1	**Adequacy of federal and state wildlife protections** Comment expressing belief that federal and state legal provisions provide little protection for most avian species.	5-2
2	**Motivations relating to the project** Opinions about motives and behavior of the applicant and/or landowners participating in the project, including statements that project is all about money; applicant does not care about residents or environment; 8 landowners will benefit to the detriment of hundreds of others; non-participating landowners will incur all of the impacts of the project and receive none of the benefits; money promised to County is an unacceptable carrot, money motivation should not ride roughshod over obligations to protect the citizenry.	11-10, 27-37, 27-62, 27-65, 30-14, 33-8, 43-85, 44-17, T14-4, T19-1
3	**Opinions about the overall merits of the project** Multiple opinions about long-term effects of the project or its desirability, including statements that windmills will result in significant negative impact; wind farms will change the area forever; project threatens many residents have been in area for generations and worked hard to enjoy the lifestyle, ; assertion that project would not be detrimental to public health, peace, safety, or character is false; wind generation would be of no benefit to the County; impact and power generated are not worth the tax reduction; County would be better served with homes and ranchettes in the area; project would provide economic benefits.	11-11, 12-15, 16-13, 31-2, 36-18, 38-120, 48-9; 49-1, 52-2 (also letters 53 through 78), T23-1, T30-3
4	**Opinions about objectivity of the EIS and supporting studies** Comments expressing opinions about the objectivity of information in the EIS and/or the objectivity of the EIS preparers, without reference to points of substantive disagreement. Includes statements critical of wildlife consultant; that document is biased toward applicant, is constructed to support the project; studies and information in DEIS were provided by wind power advocates and taken at face value; apparent disinterest in comments during January 20 meeting; many comments are not based on reality, but a vision; comparisons change based on the intended result.	15-4, 16-1, 18-3, 30-6, 38-116, 45-2, 51-2
5	**Commentary on level of local support for or opposition to the project** Comments that the only long-time residents who support the project are those who would gain financially; majority oppose the wind farms; three groups are in favor.	18-1, 21-1, 33-1, T3-2
6	**Opinions on whose views and rights should have priority** Comments expressing opinions about how individual or group preferences or rights should be viewed in the decision, including statements that the feelings and judgments of residents who are impacted should have priority; wind turbines infringe on property rights of others nearby; 8 landowners should not be allowed to impact 350 others.	21-6, 39-2, 43-75, T3-7, T23-6
7	**Acceptability of impacts on non-participating landowners** Comments expressing opinion that no impacts from proposed project should cross property line of any non-participating landowner without permission; impact to neighboring, non-participating homeowners is enough to deny proposed project; if project could discourage residential use, this is reason not to site the proposed project.	41-13, 41-19, 41-26, 42-13

Table 5-2
Issues Based on Draft EIS Comments (cont'd)

8	**Value of existing views** Comment that views in the Valley are one of the greatest resources of the County, are not renewable, and County Commissioners should protect views whatever the cost.	39-4
9	**Precedent for future wind energy development** Opinion that construction of one turbine in Valley will result in numerous wind projects.	47-11
10	**Kittitas County planning approach** Opinions relating to County planning efforts or how County might evaluate the project, including disbelief that Commissioners would harm so many and that position of County is to allow individual enterprise to dominate community interests.	27-46, 33-3
11	**Preference for nuclear power** Comment of disbelief that residents would be forced to pay increased electrical bills when capability exists to build nuclear plants, would welcome nuclear power.	32-2
12	**Need for electrical expertise** Comment that perhaps decision makers should be required to be electrical engineers, or should consult the experts on important decisions.	48-5

5.1 PROGRAMMATIC/POLICY ISSUES

5.1.1 SEPA/EIS Process and Scope (SEPA)

This section responds to comments interpreted as primarily addressing the overall content and quality of the Draft EIS, the scope and approach reflected in the Draft EIS, and/or the SEPA process in general. In general, comments assigned to an issue in this category referred to some aspect of the Draft EIS as a whole rather than to a more specific concern such as a particular resource or project alternative. The comments and issues discussed in **Section 5.1.1** mainly involve the content of the Draft EIS, while several relate to Kittitas County's process for environmental and land-use review of the Desert Claim application.

Issue EIS-1: General adequacy of DEIS content and analysis

Issue: Issue EIS-1 incorporates multiple comments interpreted as relating to the overall adequacy of the material presented in the DEIS as opposed to comments addressing the adequacy of page- or section-specific technical content in the DEIS. Comments in this issue category generally reflect one of four primary themes. One theme represents general criticism of the content and approach reflected in the DEIS, as exemplified by specific statements that the DEIS minimizes the project's permanent effect on the environment or fails to realistically present the potential downside of the project; that many impacts were downplayed because of their temporary nature; that DEIS conclusions were hastily made based on evaluations of other wind power projects; that the DEIS lacks quantitative and qualitative information regarding impacts; or simply that the DEIS has many deficiencies. Similar comments were critical of selected wording in the DEIS, or said that the DEIS is merely a statement of non-significance. Some of these comments included points about the amount of opportunity for public input or what certainty the public has that their comments are taken seriously. A second common theme related to the base of information and sources used to develop the DEIS, such as comments that the majority of the studies cited in the DEIS were developed by wind energy proponents (and therefore are suspect), and that the DEIS did not use sources with independent information concerning impacts of existing wind power projects. Some comments specifically mentioned information concerning an existing project in Lincoln Township, Wisconsin. A third theme among comments in this category concerned the level of site-specific detail in the DEIS, including specific statements that the DEIS should measure impacts at the individual resident level or measure impacts for individual turbines. Finally, some comments were at least partially positive or complimentary with respect to the approach and content of the DEIS, including statements that the DEIS adequately addresses probable significant impacts, that the potential impacts identified can be mitigated and that the DEIS is a comprehensive document that addresses all concerns.

Applicable Comments: 6-1, 7-1, 9-1, 15-1, 17-1, 18-2, 19-1, 25-1, 27-66, 27-72, 29-1, 30-1, 38-117, 43-120, 43-125, 43-128, 45-1, 47-2, 51-13, T7-1, T8-1, T11-1, T29-1

Response:

A consultant team under contract to the Kittitas County Community Development Services Department (CDS) prepared the Desert Claim Wind Power Project Draft EIS. Kittitas County staff from CDS and the County Prosecutor's Office provided administrative and technical direction to the consultant team and

were responsible for the scope, content and approach of the Draft EIS. The scope of the DEIS was based on public comments received by the County during the EIS scoping period and the rules and procedures set forth in the Growth Management Act and State Environmental Policy Act. Desert Claim Wind Power LLC/*enXco, Inc.,* paid Kittitas County for the cost to prepare the EIS under a cost-reimbursement agreement with the County, but did not direct the preparation of the EIS.

As the lead agency under SEPA, CDS's responsibilities in this process are to provide full disclosure of the expected environmental impacts of the Desert Claim project and to document objective analysis of those impacts, so that the decision makers on the Desert Claim application (the Kittitas County Board of County Commissioners) have adequate environmental information for decision-making process. Kittitas County believes that the Draft EIS meets these responsibilities in full; it provides extensive documentation of the expected impacts and thorough, objective analysis of their significance. The Draft EIS follows the SEPA direction (WAC 197-11-402) that an EIS need analyze only probable, significant adverse impacts and that discussion of insignificant impacts is not required and, if included, shall be brief. Accordingly, the Draft EIS does not address or only briefly addresses impacts that are speculative and not probable, or probable but insignificant. The Draft EIS employs appropriate and neutral technical language and standard SEPA terminology, and was not prepared with the intent to downplay or minimize the potential adverse impacts of the project. The extensive documentation provided in the Draft EIS and appendices demonstrates that conclusions were not made hastily and that the document is not lacking in quantitative and qualitative information.

With respect to the opportunity for public input to the EIS process, Kittitas County is confident that it has met and exceeded the relevant SEPA provisions. SEPA provides for a public scoping process (WAC 197-11-408) and for public review of Draft EIS documents. **Section 5.1** of the Draft EIS provides a full summary of the public involvement process conducted to date for the Desert Claim EIS. Kittitas County issued a Determination of Significance and Scoping Notice on the Desert Claim application on April 23, 2003. As part of the DS/Scoping Notice, the County provided a formal, 30-day scoping period for receipt of written comments on the scope of the EIS. The County also held a public scoping meeting on May 7, 2003 to facilitate public input on the scope of the EIS for this project. Kittitas County sponsored a public open house on September 24, 2003 to provide an opportunity for public information exchange about the project. Kittitas County staff and members of the EIS consultant team attended the open house and were available to discuss the EIS and application process with members of the public. Kittitas County released the Draft EIS on December 15, 2003. Following this, the County provided a formal, 45-day review period (exceeding the SEPA minimum requirement of 30 days) for receipt of written comments on the Draft EIS. The County held a public meeting on January 20, 2004 to facilitate the public review and comment on the Draft EIS. At that meeting, 30 people testified and provided public comments on the Draft EIS, all of which are included in this Final EIS. In addition, Kittitas County maintained informal communication with agencies, organizations and individuals throughout the EIS process. **Chapter 5** and **Appendix I** of the Final EIS provide documentation that the County has met its SEPA obligation to seriously consider public, agency and organization comments on the Draft EIS.

Several comments questioned the base of existing information used in preparing the Draft EIS or expressed opinions that the EIS authors relied on documents prepared by wind energy proponents, and/or ignored sources of information on wind energy impacts. Kittitas County notes that the list of references cited in the Draft EIS **(Chapter 6)** is 14 pages long and includes approximately 180 individual sources. Approximately 20 of those sources were prepared by entities that might be considered affiliated with the wind power industry (including the applicants for current wind energy proposals in Kittitas County,

equipment manufacturers, and organizations such as the American Wind Energy Association and National Wind Coordinating Committee that understandably sponsor much of the research on wind energy). Those 20 sources were used primarily to provide wind energy background and project description information in **Chapter 2** of the Draft EIS. In comparison, the reference list also includes more than 70 sources prepared by or for federal, state and county government (primarily Kittitas County) agencies. Documents prepared by independent scientific researchers and/or professional associations (such as the American Society of Landscape Architects, the International Committee on Non-Ionizing Radiation Protection, the Institute of Electrical and Electronics Engineers and the Transportation Research Board) comprise most of the remaining 90 reference list entries. In addition, the County's EIS consultant team conducted extensive independent field research of earth, water, biological and cultural resources in the project area that is documented in the Draft EIS. In summary, the Draft EIS (and the Final EIS) is based on independent information of existing conditions and expected impacts, and is consistent with the SEPA guidance that an EIS be prepared in a professional manner with appropriate interdisciplinary methodology (WAC 197-11-420).

In general, the EIS (Draft and Final) measures and reports impacts on a project level, with aggregation of site-specific impacts where appropriate. The inventory of existing conditions and identification of impacts for each element of the environment are appropriate for the scope and scale of the respective element. Documentation for plants and animals **(Section 3.4),** for example, reflects site-specific evaluation of the impacts of the project on vegetation, wetlands, and fish and wildlife habitat. Similarly, information in the EIS and appendices concerning noise and shadow flicker reflects site-specific analysis incorporating individual turbine and receptor locations. With respect to comments that the EIS should report all impacts for each turbine and residence, this is not required under SEPA, Washington law or applicable regulations; SEPA does not require atomistic documentation of impacts. To the contrary, SEPA regulations provide that EISs are to be concise, succinct and sufficiently detailed to adequately disclose environmental impacts from a proposed project so that the decision-makers can make an informed decision (WAC 197-11-030).

Issue EIS-2: Geographic scope and scale of EIS analysis

Issue: Two comments primarily addressed the geographic scope and scale of the impact analysis presented in the DEIS. This issue includes one statement that **Section 2.2.1.3** should identify residences within a one-half mile radius of project, in order to clearly indicate the number of residents and landowners impacted by the proposed project, and another comment that the analysis should include all residences up to 2 miles away from the project area.

Applicable Comments: 38-15, 43-40

Response:

Kittitas County believes that the EIS reflects an appropriate scope and scale of analysis of impacts to the environment. Under SEPA, an EIS need only analyze probable adverse environmental impacts that are significant; an EIS need not analyze impacts that are improbable or speculative. The range of the impact analysis in the EIS meets this requirement because it varies depending on the extent of the potential impacts for each element of the environment. The Draft EIS provides information on residences, population and land uses adjacent to the project and in the surrounding area, and extends that coverage to larger portions of the Kittitas Valley as appropriate (e.g., with respect to visual impacts and avian

impacts). The SEPA regulations do not prescribe a specific distance range for resource inventory and impact analysis. Any attempt to do so would not be likely to result in a universally accepted figure, as indicated by the substantial differences between the distance recommendations of these two comments.

Issue EIS-3: Adequacy of maps provided in the Draft EIS

Issue: This issue includes comments about the general adequacy of maps presented in the DEIS, which typically relate to the scale and level of detail. Specific comments stated that maps need greater detail; that maps of project area showing property ownership should have been included in the CD for the DEIS, that it is not sufficient to refer readers to County files for information; that DEIS maps are not legible and do not depict enough of the area; that it is difficult to determine the extent of impacts (e.g., aesthetic, shadow flicker); and that **Figure 1.1** does not indicate roads and **Figure 3.10.2** does not indicate the project location.

Applicable Comments: 15-12, 44-6, 44-8, T11-2

Response:

Kittitas County believes that the maps provided in the EIS are of sufficient clarity, scale and detail to accomplish the intended purposes of summarizing and displaying relevant information. As noted in the response to Issue EIS-1, it is not necessary or appropriate to identify and report all impacts at the level of each residence or landowner. Therefore, it is not necessary to include property ownership on the EIS maps. Likewise, while doing so may add more detail to the maps, it would also add unnecessary complexity and could disclose information that some landowners might prefer not be disclosed. The comments that reflect general statements about map legibility or ability to determine extent of impacts do not allow for a specific response. **Figure 1-1** is a map showing the general location of the project area relative to Ellensburg and surrounding areas of Kittitas County. It is intended to orient readers and decision-makers to the general location of the project. To achieve this, the map does show roads and includes road numbers and names for selected roads. The project area is not depicted in **Figure 3.10-2** because it shows the landscape units of the Kittitas Basin used in the visual analysis of potential project impacts. **Figures 3.10-3** and **3.10-4** generally depict the project area as it relates to those nearby landscape units, and thus all of these figures, taken together and with the other figures in the EIS, enable the reader and the decision makers to locate the project and orient it relative to nearby landscape features and units.

Issue EIS-4: Evaluation of project against Kittitas County criteria for wind farm approval

Issue: Issue EIS-4 includes statements relating to the general criteria (identified in the DEIS) to be used by the Kittitas County Board of Commissioners to determine the final land use approval decision for the project. Some of these comments include comparison of DEIS content with the criteria, imply that these criteria have not been met, and/or object to a perceived DEIS implication that the project meets the criteria.

Applicable Comments: 16-2, 16-5, 16-6, 17-3, 29-2, 29-7, 29-8, 38-3, 41-3, 43-121, 44-4, 51-1, T8-2, T24-1

Response:

The Kittitas County criteria, from KCC Chapter 17.61A, for approval of a wind farm are included in the EIS as background information only. These criteria are included to inform the County review and decision process. Under SEPA, an EIS is not intended to be the sole permit decision-making document, but instead is intended to be one of many documents and pieces of information that inform that decision. Consistent with SEPA, the Draft EIS for Desert Claim does not evaluate the project against the County's review and approval criteria, it does not include conclusions relating to the decision criteria, and it does not represent any content as an evaluation of the project relative to the criteria. Conducting such an evaluation is not within the scope of the EIS, but rather is the role of the Board of County Commissioners, using, in part, the information in the EIS.

Issue EIS-5: Responsibility of Kittitas County

Issue: This issue is represented by a unique comment that Kittitas County has a responsibility to ensure that the magnitude of potential impacts are assessed in a complete and unbiased manner, mitigation measures are required and enforced, and there will be a system in place to report problems and to obtain mitigation before the project is approved, constructed or operated.

Applicable Comments: 30-32

Response:

Kittitas County believes the EIS meets the County's responsibility under SEPA; see the response to Issue EIS-1. Other aspects of this comment relate to the County's decision whether to approve the project, and to conditions of approval and terms of a development agreement if the project is approved.

Issue EIS-6: Time needed for a decision on the project

Issue: Several comments related to the timing of the EIS and/or the timing of the County's decision on the project. Specific comments include requests to not make a hasty conclusion/decision; that the County should take more time to analyze data on problems from other wind farms around the world that are now being collected; and that decision-makers should stall their decision until the Bureau of Land Management (BLM) finalizes a programmatic EIS in the western states that evaluates common issues and concerns associated with wind farm development. This group of comments includes a comment that it seems senseless for the applicant and *enXco* to go through the review of the DEIS without prior approval of the appropriate zoning requirements.

Applicable Comments: 18-5, 24-5, 29-3, 29-4

Response:

The SEPA process allows for a full and deliberate evaluation of environmental considerations related to the project. The Desert Claim EIS documents a thorough and comprehensive investigation of environmental concerns that is not indicative of hasty conclusions. Similarly, the County process for approval of wind farms outlines a deliberative process that includes ample opportunity for public

involvement and comment, thorough environmental review and complete evaluation of a project against the relevant criteria, including economic and health and welfare factors, and includes participation by the appropriate County entities, affected agencies and tribes. Investigations conducted for the EIS have not identified major areas of uncertainty or pointed to impact conclusions that would be likely to change substantially with a longer record of experience from wind farms around the world. The timing and scope of the BLM programmatic EIS on wind energy leasing on western public lands are not germane to the Desert Claim EIS because it relates to leasing public lands, not to project-specific impacts applicable to the Desert Claim Project and/or Kittitas Valley, and thus it would not be reasonable to delay completion of the Desert Claim EIS until the BLM review is completed. Under state and local law, the County must first complete the environmental review before it can make the zoning decision. The sequencing of the review of the Desert Claim application, with the review under SEPA coming before the land-use decision, is consistent with the direction of SEPA, the Kittitas County SEPA ordinance, and the Kittitas County ordinance for the review of wind power projects. Kittitas County has a legal obligation to conduct the environmental review before it takes action on the request for a Wind Farm Resource Overlay Zone.

Issue EIS-7: Need for project power/power market issues

Issue: This issue includes similar comments that the EIS has not shown a need for the project, the DEIS contains inadequate discussion of how much capacity utilities are seeking or how much wind power is currently produced in the state, or does not adequately assess the market for wind energy production in the state.

Applicable Comments: 23-4, 41-30, 47-1

Response:

SEPA does not require the lead agency or the applicant to demonstrate a "need" for a proposed project. The SEPA regulations (WAC 197-11-440 (4) and (5)) provide that the EIS summary "shall briefly state the proposal's objectives, specifying the purpose and need to which the proposal is responding," and that reasonable alternatives to be considered "shall include actions that could feasibly attain or approximate a proposal's objectives….." SEPA does not place lead agencies in the position of independently determining whether there is an objective "need" for an energy project (or any other type of project). The applicant perceived a need for a wind energy project based on interpretation of market information and requests by regional utilities for the development of renewable energy sources, identified project objectives and submitted an application for this project based on those objectives. Investigation of the renewable energy capacity that utilities might be seeking, how much wind power is currently produced within the state or the market for wind energy is not legitimately within the scope of the EIS, and thus need not be analyzed by the County.

Issue EIS-8: Need for subsequent environmental review

Issue: Two comments addressed the possible need for additional environmental review following the EIS. One requested a correction in the Fact Sheet to indicate that subsequent environmental review may be required for the development addressed in the EIS and the January 2003 development activities application. One noted the DEIS does not mention future expansion of the proposed project and its impacts, while the Desert Claim application leaves the door open for expansion if it can find receptive landowners.

Applicable Comments: 27-5, 51-8

Response:

With respect to Comment 27-5, the Fact Sheet is correct in stating that no subsequent SEPA environmental review would be required for the development addressed in the EIS and the January 2003 application for the project because this SEPA review is for a project specific action as compared to a non-project or programmatic EIS. As indicated, if Kittitas County were to approve the project and Desert Claim Wind Power LLC built the project as described in the EIS, no further SEPA environmental review would be necessary; additional non-SEPA review may be required, such as additional County review under other code sections and/or federal agency review for individual permit approvals. The purpose of such a statement in the Fact Sheet is to identify the type and timing of any subsequent environmental review to which the lead agency has made commitments (WAC 197-11-440 (2)), such as when a non-project EIS is to be followed by a project EIS. In this case, there are no such commitments by the lead agency to perform additional SEPA environmental review. The Draft EIS acknowledges the Desert Claim application identifies the possibility of future expansion, but the EIS necessarily evaluates the project that is addressed in the application, which is a wind farm with a nameplate capacity of 180MW, and a maximum of 120-turbines. Subsequent environmental review would be required if Desert Claim Wind Power LLC/*enXco, Inc.* proposed to expand or significantly modify the project. Under SEPA, the County is not required to analyze speculative impacts, and thus it cannot evaluate an expansion or modification that has not been identified.

Issue EIS-9: Description of the applicant and/or its objectives for the proposed action

Issue: This issue includes a variety of comments, generally editorial in nature, addressing the DEIS description of the applicant and/or the applicant's objectives. It includes statements that there is a lack of federal or state requirements to purchase wind power, the DEIS is misleading in implying the applicant is a U.S. corporation, or doubting the existence of a buyer for the project output; questions whether energy from the project would remain in the Pacific Northwest; an assertion that site-specific criteria needed to support a wind turbine facility (i.e., ready access to sufficient available capacity on an existing electric transmission system) should not be stated as a requirement for evaluation within the DEIS; and objection to inclusion of statements considered to be marketing projections or political positions.

Applicable Comments: 27-6, 38-4, 41-2, 42-1, 42-3

Response:

Sections 1.3 and **1.5.1** of the Draft EIS are accurate and appropriate descriptions of the applicant's objectives for the proposal and the criteria used by the applicant to identify the site proposed for wind power development. Describing the applicant's objectives is a requirement under SEPA and is a necessary part of the EIS (WAC 197-11-440). The EIS clearly indicates that Desert Claim Wind Power LLC does not yet have a power sales contract for the project output. Therefore, it is not possible to state with certainty where the power would be distributed, but it is appropriate to state the applicant's intentions, as communicated to Kittitas County.

Issue EIS-10: Approach to mitigation in the DEIS

Issue: Issue EIS-10 includes a variety of comments relating to the general approach to mitigation as discussed in the DEIS. Comments about mitigation for specific resources are included in **Section 4.2**. This section includes specific substantive statements that mitigation measures should be in place (as contingencies) if the EIS is found to be wrong about impacts; that mitigation measures are not long-term in focus and do not obligate the applicant to pursue corrective actions after construction; that there is a need to provide comprehensive mitigation before construction, to address concern that once the project has been approved problems will not get a response; and to include a 24-hour hotline to address residents' concerns and impacts if the project goes forward. This category also includes several editorial requests concerning EIS language on mitigation, specifically requesting the use of prescriptive wording on mitigation (e.g., change "could" or "should" to "shall" or "will") and to replace certain words in the DEIS (i.e., promptly, continually, regularly, might) with less vague, time-linked words with consequences.

Applicable Comments: 27-58, 27-67, 38-34, 38-118, 43-67, 44-16, 51-12, T11-5

Response:

"Mitigation" is defined in SEPA to mean:

(1) *avoiding* an impact altogether by not taking an action or parts of an action;
(2) *minimizing* impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;
(3) *rectifying* the impact by repairing, rehabilitating or restoring the effected environment;
(4) *reducing* or eliminating the impact over time by preservation and maintenance operations during the life of the action;
(5) *compensating* for the impact by replacing, enhancing or providing substitute resources or environments; *and/or*
(6) *monitoring* the impact and taking appropriate corrective measures (WAC 197-11-768, emphasis added).

All six forms of mitigation are addressed to some degree in the Draft EIS. SEPA does not prioritize the listed approaches to mitigation or require that they be applied in any specific sequence. The regulations do provide, however, that measures that would mitigate the *expected* impacts are to be discussed. Identifying mitigation measures for impacts that are *not expected* is not a condition addressed in the regulations.

The mitigation measures discussed in the EIS include measures that are both short-term and long-term in focus. Avoidance of sensitive resources in the siting of project facilities, for example, is clearly an action that will yield long-term benefits. The same applies to design measures incorporated into project facilities at the time of their manufacture or construction, to protective measures such as setbacks that would be in place for the life of the project, and to provisions such as fire service contracts and safety plans that would be in force throughout the operational period of the project. In summary, careful review of the mitigation measures identified in the Draft EIS does not support a claim that the mitigation measures are not long-term in focus.

With respect to obligating or enforcing action and the use of prescriptive language concerning mitigation, it is the responsibility of the decision maker (not the EIS) to determine reasonable and appropriate mitigation in a given situation, pursuant to guidance contained in the SEPA rules (WAC 197-11-660). The EIS is not a decision document or a contract, and therefore does not and cannot include enforcement language. The Draft EIS identified mitigation measures that are incorporated in the proposal (i.e., already committed to by the applicant) and/or additional measures that may be required by specific regulatory provisions (such as wetland mitigation ratios) or are recommended for further consideration for every instance in which significant environmental impacts were identified. Consistent with the SEPA rules (WAC 197-11-440 (6)(c)(iii)), these two categories of mitigation are distinguished in the text of each section of the Draft EIS. The approach followed in the Draft EIS, which is commonly accepted SEPA practice, is to identify a full range of measures that may be considered by the decision maker to mitigate the impacts of the proposal. As part of its review of the proposed action, and pursuant to its substantive authority under SEPA, the Kittitas County Board of County Commissioners will determine and specify which mitigation measures to require as conditions of approval of the project (WAC 197-11-660). Enforcement of such conditions is a function of a development agreement and the County's typical monitoring of development permits.

Issue EIS-11: Number of wind farms proposed

Issue: One comment wondered why so many wind farms are proposed for this area, as the impact would be significantly less if just one project were proposed.

Applicable Comments: 36-4

Response:

Kittitas County has no control over the number of proposals for development of wind energy facilities within the County. Similarly, it cannot control the number of applications that might be submitted for residential subdivisions or rezones. The Desert Claim EIS documents the County's review under SEPA of the one project for which an application has been filed with the County. Current proposals for two other wind energy projects in the County are independent actions that are being reviewed through the State of Washington's Energy Facility Site Evaluation Council. The number of proposals is indicative of the level of developer interest in wind resources present in Kittitas County. The EIS considers the cumulative impacts of multiple wind power projects.

Issue EIS-12: Unique aspects of the proposed project configuration

Issue: One source provided a comment (in two different forms) that the disassociative properties of the Desert Claim project configuration add a completely different dimension, making it incomparable to either of the DEIS alternatives or the Kittitas Valley Wind Power Project and raising a need to address impacts to "captive" properties.

Applicable Comments: 37-5, T26-3

Response:

The Desert Claim EIS accurately depicts the configuration of the proposed project and responsibly discloses the impacts that are expected to result from development and operation of the project. To the extent that the type, extent and level of those impacts are based on the configuration of the project, that relationship is accounted for in the description and analysis of the impacts. While the two-dimensional configuration of the Desert Claim project may differ from that of the project alternatives or the Kittitas Valley and/or Wild Horse wind power projects, it does not follow that the impacts of multiple alternatives and projects cannot be compared because of differences in configuration. The EIS includes consideration of impacts to properties within and adjacent to the Desert Claim project boundary, just as it includes impacts that would occur at greater distances.

Issue EIS-13: Cost and accessibility of the DEIS

Issue: This category includes several non-technical comments about the cost of a hardbound copy of the DEIS or how that cost was derived, who paid the initial production/printing cost, or the difficulty of analyzing the document on CD when the printed document was too costly to purchase.

Applicable Comments: 11-12, 38-2, 51-3

Response:

The cost of the Draft EIS reported in the Fact Sheet ($65 for both volumes) is based on the unit cost estimate provided to Kittitas County by the vendor who printed the copies of the document. That cost is based on the number of volumes, the number of pages in each volume, the number of oversize pages and the number of sheets with color graphics. Distribution of EIS documents at cost is consistent with the SEPA rules (WAC 197-11-504). The initial printing and distribution costs for the Draft EIS were paid by Desert Claim Wind Power LLC/*enXco, Inc.*, under the reimbursement contract with the County. Kittitas County offered the CD copy as a low-cost alternative to the hard copy. Kittitas County regrets any difficulty reviewers might have had in using CD copies of the document, but notes that a number of recipients expressed a preference for a CD copy rather than a printed copy. Based on the large size of the EIS and the much lower cost of the CD copies (approximately $5 per set), distributing the document primarily on CDs was the most efficient course of action. Printed copies of the Draft EIS were available free of charge for review at the CDS offices in Ellensburg and at multiple public libraries in the local area.

Issue EIS-14: Selected EIS terminology

Issue: Several comments requested editorial changes to EIS language, specifically to replace “wind farms” with “wind factories” and “non-participating land owners” with “unwilling landowners” or “captive landowners.”

Applicable Comments: 37-4, 38-1, 43-122

Response:

Kittitas County has not elected to adopt these editorial changes in the Final EIS. The original terminology is accurate, objective and appropriate.

Issue EIS-15: Editorial correction on page 5-2

Issue: One comment noted that the DEIS incorrectly identifies the project location as "King County" (on p.5.2).

Applicable Comments: 38-115

Response:

The text has been corrected for the Final EIS.

Issue EIS-16: Comments on Kittitas Valley EIS

Issue: One comment presented in testimony at the January 20, 2004 public meeting appeared to address several substantive aspects related to the Desert Claim DEIS, including presumed allowance of industrial development in a rural area, potential future residential development, noise impact analysis and visual impacts. The speaker was holding a copy of the Kittitas Valley Wind Power Project EIS at the time, however, and subsequent review of the comments (which include references to specific sections of a document) indicate that the comment was actually based on content included in the Kittitas Valley EIS, not the Desert Claim EIS.

Applicable Comments: T18-1

Response:

Comment T18-1 includes several statements referenced to sections of a document that indicate the subject content was included in the EIS for the Kittitas Valley Wind Power Project, not the Desert Claim project. The comment references **Section 1.10.2** with regard to visual impacts, **Section 3.5.3** with apparent regard to land use conditions under a no action alternative, **Section 3.6.1** with regard to existing development in the project area and **Section 3.12** with regard to noise. There is no **Section 1.10.2** in the Desert Claim EIS. **Section 3.5.3** of the Desert Claim EIS addresses the energy impacts of the alternatives, not land use which is discussed in **Section 3.7**. **Section 3.6.1** of the Desert Claim EIS addresses the affected environment for cultural resources, not existing development in the area, while **Section 3.12** addresses air transportation, not noise. Comment T18-1 does not reasonably apply to the Desert Claim EIS, and no further response is possible or necessary.

5.1.2 Alternatives (ALT)

Seven ALT issues were identified based on comments that appeared to primarily address the *definition* of alternatives that were considered in the EIS. In general, these comments were referenced to specific pages or sections in Chapters 1 and 2 of the Draft EIS. Some comments referred to specific discussion in Chapter 3 of the impacts of an alternative, but incorporated points that were primarily oriented to the definition of the alternative (typically, the No Action Alternative). Many comments expressed support for or opposition to a specific alternative and were assigned to an SO issue category (see **Section 5.3.2**).

Issue ALT-1: Definition of the No Action Alternative

Issue: Nearly 20 comments in some way addressed the definition of the No Action Alternative as presented in the DEIS. Most of these comments referenced the description of the No Action Alternative in **Sections 1.5.4** or **2.3.3** of the DEIS, although some were based on subsequent discussions of impacts of the No Action Alternative in Chapter 3. These comments generally fit one of three types. The key point for several comments involved consideration of other energy-supply actions that might be undertaken if the Desert Claim project were not developed, and whether that question belonged within the scope of the EIS. For example, one comment stated that speculation on meeting the energy needs of the region should the project not be built is beyond the scope of the DEIS and another stated that the potential for some other energy facility to be proposed is a remote possibility and should not be considered as part of No Action, while a third suggested the EIS should include a No Action Alternative to wind power energy that evaluates impacts of fossil fuel plant development. A second batch of ALT-1 comments involved the characterization of future land use and development conditions in the vicinity of the project area if the project were not approved. This group included specific comments that the No Action Alternative should be limited to existing zoning provisions without additional discretionary action by Kittitas County, the EIS should address whether the area would be subdivided and the possible density of development if the project were not built, and that predicting all future events pertaining to the No Action Alternative is impossible. Finally, several of the comments in this category objected to specific aspects of and/or requested specific changes to the EIS description of the No Action Alternative. Examples include requests to strike the second paragraph on p.1-7, in **Section 1.5.4** (claiming it is speculative information not substantive to the DEIS content), the second paragraph on pp. 1-9 and 1-10, in **Section 1.6** (stating there is no proof that fossil energy would be required to replace lost wind energy), the first paragraph on p. 1-11, in **Section 1.6** (claiming it is speculative and not substantive to DEIS content) and the third paragraph on page 3-99, in **Section 3.4.3.3** (stating that new energy supplies would be produced elsewhere), the reference to 400 lots in **Table 1-1**, Ground Water (as it appears to bias reader that residential development would occur), and statements in the last sentence on p. 1-18 (as conjecture or content beyond the scope of the DEIS).

Applicable Comments: 5-4, 9-2, 9-3, 27-10, 27-11, 27-12, 27-17, 29-13, 30-4, 38-5, 38-7, 38-10, 42-6, 43-49, 44-1, 47-4, T11-1, T27-2

Response:

The SEPA rules do not specifically define the characteristics of the No Action Alternative, allowing lead agencies some discretion in defining this alternative. No Action is usually defined, however, as what would be most likely to occur if the proposed action did not occur. This is the definition applied by Kittitas County in the Desert Claim EIS.

With respect to future development conditions in the proposed project area, the *SEPA Handbook* (Ecology 2003) indicates that the most likely development on the site under existing zoning represents the appropriate No Action Alternative in the case of a rezone. Consistent with this direction, the EIS indicates that the current Ag-20 and Forest and Range zoning would continue, and that the potential for future residential development within the density constraints of existing zoning would continue. Because approximately 4,000 acres in the project area are zoned Ag-20, up to 400 residential lots could be created

in this area over time. This approach to defining the No Action Alternative is consistent with standard SEPA practice.

Several of the comments assigned to this issue involved the question of other energy development actions that might occur or be proposed if the Desert Claim project were not approved. Most of these comments reflected the theme that speculation on meeting the energy needs of the region should the project not be built was beyond the scope of the EIS. Kittitas County agrees in principle with this concept, and did not attempt to speculate in the EIS what other energy developments might occur if the Desert Claim project were not approved. **Section 2.3.3** of the Draft EIS states (p. 2-53) that the No Action Alternative for this proposal "does not apply to any other current or potential future proposals for energy generation." The Draft EIS also notes that other energy projects have been proposed and could be responsive to regional energy demands, and that the No Action Alternative does not include or preclude any specific action in relation to other energy proposals. Those statements are reasonable, accurate and appropriate, and do not amount to speculation about how future energy needs might be met.

The second paragraph of **Section 1.5.4** of the Draft EIS is an appropriate description of the No Action Alternative for this case that is consistent with SEPA guidance and is substantive to the EIS content, as is the first paragraph under Groundwater/No Action on page 1-11. The air quality entry in **Table 1-1** spanning pages 1-9 and 1-10 is an appropriate and reasonable acknowledgement that some other energy facility *might* be developed in the no action case and *might* be a fossil-fueled facility; there is no firm prediction of this outcome. With respect to the entry for Mechanical Hazards/No Action on page 1-18, **Section 3.8.1** indicates that the project is reported to be in a high fire-hazard area; based on the definition of the No Action Alternative, it is reasonable to assume that this condition would continue. Future residential development on 20-acre parcels would not lead to drastic changes in land cover (such as extensive conversion of shrub-steppe and grassland to lawn area), although it would introduce more potential sources of fires into the area.

Issue ALT-2: Scale of Proposed Action

Issue: This issue includes a question regarding the determination of the wind turbine quantity for the proposal and a suggestion that a smaller-scale project be considered.

Applicable Comments: 14-6, 36-5

Response:

The 120-turbine wind farm addressed in the EIS is based on the application that Desert Claim Wind Power LLC submitted to Kittitas County, and it is the applicant's prerogative to specify the level and type of development that would meet the applicant's objectives. Alternative 2, as described in **Section 2.3.2** and evaluated in Chapter 3 of the EIS, is a smaller scale wind project. It includes only 40 to 45 turbines because of physical site constraints at Springwood Ranch. Alternative 2 was not proposed by the applicant but instead was developed as part of the County's SEPA EIS process. This alternative does not meet the "reasonable alternative" test under SEPA as discussed in the Draft EIS. It was included in the EIS to aid decision-makers in evaluating potential environmental impacts.

Issue ALT-3: Adequacy of Alternative 1

Issue: One comment stated that Alternative 1 is not a practical alternative.

Applicable Comments: 29-11

Response:

Kittitas County agrees with this comment. **Section 2.3.2** of the EIS describes the purposes for evaluation of alternative sites and acknowledges the limitations on use of the Wild Horse site as a true alternative for the Desert Claim project. Nevertheless, Alternative 1 serves the useful purpose of providing a benchmark for the decision-makers by providing a comparison of potential environmental impacts.

Issue ALT-4: Adequacy of Alternative 2

Issue: Two comments questioned the adequacy of the action defined as Alternative 2. In general, they stated that Alternative 2 is not practical or viable, and therefore cannot be evaluated.

Applicable Comments: 29-12, 29-14

Response:

The response for this issue is the same as for Issue ALT-3. The EIS acknowledges the practical limitations on the Alternative 2 site, but Alternative 2 nevertheless provides a useful basis of comparison.

Issue ALT-5: Alternative generation technologies

Issue: Issue ALT-5 includes comments that the DEIS does not, but should, discuss alternatives to wind power that could cut greenhouse emissions and reduce dependence on foreign oil. Actions specifically mentioned in these comments included restructuring the power grid, conservation, solar power, hydrogen power and providing homeowner incentives for conservation and/or small-scale generation.

Applicable Comments: 36-1, 36-6, T14-5, T27-1, T29-4

Response:

Section 2.4.2 of the Draft EIS addresses alternative generation technologies, although this discussion is limited to wind generation technology. The alternative forms of energy generation or conservation referenced in these comments do not represent "reasonable alternatives" consistent with the SEPA rules. The SEPA rules provide that "reasonable alternatives" are those that could feasibly attain or approximate a proposal's objectives, but at a lower environmental cost or decreased level of environmental degradation. The objectives for the proposal, as established in **Section 1.3** of the EIS, are specifically stated as the development of a commercially viable wind energy facility with a nameplate capacity of at least 180 MW. In addition, Desert Claim Wind Power LLC is a wind energy developer whose expertise is in wind energy facilities, not in energy facilities in general and specifically not in solar power, hydrogen power or energy conservation. A project alternative based on one of these types of technologies or actions

would not attain or approximate the objectives for the proposal, and thus would not be a reasonable alternative under SEPA. Consequently, there is no basis for considering such alternatives in the EIS.

Issue ALT-6: Alternative sites

Issue: This issue includes comments that were interpreted to involve consideration of alternative sites in the EIS. Some comments included specific geographic direction, such as suggestions to consider other sites where impacts to residents were expected to be less (e.g., east of Ellensburg) and that alternative sites with potentially suitable winds include areas east of Kittitas between Old Vantage Highway and I-90, north of I-90, and both north and south of I-90 in the Columbia Gorge. This group also includes more general comments that a proper location would be out of view of the majority of residents, to find an unpopulated area for project, and that the proposed area provides inadequate wind to support a wind turbine project.

Applicable Comments: 39-1, 48-1, 48-6

Response:

Section 2.3.1 of the Draft EIS provides a lengthy discussion of the consideration of alternative sites to meet the project objectives. This material documents consideration of the geographic areas and site conditions referenced in the comments. One of the alternative sites considered in detail in the EIS is within the general area of Kittitas County that is suggested by some of these comments as being potentially suitable.

Kittitas County has not undertaken an independent evaluation of whether winds in the proposed project area, or in other areas of the County, are adequate to support a wind energy project. Such an evaluation is not required under SEPA, and would not be a necessary action on the County's part. There is ample published information indicating that parts of Kittitas County have sufficient wind resources for commercial wind energy generation, however, and the County has reviewed this information.

Issue ALT-7: Proximity to transmission lines

Issue: Several comments (all from the same source) objected to consideration of potential sites only if they were near existing transmission lines. Specific points were that no alternate site was provided that was not already near existing transmission lines, and that offsite alternative locations that involved incurring the cost of transporting the power produced were not included in the EIS.

Applicable Comments: 41-4, 41-29, 41-31

Response:

Please see the response to Issue ALT-5. **Section 1.3** of the Draft EIS indicates that ready access to sufficient available capacity on an existing electric transmission system is one of the site-specific criteria needed to support the action defined in the applicant's objectives. **Section 2.3.1.2** provides additional discussion of this criterion and explains why proximity to available transmission capacity is a necessary condition for a commercially viable wind energy facility. Alternative sites that do not satisfy this

condition would not be "reasonable alternatives" under the SEPA rules because they would not be able to reasonably attain or approximate the objectives for the proposal. Therefore, it would not be reasonable under SEPA for the EIS to consider an alternative site that would not be commercially viable because of the expense involved in constructing a transmission connection.

5.1.3 Project Description (PD)

Sixteen PD issues were identified based on comments that appeared to primarily address the description of the proposed action that was presented in the Draft EIS. In general, these comments were referenced to specific pages or sections in Chapters 1 and 2 of the Draft EIS. Most of the comments were grouped into distinct issues involving the level of detail provided for specific components of the proposed project, or to aspects of project construction or operation. Some comments referred to specific discussion of the project in Chapter 2 and requested corresponding material on project impacts.

Issue PD-1: General comments on specificity of construction description

Issue: Two comments appeared to be general comments on the description of project construction activities in **Section 2.2.3**. One requested clarification of construction actions such as earthwork, assembly of turbines and use of blasting for foundations, while one requested identification of cubic yards of earth to be disturbed or removed.

Applicable Comments: 11-1, 43-43

Response:

Section 2.2.3 of the Draft EIS provides a detailed description of the construction process and activities for the proposed project that appears to answer the questions posed in Comment 11-1. **Section 2.2.3.8** specifically notes that use of explosives might be required if bedrock were encountered in construction of turbine foundations. The Draft EIS does not include information on cut and fill quantities associated with construction earthwork because project plans have not been developed to a level of detail to provide such estimates. That level of detail is not required under SEPA.

Issue PD-2: Description of operation and maintenance activities and schedules

Issue: This category includes requests for clarification regarding turbine operation and maintenance schedules (e.g., availability of parts, maximum days/wind speed capacity for operation, whether certain periods of sustained wind would result in turbine shut-down or malfunction), and the meaning of the statement "controlling turbine operations as necessary to meet scheduled power deliveries." One comment stated that project O&M activities described in the EIS should include a process for complaint resolution and a wildlife monitoring program.

Applicable Comments: 14-4, 27-4, 38-28

Response:

The San Jose newspaper article concerning wind farms in that area (presumably, facilities at Altamont Pass) referenced in Comment 14-4 is not applicable to the Desert Claim project. The wind facilities at

Altamont Pass are of a considerably different design and vintage, and current wind energy technology has benefited considerably from experience at older facilities. **Section 2.2.2.1** of the EIS indicates the proposed turbines have a safety threshold of approximately 56 miles per hour, and would automatically shut down at wind speeds above that level. Based on monitoring data collected at the project site by Desert Claim Wind Power LLC, wind speeds are likely to be sufficient for turbine operation in the range of approximately 60 percent of the time. The O&M actions requested in Comment 27-4 are mitigation measures that have not been adopted by the applicant as part of the proposed action, and are therefore discussed in the EIS under appropriate mitigation headings. See the response for Issue EIS-10 for information concerning resolution of mitigation as conditions of approval.

With respect to Comment 38-28, the meaning of the statement in **Section 2.2.4.1** about controlling turbine operations is precisely as it reads: project staff would ensure turbines are operating (pending sufficient wind at the time) so the project can deliver power, and would shut turbines down as necessary for maintenance. Project O&M staff would be available 24 hours per day and patrolling activities would occur daily; daily patrol schedules have not yet been established, and are a project detail not germane to the scope of the EIS. Impact issues related to use of hazardous substances are addressed in Chapter 3, primarily in **Section 3.3**, rather than in Chapter 2. Please note that there are many applicable federal, state and local laws and regulations governing the use of hazardous substances.

Issue PD-3: Project decommissioning

Issue: Questions or observations regarding decommissioning of the project, particularly comments that referenced discussion in **Section 2.2.5** of the DEIS, were assigned to this issue category. The category includes requests to identify a proposed decommissioning plan or responsibility for decommissioning, comments that a decommissioning plan is not shown, and statements that a comprehensive decommissioning plan with provisions for accelerating decommissioning of the project or any portion of it if impacts are more adverse than contemplated must be completed prior to construction. Other comments included statements that a bond to cover decommissioning should be required, and that re-powering of the project should not be permitted under the development agreement without a formal process.

Applicable Comments: 12-22, 14-7, 24-4, 38-31, 38-119, 51-4, T4-2, T28-2

Response:

Comments 12-22 and T4-2, to the effect that a decommissioning plan is not shown and the DEIS is incomplete as a result, makes specific reference to Chapter 4 of the document. Chapter 4 of the Draft EIS is a summary of the expected cumulative impacts of the project. Decommissioning is addressed in **Section 2.2.5** of the Draft EIS. This discussion specifically states that Desert Claim Wind Power LLC would provide a guarantee bond or corporate surety to ensure sufficient funds are available for decommissioning. The content of **Section 2.2.5** also addresses the points made in Comments 14-7, 24-4 and T28-2, and portions of Comments 38-31 and 38-119. Decommissioning requirements would be addressed in the development agreement. Rights and conditions that Kittitas County might or should include within a development agreement are the responsibility of the Board of County Commissioners, and are not within the scope of the EIS.

Issue PD-4: Specific quantities and locations for project facilities

Issue: This issue includes comments relating to detailed, quantitative information presented or desired in the project description. It includes specific statements that the project description should include specific numbers for turbines and turbine heights and length of overhead cable, numbers and locations of meteorological towers, and area of graveled project roads; that proposed connections to the KRD access road are not clear; and that access road connections to the existing public road system should be indicated on **Figure 2.12**. The issue also includes an inquiry as to why **Table 2-1** includes turbines larger than 1.5 MW, as the DEIS analysis addresses only 1.5 MW turbines, and a comment that the projected 23 miles of access roads should be included in the permanently impacted acreage identified in the DEIS.

Applicable Comments: 16-3, 38-16, 38-20, 38-21, 38-91, 43-42, 44-3

Response:

Section 2.2.2.1 of the Draft EIS explained the current uncertain status of turbine equipment selection for the proposed project. The applicant had not selected an exact turbine model when the Draft EIS was prepared. Because of this, the Draft EIS described and evaluated the impacts associated with a maximum turbine envelope based on a turbine with an 80-meter tower and an 80-meter diameter rotor blade. The Draft EIS specifically indicated that the turbines would be a maximum of 393 feet in height (120 meters), that there would be a maximum of 120 turbines, and that the project would produce *at least* 180 MW of nameplate power. At this point in the environmental review and project permit process (i.e., at the Draft EIS stage), there is no need to specify the exact number of turbines or the exact turbine model so long as the maximum conditions are identified and incorporated into the impact analysis. With respect to **Table 2-1** and the turbine characteristics that are addressed in the impact analysis, the key characteristics are the hub heights and rotor diameters—none of which exceed the maximum turbine envelope analyzed in the Draft EIS. While several of the specific turbine models listed in the table would produce more energy than 1.5MW, they would still fit within the 393-foot height envelope and are therefore covered by corresponding elements of the impact analysis.

For purposes of the analysis in the Final EIS, the applicant has selected the GEWE 1.5sl turbine, which is described in **Table 2-1**.

With respect to the length of overhead cable (Comment 16-3), **Section 2.2.2.3** of the Draft EIS clearly states the length of both underground and overhead power collection cable included in the proposed plan (these numbers have been revised for the Final EIS). The Draft EIS states the length of the transmission interconnection as a range (200 feet to 1,500 feet, not a few feet to several miles) because the applicant does not yet know whether the project would connect with the BPA or PSE system; the former figure applies to a BPA connection and the latter to a PSE connection, and both conditions are considered in the impact analysis.

The Draft EIS did not identify the specific number or location of meteorological towers, as the applicant had not yet defined this project feature. The Final EIS includes specific information for met towers; there would be five free-standing met towers in the locations depicted in the Final EIS.

Under the original project configuration, there were approximately 23 miles of project access roads; these roads were included in the acreage for permanent project impacts analyzed in the Draft EIS. In response to direction from Kittitas County based on comments on the Draft EIS, the applicant modified the project layout, including reconfiguring the project access road network to reduce impacts to sensitive environmental features identified in the Draft EIS. As indicated by **Table 2-3** and corresponding information in Chapter 3 (**Table 3.4-2**, for example) there are now approximately 27 miles of proposed project access roads; Desert Claim increased the amount of project access roads in the modified project layout to avoid sensitive environmental features identified in the Draft EIS. The project access roads are included in the acreage for the permanent project footprint (Comment 38-21). The locations at which the project access roads would connect with the public road system are depicted on **Figure 2-12** (where the yellow lines of the project road system cross the black lines of public roads), and these intersections are clearly indicated in the discussion in **Section 2.2.2.5**. There are no longer any proposed connections to the KRD access road.

Issue PD-5: Energy production capacity of the project

Issue: Several comments requested editorial revisions to statements regarding the capacity of the proposed wind energy facility. Individual comments stated that the DEIS overestimates actual production of the facility by using the nameplate capacity of 180 MW, as actual energy production is usually less than 30 percent of capacity, and that the DEIS should state the project will contribute 60 MW of intermittent power, at best.

Applicable Comments: 27-1, 27-8, 29-28, 30-3, 41-1, 42-2

Response:

The EIS accurately and consistently refers to 180 MW as the nameplate capacity of the proposed project, with capacity understood to be commonly defined as the maximum output at a given time. The EIS likewise describes the likely operating pattern of the project, with no generation at times when wind speeds are too low for power generation or too high for safe operation of the turbines, and discloses the expected average annual output of the project as 60 MW.

Issue PD-6: Disposition of project output

Issue: Issue PD-6 includes comments relating to where and whether energy from the project would be used. Examples are that the project does not have a buyer for the energy; the DEIS contains references to buyer and location to where energy will be distributed that should be revised; contracts for purchase of power do not exist and the DEIS should reflect this situation; power from the project will not go to Kittitas County; and that purchase agreements should be required for the EIS.

Applicable Comments: 27-2, 27-3, 27-7, 27-9, 29-10, 42-4

Response:

The EIS accurately describes the status of expected delivery of the project output, stating specifically that the applicant has not yet entered into a power sales agreement and does not know the specific distribution

of the generation from the project. The fact that a power sales contract currently does not exist does not change the applicant's intent or objectives for the project, which are disclosed in the EIS. In general, market conditions are such that a project developer is not able to execute a power sales agreement until after land use approval for a project has been obtained.

Issue PD-7: Use of hazardous materials

Issue: Two comments stated that the DEIS does not but should list the project-related hazardous materials (including oils and lubricants) that would be used, and address the impacts associated with their use.

Applicable Comments: 43-45, T13-3

Response:

The EIS identifies in generic terms the types of hazardous substances that would likely be used in project construction and operation, and discusses the prevention and control measures that are standard for the use of such substances. The SEPA rules (WAC 197-11-440 (6)) provide that insignificant impacts need not be discussed in an EIS; because significant impacts from use of hazardous substances are not expected, it is not necessary or appropriate to provide the additional detail requested in these comments.

Issue PD-8: Project power collection system and related facilities

Issue: This category includes comments relating to the discussion of the power collection system in the project description. Specific comments were that the DEIS should clearly identify the location of transformers and electrical equipment (i.e., below ground or near base of turbines, number and placement of substations, location of O&M facility) and the location of all collection lines, particularly down Smithson Road, and state whether they will encroach on adjacent property. Comments requested further explanation on installation of underground cables on non-leased property, expressed concern regarding the size and visual impact of collection lines, and stated that additional telephone lines used to connect turbine communication network should be located underground to minimize potential impacts. One comment maintained that information on electrical systems differs between the Fact Sheet and Chapter 1 of the DEIS.

Applicable Comments: 27-51, 38-18, 43-41, 43-46, 50-3

Response:

With respect to Comment 27-51, the referenced statement in **Section 1.8.8.1** identifies a possible mitigation measure related to fire hazards, based on recommendations from the Kittitas County Fire Marshal. This measure has not been incorporated into the project description; **Section 2.2.2.3** indicates that the transformers would be located above ground on concrete pads. While it is true that locating transformers below ground might harden them against various hazards, that is not standard practice in the wind industry because it would involve unreasonable safety risks for project personnel and operational and maintenance disadvantages.

The Draft EIS adequately described the characteristics of the overhead power collection lines and identified them in the impact analysis as visible features of the property. The proposal has been modified to replace these facilities with underground collection lines wherever feasible. The underground lines would be placed, at the applicant's expense, within County road rights-of-way and/or within easements and rights-of-way granted to the applicant; the lines would not be placed on non-participating landowner property. Therefore, these Draft EIS comments are moot.

Plans for the placement of the project substation and O&M facility have not yet been finalized because this decision depends upon the identity of the power purchaser(s) and the corresponding transmission system to which the project would connect. The Final EIS describes the options that exist for both facilities and discloses the impacts that would occur for each option. Impacts and mitigation for each facility and option can be and have been adequately addressed, even though final locations have not been determined.

Issue PD-9: Configuration of the proposed project area

Issue: Two comments stated that the alternatives described in the DEIS do not realistically represent the proposed project because the project is unique in its patchwork appearance; the project is stated as 5,237 acres but encompasses more acres and is actually 4 or 5 micro-sites that surround unwilling landowners.

Applicable Comments: 37-3, 38-14

Response:

See the response to Issue EIS-12. The EIS accurately describes the extent of the project area as 5,237 acres and displays the distribution of that acreage. Some of the proposed power collection cabling would be located outside of the project boundary, but would occupy a very narrow, underground space within County road rights-of-way and/or within easements and rights-of-way granted to the applicant. Because these cables are located in a small area, this would not encompass many more acres than the 5,237 cited. The impact analyses for the respective elements of the environment address the extent of project impacts as appropriate for each element, which includes adjacent properties as well as properties that are more distant.

Issue PD-10: Description of Kittitas County objectives

Issue: One comment maintained that only the County objectives specifically contained in KCC17.61A.010 or its appendices should be referenced in the DEIS (p. 2-41).

Applicable Comments: 38-32

Response:

Comment 38-32 does not explain in what way the text on page 2-41 is considered to be inconsistent with the objectives stated in KCC17.61A.010. No further response is possible.

Issue PD-11: Transmission interconnection point

Issue: This issue is based on a single comment that the DEIS identifies a potential interconnection point at Woldale substation, so additional development, potential impacts and mitigation for this action should be addressed.

Applicable Comments: 38-19

Response:

Section 2.2.2.3 (page 2-24) describes the facilities involved with the project connection to an existing transmission system, while **Section 2.2.3.10** describes the construction activities associated with those facilities. Impacts of the transmission connection are addressed at many locations in Chapter 3. As discussed in the response to Issue PD-8, impacts and mitigation can be and have been adequately addressed, even though the final location for the transmission connection has not been determined.

Issue PD-12: Project visitor center

Issue: Two comments stated that the DEIS does not address the location and potential impacts of the proposed visitors center.

Applicable Comments: 38-22, 43-44

Response:

The Final EIS provides additional information on the probable character and location of project visitor facilities, based on a recommendation from the Kittitas County Public Works Department (see Issue GT-5). Visitor facilities would be small in scale and would serve the simple purpose of allowing interested visitors to stop at a location that is not on a public roadway. The facilities would have minimal impacts that are limited primarily to transportation; these impacts are addressed in **Section 3.12.2.2**.

Issue PD-13: Phasing of project construction

Issue: This issue reflects concern regarding the potential for greater impact should the project be constructed in phases, as phasing would change the temporary nature of construction and associated impacts, and the opinion that the option to construct the project in phases should be removed.

Applicable Comments: 38-23

Response:

If construction of the project were conducted in two or more phases, it is possible that the time from the start of the first phase to completion of the last phase might span several years. Construction activity would be intermittent during that period, however, rather than continual; it is estimated that any phase would take approximately 9 months to complete. Because of this, construction impacts would still be temporary, but could occur at multiple, intermittent times. Construction activities would also be more

localized geographically if the project were developed in phases. Chapter 3 has been modified in appropriate locations to more clearly acknowledge the possibility and consequences of multiple construction phases. Based on the construction impact results provided in the Draft and Final EIS, it is not accurate to characterize air quality, noise, traffic and access impacts during construction as "extensive," nor to imply that these impacts would not be temporary if the project were developed in phases. Limitations on the amount of time for the construction phase of the project is a function of the Development Agreement to be written and approved by the Kittitas County Board of County Commissioners, should they approve the project. Although the project might be developed in phases, Kittitas County has the right to impose construction time limitations for the development of each phase.

Issue PD-14: Use of local resources for project construction and operation

Issue: Issue PD-14 includes two similar comments that the use of local contractors and suppliers should be quantified, as the DEIS is vague regarding this point, and that the DEIS should provide the actual number of the 10 operational staff who would be local.

Applicable Comments: 38-24, 38-29

Response:

At various locations in Chapters 2 and 3, the Draft EIS addresses reasonable expectations for the use of local contractors, suppliers and employees, based on experience with other projects and the characteristics of local resources. At this point in the approval process, the applicant is not required to, nor is it possible or reasonable to develop project plans and contractual arrangements to the point where use of local resources could be quantified with any precision. Without having selected a prime construction contractor or received applications for project operation positions, the applicant cannot reasonably provide the information requested in these comments.

Issue PD-15: Timing of restoration plans

Issue: One comment referencing the project description stated that plans for restoration and revegetation should be determined prior to commencement of the project, in order to mitigate environmental impacts, and that reasonable deadlines and maximum impact exposure limits should be set.

Applicable Comments: 38-25

Response:

This comment is consistent with similar comments expressed by the Washington Department of Fish and Wildlife regarding the content of **Section 3.4**, which is where habitat impacts and restoration are discussed in detail. Timing for completion of restoration plans and actions is an appropriate subject for a development agreement.

Issue PD-16: Project traffic management plan

Issue: This issue includes two comments referencing discussion of the traffic management in **Section 2.2.3**. These included comments that hauling construction materials, gravel, water, etc. will impact public roads and that waiting for completion of the project to repair damage caused to roads by the project construction is not acceptable. They also stated that the applicant should maintain roads in pre-construction condition throughout project construction, and that the traffic management plan should stress that community access cannot be compromised.

Applicable Comments: 38-26, 38-27

Response:

The request to maintain public roads in pre-construction condition throughout the construction process is not reasonable, practicable or consistent with standard practice for public or private construction projects. Road damage from wear and tear is an incremental, accumulative process that is a function of trip quantities and loads. Even if it were possible to measure the degree of damage from each trip or day of construction activity, it would not be feasible to restore that fractional level of damage on a daily, weekly or monthly basis. The reasonable and universal approach is to define the pre-construction condition of the affected roads, monitor changes to that condition and the final post-construction condition, and ensure restoration of the pre-construction condition subject to inspection and approval of the jurisdiction with authority over the roads. Based on recent experience with other projects, it is reasonable to assume that Kittitas County Public Works will capably discharge this function. Maintenance of reasonable local access for affected residents is one of the primary purposes of a project construction traffic management plan.

5.2 ENVIRONMENTAL ELEMENT/RESOURCE ISSUES

Most of the review comments on the Draft EIS were classified as pertaining to one of the 16 elements of the environment addressed in detail in Chapter 3 of the document. Individual comments were assigned to issue categories based on interpretation of the primary theme or subject matter of the comments. Many comments appeared to address multiple issues related to a particular element or resource, while some could be interpreted to apply to multiple elements. Review and classification of the comments resulted in identification of 109 distinct issues among the 16 elements of the environment discussed in the Draft EIS.

5.2.1 Earth Resources (ER)

Issue ER-1: Impacts on Ellensburg Blue agate

Issue: One comment stated that the DEIS does not mention the potential impact on the highly coveted Ellensburg Blue agate, which is specific to the area west of Ellensburg.

Applicable Comments: 27-59

Response:

The Ellensburg Blue may be highly coveted and specific to the area west of Ellensburg (note that the project area is primarily north of Ellensburg), but the comment fails to establish a reasonable impact link between the project and the agate. The Desert Claim project would have no impact on the physical supply of Ellensburg Blue agate, as it would neither create nor destroy these stones. The project would also have no impact on the availability or accessibility of the agates because the proposed project is located exclusively on private land that is not open to the public for rock hounding.

Issue ER-2: Erosion impact analysis and conclusion

Issue: One comment disagreed with the methods and/or conclusion of the erosion impact analysis in **Section 3.1**.

Applicable Comments: 29-15

Response:

Comment 29-15 poses questions that are addressed in the impact analysis presented in **Section 3.1.2.1** of the EIS, which described relevant facts and provided a rationale for the impact conclusion. The comment does not provide any evidence to the contrary, or explain in what way the EIS analysis might be inaccurate.

Issue ER-3: Landslide hazards and mitigation

Issue: Issue ER-3 includes several comments addressing consideration of landslide hazards. Specific comments were that the landslide hazard discussion should be clarified, and the EIS should include mitigation for site-specific geotechnical study and removal of turbines in the high-risk zone if the risk cannot be mitigated to an acceptable level.

Applicable Comments: 29-16, 38-35, 38-36, 38-99

Response:

Comment 29-16 expresses an opinion that goes beyond the development restrictions provided by applicable existing codes and regulations. With respect to Comment 38-35, **Section 3.1.5.2** has been revised to more clearly explain that it is not known whether the triggering mechanism for the historic landslide activity was seismic or some other factor. That triggering mechanism and the existing physical characteristics of the area will continue to exist regardless of whether the project is constructed, so the high landslide hazard will persist with or without the project. If wind turbines were constructed within this area (with required mitigation as discussed in the Draft EIS), the hazard area would continue to be highly localized and would not be extended to off-site areas. Comments 38-36 and 38-99 appear to be based on the presumption that mitigation would not be accomplished or effective, and that relocation is the only possible form of mitigation. To the contrary, as discussed in **Section 3.1** of the Draft EIS, if turbines are not shifted outside this area using micro-siting, then site-specific geotechnical study and engineering measures would be applied to protect the slope stability and integrity of the turbines, resulting

in the conclusion that there would not be significant unavoidable adverse impacts related to landslide hazards.

Issue ER-4: Ongoing baseline impacts on earth resources

Issue: One comment stated that the impacts of the proposed project neglected to include the same ongoing impacts addressed in the No Action Alternative, with a cross-reference to **Table 1-1**.

Applicable Comments: 38-6

Response:

The purpose of **Table 1-1** is to identify, in summary form, the impacts for each element of the environment that are specific to each alternative. It is, or should be, understood that for the No Action Alternative, existing conditions for each element would remain in the baseline condition *except* as modified by a given alternative. It should not be necessary, and would needlessly add excess verbiage to the summary table, to repeatedly state that baseline impacts would continue under the No Action Alternative. Such needless repetition is not required under SEPA. Moreover, it also should be recognized that ongoing baseline impacts to earth resources (or other resources) that occur regardless of the project would continue with the proposed action, and those would be baseline impacts and not impacts of the proposed action.

5.2.2 Air Quality (AQ)

Issue AQ-1: Dust impacts during operation

Issue: Several comments expressed concern that turbine operation would create dust clouds and disperse pollen, affecting down-wind areas.

Applicable Comments: 12-30, 51-5, T9-1, T24-6

Response:

Without corroborative evidence (such as photographs or videotape) of the phenomenon reportedly observed at the Stateline wind project, it is not possible to respond definitively to this concern. **Section 3.2.2.2** of the Draft EIS accurately describes the relevant physics properties that apply to wind turbine rotors and concerns about dust dispersion; the situation referenced in the comment is not consistent with these properties and is not expected to occur. The discussion has been modified somewhat for the Final EIS to provide additional support for the concept that wind turbines do not operate as fans, but instead take energy out of the wind.

Issue AQ-2: Air quality impacts during construction

Issue: Issue AQ-2 includes comments relating to the analysis of potential air quality impacts during project construction. It includes specific comments that construction dust will adversely affect air quality; the potential for cumulative impacts from dust and vehicle emissions (if the Kittitas Valley and Desert Claim projects are constructed simultaneously) could be significant; and that

the project impact would be major or significant, especially if mitigation does not work. It also includes a request that a statement referring to the minor amount of construction dust relative to dust from other rural residential, industrial, and agricultural activities should be removed.

Applicable Comments: 29-17, 38-40, 38-100, 43-50

Response:

Comment 29-17 expresses the hope that the construction impact on air quality will be evaluated. **Section 3.2** of the Draft EIS provides the requested evaluation. Comment 38-40 references a statement in **Section 3.2.6** that is a summary re-statement of impact analysis and conclusions provided in **Section 3.2.2.1**. Evaluation of an impact requires consideration of the impact's *context*, i.e., the degree of change relative to existing conditions. The point of both sections is that construction air quality effects would represent a minor, localized and temporary addition to existing sources of air emissions. The comment does not provide evidence to support the claim that temporary construction emissions in a localized area would constitute a major impact. Similarly, Comment 38-100 does not explain or provide evidence to support the claim that cumulative air quality effects could be significant. Lacking such an explanation or evidence, no further response is possible other than to state that for temporary air quality effects to be significant, their extent and magnitude would need to be rather large, such as noticeable degradation of air quality in Ellensburg for a substantial period of time. As stated in the EIS, the likelihood of such an event appears to be very remote.

With respect to Comment 43-50, the SEPA rules include a definition of "significant," but not a definition for negligible or insignificant. Significant means a reasonable likelihood of *more than a moderate* impact (WAC 197-11-794). Webster's Dictionary defines "negligible" to mean "so small or unimportant or of little consequence as to warrant little or no attention." Based on these definitions, a negligible impact would also be insignificant.

Issue AQ-3: Mitigation for dust impacts

Issue: Several comments primarily addressed mitigation for dust impacts, as opposed to the impacts themselves or the adequacy of the analysis. Specific statements were that there is no mention of dust mitigation during construction or in the event that turbine action results in increased dust; watering of road and soil surfaces during and after construction hours should be included; mitigation should include reduction in speed limit to 20 mph; DEIS should include more specifics on dust mitigation, and should indicate the source for the large quantities of water needed for dust control.

Applicable Comments: 38-37, 38-38, 43-26, 43-47, 43-48

Response:

Section 2.2.3 of the EIS indicates that water trucks would be used to transport water to the project site for dust control, and water would be purchased from local supply sources. **Section 3.2.2.1** indicates that vehicle speeds would be limited to 25 miles per hour, while **Section 3.12.1** indicates that posted speed limits in the project area range from 25 to 45 miles per hour. Comment 38-38 does not identify the basis for the recommended speed of 20 mph, the benefits that would be obtained from the 5-mph reduction in

the speed limit, or why a reduction below the minimum posted speed limit is necessary. Use of dust palliatives has been added to the discussion of possible mitigation measures. Comment 43-26 inappropriately requests discussion of dust mitigation in **Section 1.9.2**, which addresses air quality. Comment 43-47 acknowledges that dust mitigation measures are addressed in **Section 3.2.2.1**, but asks for more detail in describing the measures. Comment 43-48 appears to be based on misinterpretation of SEPA guidance, which requires identification of mitigation measures associated with significant impacts that are expected. As stated in the Draft EIS, with the mitigation included in the proposed action, significant air quality impacts are not expected.

Issue AQ-4: Greenhouse gases from backup power source

Issue: One comment stated that the DEIS had no discussion of the backup power that would be required to be on line when the wind farm was not producing electricity, resulting in production of more greenhouse gases.

Applicable Comments: 36-3

Response:

Section 3.2.2.2 of the Draft EIS (page 3-31) explains that the Desert Claim project would not include any provision for fossil-fueled backup power at times when the wind was insufficient for the turbines to operate. The utility purchasing the power from the project would integrate it into the utility's supply and it would make the decision regarding additional power requirements, including the source of that additional power, if any. **Section 2.3.3** explains that under the No Action Alternative, alternative forms of power generation may or may not occur but in any case are not discussed in the EIS because this project would not include or preclude any such generation. Please see the response to Issue ALT-1 with respect to possible development of other energy facilities. Comment 36-3 assumes an action that is not part of the proposed project and does not need to be evaluated in the EIS.

Issue AQ-5: Air quality impacts under No Action Alternative

Issue: One comment stated that the text of the EIS should note that current land use in the project area is both agricultural and residential, and that reference to possible development of some other energy facility is remote and should be removed.

Applicable Comments: 38-39

Response:

Section 3.2.3.3 accurately states that "*most* of the land in the project area would likely remain in its current agricultural use," and that some of the existing land could be converted to rural residential use; therefore, the text has not been changed. Please see the response to Issue ALT-1 with respect to possible development of other energy facilities.

5.2.3 Water Resources (WR)

Issue WR-1: Impacts on surface water resources and water supplies

Issue: Several comments concerned primarily the impacts of road and utility crossings of watercourses. They specifically addressed construction-related BMPs, the potential for disturbances that could significantly impact residents' use of water for irrigation and stock watering, and the level of information on water use and discharge included in the Draft EIS. This issue also includes a comment on permits; i.e., that a Hydraulic Project Approval from WDFW was required, and an inquiry as to whether DOE approval was required for relocation of ephemeral or intermittent streams.

Applicable Comments: 1-15, 15-3, 16-4, 29-18, 38-42, 43-51, T13-2

Response:

Section 3.3 of the Draft EIS adequately addresses concerns about impacts to surface water resources, particularly with reference to stream crossings. Within the project area nineteen (19) streams were identified through map and field investigation. Of these streams, five (5) are perennial surface water bodies, which include Green Canyon Creek, a tributary to Green Canyon Creek, Reecer Creek, a tributary to Reecer Creek and one unnamed tributary to Jones Creek. The remaining 14 streams have flowing water only a few weeks or months out of the year, typically during rain events or groundwater recharge events in the spring and early summer.

Construction impacts to surface water flow may occur during the installation of turbine pads and towers, and during the installation of the underground collection system. To ensure the surface water flows will not be changed from the current conditions, the applicant will be required to obtain permits and approval from federal, state, and local agencies.

A Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife would be required for all in-water construction activities. The project applicant would be required to submit a plan with the permit application detailing construction methods that would be used to install the underground collection system beneath surface water bodies, and would be required to identify all access routes crossing a surface water body. The plan would include stipulations to ensure that surface water flow would not be altered by construction and operational phases.

Issue WR-2: Mitigation for potential surface water or groundwater impacts

Issue: Issue WR-2 includes comments indicating that the DEIS does not sufficiently address mitigation for potential impacts to groundwater and wells from potential blasting or other construction activities or from operational impacts over the life of the project. Comments include specific points that compensation should be provided as mitigation; a 2000-foot setback should be provided; the DEIS should address mitigation for potential loss of water quality/quantity resulting from crossings over watercourses; and the EIS should identify which protections will be in place. It also includes requests for assurances that surface water flow will not be changed from current conditions, that turbine placement would not occur in areas where it would impact groundwater, and that blasting would not have adverse impacts on wells.

Applicable Comments: 11-2, 27-39, 29-19, 42-22, 43-1, 43-2, 43-3, 43-52, 43-54, 43-56, 43-59, T12-2

Response:

As stated in **Section 3.3.5** of the Draft EIS (page 3-54), any work adjacent to creeks would be required to adhere to applicable federal, state and local regulations. The applicant would be required to comply with requirements of the Kittitas County Critical Areas Ordinance (KCC Title 17A), the State Water Code (RCW Chapter 90.03), the State Water Pollution Control Act (RCW Chapter 90.48), and sections 404 and 401 of the Clean Water Act (CWA; 33 CFR 320-330). Compliance with these regulations requires the preparation and submittal of a Stormwater Pollution Prevention Plan (SWPP), which describes the construction activities; identifies potential pollutants sources; presents specific Best Management Practices for minimizing erosion and protection of water bodies; describes a spill prevention, containment, and control plan; identifies personnel training requirements; and describes site monitoring, inspection, and maintenance requirements. Mitigation measures outlined in the SWPP to protect water quality and quantity impacts during construction activities may include the following:

- The clearing of vegetation would be confined to the minimal area needed to conduct the construction activities.
- Any work near or adjacent to any stream, wetland, or waterway would be protected through installation of erosion control fencing or other devices such as hay bales, matting, or mulch.
- Work near or in waters of the United States (U.S.) would be done to minimize turbidity, erosion, and other water quality impact concerning regulatory agencies.
- Any material that may be disturbed near or adjacent to streams or other waterways would not be placed within the 100-year floodplain, and will be contained to prevent any erosion into adjacent streams, or waterways.
- For any work near waterways, the contractor would be required to have an emergency spill containment kit to contain and remove any potential spilled fuels, hydraulic fluids, etc.
- Equipment refueling or storage of hazardous or petroleum materials would not occur within 50 feet of wetlands, streams or other waterways.
- Construction equipment would be stored and maintained at least 50 feet from any wetland, stream, or other waterway.
- At completion of construction activities near or adjacent to wetlands, streams, or other waterways, disturbed soils would be stabilized and erosion control fencing would remain until restoration activities ensure soil is properly stabilized.

Other mitigation measures might be developed during the permitting process with regulatory agencies. Additional compliance measures would require the applicant to obtain permits from federal, state and local agencies. The expected permits include a State Stormwater Construction Discharge Permit and Water Quality Certification from the Washington State Department of Ecology that will include permit stipulations in conformance with state water quality standards as provided for in Chapter 173-201A WAC authorized by 33 U.S.C. 1313 and Chapter 90.48 RCW. The U.S. Army Corps of Engineers (USACE) will require a 404 CWA permit for activities that will excavate or place materials within wetlands or waters of the U.S. Kittitas County also will require the applicant to comply with its critical areas regulation.

Based on the information presented in the Draft EIS and direction from Kittitas County in response to comments on the Draft EIS, the applicant modified the proposed turbine layout, including the project access road network and power collection system, to reduce or minimize impacts to wetlands and waters of the U.S.. The modified project configuration incorporated concerns raised by the public and regulatory agencies to avoid, reduce, or minimize impacts to wetlands and waters of the U.S. The modified project configuration is depicted in the Final EIS and the level of impacts from the modified proposal to wetlands and streams is analyzed in the discussion of water resource impacts. The mitigation measures identified in **Section 3.3.5** would be adequate to limit water resource impacts to a level of insignificance.

Issue WR-3: Groundwater impact analysis

Issue: Several comments indicated concern regarding the analysis of potential impacts to groundwater, such as that well locations indicated on the maps are not accurate and should be verified prior to turbine placement and blasting; more information was needed; disagreement with the conclusion of no significant impacts; and noting a need to evaluate the potential for concrete to leach minerals into the groundwater.

Applicable Comments: 27-40, 38-41, 38-44, 42-23, 43-27, 43-55, 43-58, T8-3, T12-1

Response:

The response material for this issue addresses several specific aspects of ground water impacts.

Several comments expressed concerns regarding the potential impacts to area domestic water wells and changes to ground water flow potentially caused by vibration from the use of explosives to install turbine foundations, or from vibration possibly caused by turbine operation. In addition, comments were made concerning possible mitigation measures to prevent well damage, to protect water quality from siltation, and to protect water quantity from alteration of ground water flow caused by the use of explosives. One comment addressed the need for verification of water well locations. **Section 3.3.2.2** has been modified for the Final EIS in response to the above comments. The following paragraphs summarize the response to these issues.

Blasting

As stated in the **Section 2.2.3.8** of the DEIS, use of explosives might be required for installation of turbine foundations in areas were bedrock is encountered. The majority of the proposed turbine locations are not located on bedrock and would not require blasting. The impact of vibration from blasting on ground water flow to wells or water wells would depend primarily on the well construction, geologic conditions and proximity to the vibration source. The discussion of blasting in **Section 3.3.2.2** has been supplemented substantially for the Final EIS. The modified discussion addresses information from available studies concerning the effects of blasting, regulatory limits on ground vibration from blasting, and the physical relationships involving wells in the project vicinity and potential blasting activity. The Final EIS supports and documents a conclusion that potential blasting from project construction would not be likely to cause sloughing, collapse or yield fluctuations in local wells and significant impacts on ground water supplies are not expected.

Locations of existing wells in the project vicinity may differ from the locations indicated by the Department of Ecology Water Well Reports. Consequently, well locations in proximity to blasting sites should be verified prior to blasting. Potential impacts from vibration due to blasting can be mitigated by following the appropriate regulations for blasting vibrations for protected structures and applying those regulations to water wells.

Turbine Vibrations

Vibration from the turbines under operation is far less than the vibration due to blasting. A seismic study was performed by the University of Oregon to determine the ground vibration caused by operation of wind turbines at a location in Washington State with similar geologic conditions. The study provides information on the magnitude of ground motion caused by the operation of wind turbines. For distances of approximately 1,000 feet, vibrations caused by a wind turbine would be on the order of a million times less than the maximum allowable PPV provided by the blasting regulations discussed above (Schofield, 2002). In terms of human perception of vibration in the long-term, the threshold for which people begin to perceive vibration is in the range of 0.01 in/s to 0.02 in/s PPV, which is on the order of 10,000 times greater than the vibration expected from a wind turbine 1,000 feet away (Hendron 1976). No impacts to groundwater or area water wells are expected from vibrations caused by turbine operation.

Ground Water Flow, Recharge, Discharge and Impervious Surface

A few comments expressed concern over the placement of turbine footings and their potential impact on ground water flow and recharge as well as impacts to ground water recharge across the project due to the creation of impervious surfaces. The impact of impervious surfaces on ground water recharge is discussed in the impacts section, **Section 3.3.2.2**, Groundwater. Impervious surfaces would be created by the project, but they are limited in size and extent across the project areas and are expected to have minimal impacts to recharge. Ground water flow, recharge and discharge are discussed in **Section 3.3.1.2**. The majority of the wells in the vicinity of the project are completed in deep bedrock aquifers. Little interaction between surface water and deeper bedrock aquifers is expected in the area. No impacts to ground water flow and recharge are expected from individual turbine footings because of their limited size and extent.

Significance of Ground Water Impacts

A few comments disagreed with a DEIS conclusion that there would be no significant impacts to ground water by the project. The DEIS does list potential impacts to ground water (**Section 3.3.2.2**, Groundwater) and recommends mitigations for those impacts (**Section 3.3.5.2**, Groundwater). Impacts and mitigation due to vibrations on ground water are discussed above and the appropriate sections of the DEIS were modified to include this information. The DEIS states that no significant unavoidable adverse impacts to ground water recharge or supply are expected because all potential impacts identified can be avoided through mitigation.

Water Quality – Concrete, Spills

Two comments noted that the long-term effects of concrete on ground water quality were not discussed in the DEIS. Large amounts of concrete are expected to be used for turbine foundation construction. Concrete is widely used in building foundations, homes, road construction, dams, potable water storage

and conveyance systems, and well construction. Washington Administrative Code (WAC) 173-160-221 allows the use of concrete in construction of water wells in order to seal the annular space between the casing and undisturbed earth. A review of readily available public information identified no documentation that concrete may leach minerals and pose a potential risk to ground water quality. Undisturbed concrete foundations are considered inert and are not recognized as a potential risk to ground water quality by the Washington Department of Ecology (personal communication, D. Anderson, Washington Department of Ecology, Environmental Assessment, Olympia, Washington, May 28, 2004).

One comment expressed concern over impacts from hazardous material spills. Water quality impact and mitigations from unintended releases of fuels, oils, or hydraulic fluids are addressed in **Section 3.3.2.2** Groundwater, subheading Ground Water Quality (impacts) and **Section 3.3.5.2**, Groundwater (mitigation). No other impacts from spills are expected as a result of the project.

Issue WR-4: Use of stream water for dust control

Issue: One comment maintained that the use of stream water for dust control should not be allowed.

Applicable Comments: 43-53

Response:

The applicant has not indicated that it proposes to use water diverted from streams for dust control, and the project description presented in the EIS (**Section 2.2**) makes no mention of such an action.

Issue WR-5: Impacts of surface water disturbance on wildlife

Issue: A comment questioned the DEIS assertion (p. 3-47) that disruption to priority habitat would be temporary.

Applicable Comments: 38-43

Response:

The referenced discussion on page 3-47 correctly states that three riparian areas designated as priority habitat by WDFW would be within the temporary disturbance zone for construction of turbine foundations; this statement applies to the area within which equipment operation could result in ground disturbance, but outside the permanent footprint of the turbine and its foundation. **Section 3.4.3** of the EIS addresses impacts to wildlife and wildlife habitat, including short-term effects from project construction and long-term effects during the project operation period.

5.2.4 Plants and Animals (PA)

Issue PA-1: General adequacy of studies and information on plants and animals, particularly avian studies

Issue: Over 35 individual comments were interpreted as primarily related to the overall adequacy of the plants and animals studies and analysis documented in the DEIS, particularly with respect to

birds. One comment expressed general satisfaction with the background studies and the information collected on fish, wildlife and habitats, and noted they were generally consistent with previous discussions and WDFW recommendations. Most of these comments, however, were critical of the subject EIS studies. Multiple comments reflected a theme that avian studies conducted for the DEIS were inadequate to determine the level of avian use of the project area and provide a sufficient base for estimation of impacts. Some comments made general statements about the adequacy of the avian studies, such as that the surveys were cursory and incomplete, models are inaccurate, the studies do not assure that bird kills and habitat destruction would not be excessive, and expanded analysis should be done prior to project approval. Several comments focused on the duration of the studies, stating that 1 year of baseline study is insufficient and a 2-year study period is needed before approval. Some comments stated that comparison of Desert Claim bird mortality with other projects is not possible due to inaccurate data for the other projects. A number of comments addressed specific aspects of the avian studies, including comments that the study did not include nocturnal use or migratory pathways; area residents were not surveyed to gather additional information; consider use of radar to determine altitude of bird flights, as well as spatial and temporal distribution; aerial observations for active raptor nests are insufficient; the DEIS fails to analyze weather conditions (e.g., mid-winter fog) that could affect bird and bat mortality; and there should have been an assessment of rodent populations to predict the likelihood of the presence of avian species as predators. This issue includes comments relating to accountability for the studies and whether the studies should be redone.

Applicable Comments: 1-1, 5-10, 5-15, 12-1, 12-3, 12-18, 15-5, 15-7, 15-10, 25-3, 26-2, 27-13, 27-15, 27-34, 27-68, 29-22, 30-5, 30-21, 30-24, 33-5, 36-10, 36-12, 38-47, 38-49, 38-102, 41-6, 41-10, 41-22, 41-32, 42-7, 43-5, 43-28, 43-60, 43-66, T5-2, T13-4, T27-3

Response:

Several themes were presented within the comments regarding the adequacy of the information on wildlife presented in the DEIS: (1) general satisfaction with the baseline studies conducted; (2) insufficiency of baseline studies to adequately describe avian use of the area; (3) predicting impacts by using other studies is not possible; (4) specific or individual shortcomings of the studies; and (5) the contractor used for the studies was biased and should be held accountable. Each of these themes is addressed below.

The overall objectives of the baseline wildlife study conducted at Desert Claim were twofold: 1) to gather information that could be used to describe or predict potential impacts from the wind plant; and 2) to gather information that could be used to assist in design of a wind plant that would reduce or minimize risk to wildlife resources. The study was designed specifically to these objectives, which is different, for example, from a study that would try to predict trends in populations or population size of individual species or groups of birds. Many of the individual comments indicating that the study was insufficient reflect different objectives. For example, the comments that indicate the avian baseline study should consider that bird populations change from year to year. While this certainly is a possibility, it was not an objective of the study conducted. The study was designed to predict impacts from a wind project, not predict changes in bird populations over time. In general, most comments that question the adequacy of the baseline studies are taken out of context with respect to the overall objective for conducting the studies.

The scope of study and protocol were developed with input from, and approved by the Washington Department of Fish and Wildlife (WDFW) and the United States Fish and Wildlife Service (USFWS). The study protocol also was consistent with and followed the guidelines developed by the WDFW. As the resource agencies responsible for protection and management of wildlife resources, the sufficiency of the studies was based on the expert opinions of these agencies. The agencies were, in general, pleased to receive empirical information about the wildlife resources from the study area, which greatly enhanced the ability to describe the affected environment, predict potential impacts, and show areas that could be considered sensitive (e.g., a raptor nest or rare plant population). Additionally, the scope and design of the baseline studies conducted in the Desert Claim project area were well within the realm of studies that have been conducted at other wind plants and wind resource areas throughout the western U.S. Defining the scope of study for wind plants has been a dynamic process with on-going and project-specific consultation with agency personnel. As such, the County's sub-contractor responsible for conducting the studies did not create them based on what they wanted to do. The scope was developed based on direct input from WDFW and USFWS about this particular site and on numerous preceding studies, all of which have taken advantage of agency and resource experts. In summary, the scope and protocol of the avian baseline studies conducted at Desert Claim was according to and consistent with the state of the art for wind power project wildlife studies within the Pacific Northwest and western U.S.

Because there is a wealth of information available from numerous studies of wind projects and wind resource areas, the Bonneville Power Administration (a federal agency) funded a meta-analysis, *Synthesis and Comparison of Baseline Avian and Bat Use, Raptor Nesting and Mortality Information from Proposed and Existing Wind Developments*, to analyze this information. BPA's study utilized all data within the public domain. BPA also requested and obtained volunteered data from other proposed wind plants and wind resource areas (Erickson et al. 2002). BPA's study was extensively peer reviewed by affected interests and resource experts such as the Oregon Department of Fish and Wildlife, WDFW, Oregon Office of Energy, Renewable Northwest Project, Eastern Oregon College and other local bird experts. The objectives of the meta-analysis were to: 1) extend the avian and bat mortality summary to include both baseline data and operational fatality monitoring data by including very recently collected fatality data at new wind projects; 2) provide an evaluation of the ability to predict direct impacts on avian resources using less than an entire year of baseline avian use data (one season, two seasons, etc.); 3) assist the various stakeholders in the interpretation and use of this large information source in evaluating new projects; and 4) suggest an appropriate level of baseline data required to adequately assess potential impacts of new wind projects. BPA used a total of 27 different avian use data sets from 13 wind resource areas in the western U.S. in the meta-analysis (see Erickson et al. 2002). Results of the meta-analysis indicate that, depending on factors such as vegetation types and topography, one season of data collection was adequate to characterize bird use of a site in a manner that could be used to accurately estimate impacts. The study conducted at the Desert Claim site, which included one full year of avian use surveys and two winter seasons of data on bald eagles, was more than adequate for predicting avian impacts from the proposed project as well as to suggest some modifications to the wind plant design to help minimize risk to avian species (the two primary objectives of the baseline study).

With respect to the third theme among the comments, the estimates of Desert Claim bird impacts are based on results of studies at other wind plants, not other developments or construction projects in general. It was deemed the best approach to compare a proposed wind plant with existing wind plants and not other sources of energy production such as hydroelectric plants or gas-fired plants. The impact numbers used for other wind projects, such as the identified Stateline Project, were those available at the

time the Draft EIS was being prepared. Upon further investigation in response to submitted comments, the numbers used are accurate and were those presented as public information from the Stateline project.

Responses to comments that were specific to certain study components or lack of study components of the baseline studies are as follows:

Nocturnal Migration – Comments received included such items as: the baseline study did not include information regarding nocturnal use or migratory pathways; the Ellensburg area is in the western neotropical migratory flyway zone and further migratory study is needed, to include nighttime analysis; and consider use of radar to determine altitude of bird flights, as well as spatial and temporal distribution.

Information available from studies of nocturnal bird migration indicates that risk to nocturnal migrants from wind energy development in the Pacific Northwest is low. Most nocturnal migrants fly at altitudes above the height of wind turbines with a blade extended straight up. For example, a radar study conducted at the Stateline and Vansycle wind projects found that the average height above ground level for nocturnal migrants was 454.8 meters and 481.1 meters respectively for spring migrants and 649.4 meters and 610.8 meters for fall migrants (Mabee and Cooper 2002). For this study, more than 85 percent of targets passing over the sites were higher than the turbine heights (Mabee and Cooper 2002). Results of a similar study at the Nine Canyon wind project in Benton County, Washington indicated that the mean flight height for spring migrants was 472 meters, and that greater than 85 percent of the targets flew higher than the turbines (Mabee and Cooper 2001). Post-construction monitoring studies at Stateline estimated that approximately 45 percent of the avian fatalities found were migrants and that there were approximately 0.55 migrant fatalities per turbine per year (WEST and NWWC 2004). Post-construction monitoring studies at Nine Canyon estimated that approximately 17 percent of the avian fatalities found were migrants (Erickson et al. 2003). Both the Nine Canyon and Stateline projects are within the Columbia Basin physiographic region, similar to Desert Claim; the Stateline project is adjacent to the west flank of the Blue Mountains and the Nine Canyon project is adjacent to the Columbia River, both of which could be considered major topographic features that could be followed by migrant birds. Based on this information, the risk to nocturnal migrants from wind power development in the region is considered low. There is no evidence to suggest that the Desert Claim wind project would pose a higher risk to nocturnal migrants than either Stateline or Nine Canyon. See also the response to Issue PA-3.

Bats – Comments noted that the baseline study did not include an assessment of bat habitat. While the baseline study did not include any primary data collection for bats and bat habitat in the project area, the DEIS provides an assessment of existing conditions and potential impacts to bats based on available information (see p. 3-85 and p. 3-93, DEIS). Post-construction fatality studies of wind plants throughout the U.S. have repeatedly shown that the vast majority of bat fatalities are of fall migrant bats (see, Johnson et al. 2000a, Young et al. 2003b, Erickson et al. 2000, Erickson et al. 2003, WEST and NWC 2004, Kerns and Kerlinger 2004). Studies of resident bats at the Buffalo Ridge Wind Plant, Benton County, Minnesota, in conjunction with post-construction fatality monitoring studies, showed that resident bats do not appear to be at great risk of collision with wind turbines (Johnson et al. 2003). In addition, fatality studies at other wind plants rarely find spring migrant or summer resident bat fatalities. The vast majority of evidence indicates that the bat populations that are at risk of collision with wind turbines are foliage-dwelling migratory bats and, in the Pacific Northwest, hoary bats (*Lasiurus cinereus*) and silver-haired bats (*Lasionycteris noctivagans*). While there is certainly habitat nearby for hoary bats and silver-haired bats (WCFWRU 1999), local residents of these species would not be at high risk for turbine collision and only fall migration season bats are considered at risk from the wind plant. While the

specific risk of collision is unknown, based on the studies to date, it is believed that many of the bats that are at risk of collision with any given wind plant could be from as far north as Canada and/or southern Alaska. See also the response to Issue PA-15.

Local Residents – a comment noted that area residents were not surveyed to gather additional information pertaining to avian sightings. Interviewing local residents about avian resources in the area was not part of the overall scope or protocol for the avian baseline studies. While local residents are often a good source of information about local resources, the information is usually not quantitative and is often historical in nature. Based on the input from WDFW and USFWS regarding the baseline studies, it was decided that contemporary information would be best for the impact assessment, and therefore, field surveys by trained ornithologists over a 1-year period was an appropriate study design. Field personnel conducting the study were extremely qualified and experienced in bird identification, bird surveys, and in the types of surveys conducted. In addition, the local landowners who are part of the project were contacted on a periodic basis to inquire about site conditions, access, concerns, observations, and issues that may affect the study. Information from these landowners was used to the extent possible to guide logistical concerns of the study such as access and survey point/routes locations.

One comment in particular indicated that the Audubon Society and local residents know that bald eagles roost in Wilson Canyon and that this information was not used in the study. This information was included in the Draft EIS; one of the bald eagle survey routes chosen for the project surveyed the Wilson Creek Road to the mouth of the canyon. Snow conditions prevented surveys within the canyon itself, but observations were made at the mouth of the canyon where eagles were observed. This information is presented in the baseline study report (see Appendix C, Exhibit 2 of Volume II of the DEIS) and the potential impact to bald eagles traveling across the project area is discussed in the DEIS (see p. 3-96 of the DEIS and Appendix C, Exhibit 1 of Volume II of the DEIS).

Raptor Nests – a comment noted that aerial observations for active raptor nests are insufficient, as some raptors are cavity dwellers. The comment correctly acknowledges that the method utilized in the baseline study to survey for nesting raptors does not allow detection of all nesting raptors in an area. The methods chosen for the raptor nest survey were based on input and approval from WDFW and USFWS, as well as on other studies of wind plants and wind resource areas throughout the Pacific Northwest and accepted methods for monitoring nesting raptors over large areas. While this method does not provide an estimate of cavity or ground nesting raptors in an area, it does provide a relative density of nesting raptors that can be used to compare with other sites studied. It also provides an objective impact assessment as well as identification of sensitive resource locations that should be avoided by the development – the objectives of the baseline study. The study was not designed to monitor population trends or inventory all species within the area, but was designed to provide relative estimates of avian resources that could be used in the impact assessment.

Weather Patterns – a comment stated that the DEIS fails to analyze weather conditions (e.g., mid-winter fog) that could affect bird and bat mortality. The comment is correct in that there was no detailed analysis of the influence of weather patterns on use of birds in the study area. The avian surveys were conducted approximately weekly for one full year, which took into account varying weather patterns as they occurred during the surveys. To a certain degree the use estimates, therefore, take into account varying use based on different weather patterns. Additionally, mid-winter fog is not considered a great risk to birds and bats because: 1) avian use tends to be lower in the winter (see **Table 2**, p. 31, Exhibit 2, Appendix C, Volume II of the DEIS); 2) bats are not active in Washington in the winter (i.e. they

hibernate or migrate south); and 3) typically, during heavy fog events wind speeds are greatly reduced and turbines are not turning. The risk of a bird colliding with a non-turning turbine is not considered higher than the risk of a bird colliding with a power line or power pole or other structure in the area, including fences and houses.

Rodents – comments stated there should have been an assessment of rodent populations to predict the likelihood of avian species as predators. Several comments noted that there was no study of rodent populations in the project area and indicated that such a study could be used as a predictor of raptor use. During the development of the study protocol it was determined that direct observation of raptors in the area was a better predictor of use over indirect measures such as habitat or prey availability. Therefore, weekly avian surveys were conducted to look for raptors using the study area, instead of conducting rodent surveys to try and predict raptor use.

Other comments indicated that loss of raptors from the project may cause rodent populations to grow and thus spread diseases such as hantavirus. While this line of thought may be plausible, the low level of impacts to raptors from the project is not likely to have a measurable effect on rodent populations. Rodent populations are highly dynamic and cyclical. The loss of 3 to 4 raptors a year to the wind plant (p. 3-93 DEIS) would not be measurable in the overall raptor population in the area and certainly not affect the highly dynamic rodent population. See also the response to Issue PA-6.

Finally, several comments expressed concern that the contractor used for the studies (Western EcoSystems Technology, Inc. (WEST)) was not impartial, and that other consultants or even local landowners should have been used for the studies. Some comments erroneously attributed research at Altamont, California to WEST. WEST, Inc. has been involved in the study of wind power development and the interaction of wind plants with wildlife populations since the mid 1990's. WEST has never conducted any primary field research at Altamont. WEST is one of only a few private contractors in the U.S. with over 10 years of experience conducting wildlife studies at wind plants and has been involved in all facets of wind power research, including phase I risk assessment studies; baseline (pre-construction) studies; monitoring (post-construction) studies; permitting and impact assessment studies; research oriented studies; and technical advisory committee participation. In the realm of wind power studies, WEST has worked for federal agencies (e.g., Bureau of Land Management, Bonneville Power Administration), state and local agencies (e.g., Kittitas County, Washington Energy Facility Site Evaluation Council), utilities (e.g., Xcel Energy, PacifiCorp), developers, other wildlife consultants, engineering firms, and non-profit organizations. WEST is nationally regarded as being objective, as indicated by the diversity of its clientele. While Desert Claim contracted with WEST to design and conduct the baseline studies for the project, WEST served as an independent consultant to Kittitas County during the preparation of the EIS.

Issue PA-2: Determination of net impacts and associated mitigation

Issue: Two comments stated a theme that the DEIS has inadequate presentation of net impacts and specific mitigation. They indicated that project impacts can be substantially mitigated by employing measures discussed in the document, but confusion as to degree of mitigation and potential net environmental impacts undermines the conclusions of the DEIS, so the analysis should be revised to clearly describe the net effects and unequivocally address which mitigation measures will be implemented.

Applicable Comments: 1-2, 1-3

Response:

Kittitas County agrees with the comments that the mitigation measures discussed in the Draft EIS can substantially mitigate the potential project impacts identified in the impact analysis. The EIS is not a decision document or a contract, however, and it is not the proper function of the EIS to specify which mitigation measures will actually be employed (other than measures that are required by existing regulations, or measures that the applicant might agree to incorporate as components of the project in advance of publication of the Final EIS, such as providing a 1,000-foot setback from residences and the 487-foot safety zone setback,). The function of requiring project mitigation is reserved to the Kittitas County Board of County Commissioners and would occur through the conditions of approval and development agreement. Discussion in the Final EIS has been edited to more clearly identify the level of residual impacts that would occur with mitigation but, for the reasons stated above, does not prescribe with certainty the mitigation measures that would be employed. See also the response to Issue EIS-10.

Issue PA-3: Resource agency guidelines for wind projects

Issue: This issue includes a request that the DEIS incorporate WDFW guidelines intended to support renewable wind power projects while concurrently preserving fish and wildlife interests. It also includes several comments relating to USFWS recommendations for wind projects, such as a statement that the project does not meet 6 of 10 USFWS criteria, the project violates at least three guidelines (2, 4, and 10), and the EIS should state Desert Claim's level of compliance with the USFWS guidelines.

Applicable Comments: 1-4, 27-14, 41-11, 42-8, 43-123

Response:

Several comments pointed out what were believed to be deficiencies in following specific USFWS recommendations. Each of these is addressed below.

1. Avoid placing turbines in documented locations of species protected under the Endangered Species Act. While the project area is periodically used by bald eagles for foraging, bald eagle use of the area is transient in nature and based on the presence of foraging opportunities such as dead cows and calving operations. There are no communal roost sites or other important bald eagle habitats, such as nest sites or large bodies of water, in the project area.
2. Avoid locating turbines in known migratory pathways or in areas where birds are highly concentrated. There is no evidence that the Desert Claim project falls in a migratory pathway. Landscape features such as rivers, coastlines and linear mountain ridges are often believed to be migratory pathways for birds. While this may be true to a certain degree, much of the information from studies of nocturnal migrants indicates that many species move in more broad-front patterns and fly at altitudes where they are not influenced by variation in surface features (e.g., Kerlinger 1995, Mabee and Cooper 2002, Young et al. 2004). In addition, the Desert Claim project area is situated in the Kittitas Valley, which is oriented approximately northwest-to-southeast into the eastern flank of the Cascade Mountains. If birds were following the eastern edge of the mountains as they moved south, they would actually pass by the Kittitas Valley to the east along approximately the Columbia River. Local movements by birds may follow the

Yakima River corridor, although this would not be affected by the project approximately 4 miles to the northeast. Studies conducted for the project indicate that there may be suitable bald eagle habitat near the Yakima River, but there are no known nesting bald eagles in this area.

3. Avoid placing turbines near known bat hibernacula, breeding, and maternity/nursery colonies, in migration corridors, or in flight paths between colonies and feeding areas. While the presence of important bat habitat near the Desert Claim site is generally unknown, the results of numerous studies have shown that resident bats, such as those occupying summer ranges where they breed and feed, are not as much at risk as are migratory bats. The bats at risk from the project are those that might be migrating through the area in the fall season. Very little impact is anticipated to local breeding and feeding bats.

4. Configure turbine locations to avoid areas of features of the landscape known to attract raptors. This recommendation was included in the Draft EIS and was adopted by the applicant in the modified turbine layout presented in the Final EIS. The baseline studies identified the escarpment running through the eastern half of the project area as a landscape feature that appeared to concentrate raptor use. The recommendation was made to configure the turbine layout so that no turbines were within 50 meters of this rim edge (see Exhibit 2, Appendix C, Volume II). The modified turbine layout incorporated this recommendation by as eliminating 3 turbines near the escarpment and moving 4 others further from the rim edge. A similar situation was studied at the Foote Creek Rim wind plant in Carbon County, Wyoming, where the setback of turbines from the rim edge appeared to minimize exposure of raptors to turbines, thus reducing mortality (see Johnson et al. 2000 and Young et al 2003).

5. Configure turbine arrays to avoid potential avian mortality where feasible. Results of the baseline studies did not identify other bird concentration areas in the project area other than the escarpment running through the project (see 4 above). The modified turbine array does not affect any bird concentration areas. There are no known migration pathways through the project that the turbines would bisect. There are no large areas of habitat occupied by sensitive species. Stormwater management for the site would be consistent with local regulations and should not create attractants to avian species.

6. Avoid fragmenting large, continuous tracts of wildlife habitat. Habitat within the project area and the surrounding areas is generally fragmented in its current state due to rural residential development, farms, roads and numerous power lines, and is being encroached upon by expansion of development related to nearby Ellensburg. The proposed project would not further exacerbate habitat fragmentation and would likely preserve tracts of shrub steppe by supporting current agricultural operations, thereby relieving pressure to convert this land to rural residential development. In addition, the project would provide additional shrub steppe habitat under WDFW's guidelines that require replacement at a 2:1 ratio, which, in the long term should result in a net increase in native wildlife habitat.

10. Reduce availability of carrion by practicing responsible animal husbandry to avoid attracting golden eagles and other raptors. See Exhibit 1 or Appendix C to the DEIS. One of the recommended mitigation measures for the project to minimize potential exposure of bald eagles to the wind plant is to remove and dispose of all wildlife and livestock carcasses found on the site. The final mitigation plan would be approved by WDFW and the Technical Advisory Committee and would presumably include site management provisions that include removal of carrion.

Issue PA-4: Role of Technical Advisory Committee in mitigation and monitoring

Issue: Several comments addressed aspects of the Technical Advisory Committee (TAC) identified in the DEIS as a possible mitigation measure. They include support for the TAC as a valuable asset and requests that the formation and role of TAC be a binding measure; TAC be in place for life of the project, rather than 1 year; authority and budget source of the TAC be described; and for an indication if data gathered by TAC would be available to public on request. One comment requested membership in the TAC.

Applicable Comments: 1-5, 27-42, 30-28, 38-51, T27-6

Response:

These comments concerning the role of the Technical Advisory Committee are generally consistent with the discussion of that prospective body in **Section 3.4** of the EIS. The Kittitas County Board of County Commissioners would determine the specific role, functions and composition of the TAC through conditions of approval and a development agreement.

Issue PA-5: Vegetation/habitat restoration and mitigation

Issue: This issue includes comments relating primarily to restoration of habitat disturbed by project construction and/or measures to mitigate disturbance and permanent impacts through replacement habitat. The issue includes a request to include construction timing as a mitigation measure (Sec. 3.4.1.5) to minimize impacts to soils/vegetation, with discussion that construction activities outside of the project footprint should be done during dry periods, when plants have greater potential to withstand impacts, and that construction on frozen ground (in winter) is possible, although changes in site elevation could result in varying ground conditions. Other comments were that the DEIS should identify (in consultation with WDFW and TAC) a reference standard for evaluation of site restoration success; specify that seeding will be done at the next suitable planting period following site disturbance; state temporary erosion control measures should be implemented as appropriate; specify long-term protocol for establishing plant communities while excluding invasive species, using methods such as supplementary water. The issue also includes comments relating to mitigation ratios for replacement habitat, such as requests for clarification of existing vegetation types and proposed mitigation ratios, that the mitigation site should be strategically located with respect to other shrub-steppe habitat and that enhancement at the mitigation site should be considered. Comments noted that the project area does not include "true grasslands" or CRP "managed grasslands." WDFW considers "grassland" and shrub steppe sites to be essentially the same and both would have the same mitigation ratio, and the ratios negotiated for the wind power industry resulted in a lower ratio for true grasslands that should not be applied to the Desert Claim project. One comment stated that the plan to acquire replacement habitat should be explained in detail, and another recommended considering use of the mitigation site for farming to replace the area used by project roads and turbines.

Applicable Comments: 1-6, 1-7, 1-8, 1-9, 5-7, 27-41, 43-4

Response:

Vegetation of the project area was mapped according to characteristics found during field visits. Areas mapped as grassland lacked a shrub component. In response to WDFW's comment, Desert Claim agrees these areas will be treated as shrub steppe for the purposes of calculating the ratio of required mitigation. Desert Claim has and is continuing to coordinate with the WDFW to ensure that the WDFW wind power guidelines are followed and an acceptable mitigation plan is in place during project construction and operation. Integral to the mitigation plan will be replacement of shrub steppe habitat according to ratios identified in the guidelines and a detailed reclamation and revegetation component. Desert Claim has indicated it fully intends to comply with the WDFW guidelines regarding replacement habitat and reclamation standards.

Issue PA-6: Mitigation for potential avian impacts

Issue: Four comments related primarily to project design or siting features to mitigate possible avian mortality. They include a recommendation to set turbines back from the windward edge of the ridgeline, thereby reducing potential impacts to raptors, and statements that meteorological towers should be freestanding (not guyed) to reduce the likelihood of bird mortality; the reliability of bird flight diverters in lieu of freestanding towers is questionable and should not be used unless their effectiveness is demonstrated, and the only mitigation is not to build turbines.

Applicable Comments: 1-10, 1-11, 12-2, 27-44

Response:

See the response to Issue PA-3 above with respect to the recommendation to set turbines back from the ridgeline, which has been incorporated in the modified project configuration presented in the Final EIS. As explained in the project description for the Final EIS, Desert Claim agreed to use free-standing, rather than guyed, permanent met towers. Comment 12-2 is not consistent with the EIS discussion of mitigation measures and their effectiveness, nor with the review input of the WDFW that expresses support for the mitigation measures.

Issue PA-7: Post-construction adjustments in response to avian mortality

Issue: This issue includes comments that the DEIS does not include contingency measures to address bald eagle mortality; the County should require use of the conservation measures identified in the DEIS (App. C, Exhibit, p. C1-20); that corrective action (e.g., removal of a turbine) in event of avian mortality may not be possible during operation; and that a plan for post-construction adjustments is needed.

Applicable Comments: 1-12, 5-9, 36-16, T27-5

Response:

Because the bald eagle is listed as a threatened species under the Endangered Species Act (ESA), potential take of individuals of this species by the project will be addressed under consultation procedures

with the USFWS as required by the ESA. Any contingency measures to deal with bald eagle mortality, if needed, will be addressed through that process.

As far as other avian species mortality prohibited under the Migratory Bird Treaty Act (MBTA), there are no provisions for permitting incidental take under the MBTA. Typically, the USFWS requests that wind plant developers engage in coordination with agency personnel and implement measures to minimize and monitor avian impacts from the development. Measures include use of tubular towers for turbines; use of un-guyed towers for met towers; burying all power collector lines where possible; following Avian Power Line Interaction Committee (APLIC) guidelines for all overhead power lines; and utilizing results of baseline studies to assist in turbine siting so as to minimize risk to avian resources. Desert Claim has agreed to all of these recommendations and has incorporated them into the project wherever possible and as described in Chapter 2 of the Final EIS. The USFWS recently developed Interim Guidelines for wind power developments (USFWS 2003) outlining their recommendations. While there are no provisions for incidental take under MBTA, the USFWS has practiced prosecutorial discretion with respect to responsible wind developers taking actions to minimize avian impacts. Developing a mitigation plan that includes post-construction adjustments of a wind plant or management actions such as shutting down turbines has not historically been practiced or implemented.

Issue PA-8: Additional upland bird species

Issue: One comment stated that sharp-tailed grouse and sage grouse should be discussed in the EIS.

Applicable Comments: 1-13

Response:

Sharp-tailed grouse and sage grouse are addressed in the DEIS under Exhibit 1 of Appendix C, Volume II of the DEIS. Sage grouse is discussed in some detail in the appendix. Sharp-tailed grouse is listed as a state threatened species in Washington. The Washington State Status Report of Sharp-tailed Grouse (Hays et al. 1998) indicates that Kittitas County was within the historical range of sharp-tailed grouse in Washington, but the species was considered not likely to occur there now based on its current distribution in the state (north-central Washington). Sharp-tailed grouse may occur in a variety of steppe, grassland, and agriculture (e.g. CRP) habitats (Hays et al. 1998), and the shrub-steppe on the site may be considered suitable habitat. Since sharp-tailed grouse historically occurred in Kittitas County, it is conceivable that they could once again occur there should the species recover and flourish in the future. However, based on the Washington State Breeding Bird Atlas and GAP Analysis (Smith et al. 1997), Kittitas County does not contain any core habitat for sharp-tailed grouse and, similar to sage grouse, it is considered unlikely that they would occur there in the future due to the developed nature of the area and marginally suitable habitat on the periphery of the historic range. The project is not likely to affect sharp-tailed grouse.

Issue PA-9: Big game impacts and mitigation

Issue: Issue PA-9 includes a variety of comments relating primarily to big game impacts and mitigation. Specific comments express support for management of big game and control of animal damage on project land, including habitat mitigation lands; note that public hunting is WDFW's primary tool for minimizing damage caused by game animals, for which WDFW is liable; discuss access control and weapon restrictions; and state that measures to address game damage should be

approved by the TAC. The issue also includes comments that the DEIS should provide more information or analysis on big game habitat, migration and displacement, including shadow flicker effects on deer and elk; that impact estimates based on other wind project studies are not sufficient; and that mitigation measures beyond asserting elk and deer would avoid the area if turbines created a disturbance should be included. One comment suggested that project studies involving helicopters could have scattered area elk and deer herds in the area.

Applicable Comments: 1-14, 11-3, 14-3, 15-9, 16-10, 17-10, 29-24, 30-22, 41-14

Response:

There is little information available about potential impacts from wind plant construction and operation on big game species. The presence of deer and elk in the project area varies seasonally (see Exhibit II Appendix C). The numbers increase in the winter as animals move out of the high country north and west of the site. Construction during the winter might have greater disturbance-related effects than summer construction. The impact assessment is based on assumptions that effects from other construction projects or developments (e.g., oil and gas field developments) on nearby big game populations are similar. Pages 3-94 and 3-95 describe in more detail the anticipated impacts to big game species from the project. In general, as is pointed out by some of the comments, it is believed that big game would eventually become habituated to the wind plant, as they have with the current level of development in the project area. For example, one comment noted that elk could be observed from the person's house, suggesting a current high level of tolerance to human disturbance by area elk. Currently, the project area is all private land, open to hunting only with the owners' permission; it is expected that the current level of hunting within the project area would continue with the landowners' permission. An indirect effect from the project might be in providing a refuge of sorts to big game if they are not hunted within the confines of the wind plant. If this were the case, it might be plausible that the area deer and elk population would increase. WDFW raised concern over the ability to effectively manage the area herds through hunting if there is no hunting within the wind plant, and in particular if the area herds experience growth in numbers. Without effective management, the number and distribution of crop damage claims due to big game species could increase, particularly if the wind plant resulted in large deer and elk numbers in the area. WDFW has requested that measures to address potential changes in big game management be included in the mitigation plan for the project.

Issue PA-10: Presence of fish species in project area waters

Issue: One comment noted that the DEIS indicates that fish are not expected to be present in the project area, based on WDFW map information, but that WDFW believes that its maps do not have sufficient accuracy and resolution to be used for this purpose, and that based on some prior field work WDFW expects fish (possibly including juvenile steelhead) to be present in Currier Creek and Reecer Creek within the project area, and possibly their tributaries at times. Another comment stated summer steelhead are present in Reecer Creek and the Yakima River, and requested information on the impacts of the project on steelhead survival.

Applicable Comments: 1-16, 29-25

Response:

WDFW provided some new information in its comments regarding its expectations of potential fish presence in the perennial streams within the project area. WDFW also suggested the possibility of juvenile steelhead being present as a result of an unscreened diversion from First Creek, where steelhead spawning has been documented, to Dry, Reecer, and Currier Creeks. Potential impacts to steelhead will be addressed through the ESA compliance process, which will address impacts to threatened and endangered species including bald eagles. It is currently anticipated that a permit from the U.S. Army Corps of Engineers (Corps) would be required for impacts to jurisdictional wetlands or waters of the U.S. from construction of the wind plant. In this event, the Corps, a federal agency, is required under the ESA to ensure that authorization of wetland filing would not jeopardize the continued existence of threatened or endangered species, and is required under the National Environmental Policy Act (NEPA) to ensure that its permitting decisions undergo environmental review. Section 7 of the ESA requires that federal agencies consult with the USFWS and/or NOAA (the "Services") prior to permitting, funding or implementing any actions that may affect a listed species. During the formal consultation process the Services provide a Biological Opinion regarding the expected effect of the federal action on listed species; a list of conservation measures that must be implemented to avoid, minimize, and mitigate potential impacts; and an Incidental Take Statement (ITS) quantifying the take of listed species that is authorized. As part of the Corps's NEPA review and permit application review process, it will likely impose mitigation measures on the project. In the case of Desert Claim, the consultation process between the Corps and the Services will identify potential impacts to steelhead, conservation measures to avoid, minimize, and mitigate potential impacts to steelhead from the project and terms and conditions required for implementing the conservation measures. For example, screening the First Creek diversion referred to in the WDFW comments might be adequate to avoid impacts to steelhead. The conservation measures and terms and conditions would be legally binding and must be implemented for the incidental take statement to be valid. Desert Claim would be responsible for implementing the conservation measures and any mitigation measures developed with and required by the Corps.

Issue PA-11: Impacts to wetlands, streams and riparian areas

Issue: This issue includes several comments addressing impacts to wetlands, watercourses and riparian areas. Some comments are prescriptive, indicating that such impacts should be minimized to maintain habitat and water quality; micro-siting should be used to reduce impacts; where impacts cannot be avoided, turbines should be removed; and that streambeds are designated as critical areas by the County with setbacks to protect these areas, so filling and/or relocating these features should not be permitted. Comments stated that proposed access roads and tower foundations would affect native vegetation and wetlands; that the DEIS does not discuss potential wildlife impacts near wetland and riparian areas; and that the EIS should include the total wetland acreage for project area, as well as the percentage of wetland area to be temporarily or permanently altered. One comment expressed disbelief that wetland impacts would be allowed.

Applicable Comments: 1-17, 15-2, 29-21, 36-14, 38-46, 38-101

Response:

Laws and regulations pertaining to wetlands do not prohibit wetland impacts or contemplate that human development activities will occur with no impact to wetlands. Instead, the general policy is one of "no net

loss," meaning that any adverse impacts to wetlands would be mitigated through wetland enhancement or replacement, to a level at which wetland functions and values would be equal to the pre-project condition. Wetland impacts can be permitted under the Clean Water Act (CWA) of 1977, subject to requirements to investigate feasible alternative methods to avoid wetland impacts. Any project that would cause impacts to 1 acre or more of wetland area is required to obtain a permit or approval from the U.S. Army Corps of Engineers, Washington Department of Ecology and/or Kittitas County, depending on jurisdictional status of the wetlands. In anticipation of unavoidable impacts to wetlands, the applicant has discussed wetland mitigation options with Kittitas County.

The Draft EIS provided preliminary wetland mitigation measures to minimize impacts to wetlands and waters of the U.S. during construction. These preliminary mitigation measures would be expanded during the permitting process with the Corps and Kittitas County, and as the project applicant develops construction plans and specifications. Work within or over any streambed with fish may require a Hydraulic Project Approval from WDFW. Additionally, the Washington Department of Ecology may also assert regulatory authority to require mitigation for filling of wetlands that are not regulated by the Corps. Anticipated mitigation measures that would be used during construction to reduce or minimize impacts would include:

- Construction staging, including construction and waste material, fill material, equipment, fuel, etc., areas would be located outside of the area adjacent to streams, including wetlands and riparian areas. At a minimum, such staging areas and materials would not be located within 50 feet of the ordinary high water mark of any watercourse.
- Equipment refueling and servicing would occur only within approved designated areas.
- All construction equipment would be maintained in good working order to avoid unnecessary discharge of harmful materials used in the operation of that equipment, including petroleum products, radiator fluid, hydraulic fluid, etc.
- All practicable efforts would be expended to avoid and minimize in-stream work. In those instances where in-stream work is required, such work would be performed during low flows, use fluming techniques, and minimize the use of heavy equipment in streambeds. The equipment used would be of such a type that will produce minimal environmental damage, including damage to the stream bottom.
- Silt fences, hay bales, or similar erosion control products would be installed wherever the toe of fill meets the water's edge, riparian areas, and wetlands in the work area. Temporary and permanent erosion and sediment control measures would be installed at the earliest practicable time consistent with good construction practices. Such measures would be properly monitored and maintained throughout construction.
- No washing of concrete trucks or equipment used for the placement of the concrete turbine pads would be allowed in aquatic ecosystems and riparian areas, including wetlands. Concrete washout areas would occur only within approved designated areas.
- The stream channel bottom would be returned to the elevation and configuration existing prior to construction.
- All practicable measures would be taken to avoid disturbance to existing vegetation. The length of time that disturbed areas are left exposed would be as short as practicable and the extent of such disturbed areas would be as small as practicable. Within seven days, completed areas should be stabilized, that is, seeded and mulched.
- All disturbed areas above the ordinary high water mark would be revegetated with appropriate native plant species to provide bank stabilization, erosion control, and habitat replacement.

- All practicable effort would be expended to avoid destruction of trees and shrubs in the vicinity of streams and in riparian areas. Existing trees within the project area that are not scheduled for removal would be cordoned off from construction activity with orange temporary construction fencing.

The Kittitas County critical areas ordinance requires, to the extent practical, no net loss of wetlands (except for Category IV wetlands). The majority of the wetlands delineated within the project footprint are Category III wetlands that have a 1.5 :1 replacement ratio under County regulations. The project applicant would work with Kittitas County, the Corps, and Ecology during the permitting process to develop a wetland mitigation plan to comply with agency requirements. Unavoidable impacts to wetlands and waters of the U.S. would be compensated in-kind with on-site mitigation to the extent practicable.

The EIS indicates there would be both permanent and temporary impacts to wetlands and waters of the U.S. caused by construction activities. The acreages of temporary and permanent impacts would be finally determined once the micro-siting analysis is completed. A wetland mitigation plan would be prepared by Desert Claim to address the temporary and permanent impacts. The wetland mitigation plan would describe the project impacts, and present an overview of possible mitigation designs and implementation strategies. Any proposed wetland mitigation measures are conceptual at this point, as there are a number of factors that need to be resolved prior to final decisions regarding mitigation sites and approaches (e.g., land acquisition, analysis of site hydrology, completion of design plans, and coordination with regulatory agencies).

The goal of the wetland mitigation plan would be to replace and/or restore the wetlands and waters that are temporarily disturbed during project construction, as well as any areas in which permanent wetland fill is required for the project. The wetland mitigation plan would address replacement of disturbed vegetation with selected native plant species with habitat enhancement properties. Species selections would be based on the abilities of the plants to become established within existing plant communities in this region. The species composition and densities for replacement vegetation would be established based on knowledge of the region and species identified during the wetland delineations.

The wetland mitigation plan would include monitoring measures and performance standards to ensure replacement vegetation became reestablished. Monitoring of the site could occur twice a year, which would allow for seasonal growth and timely detection of potential maintenance actions. If the mitigation were not successful, the project applicant would develop and implement (in consultation with a professional wetland ecologist) a contingency plan. The contingency plan would describe appropriate actions if performance standards were not being met. The plan would include possible steps necessary to correct the failure, along with the proposed time frames for implementing the new corrective action. For instance, if herbaceous vegetation is not becoming reestablished, additional seeding and fertilizer enhancements, if necessary, would be applied to appropriate areas. The contingency plan would be incorporated into the performance standards. Thus, if specific standards were not being met post-construction, appropriate actions would be prescribed and taken.

Issue PA-12: Take of species protected under treaty or the Bald and Golden Eagle Protection Act

Issue: Several comments relating to potential bird mortality included specific reference to the Bald and Golden Eagle Protection Act (BGEPA) and/or the Migratory Bird Treaty Act (MBTA), and were

therefore assigned to this issue. Individual comments stated that the project could result in take of species protected under the BGEPA, including points that USFWS must authorize a take level prior to permit issuance; the DEIS does not specify whether an eagle take application has been filed; eagle mortality has occurred at the Altamont, California wind farm site; or that the DEIS should contain assurances against potential take. The issue includes questions why bald eagles were the only species addressed and who would be the *enXco* official prosecutable under BGEPA if a bald eagle is killed.

Applicable Comments: 5-3, 5-11, 11-4, 16-9, 17-9, 27-33, 27-43, 29-23, 36-15, 42-9, T5-4

Response:

There are no provisions for permitting incidental take under the BGEPA or the MBTA (see above response to Issue PA-7). However, the bald eagle is currently listed as a threatened species under the Endangered Species Act (ESA) and the ESA has provisions for permitting incidental take[1] of listed species. Desert Claim Wind Power LLC is pursuing an incidental take permit for potential take of bald eagles under the ESA provisions in tandem with the Kittitas County permitting process. Under current policy, the USFWS has not pursued prosecution under the MBTA or BGEPA when wind developers have taken reasonable and prudent measures to minimize impacts to birds and have acquired an incidental take permit under the ESA, where necessary.

The ESA provides two means by which incidental take of a listed species may be authorized or permitted depending on federal involvement in a project. In the case of the Desert Claim project, it is anticipated that a federal permit through the Corps will be required to permit potential impacts to wetlands (see above comment PA 10). In this case, the Corps would be required to consult with the USFWS to insure that issuance of their permit would not jeopardize the continued existence of any federal endangered or threatened species. The consultation process would culminate with conservation measures and terms and conditions for implementing the conservation measures that are legally binding and which would apply to the project proponent. Potential incidental take of bald eagle and steelhead (see above) from implementation of the project would be permitted through this process. While bald eagles are further protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act, the USFWS, using prosecutorial discretion, typically addresses take under these acts though the ESA process. In any event, potential impacts to bald eagles would be addressed through a more rigorous process under the ESA and there would be mitigation measures implemented to insure minimization of impacts to this species.

Issue PA-13: Mortality assessment for raptors, particularly bald eagles

Issue: This issue includes comments relating to the DEIS coverage of raptor and/or bald eagle mortality, and overlaps to a degree with issue PA-12. Specific comments in this category note the potential for bald eagle mortality and/or raptor mortality in general; state that wind farms should not be built in known eagle habitat; pose questions on the reliability of comparative mortality statistics for other wind project sites due to the known presence of eagles at the Desert Claim site; state there is no discussion of raptor presence along ridgelines, other than in mitigation; refer to roosting areas identified in the DEIS and the potential for multiple flights through the proposed

1 Take that is the result of and incidental to an otherwise lawful and permitted activity.

site; note that calving will continue to attract raptors and could threaten their safety; and inquire about displacement impacts. The issue also includes requests to strike all references indicating that no bald eagle fatalities have been reported at wind farms in the U.S.

Applicable Comments: 5-14, 25-4, 26-4, 6-5, 27-32, 30-20, 38-48, 38-103, 41-5, 41-7, 43-62, 43-63, T12-3, T27-4, T29-3

Response:

The Endangered Species Act describes incidental take permit processes (Sections 7 and 10 of the ESA) for allowing otherwise lawful activities to proceed in the presence of threatened or endangered species. See the response to Issue PA-12. Conservation measures that can include avoidance, minimization, and mitigation of impacts to listed species become legally binding under an incidental take permit, thus ensuring that any given project will not jeopardize the continued existence of a listed species. As noted in response to Issue PA-12, Desert Claim is pursuing an incidental take permit concurrent with the Kittitas County permitting process. While the Desert Claim project may result in the take of an occasional bald eagle, it would not affect the winter bald eagle population of Kittitas County to a measurable degree and would certainly not jeopardize bald eagles.

Impacts to other raptors, as well as bald eagles, are discussed in detail on pages 3-91 to 3-93 and 3-96 of the DEIS as well as in Exhibit 2 of Appendix C of the DEIS which includes discussions of the issues raised by comments. For example, raptor use of the escarpment ridgeline running through the project is discussed in the technical report and recommendations made for moving turbines to avoid higher raptor use areas were adopted by Desert Claim and incorporated into the modified turbine layout included in the Final EIS (see also response to comment PA 3 above). The modified turbine layout has taken these considerations in to account through the elimination and re-siting of turbines near the escarpment. The other issues raised, such as bald eagles foraging on carrion and calving by-products, lack of previous bald eagle fatalities at wind plants, bald eagles moving though the area, and the basis for raptor impact predictions, are all discussed in the DEIS in the referenced section and Appendix and are not further discussed here.

One comment suggested that bald eagles nest in the winter (December through April) and remain in the area year round. Despite nearly weekly surveys of the project area, no bald eagles were observed in the project area after mid-April. The same results were also found at the studies of the other proposed wind plants in Kittitas County (see Young and Erickson 2003). No bald eagle nests were found during the nest survey and the WDFW, USFWS and Washington Breeding Bird Atlas have no records of bald eagles nesting in the Ellensburg area. Habitat along the Yakima River appears suitable for bald eagle nesting, but to date there are no known nests near the project. The project would not affect nesting bald eagles.

Several comments objected to the EIS statement that no bald eagles to date have been reported killed at wind plants. None of these comments provided evidence indicating this statement was not true, or provided a reference to where a bald eagle fatality has been reported at a wind plant. One comment claims bald eagles have been killed at Altamont. To date, while bird fatalities at Altamont have included golden eagles, no bald eagle fatalities have been reported from this wind resource area. Based on the literature to date from countless studies conducted at wind plants throughout the U.S., no report includes bald eagle in the list of avian fatalities. WEST, Inc. is one of the foremost consultants in the U.S. studying avian and other wildlife interactions with wind plants, and is familiar with and has a sizable library of the published

and gray literature dealing with wind plant studies. In addition, scientists at WEST have worked with many other researchers also conducting studies at wind plants. WEST is not familiar with any reported bald eagle fatalities at wind plants.

Issue PA-14: Impacts to non-endangered avian species

Issue: Several comments primarily addressed the impact analysis and/or conclusions regarding non-endangered avian species. These comments include concern for the level of protection provided for non-endangered avian species potentially present on the site; objection to characterization of the estimated 220 bird kills per year as not significant, especially when considering potential cumulative impacts; concern for the known presence of great horned owl; and request that the DEIS clarify whether the impact addresses the total avian population or the local population.

Applicable Comments: 5-8, 12-4, 14-2, 17-7, 27-60, 38-50, 43-61

Response:

One of the objectives of the baseline studies was to provide information that could be used in estimating impacts from the proposed project. Impact predictions are thus based on the use estimates from the site and available information on fatality rates from existing wind plants. Determining significance is subjective at best and is often based on comparison with other similar impacts or sources or what is commonly believed acceptable. This method undoubtedly is not agreeable to all affected interests. However, it does provide a basis for comparison and on which value judgments by individuals can be made. For example, avian fatalities associated with wind power projects should be considered in light of other avian fatality sources. Existing information from published literature indicates that there are numerous other sources of avian mortality that far exceed the expected level of mortality from wind turbines (see Erickson et al. 2001). For example, buildings, roads, communication towers, and power lines, all result in collision related deaths of birds at levels exceeding those of wind turbines. Other sources of human-related avian mortality include use of pesticides, fencing, cats, oil spills, pollution, hunting, wastewater retention and treatment ponds, and loss of habitat due to development. All of these sources, which are far more common than wind power projects, likely exceed the level of fatality impacts from wind turbines. There are very few human activities that have not or do not directly or indirectly contribute to impacts to birds and other wildlife. In light of this type of information, the relative significance of avian impacts from wind developments are minor compared to, for example, the number avian fatalities caused by domestic and feral cats in the U.S. alone. While the addition of wind turbines adds to the overall cumulative level of avian mortality cause by humans, the elimination of even one feral cat would easily offset the average total number of birds killed by approximately 200 turbines in one year. According to the American Bird Conservancy, some studies have shown that a single domestic cat can kill up to 40 birds a month (ABC no date).

One comment suggested that the number of projected bird kills from the project was unacceptable for the "minor" amount of electricity produced. The proposed wind plant could provide electricity for approximately 47,000 homes assuming that: (1) the wind plant is running at full capacity 30 percent of the time; and (2) the average household consumes about 10,000 kW hours per year. If the wind plant killed 220 birds each year, this would equate to on average 1 bird death for every 213 households served.

Issue PA-15: Impact analysis methods and results for bats

Issue: Multiple comments relating to study methods and conclusions for bats were assigned to issue PA-15. They include requests for a thorough study of the project risk to bats; to include information from nocturnal studies; provide evidence of bat mortality at other wind turbine installations; and to assess bat populations using appropriate technology (i.e., radar, acoustical studies). Other comments state that the estimates are not sufficient for determining significant adverse impacts would not be expected; no analysis of potential bat activity in relation to nearby forested area was undertaken; documentation regarding bat fatalities at other wind facilities was not included; and further study is needed. One comment referred to a wind turbine project in the Appalachians that reportedly caused a record number of bat kills.

Applicable Comments: 5-12, 15-8, 33-6, 36-11, 38-52, 38-104, 42-10, 43-64

Response:

While the baseline study did not include any primary data collection for bats and bat habitat in the project area, the DEIS provides an assessment of existing conditions and potential impacts to bats based on available information (see p. 3-85 and p. 3-93, DEIS). Post-construction fatality studies of wind plants throughout the U.S. have repeatedly shown that the vast majority of bat fatalities are of fall migrant bats (see, Johnson et al. 2000a, Young et al. 2003b, Erickson et al. 2000, Erickson et al. 2003, WEST and NWC 2004, Kerns and Kerlinger 2004). Studies of resident bats at the Buffalo Ridge Wind Plant, Benton County, Minnesota, in conjunction with post-construction fatality monitoring studies, showed that resident bats do not appear to be at great risk of collision with wind turbines (Johnson et al. 2003). In addition, fatality studies at other wind plants rarely find spring migrant or summer resident bat fatalities. The vast majority of evidence indicates that the bat populations that are at risk of collision with wind turbines are foliage dwelling migratory bats and, in the Pacific Northwest, hoary bats (*Lasiurus cinereus*) and silver-haired bats (*Lasionycteris noctivagans*). While there is certainly habitat near the project for hoary bats and silver-haired bats (WCFWRU 1999), residents of these species outside of the fall migration season are not considered at high risk from the wind plant. While it is not known with certainty, based on the studies to date it is believed that many of the bats that are at risk of collision with any given wind plant could be from as far north as Canada and southern Alaska.

In light of the available information, and based on the early coordination processes with the WDFW and USFWS, it was not deemed a high priority to study resident bat habitat and populations at the Desert Claim site because these resources would not be at great risk. It was considered important, however, to include an impact assessment on bats from the project based on the available information, which is included in the DEIS (see pages 3-85 to 3-87 and 3-93 to 3-94).

Issue PA-16: Indirect avian impacts, particularly potential for viral outbreaks

Issue: This issue includes comments addressing indirect impacts possibly resulting from avian mortality. These comments primarily question whether avian mortality could result in growth of the local mice or mosquito populations, with corresponding potential for viral outbreaks (e.g., hantavirus, West Nile virus) that might threaten human health. (See also issue HS-12.)

Applicable Comments: 15-6, 16-8, 17-8, 41-8, 43-65, T13-5

Response:

A few comments indicated concern that loss of raptors or bats from the project might cause rodent or mosquito populations to grow and thus spread diseases such as hantavirus or West Nile virus. While this line of thought may be plausible, the low level of impacts to raptors from the project is not considered likely to have a measurable effect on rodent populations. Rodent populations are highly dynamic and cyclical. The potential loss of 3 to 4 raptors a year to the wind plant (P. 3-93 DEIS) would not be measurable in the overall raptor population in the area and would not affect the highly dynamic rodent population. Similarly, impacts to bats would not be sufficient to affect local mosquito populations. Mosquito populations are seasonal and highly influenced by local environmental conditions, such as rain and flood irrigation practices. Additionally, numerous studies at wind plants in the U.S. have shown that fall migrant bats are the most at risk of collision with wind turbines and local resident bats appear to co-exist with wind plants with little impact (see Johnson et al. 2003). The two species of bats that appear to be most at risk of wind development in the Pacific Northwest are hoary bats and silver-haired bats. While both species will consume a variety of insects, hoary bats tend to specialize on moths (Shump and Shump 1982) and silver-haired bats consume primarily moths and beetles (Kunz 1982). The loss of migratory individuals of these species through collisions with the wind turbines would not affect the local mosquito population. The prevalence of diseases such as hantavirus or West Nile virus in Kittitas County would not be influenced by the Desert Claim project.

Issue PA-17: Impacts to shrub-steppe vegetation and lithosols

Issue: Two comments specifically addressed impacts to shrub-steppe habitat and lithosols. They noted that the DEIS states that the primary vegetation type is shrub-steppe (53.4 percent), which is in a critical state of survival, and the loss of shrub-steppe could undermine the habitat value; shrub-steppe obligate bird species occupy this region during the breeding season; and the project could impact low-growing plant communities used by raptors for hunting visible prey. The comments also expressed concern that lithosols (a fragile, slow-growing feature of the shrub-steppe zone, located generally near ridge tops) would be disturbed by the project.

Applicable Comments: 5-5, 5-6

Response:

The impacts from the project, both temporary and permanent, to the shrub steppe vegetation type would be mitigated according to the WDFW wind power guidelines. These guidelines acknowledge the difficulty inherent in restoring shrub steppe vegetation and require a greater amount of replacement habitat than that being impacted. Over the long term, there should be a net increase in the amount of shrub steppe in the project area if reclamation and mitigation is successful. In addition, the presence of the wind plant could facilitate continued agricultural operations within the 5,237-acre project area and thereby reduce pressure to convert this land to rural residential development, which has and continues to contribute to the loss of shrub steppe habitat in Kittitas County. Because of WDFW's mitigation replacement ratios and the support of continued agricultural operations, if the wind plant is constructed, it is likely that there would be more shrub steppe habitat in the project area over the life of the project (30 years) than if the wind plant is not constructed.

Less than 4 percent of the project area (approximately 200 acres) was classified as lithosol. The topography of the project area, which tends to be broader plains with little relief, and the dominant vegetation types present suggest that most of the site has deeper soils. Lithosol is much more common along the ridgelines in shrub steppe communities where conditions create the characteristic rocky shallow soils. Lithosol is confined to the northernmost section of the project area. Based on the proposed turbine layout, impacts to lithosol are expected to be minor. There would be approximately 17.1 acres of temporary impact and 4.0 acres of permanent impacts to the lithosol type in the project area. The difficulty of restoring lithosol habitats is factored into the WDFW guidelines, which would be followed for mitigating vegetation impacts from the project.

Issue PA-18: Vegetation and wildlife impacts in general

Issue: Two comments expressed general concern over impacts of the project on existing vegetation, or impacts to wildlife without respect to specific wildlife types or guilds.

Applicable Comments: 20-3, 29-20

Response:

Impacts to vegetation and wildlife are addressed in detail in **Section 3.4** of the EIS.

Issue PA-19: Impacts to threatened and endangered species

Issue: One comment questioned the acceptability of the DEIS conclusion that there would be no significant impacts to threatened and endangered species.

Applicable Comments: 29-26

Response:

Comment 29-26 is incorrect in stating that the EIS includes no methods for protection of endangered species. As a general matter, **Section 3.4** and Appendix C of the EIS thoroughly address baseline conditions, potential impacts and mitigation measures for threatened and endangered species. This content includes several measures specific to concerns over potential impacts to bald eagles. See also the responses to Issues PA-12 and PA-13. The conclusion of no significant effect to such species is based on the analysis documented in the EIS, not on the assertion of the applicant. Comment 29-26 provides no information to support the claim that the conclusion is inaccurate.

Issue PA-20: Monitoring of post-construction conditions

Issue: This issue includes comments addressing post-construction monitoring, which was identified in the DEIS as a mitigation measure. Comments include specific points that monitoring should be done by an impartial body, not project employees; adequate monitoring requirements and mitigation should be in place to document bird fatalities; a project of this size could change the overall ecology, so there should be monitoring of a test installation first; and that the DEIS does not include follow-up baseline studies of other wind farms to determine if they change the 'overall' ecology of a site.

Applicable Comments: 30-25, 41-9, 41-25, 43-6

Response:

With respect to comments concerning postulated changes to the "overall ecology" of an area, the EIS thoroughly documents an analysis supporting the conclusion that the Desert Claim project would have insignificant impacts on the plant and animal resources of the local area. The EIS also provides extensive information about existing wind farms indicating that they likewise have generally had minor impacts on ecological resources. There is no evidence that wind farms in the U.S. or Europe have changed the overall ecology of an area; therefore, it would be unreasonable to require a test installation and monitoring. With respect to monitoring requirements for the Desert Claim project, the Kittitas County Board of County Commissioners would determine those requirements through conditions of approval and a development agreement.

Issue PA-21: Impact of turbine safety lights on avian mortality

Issue: One comment noted that night lighting on turbines could attract night migrating birds, and expressed the opinion that such lights should not be used since they are not required by the FAA.

Applicable Comments: 36-13

Response:

Contrary to the statement in Comment 36-13, the FAA does require safety lighting on tall structures, as discussed in **Sections 3.13.2.2** and **3.13.5.2** of the EIS. The comment correctly notes there is concern over the possibility that the safety lights might attract birds, especially night-migrating birds. Wildlife resource agencies have been interested in this question and the FAA has sponsored research into the issue, but the agency has not yet made any changes to its lighting requirements.

Issue PA-22: Adequacy of entries in Table 1-1

Issue: Several comments (all from the same source) addressed specific entries in **Table 1-1**. They include statements that the table provides inaccurate comparisons between the Desert Claim and Wild Horse areas, as vegetation at the two sites is not similar and avian impacts would be different, and that **Table 1-1** fails to include the County's "zero net loss" policy on wetlands.

Applicable Comments: 37-2, 38-8, 38-9, T26-2

Response:

Table 1-1 of the Draft EIS indicates that impacts to birds from Alternative 1 (the Wild Horse site) would be similar to those for the proposed action because of the similar vegetation types *and avian species* at the two sites. The table entry did not state that vegetation at the two sites was identical, only that the vegetation types were similar, and the conclusion was based on similarity of avian species in addition to vegetation. Both project areas have extensive shrub-steppe and grassland habitats, as well as smaller areas of pine forest, riparian forest/woody riparian and water bodies. The shrub-steppe and grassland types

account for 87 percent of the Desert Claim area and 97 percent of the Wild Horse area; that condition is sufficient to establish the two areas as having *similar* vegetation patterns. **Table 1-1** does not note the County's no-net-loss policy for wetlands because **Table 1-1** only addresses projected impacts; mitigation of wetland impacts, which would be required to achieve no net loss, is addressed in **Sections 1.7.4.2** and **3.4.2.5**. Also, please see the responses to Issues PA-11 and LU-6.

Issue PA-23: Classification of vegetation types

Issue: One comment stated that because **Section 3.4.1.1** indicates that shrub-steppe and grassland types are also used for agriculture, the DEIS should include all uses of vegetative areas in this section or only address uses of vegetation in the Land Use section.

Applicable Comments: 38-45

Response:

The EIS statement referenced in Comment 38-45 is a reasonable and accurate statement that provides context for the differentiation of agricultural areas from shrub-steppe and grasslands in the vegetation classification for the project area. The comment does not appear to recognize the fact that developed uses (which include primarily rural residential) are classified in the vegetation inventory.

5.2.5 Energy and Natural Resources (ENR)

Issue ENR-1: Impact of project on the supply and price of electricity

Issue: This issue includes comments pertaining to DEIS **Section 3.5** content on the local or regional effects of the project on the availability and/or price of electricity. Individual comments stated that the DEIS fails to evaluate the potential impact on the broader energy picture, or disagreed with DEIS conclusions about effects on the price and availability of electricity.

Applicable Comments: 27-16, 27-35, 29-27, 38-11, 42-5

Response:

With respect to Comment 27-16, the statement in **Table 1-1** is based on the facts that: (1) there has been no indication that power from the Desert Claim project would likely comprise a large portion of the supply of electricity to local (i.e., Kittitas County) consumers; (2) unit costs for wind energy are similar to and not markedly higher than costs for energy from other sources; (3) power from the project would likely be blended with supplies from other sources, which would tend to mask any price differences among sources and any potential changes in retail rates experienced by consumers; and (4) the project would represent a small increment of additional supply relative to the existing base level of supply. While utilities that supply "green energy" typically sell this power at a somewhat higher rate, in many cases because consumers are willing to pay a premium for it, the magnitude of this price difference is not great. The current lack of power sales contracts does not preclude assessment of the potential supply and price impacts, based on the applicant's intentions and reasonable expectations of what might occur. Wind energy developers typically do not conclude power sales contracts until they have obtained land use approval for a project. The fact that Puget Sound Energy issued a formal request for proposals for a

specific amount of wind energy (150 MW) is a sufficient basis to state that PSE (and other utilities) have expressed a desire to acquire wind energy; in fact, on May 19, 2004, PSE issued a press release stating that the Desert Claim project made it onto PSE's short-list of projects being considered in response to its request for proposals. Comment 38-11 provides no explanation for the claim that "the impacts of this project on the broader energy impacts have not been evaluated." Energy production from the Desert Claim project and its relation to baseline energy conditions is the primary focus of **Section 3.5** of the EIS.

Issue ENR-2: Relative energy importance of the project and wind power in general

Issue: Comments primarily addressing the contribution of the Desert Claim project and/or wind power in general to the energy supply were assigned to Issue ENR-2. These comments include statements that the project would generate a minuscule amount of power; the contribution of this and other proposed area projects to energy production and taxes are minimal; and that the DEIS should include discussion of the relative importance of these wind projects to the whole energy picture. One comment stated that conservation could accomplish the same savings without the damage, another noted that it is absurd to discuss how the project might contribute to addressing the looming energy crisis because there is no competent national energy policy, and a third said there should be a comparison of wind energy to hydroelectric power, as hydro facilities have a longer lifespan and greater output potential. This issue also includes objections to specific statements in the DEIS addressing the amount of energy the project would produce, or the comparison of potential project-generated energy to existing local or regional production quantities.

Applicable Comments: 12-19, 33-4, 36-17, 38-53, 38-105, 41-23, 48-3

Response:

Section 3.5.2.2 of the EIS accurately characterizes the amount of energy that would be generated by the project. That amount could be compared to any number of baseline energy supply quantities (e.g., total supply to Kittitas County electricity consumers, total generation in Washington State or the Pacific Northwest, etc.), and readers are free to consider their respective subjective assessments of the value of the additional generation. As discussed in the response to Issue ALT-5, consideration of whether conservation could provide the same amount of energy, or whether alternative forms of energy production are preferred by some observers, is not germane to the action under review by Kittitas County and is not required by SEPA. Similarly, the relative significance of wind energy on a state, regional or national basis, and the existence or lack of a national energy policy, are not germane to the environmental review of the Desert Claim application.

Issue ENR-3: Scope of EIS energy analysis

Issue: One comment stated that discussion of other potential energy facility developments is outside the scope of DEIS (regarding **Section 3.5.3.3**), and that if the project were approved, it would not eliminate other energy facility proposals in the Ellensburg area or elsewhere.

Applicable Comments: 38-54

Response:

The description of Alternative 1 in **Section 2.3.2** appropriately describes the options for transmission connections for a wind energy project at the Wild Horse site. Connecting to the PSE transmission system is also an option for the Desert Claim project, as is described in **Section 2.2**. A general, non-speculative discussion of other foreseeable (i.e., proposed) energy developments that might occur in the event of no action on the Desert Claim proposal is within the scope of the EIS and is a reasonable topic of discussion relative to the No Action Alternative, consistent with the SEPA rules and standard SEPA practice. Kittitas County agrees that approval of the Desert Claim project would not necessarily cancel out other energy facility proposals, but the EIS does not make a statement to the contrary.

Issue ENR-4: Quantification of resource use

Issue: One comment stated that the DEIS should list specific quantities of resources to be removed or displaced.

Applicable Comments: 43-69

Response:

See the response to Issue PD-1. An approximate range of possible quantities has been added to the Final EIS.

Issue ENR-5: Energy loss through transmission

Issue: One comment stated that wind energy is best used in areas in close proximity to consumers and expressed concern regarding energy loss through the long-distance transmission of power.

Applicable Comments: 48-4

Response:

The statement that wind energy is best used in areas close to consumers is actually applicable to all forms of electrical energy generation. Electricity generated from wind turbines has the same characteristics in the transmission system as electricity generated from hydroelectric turbines, gas turbines or other fuel sources; all of these forms of electricity are indistinguishable once they are connected to the grid, and all are subject to transmission loss at an equal rate that is primarily a function of distance. While locating generation sources near load sources would serve to minimize transmission losses, other considerations tend to cause energy developers to locate generation sources in relatively remote areas.

5.2.6 Cultural Resources (CR)

Issue CR-1: Mitigation for cultural resource impacts

Issue: This issue includes several comments relating to discussion of mitigation measures for potential cultural resource impacts. Comments were that the DEIS should specify mitigation measures required of the applicant; turbines or roads sited in an identified area of concern should be

relocated; mitigation of retrieving scientific or cultural information from its location is unacceptable, as it would alter the character of the site and the artifact; it would not be permissible to unearth artifacts; and that mitigation involving removal of artifact(s) would result in significant unavoidable adverse impacts.

Applicable Comments: 29-29, 38-56, 38-57, 38-106, 43-72

Response:

Comment 29-29 is generally consistent with a careful reading of **Section 3.6** of the EIS, which provides considerably more detail than **Table 1-1** concerning cultural resource impacts and mitigation. The EIS indicates that a mitigation plan would be developed in consultation with the Washington State Historic Preservation Officer if it became necessary to retrieve and archive cultural materials. The remaining comments in this issue category express opinions concerning mitigation (i.e., that retrieval of scientific and cultural information is unacceptable) that are not consistent with applicable federal and state legal and regulatory provisions. Those provisions do allow for excavation and recovery, subject to an approved mitigation plan, if disturbance of cultural sites cannot be avoided. Because recovery is an accepted form of mitigation, use of that measure does not constitute a significant unavoidable adverse impact. As indicated in the response to Issue EIS-10, the EIS is not a decision document,; it is the function of the Kittitas County BOCC, not the EIS, to prescribe which mitigation measures will actually be required.

Issue CR-2: Nature and extent of cultural resource impacts

Issue: Several comments were specific to cultural resource impacts, such as statements that the DEIS is insufficient and incomplete on cultural resource impacts; the DEIS refers to possible transmission connection impacts and actual impacts should be determined to complete the EIS; and that six cultural sites have been identified as potential impact areas.

Applicable Comments: 12-16, 38-55, 43-71

Response:

Section 3.6 of the EIS addresses potential project impacts on prehistoric sites, historic sites and traditional cultural properties, which are the three standard topics of cultural resources that are typically evaluated in environmental documents. Comment 12-16 does not indicate what is meant by the term "historical culture," but that term would seem to be within the scope of the specific types of cultural resources addressed in the EIS. Comment 12-16 also makes specific reference to page 4-10 of the Draft EIS, which is in the summary of cumulative impacts and not the full discussion of cultural resources provided in **Section 3.6**.

With respect to Comment 38-55, the cultural resources studies undertaken to support the EIS included field investigation of both possible transmission connection points and routes. Therefore, even though the eventual connection point has not been determined, the routes that could be used have been defined and potential impacts for both routes have been identified.

Comment 43-71 is an accurate statement about the number of cultural resource sites that could be subject to ground disturbance, as reported in **Section 3.6.2** of the Draft EIS. This result has been revised for the

Final EIS, based on modifications to the proposed locations of project facilities. Mitigation measures discussed in the document include actions to prevent loss of artifacts.

Issue CR-3: Impacts and consultation regarding traditional cultural properties

Issue: This issue includes three comments that pertain primarily to traditional cultural properties. Comments stated that the DEIS contains little information on cultural resources, and the writer suspects little consultation with the Yakama Nation occurred; there is a need to include area(s) of the site pertaining to the Yakama Nation that would be affected and their value; a supplemental EIS per Section 106 of NHPA is needed; and private property use is not identified and cannot be assumed.

Applicable Comments: 12-17, 43-29, 43-70

Response:

The Draft EIS (page 3-115) indicates the Yakama Cultural Resources Program was formally contacted with notification of the field studies and a request for assistance concerning potential traditional cultural properties (TCPs). The Yakama Nation did not respond to that request, so the EIS addresses TCPs to the extent possible using other sources of information. The Yakama Nation will have the opportunity to be involved in any future work with prehistoric sites if data recovery is needed at such sites because ground disturbance could not be avoided. The meaning of the statement in Comment 43-70 that private property use is not identified and cannot be assumed is unclear. It is clear, however, that the project area is entirely private property. The participating landowners have not identified any authorized or unauthorized use of their lands for access to TCPs, and the EIS explains the relevant conditions regarding off-reservation rights on private lands.

Section 106 of the National Historic Preservation Act has not been determined to apply to the proposed action, as no need for a federal permit or federal funding has been identified.

5.2.7 Land and Shoreline Use (LU)

Issue LU-1: Direct land use impacts/compatibility with existing uses

Issue: A number of comments that appear to address primarily the DEIS discussion of direct land use impacts of the project were assigned to Issue LU-1. One common theme among several of these comments was the compatibility of the project with existing land uses, primarily residential use. Specific comments included concern regarding compatibility of project with residential land use and lifestyle, particularly for residences within one-half mile of the project boundary; that some residences would be completely surrounded by turbines at close range; the project would represent intensive use of structures relative to current land use and structures; and that the DEIS fails to adequately address impacts to changing land use. Several comments reflected the theme that the project represented an industrial use. Another group of comments in this category addressed the approach, accuracy and content of the analysis, including specific comments that the DEIS downplays impacts on residents by characterizing the land as mainly agricultural; many people reside in the area; the EIS should provide evidence that impacts to existing activities are not expected; the number of residences shown within 1,000 feet is inaccurate; residence data in

Sec. 3.8.1.3 is inconsistent with Sec. 3.7.1; the DEIS should account for all residences within a 2-mile radius; or disagreement with the DEIS impact conclusion. One comment stated that the cumulative impacts on all residences with a view was not adequately addressed in the DEIS.

Applicable Comments: 15-15, 25-2, 25-5, 27-18, 27-61, 27-70, 29-5, 29-30, 38-58, 38-64, 38-107, 38-108, 38-110, 42-11, 43-74, 43-76, 43-78, 43-84, 43-91, 44-2, 44-5, 46-1, 47-12, T22-5

Response:

Several commentors disagreed with the Draft EIS analysis of the land use change associated with the project and suggested that the change would be more extensive. The land use discussion is focused on the broad pattern of land use in the site vicinity, including the pattern within one mile of the proposed project area. This focus is consistent with the decision of the Central Puget Sound Growth Management Hearings Board in *Vashon-Maury, et al v. King County* (No. 95-3-0008), discussed in the Draft EIS (page 3-138). That decision concluded that uses permitted in a rural area must be compatible with the rural land use pattern in the immediate area, not solely with uses on an individual parcel. The pattern in the vicinity of the Desert Claim proposal is identified as primarily a combination of agricultural and rural residential uses (Draft EIS **Section 3.7.1.1**). This characterization is based on current, adopted Comprehensive Plan land use map designations and zoning map classifications (shown on Draft EIS **Figure 3.7-1**), as well as on observations of existing land uses. The primary land use map designations are Agriculture-20 and Forest and Range; these dominate the site and surrounding area in terms of acreage. The primary purpose of these designations, as described further in response LU-6, is to encourage continued agricultural use; they are not strictly residential zones per se.

From this broad land use perspective, the proposal is not expected to generate significant changes or impacts. It is acknowledged that some individual homeowners may perceive that land use has changed more significantly as compared to others. The Draft EIS also identifies that wind turbines are significantly larger in scale than most existing structures in the area and would conflict to some degree with existing residential uses (page 3-130).

The presence of rural residential land uses is clearly acknowledged in the Draft EIS (see page 3-124); however, this is not the predominant use of land in the vicinity based on the acreage encompassed by applicable land use and zoning designations. Currently on the project site, for example, only one-half of 1 percent (26 acres out of 5,237 acres) of the land is developed with buildings and structures, with the remainder primarily grassland and rangeland.

Environmental impacts to neighboring properties are also addressed throughout the Draft EIS. For example, the discussions of health and safety (**Section 3.8**), noise (**Section 3.9**), and aesthetics (**Section 3.10**) all identify impacts from construction and operation of the project. Impacts on nearby residential uses (e.g., within 1,000 feet) are included in **Section 3.7**. **Section 4** discusses cumulative impacts from the proposal and other known wind projects. **Section 4.10** addresses cumulative impacts to views, and includes potential impacts of the Desert Claim project and other proposed or known wind power projects in the general area. This analysis has been updated in the Final EIS to reflect revisions to the proposed action.

The "intensity" of the proposed use depends on how it is characterized and/or perceived. A number of commentors stated that wind turbine structures are more intensive than existing land uses, characterized

them as industrial in nature, and asserted that they are not consistent with rural character. Kittitas County defines wind turbines as "utilities", not as industrial land uses (KCC 17.61). Utility uses are not believed to be inherently incompatible with rural land use patterns. This issue is addressed in greater detail in responses LU-7 and LU-8 below. The proposal would not displace or significantly interfere with existing agricultural uses and would involve construction and use of a relatively small portion of the overall site.

Because the project site is comprised of several separate properties that are not all contiguous, some individual residences may be adjacent to wind turbines on more than one side. The proposed configuration and location of wind turbines has been modified; refer to **Figure 2-8** in the Final EIS.

The number of residences in the site vicinity, generally within one-half mile of the proposed site, was estimated in the Draft EIS from a review of aerial photographs and a site reconnaissance, using County land use maps and direct observations. Land uses and densities within the broader site area (generally a 5 mile radius) are also described. This is the best information available and is believed to provide a reasonably accurate indication of the types of uses, and the amount and density of population near the proposed project.

An updated residential survey, using ground reconnaissance and GPS coordinates, was conducted in response to comments on the Draft EIS. This study identified 32 residences within 1,000 feet of proposed turbine locations. These residences are depicted in **Figure 3.7-2.** The modified turbine layout includes a 1,000-foot setback from all of these residences *and* a 487-foot setback from the project area boundary, adjoining property lines, public roads, utility corridors and the KRD canal in order to minimize impacts.

It should be noted that Kittitas County's regulations for wind farms, and the BOCC's land use decision, address land use compatibility. Pursuant to the Wind Farm Resource Overlay Zone, which applies to the proposal, the Board of County Commissioners must decide whether a wind power facility in a specific location is suitable, protects the public health, safety welfare, safety and quality of life, and ensures compatible land uses in the vicinity of the areas affected by wind farms (KCC 17.61A.010). Other criteria considered by the BOCC include the effects of the proposal to the character of the surrounding neighborhood.

Issue LU-2: Indirect land use impacts

Issue: Issue LU-2 includes comments that are similar to those in LU-1, but that reference or appear to address the analysis of indirect land use impacts, such as potential effects on residential development near the project in the future and/or continued agricultural use. It includes comments that residential development may be incompatible with the proposal, the project would be incompatible with the growth of Ellensburg, or that the project could discourage residential development over time. One comment noted the prospect of a wind farm did not discourage a recent subdivision request for 56 lots on 400 acres. Another noted that a zoning change from Ag 20 and FR to Wind Energy Resource Overlay Zone could indirectly result in increased bird mortality and destruction of shrub-steppe habitat.

Applicable Comments: 5-13, 29-6, 36-8, 43-81, T22-7

Response:

The Draft EIS (**Section 3.7.1**) concludes that the proposal would not significantly impact the overall rural land use pattern in the general area, which is dominated by agricultural land uses. Agricultural activities would not be displaced or significantly disturbed by wind power facilities. The Draft EIS does acknowledge that proposed wind turbines would be significantly larger in scale than surrounding structures; this contrast would be pronounced relative to individual residential structures.

The Draft EIS discussion of indirect impacts acknowledges that the proposal could discourage residential land uses in the vicinity due to individuals' perceptions that wind turbines are incompatible with such uses. If this occurred, it would be viewed as an adverse impact to those existing or future residents who did not wish to see or live near wind farms, and this is acknowledged in the EIS. There has been subdivision activity in the general area since the proposal has been announced, however, which could indicate that residential development is not being discouraged currently. Since the effect of a wind power facility is not certain, the Draft EIS looks at a range of possible impacts. As noted in the analysis, discouragement of residential uses could also tend to encourage continuation of agricultural activities.

The proposal is located approximately eight miles from the City of Ellensburg urban growth area. Turbines could be visible from some locations within the City. Given the significant distance, however, and the conclusion of the Draft EIS that the proposal would not significantly affect land use patterns, it is not expected to adversely impact future growth in Ellensburg.

One commentor noted correctly that a rezone to Wind Farm Resource Overlay Zone is required for wind farms according to Kittitas County regulations (KCC 17.61A.040). This commentor also asserted that such a rezone would indirectly cause mortality to birds. The Draft EIS evaluates the impacts of the proposal to birds and wildlife as direct impacts to those elements of the environment (**Section 3.4**), rather than as indirect land use impacts.

Issue LU-3: Possible relocation of existing area residents

Issue: Several comments related to a statement in the DEIS that area residents may choose to relocate if the wind turbine project conflicted with their lifestyles. They include general objection to or questioning of that statement or a similar statement that wind production is compatible with rural resources, but does not do the same for residential land uses. This issue includes a comment that for the relocation option to be viable, property value analysis and mitigation would be necessary to allow residents the financial ability to relocate.

Applicable Comments: 11-8, 12-28, 27-36, 30-26, 38-60, 43-83, 44-7, T4-8

Response:

The Draft EIS identified the potential for existing residents nearby to relocate as one possible reaction of persons who felt strongly that wind power facilities were incompatible with their desired lifestyle (page 3-131). It was not intended to suggest that they *should* move or that such reaction would be inconsequential. Similarly, this statement was not intended to suggest that those who did choose to relocate would or should be compensated by Kittitas County or the wind project applicant.

Issue LU-4: Compensatory mitigation for land use impacts

Issue: This issue includes comments on **Section 3.7** indicating that insufficient mitigation is proposed to protect the rights of landowners, and/or that mitigation should include property purchase or some other form of compensation.

Applicable Comments: 11-9, 15-16, 27-47, 38-109, 43-80

Response:

As indicated in responses LU-1 and LU-2, the Draft EIS did not identify probable significant adverse land use impacts with the potential exception of some turbines located adjacent to existing residences in a portion of the site. Increased setbacks were identified as a possible mitigation measure in those instances. No additional mitigation measures – apart from those already incorporated in the proposal -- were recommended or warranted by the findings of the land use analysis.

A review of existing research on the effects of wind power facilities on property values was published concurrent with the Draft EIS (Huckell/Weinman Associates, December 2003). That analysis did not find a clear, consistent or certain relationship – either positive or negative -- between wind power facilities and property values. Relatively few studies have been published to date on this subject.

The purpose of SEPA is to ensure that environmental issues are considered in decision-making. An EIS documents consideration of environmental issues. According to the SEPA Rules, an EIS is limited to an analysis of *probable significant adverse environmental* impacts of a proposal (WAC 197-11-402(1)). An EIS is not intended to address every issue that a decision maker may properly consider when making a decision. Impacts to property values, financing, taxation, cost-benefit, competition, and social policy are examples of the types of issues that the SEPA Rules explicitly exclude from consideration in an EIS (WAC 197-11-448). However, the BOCC may consider such issues when making its decision on an application.

Mitigation measures imposed on a proposal pursuant to SEPA are required to be reasonable, capable of being accomplished, based on adopted policy, and must be related to environmental impacts caused by a proposal and identified in an EIS (WAC 197-11-660). Mitigation for asserted impacts to property values, or for speculative impacts generally, is not consistent with these rules and, therefore, is not appropriate.

Issue LU-5: Setbacks from residences and property lines

Issue: Comments relating to the land use aspects of the turbine setbacks addressed in the EIS were assigned to Issue LU-5 (similar comments that did not specifically involve land use aspects were assigned to Health and Safety or Noise issue categories). These comments include objections to the proposed setbacks from residences and/or property lines; objection to setbacks relative to residences adjacent to central portion of the site, which imply that impacts to other residents near the project may not be significant and do not warrant mitigation; concern over potential limitations on use of land on adjacent properties within setback limits; and a statement that land use will be changed if setbacks do not address all potential impacts.

Applicable Comments: 16-12, 17-6, 20-1, 25-6, 27-45, 38-63, 43-7, 43-30, 43-79, T22-6, T24-4

Response:

Setbacks from wind turbines are commonly established to provide protection from noise and potential safety hazards, including tower collapse, blade throw and ice throw. The setbacks incorporated into the wind turbine configuration evaluated in the Desert Claim application and the Draft EIS accounted for existing residences (1,000-foot setback) public roads and the project boundaries (250-foot setback). Setback distances were based primarily on regulatory standards from other jurisdictions. No setbacks were originally proposed from the boundaries of adjacent properties or other natural or man-made features.

Section 3.8 of the Draft EIS (Health and Safety) identifies "hazard zones" associated with a tower collapse, blade throw and ice throw. These hazards are calculated based on the maximum turbine envelope analyzed in the Draft EIS (80 meter tower with 80-meter turbine blades). Calculation of hazard zones was based on the largest area that could be affected by the types of occurrences in question (e.g., a blade breaking, ice being thrown, or a tower collapsing). Calculated distances reflected recorded occurrences and the findings of international scientific studies; they also accounted for various physical properties and processes (e.g., gravity, trajectory, speed, drag coefficients, etc.). Applying these principles, the Draft EIS identifies hazard zones of 491 feet for blade throw, 393 feet for tower collapse, and 328 feet for ice throw for the maximum turbine envelope.

Since publication of the Draft EIS, Desert Claim selected the turbine model to be used in this project; it is the GEWE 1.5sl. This turbine fits within the maximum turbine envelope and it is smaller than the maximum size turbine analyzed in the Draft EIS as it uses a 65-meter tower and a 77-meter diameter rotor blade.

Desert Claim modified the project proposal as presented in the Final EIS in response to information in the Draft EIS and direction from Kittitas County based on comments received on that document. Desert Claim would still provide a 1,000-foot setback from residences. One of the modifications is a proposal to provide a 487-foot performance-based safety zone setback from other features, including the – project area boundary, adjoining property boundaries, public roads, utility transmission corridors and the KRD canal. This "performance based" safety zone is described in Chapter 2. It is based on the analysis in the Draft EIS and was developed in response to comments and direction from Kittitas County.

This safety-zone setback is large enough to address potential blade throw, ice throw and tower collapse for the GEWE 1.5sl. This setback distance is based on the technical information on maximum hazard zones contained in the Draft EIS. The proposed GEWE 1.5sl turbine has a 65-meter (212 feet) tower and 77 meter (249 foot) rotor. Out of the three potential mechanical hazards for this turbine (blade throw, ice throw and tower collapse), blade throw has the largest possible hazard zone—it is 443 feet (135 meters). Desert Claim added a 10 percent safety factor (i.e., 44 feet) to the blade throw hazard zone to provide a margin of safety. This results in a performance-based hazard zone of 487 feet. Desert Claim is proposing to from property area boundaries, adjoining property lines, public roads, utility transmission corridors and the KRD canal, which is large enough to provide protection for potential blade throw and ice throw from the GEWE 15.sl turbine. Desert Claim also would maintain a 1,000-foot setback between turbines and nearby residences. As noted in response LU-1, the number and location of existing residences has been rechecked in the field, identified using GPS coordinates, and accounted for in proposed turbine locations;

this confirmed that there are 32 residences located within the project area boundary or within 1,000 feet of the project area boundary.

Issue LU-6: Project consistency with Kittitas County Comprehensive Plan

Issue: This category includes comments with specific reference to the DEIS discussion of project consistency with some aspect of the Kittitas County Comprehensive Plan. Individual comments offer opinions on whether the project would be consistent with one or more provisions of the comprehensive plan. They include specific comments that to conform with the plan, every wind turbine would need to be located within industrial-zoned land, giving the appearance that any landowner could develop industrial parks; the project would allow industrialization of broad sections of the valley's scenic landscape; in combination with other proposed projects, there would be over 10,000 acres of land used for turbine development; or that disagree with the DEIS statement that the project would be consistent with the plan. Other comments state that the project is not consistent with the plan's land use and utilities policies, including comments disputing the DEIS assertion that the project conforms with GPO 8.9 and GPO 8.11; that incompatibility with rural residential uses has been identified within the DEIS; the project would violate the County's "zero net loss" policy on wetlands; the DEIS fails to consider the definition of rural lands and the type of compatible activities; the DEIS fails to include discussion of GPO 2.109 and GPO 2.109A; and that each turbine would be an industrial land use in the Ag 20 and FR zones.

Applicable Comments: 27-19, 29-31, 30-7, 32-5, 33-2, 38-65, 38-67, 42-14, 47-3, 47-10

Response:

Several comments expressed the opinion that wind turbines are industrial uses and should locate on industrially zoned land to prevent the "industrialization" of the area. Based on Kittitas County's Comprehensive Plan and zoning regulations, however, wind power facilities are properly considered to be "utility" rather than industrial uses. The Comprehensive Plan's Glossary of Terms (Appendix A) defines "utilities" as follows:

> "the supply, treatment and distribution, as appropriate, of domestic irrigation water, sewage, stormwater, natural gas, electricity, telephone, cable television, microwave transmissions and streets. Such utilities consist of both the service activity along with the physical facilities necessary for the utilities to be supplied. Utilities are supplied by a combination of general purpose local governments as well as private and community based organizations."

"Industrial uses" are defined as "activities predominantly connected with the manufacturing, assembly, processing or storage of products." The purpose of wind turbines is to generate electricity and they are not connected with the manufacture, assembly, processing or storage of products. Wind power facilities, therefore, are utilities within the meaning of the Comprehensive Plan. The County's zoning code also defines facilities that produce electricity as utilities and permits them to be located within any zoning district (KCC 17.61). Wind farms are further categorized as "alternative energy facilities," which are subject to special provisions for review and designation of a Wind Farm Overlay Zone (KCC 17.61A).

While it is acknowledged that some people may consider turbines to be industrial in appearance or character, Kittitas County does not categorize individual turbines or wind farms in this manner for purposes of regulating their location, configuration or impacts.

The Draft EIS (**Section 3.7.1.2**) concluded that, as a utility land use, a wind farm would be generally compatible with the *pattern* of rural uses (including rural residential uses) and agricultural activities that occur in the area. The discussion also acknowledges, however, that there would be significant contrasts in scale with adjacent rural residential uses and that some degree of incompatibility or conflict would exist.

Several comments asserted inconsistencies with GPO 2.109 and GPO 2.109A to indicate that the proposal would be incompatible with rural land uses. These policies both relate to Industrial Land Use and are contained in the Comprehensive Plan's section on land use in Urban Growth Areas. Since the proposal is neither an industrial land use nor located in an urban growth area, the cited policies are not applicable.

The discussion of Land Use and Utility policies in Draft EIS **Section 3.7.2.1** is believed to be an accurate evaluation of the relationship of the proposal to the Comprehensive Plan. GPO 8.11, for example, which was cited by a commenter, promotes protecting and supporting "existing and traditional uses" while also allowing "as much as possible for diversity, progress, experimentation, development and choice in keeping with the retention of rural lands." The proposal is believed to meet the objectives of this policy. The Desert Claim proposal would be located on private, leased lands that are currently used for agricultural activities. As discussed in more detail in response LU-7 below, the proposal would involve development of 82 acres (1.6 percent) of its 5,237-acre site and would not physically displace or significantly interfere with existing uses on the site. It would, therefore, retain rural lands (zoned for Agriculture-20 and Forest and Range) as called for in the policy (and in GPO 8.9). While some may disagree, wind power can be characterized as an innovative, non-consumptive approach to generating electricity. Wind power is also a relatively recent approach to energy production in the U.S. and could, therefore, be viewed as promoting progress and experimentation. This type of use can, therefore, be interpreted to be consistent with GPO 8.11.

The Cumulative Impacts discussion in the Draft EIS acknowledges that the three wind power projects proposed or likely to be proposed in Kittitas County would, if approved, each be located on a site larger than 5,000 acres in area, or almost 18,000 acres cumulatively (**Section 4.7**). It is acknowledged that this is a large area. As noted in response LU-7 below, however, development of wind power structures and facilities would physically occupy a small fraction (approximately 82 acres or 1.6 percent for the Desert Claim project) of the total site areas. Cumulatively, the projects would not significantly change the rural land use pattern of the overall area.

One commenter suggested that the proposal would violate the County's policy of "zero net loss" of wetlands (GPO 2.57). However, this comment is believed to be based a misinterpretation of the meaning of zero (or no) net loss in Kittitas County's critical areas regulations (KCC 17A.04), and to overlook the mitigation measures recommended in the Draft EIS. "No net loss" does not mean that no impacts to wetlands are permitted. Rather, it means that wetland impacts must be compensated for to ensure that there is no *net* loss of wetland functions and values (KCC 17A.04.040), i.e., subtractions may be compensated for by additions. For example, the critical area ordinance requires that impacted wetlands be replaced at a specified ratio that varies with the quality and sensitivity of the wetland (KCC 17A.04.050). The Draft EIS discusses the extent of projected impacts and approaches to mitigating these impacts.

Based on the modified turbine configuration considered in the Final EIS, the proposal would permanently affect approximately 3.6 acres of wetlands. Micro-siting of turbines -- i.e., adjusting their exact placement on the ground to avoid sensitive natural features – would be used to help avoid wetland impacts to the extent possible. As described in the Final EIS, impacts that could not be avoided would be mitigated through wetland enhancement and/or replacement.

Issue LU-7: Consistency of project with Growth Management Act

Issue: One comment stated that the DEIS discussion of consistency with GMA is flawed by an inaccurate conclusion that the proposal would not involve significant amounts of buildings, structures, or impermeable surfaces, as development of 120 structures is considered significant.

Applicable Comments: 38-68

Response:

The Draft EIS indicates that the Growth Management Act (GMA) does not define or discuss utility facilities, such as wind turbines. It is not clear, therefore, whether such uses would be considered to be "urban" or "rural" uses under the GMA. Since the statute is silent as to how wind power facilities are characterized, the Draft EIS discussion considers the GMA's definitions of both "urban" and "rural" land uses and how wind power facilities compare to those definitions. A review of Eastern Washington Growth Management Hearings Board decisions was also conducted but did not identify any opinions that addressed this issue. One Central Puget Sound Growth Management Hearings Board decision that bears on the question of rural land use compatibility is discussed in the Draft EIS (*Vashon-Maury, et al v. King County, 1995*). This decision relates land use compatibility to the land use pattern in the immediate vicinity, whether the use is dependent on a rural setting, if it would interfere with rural lands/uses, and its effects on visual character. This topic is addressed in the Draft EIS.

The GMA defines "urban growth" as "development that makes intensive use of land for the location of buildings, structures and impermeable surfaces *to such a degree as to be incompatible with the primary use of the land* for the production of food, other agricultural products…or the extraction of mineral resources, rural development and natural resource lands" (emphasis added). The Draft EIS identifies the amount of land that would be developed, i.e., covered with buildings, structures and impermeable surfaces. Developed areas – including turbines, roads, transformers, and other project-related facilities -- were calculated at approximately 82 acres, or 1.6 percent of the overall site. While these 82 acres themselves could be considered intensively developed, the amount of such land is small relative to the size of the total site (5,237 acres) and the surrounding area. The same reasoning would apply to a single residence located on a 5-acre or 10-acre lot.

As indicated in the italicized text above, interference with rural and resource land uses is the other key attribute of "urban growth." The analysis indicates that the project would not displace, significantly interfere with or be incompatible with the continuation of existing rural and agricultural uses, both on the site of the proposal and in the surrounding area. Existing rural residential and agricultural land uses would continue on affected properties; some temporary disruptions could occur during construction. Based on this reasoning, the Draft EIS concludes that the proposed use would not be considered to be "urban growth."

Issue LU-8: Compatibility of agricultural and residential uses

Issue: Two comments objected to DEIS statements on the potential for conflicts between existing agricultural and residential uses. They maintain that the DEIS does not show conflicts between agricultural and residential uses exist in the area, the suggestion that residential users currently compete with agriculture is not accurate, and the statement that current agricultural activities would continue on the land leased to the project cannot be substantiated.

Applicable Comments: 38-12, 38-61

Response:

Lands designated Forest and Range and Agriculture 20 are the predominant land use and zoning designations applicable to the site of the proposal and the general site vicinity. These two designations account for more than one-quarter of all land within the county. With the exception of Commercial Forest–80 and Commercial Agricultural, they are the most extensive land use designations in the County. The purpose and intent of the Agriculture-20 zoning classification is to preserve farmland from encroachment by non-agricultural uses and protect agricultural activities (KCC 17.29.010). The purpose and intent of the Forest and Range classification is to encourage natural resource management and discourage development and subdivisions (KCC 17.50.010).

The Draft EIS documents that, over the past decade, growth in Kittitas County has resulted in an increase in residential uses and a decrease in agricultural and forest land uses (page 3-124). Much of this growth has occurred on lands designated for agricultural use. The Sun East subdivision, for example, is located on lands zoned Forest and Range. Rural residential subdivisions generally remove land from agricultural production and, in this sense, conflict with agricultural land uses.

It is generally acknowledged that agriculture activities can be intensive and generate noise and emissions that can annoy nearby residents and lead to nuisance complaints. Many jurisdictions, including Kittitas County (see KCC 17.74), have adopted "right-to-farm" laws to help protect the viability of agricultural activities in these situations.

The Desert Claim wind power facilities would be constructed and operated on land leased from the property owners. Most of this land is currently used for agricultural activities and, as far as is known, the landowners intend to continue such uses. As noted above, the layout and nature of the Desert Claim project would be compatible with continued use of these properties for agriculture. However, it is not possible to predict what the individual property owners entering into leases will decide to do in the future.

Issue LU-9: Proximity of project site to transmission lines

Issue: A comment noted that the DEIS statement that transmission lines are already located proximate to the site indicates that a means of transmission connection has been determined, which is not the case, and stated that the proximity of transmission lines is irrelevant and should be removed.

Applicable Comments: 38-59

Response:

The Draft EIS discusses the site screening process that was used to identify alternative sites (**Section 2.2.1.3**). In that context, proximity of transmission lines with adequate capacity is identified as one of five criteria (along with sufficient wind resources, large land area, absence of significant environmental constraints, and property owner interest) typically used by wind energy developers to identify potential sites and to conduct further evaluations. As noted in that discussion (see page 2-42), the need to upgrade transmission facilities and/or to connect to distant transmission facilities are factors that influence project cost, feasibility and location. This is, therefore, one relevant criterion for selection of a site on which to consider or to propose wind power facilities.

As described in the Draft EIS Project Description and the Land Use section, several transmission lines are located proximate to the project site. As of this writing, an interconnection point has not been determined.

Issue LU-10: Impacts of power collection lines

Issue: This issue includes two comments pertaining to overhead power collection lines included in the proposed action. One stated that the DEIS should note that additional overhead lines are proposed off-site, which would increase adverse impacts to non-participating landowners. The other noted that a proposed overhead collection line would have an adverse impact on a specific property.

Applicable Comments: 38-66, 50-4

Response:

Two comments noted that overhead transmission lines from the Desert Claim project would have adverse land use impacts to adjacent, non-participating property owners. However, these properties are adjacent to existing transmission facilities and any land use impact from these facilities has likely already occurred and/or is an existing condition. Addition of an overhead line is seen as a potential aesthetic/visual issue for affected property owners rather than a land use issue; an overhead line would not affect the overall land use pattern or displace existing uses. In any event, the referenced overhead line is no longer part of the proposal; as part of the modified project configuration, Desert Claim is proposing to locate all project power collection and data/control cables underground wherever feasible (see **Figure 2-9**).

5.2.8 Health and Safety (HS)

Issue HS-1: Fire hazards

Issue: More than 20 comments interpreted as primarily relating to the discussion of fire hazards in **Section 3.8** of the DEIS were assigned to Issue HS-1. Comments within this category generally addressed one or more of three primary topics: (1) the existing level of fire hazard in the project area; (2) the fire hazards associated with construction and/or operation of the proposed project; and (3) the possible mitigation measures related to fire hazards. Specific comments of the first group typically noted that the proposed project site is in an extreme high fire hazard area, as evidenced by the local fire history; also, one comment questioned whether it should be assumed that a high fire hazard would continue under no action. A number of comments expressed concern that the project itself could cause fires, or dissatisfaction with the DEIS coverage of fire hazards.

Some comments made reference to a 2003 incident at an *enXco* wind energy facility at Altamont Pass, in which a transformer explosion resulted in a grass fire and a burn fatality, or to other reports of fire hazards associated with wind turbines. Other comments wondered whether the operation of the turbines and/or wind itself might spread fire, or stated that there should not be homes and farms downwind of project. Specific comments related to mitigation included statements that no fire mitigations are given (with reference to p. 4-12); a fire fighting plan was needed; the DEIS should indicate the amount of time needed to fully stop turbine action and whether this time is longer than aerial firefighters' response time; and the applicant should be required to operate wind turbines within restricted time periods and under the requirements of the County's fire restrictions.

Applicable Comments: 4-1, 10-1, 11-6, 12-5, 12-29, 22-2, 23-1, 24-3, 27-21, 27-22, 29-33, 29-35, 38-72, 42-16, 43-24, 43-25, 43-92, 43-96, 43-105, 43-110, T14-2, T29-2, T30-1

Response:

Numerous comments mention that the existing fire hazard in the project area is high and state that mitigation measures are not provided. The DEIS acknowledges that the project is located in a fire hazard area. **Section 3.8.5.1** describes measures that the County Fire Marshall had previously said would be required to mitigate the danger of fire during construction and operation of the facility. In a letter dated January 29, 2004, the Fire Marshal provides detailed measures that he deemed would be required for his approval during planning, construction and operating phases of the project.

Several comments included reference to the fatality of an *enXco* worker and subsequent grass fire that occurred on September 18, 2003 in the Tres Vaqueros Wind Farm in Byron, California. Some expressed concern that this could happen at the Desert Claim project. The Tres Vaqueros incident and its relevance to the Desert Claim project are discussed in detail in **Section 3.8.2.1**. It cannot be said with 100-percent certainty that an accident would never happen at the proposed project. It must be noted, however, that the transformer type involved in the accident at the Tres Vaqueros Wind Farm is an old design that would not be used at the Desert Claim project. More importantly, the switching procedure used in that incident was the cause of the explosion, and that procedure would not be used at the Desert Claim project. In a letter dated April 15, 2004, *enXco* states that its corporate occupational safety programs have resulted in less than one-half of one percent lost work time due to accidents in the last 5 years.

Several comments express the fear that the turbines would "fan" a brush fire. This is not the case, as was stated in the DEIS **Section 3.8.2.1**. The reason can be seen by application of the first law of thermodynamics ("conservation of energy") to a wind turbine, using the concept of a "control volume" that completely surrounds the turbine. At any given operating speed, the first law requires that the sum of energy of all forms entering a "control volume" around the turbine must equal the sum of all energy leaving and/or stored internally (Van Wylen and Sontaag 1968, Ch. 5.7). Because the only energy entering the control volume is the kinetic energy ($=1/2\ mv^2$) of the air (wind) and the turbine converts some of that energy to electricity, which leaves through the wires, the exiting air (wind) must have a lower kinetic energy than the entering air. Because the mass of the air leaving is the same, its velocity must be less. Therefore, the general tendency of a wind turbine is to slow air down by extracting energy from the wind.

A related "fanning" comment mentioned turbulence caused by turbines. This is not a fire concern because turbines create spiral "vortex"-like flow patterns downstream, which are defined by the outside diameter of the turbine rotor and remain essentially horizontal, well above ground level (about 40m = 130 ft. for the project turbine envelope). This phenomenon has been documented at NASA's Ames Wind Tunnel, and photographs and a video can be found at the National Wind Technology Center's website www.nrel.gov/wind/about_aerodynamics.html.

The question was raised as to whether or not, in the case of a fire, the turbine rotors can be stopped quickly enough to allow aerial fire fighting. In an e-mail dated May 26, 2004, GE Wind Energy states that pressing the local emergency stop switch will stop the turbine in 5 to 10 seconds. Stopping the turbine remotely through the control system takes up to 2 minutes. Both of these times are significantly less than the time it would take fire-fighting aircraft to arrive on site.

Issue HS-2: Impacts of mechanical hazards from machinery/structure failures

Issue: Issue HS-2 includes comments primarily addressing possible mechanical hazards associated with wind turbines, other than fire-related hazards. This category includes general statements that the turbines would present health and safety hazards; impacts will drive property owners from the area; more study of hazards is needed; and there is no operational history for 1.5 MW turbines, so it is not possible to tell which design is most reliable or safest. Some comments were more specific to the technical analysis documented in the EIS, such as statements that there is insufficient evidence for the blade throw estimates provided in the DEIS; no advanced modeling has occurred to accurately predict blade throw; wind speeds are not included in DEIS calculations; and **Figure 3.8-1** should be updated to reflect a "worst-case" scenario for tower collapse, including the potential for dispersal of flying fragments.

Applicable Comments: 12-11, 15-13, 27-48, 29-32, 43-8, 43-93, 43-94

Response:

Several comments note the industry-wide lack of advanced modeling concerning blade throw, and question the adequacy of the DEIS estimated "worst case." It is assumed that there has been no advanced modeling because blade throw is extremely rare and no causal commonality has been observed. Instead, all analytical effort has gone into preventing blade failures from occurring, thereby reducing the hazard. A very good analogy would be wings on airplanes. No one has ever developed a model to predict where a wing will go if it falls off; instead, all analysis is directed at preventing the failure. This having been said, it is a fairly simple matter to estimate the maximum distance a blade could travel, as presented in the DEIS.

One comment questioned why wind speed is not mentioned in the distance estimate. This is because a "zero drag" assumption is made for the blade, in order to estimate maximum theoretical throw distance in the plane of rotation, assuming maximum rotor operating speed. This is consistent with ignoring any downwind component of blade acceleration, since an unrestrained blade (i.e., not held at an angle to the wind) will align with the wind to reduce drag. Another reason to ignore downwind travel is that the blade will hit the ground in about 7 seconds. Even if drag were considered, the relatively small wind forces could not accelerate the 6-ton (+/-) blade appreciably downwind in that time.

One comment suggested that the tower collapse hazard radius estimate in the DEIS was deficient and should be revised to include "flying fragments." For tower collapse, at the instant when the rotor and tower hit the ground they are traveling perpendicular to the ground, meaning there is no horizontal velocity component. For this reason an additional distance for flying fragments would be pure conjecture and not analytically supportable.

It should be noted that all calculations in **Section 3.8** of the EIS are estimates. They are considered to be conservative, although elsewhere in the EIS additional safety factor multipliers are applied when suggesting setbacks for mitigation of specific hazards.

It also should be noted that the proposed project layout has been modified to provide a 487-foot performance-based safety zone. This is discussed in Chapter 2. The 487-foot safety zone was developed for the turbine selected for this project--GEWE 1.5sl—and is designed to provide a sufficient safety zone to address blade throw, ice throw and tower collapse consistent with the analysis in the Draft EIS.

Issue HS-3: Ice throw impact analysis and mitigation

Issue: Comments similar to those in Issue HS-2, but specifically related to the DEIS ice throw analysis and mitigation discussion, were assigned to a discrete category. These comments include a statements that the ice throw probability is not remote and that Bowers Field maintains icing information that could be used in DEIS, and a question whether the DEIS indication of icing conditions reflects a 2-year period or historical weather data evaluated over a longer period. Comments relating to ice throw mitigation include statements that the language in the DEIS pertaining to shutting down wind turbines and using icing sensor systems is inadequate, the DEIS should indicate with certainty if icing sensors will be utilized, and the use of ice sensors should be required.

Applicable Comments: 12-13, 27-50, 38-71, 43-104, T23-2

Response:

These comments appear to indicate general mis-association of common frost with the icing conditions needed to generate significant rime ice buildup that can be hazardous. As stated in the DEIS, the frequency of hazardous icing is low at the project site. This statement is based on a professional meteorologist's review of 5 years of data from the Ellensburg Airport. In that period there were an average of 3 days per year of possible icing conditions. Based on this information, it was suggested to assume 4 to 5 days per year of possible icing conditions at the project site, which was the frequency cited in the DEIS.

Issue HS-4: Hazard mitigation through prescribed setbacks

Issue: This issue includes comments primarily addressing specific distances considered as setbacks to mitigate for mechanical hazards. Individual comments include general objections to the distances contained in the DEIS and statements that there are no measures to reduce blade throw and that the greatest setback distance determined for any one hazard should be applied for all potential impacts, with the same distance set for residences, rights of way and property lines. Several

comments suggested specific distances to use for setbacks, such as to place turbines at least 435 feet from property lines, and 2,000 feet or 2,500 feet from property lines, rights of way and roads.

Applicable Comments: 12-12, 12-14, 12-26, 15-14, 27-20, 38-17, 38-78, 41-35, 42-15, 42-17, 43-13, 43-95; 43-103, 43-108, 51-6, T4-6

Response:

The Draft EIS presented reasonable, technically sound calculations of distance relationships associated with various types of mechanical hazards. These results have been modified somewhat in the Final EIS, because the applicant has determined it would use a turbine model with a lesser maximum height (340 feet, rather than 393 feet) than the case assumed for the Draft EIS. The selected turbine model fits within the "maximum turbine envelope" analyzed in the Draft EIS and is thus consistent with that analysis. Comments critical of the hazard analysis or the corresponding setback distances addressed in the EIS mitigation discussion have not provided alternative technical information that would warrant substantial revision of the analysis or the setbacks. With respect to measures to reduce blade throw, please see the response to Issue HS-2 above. Kittitas County agrees that the greatest setback distance calculated for any given hazard should be the controlling consideration in determining setbacks for protection against mechanical hazards, and that setbacks should apply to property lines and rights-of-way as well as residences; please refer to the response to Issue LU-5 and the description of the modified project configuration in **Section 2.2**. Comments suggesting setbacks such as 2,000 or 2,500 feet are not consistent with the results of the hazard analysis and are not supported by valid, documented technical information relating to these types of hazards.

Issue HS-5: Potential interference with telecommunications

Issue: Several comments addressed the possibility that the project might interfere with one or more means of telecommunication. This category includes specific comments that an FCC-style study should be required, to ensure emergency responders' communications were not derogated by wind turbines, and that a study of the impact of wind turbines on TV and radio reception needs to be conducted and mitigation measures included in DEIS.

Applicable Comments: 4-2, 11-5, 32-3, 43-99

Response:

Telecommunications can be affected by electromagnetic interference (EMI), such as that associated with corona on transmission lines, and by physical blocking or reflection of the signal. This latter can be caused by large metallic structures such as transmission towers, large metal buildings or wind turbine towers. The discussion of all aspects of potential electrical effects of the project in **Section 3.8.2.2** has been supplemented for the Final EIS. This discussion addresses the potential for interference with communications used by emergency responders, radio and TV reception, microwave signals and other types of communications that might be used in the project vicinity, along with mitigation measures that would be applicable if any interference should occur. The additional information presented in **Section 3.8.2.2** represents the response to this issue.

In the unlikely event that interference with television or radio signals occurs due to the electrical or physical characteristics or the wind turbine project, such interference can be mitigated by replacing or moving the antenna or by increasing the antenna gain (Loftness, 1977; Loftness, 1980). Documented cases of interference by transmission lines are routinely mitigated by electric utilities in this manner.

Issue HS-6: Electrical hazards, including lightning

Issue: Ten comments pertaining to various safety-related potential electric hazards were assigned to Issue HS-6. These comments include statements that the DEIS does not address electrical hazards or lightning impacts, a request to address the health hazards of electromagnetic fields, and a request to clarify the location of transformers. This category also includes several comments addressing the potential issue of stray voltage, such as statements that the DEIS provides insufficient information pertaining to stray voltage; there is no reference to comparative studies on the subject; the DEIS should include mitigation for the potential stray voltage; and the EIS should include a plan to ensure that electricity would not back up into residential systems in the event of lightning.

Applicable Comments: 29-36, 38-79, 43-10, 43-89, 43-90, 43-97, 43-98, 43-106, 43-109, 43-127

Response:

Responses for the multiple specific aspects of this issue are summarized below, by topic.

Safety-Related Hazards/EMF

Section 3.8.2.2 of the (Draft and Final) EIS provides a thorough discussion of the potential safety-related electrical hazards of the project (such as electrocution hazards) and the potential health effects associated with electric and magnetic fields (EMF). The discussion explains that the electrical collection and interconnection systems associated with the Desert Claim project would be constructed and operated in accordance with applicable electrical codes; the grounding system to be installed as part of the wind turbine foundation would be designed to meet local conditions and regulations (GEWE, 2002), overhead lines would have sufficient clearance above ground to meet code requirements, and buried cables would be placed 4 feet underground to minimize the risk of inadvertent contact. The project substation(s) would be fenced to restrict access to areas where electrical hazards may exist. Based on the safety features incorporated into the project design, the project would not result in significant safety hazards associated with the introduction of new or additional electrical hazards. Similarly, the electric and magnetic fields associated with the Desert Claim project would be comparable to those already present on the site. Any overhead lines would be located away from residences and the collection lines would be located underground within existing road and utility rights-of-way and/or easements obtained by the applicant. Incremental changes in exposures to electric and magnetic fields would be small to non-existent for the public. Therefore, impacts associated with the possible long-term health effects of electric and magnetic fields are highly unlikely.

Transformers

All transformers would be located above ground. The transformers that increase the voltage from 575 volts to 34,500 volts at each wind turbine would be mounted on concrete pads (DEIS, page 2-20). The

power transformers that increase the voltage from 34,500 volts to 115,000 or 230,000 volts at the collector substations would also be located above ground.

Lightning

Section 3.8.2.2 has been supplemented to include additional discussion of project features to protect against potential lightning hazards. Protection against lightning strikes is built into the electrical systems of all wind turbine projects, all of which have a lightning protection system that includes grounding of the towers. The electrical system of the wind power project would be completely independent of the residential distribution system in the project vicinity. Therefore, any faults or surges on the project's electrical system due to lightning or other causes would not impact the local distribution system that provides power to residences in the area, and the project would not increase long-term lightning hazards for residents in the project vicinity.

Stray Voltage

Section 3.8.2.2 has also been supplemented to include discussion of "stray voltage," which is defined as a potential difference (voltage) between two points that can be accessed by a person or animal. Stray voltages can arise from unbalanced neutral currents flowing into the earth through ground rods, pipes or other conducting objects, or from faulty wiring or faulty grounding of conducting objects in a facility. Thus, stray voltage is generally associated with the distribution system that provides electric power to a farm and nearby areas, and/or with wiring on the farm.

Electric power from the proposed project would be balanced, three-phase power fed directly into the electric transmission system, with very little or no unbalanced current to return through the earth. In addition, the power collection and interconnection systems would be separate from the distribution system serving the local area and would not contribute to currents on that system. Consequently, no stray voltage effects related to the Desert Claim project are anticipated.

Without the possibility of stray voltage from the wind turbine system, there is no need to describe mitigation methods. Because stray voltage is not anticipated to be associated with the project electrical system, a discussion of scientific investigations related to stray voltage is beyond the scope of the DEIS.

Issue HS-7: Shadow flicker impact analysis and conclusion

Issue: A number of comments addressed the methods used in the DEIS analysis of potential shadow flicker impacts, and/or the results of that analysis. This issue includes several more general comments that the DEIS contains insufficient assessment of impacts; does not assess traffic-related impacts of shadow flicker over roads; shadow flicker causes health problems; shadow flicker impacts are not unavoidable; nuisance trespass would occur to existing residences and properties; there are no site-specific assessments of shadow flicker; shadow flicker impacts are unacceptable; impact of flickers from multiple turbines could cause vertigo and result in injury; and the graphs in this section do not provide substantive information. Other comments were more specific to various aspects of the technical model analysis, such as statements that the DEIS provides a misleading definition of "receptor" and that all potential receptors have not been included in the model; assessment of shadow flicker during fog or clouds is not reasonable, as this would imply lack of wind and inoperable turbines; and disputing the assertion that cloud

cover or fog is likely present in the morning and evening hours, as fog does not occur in the summertime.

Applicable Comments: 12-9, 27-23, 29-37, 30-8, 30-10, 38-73, 38-75, 38-76, 43-31, 43-100, 44-13, 44-14, T25-1

Response:

The EIS identifies the various types of adverse consequences associated with shadow flicker, including concerns over possible health effects, and discloses the extent to which they might occur with the Desert Claim project. The discussion on page 4-13 questioned in Comment 12-9 addresses the potential for cumulative impacts from the Desert Claim and Kittitas Valley projects; it does not state that shadow flicker would not occur. **Section 3.8.2.3** has been modified for the Final EIS to include discussion of possible shadow flicker consequences for receptors other than residences, including traffic on local roads. The impact analysis presented in the Draft and Final EIS is highly site-specific, as it is based on shadows cast by individual turbines and their relation to individual residences; it would be impossible to determine the potential number of hours per year of shadow flicker at specific residences without such site-specific analysis. With respect to the frequency of shadow flicker (Comment 38-76), all of the rotor blades would be traveling at the same speed of less than 1 Hz. Even if multiple turbines were casting asynchronous shadows in the same location (hypothetically resulting in an additive frequency), the distribution of turbines and residences is such that no residence would experience a combined frequency anywhere close to 10 Hz. As noted in the EIS, frequencies above 3 Hz are widely used in nightclubs, apparently without ill effect.

Comments 38-73 and 44-14 appear to reflect a misinterpretation of the Draft EIS discussion of shadow flicker modeling with respect to fog and cloud cover. The modeling discussion states that hours of sunshine (needed to produce shadow flicker) are input to the model as monthly averages, rather than as specific hours during the day. Because fog or cloud cover is *more* likely to be present in the morning or evening hours, when shadows are longest, the model actually overstates the potential hours of shadow flicker at receptor locations.

Some comments state that any shadow flicker experienced on the property of any non-participating landowner would constitute nuisance trespass and would be unacceptable. Those comments rightfully express opinions about the issue, although those opinions are not embodied in provisions of local land-use codes. Many residents of Kittitas County and other jurisdictions are subjected to sights, sounds or smells from nearby properties that they find objectionable, but that are not prohibited under trespass or nuisance regulations.

Issue HS-8: Mitigation for shadow flicker impacts

Issue: Another sizable group of comments that addressed the DEIS coverage of shadow flicker but focused primarily on mitigation of those impacts were assigned to Issue HS-8. This category includes individual comments that inadequate mitigation for shadow flicker impacts is identified; the EIS places the burden on affected residents, while it should be on applicant as the source of impact; turbines should not be allowed or should be removed where shadow flicker occurs; suggesting that residents be confined to their homes when shadow flicker occurs is not practical; and **Table 1-1** conflicts with Chapter 3 regarding mitigation for shadow flicker.

Applicable Comments: 12-10, 27-52, 30-9, 30-29, 37-1, 38-13, 38-74, 38-80, 38-114, 43-12, 43-32, 43-101, 43-107, 43-126, T26-1

Response:

Shadow flicker mitigation is addressed in **Section 3.8.5.3**. The content of this section identifies a variety of mitigation measures that could be employed, and that would substantially reduce shadow flicker impacts. Several of the comments in this category appear to misinterpret the EIS language with respect to controlling or preventing shadow flicker at the source (i.e., at the turbine). The key points of the second and third paragraphs in **Sections 3.8.5.3** are that (1) the WindPRO software could not be used in advance to develop a schedule for shutting down specific turbines at specific times, (2) it might be feasible to accomplish the same objective through use of a telephone hotline system, and (3) the viability of such a system had not been evaluated. The Draft EIS did not state that the telephone system would not be used or that the applicant had rejected such a system, it simply stated that the viability was not known. That question can be resolved through negotiation of a development agreement, if necessary.

Several comments reflected the interpretation that the EIS suggested the burden for mitigation of shadow flicker would or should be placed on the affected residents/receptors, rather than on the project; that was not intended. What the Draft EIS actually stated (page 3-165) was that "an alternative set of mitigation measures would be *for the applicant to develop and implement* a program including the following actions at affected receptor locations." The EIS clearly shows the intent that the applicant would bear the responsibility for mitigating shadow flicker, and does not suggest that the receptors should have to take care of such problems on their own. In addition, the EIS does not assume that residents would always be indoors at times when shadow flicker would occur, or suggest that they should be confined to their residences at those times; however, when shadow flicker occurs it is at times of the day when people are more likely to be indoors. The EIS addresses mitigation measures that are reasonable, effective, practical and efficient, and it is appropriate to discuss such measures regardless of individual opinions as to what might or might not be considered fair, preferable or ideal. With respect to Comments 38-13 and 38-114, **Table 1-1** has been modified to remove the term "at the source." Similarly, the phrase "within the room" has been added to the discussion on page 3-155 (Comment 38-74). Finally, some comments in this category state removal of turbines is the only acceptable form of mitigation, and that any shadow flicker would be unacceptable. As discussed in the response to Issue HS-7, those comments rightfully express opinions about the issue, although those opinions are not embodied in provisions of local land-use codes.

Issue HS-9: Spill/accident remediation

Issue: One comment requested the developer contract for environmental remediation services, in the event of an incident.

Applicable Comments: 4-3

Response:

The EIS addresses possible use of hazardous materials and spill control and prevention measures. This comment has been incorporated into the discussion of possible mitigation measures.

Issue HS-10: Liability for damage from hazards

Issue: Several comments recommended that the applicant assume liability (i.e., for loss of property, life) for any impacts that could occur as a result of project-related fires, as a condition of approval, or that the applicant assume liability for any project-related electricity damage.

Applicable Comments: 22-3, 23-2, 43-11

Response:

Liability insurance, specification of liability for damages and related concerns are legal issues that are not within the scope of SEPA or the EIS.

Issue HS-11: Need for engineering review

Issue: One comment stated that an engineering review to assure that design and construction standards are appropriate should be included as part of the DEIS.

Applicable Comments: 27-49

Response:

An engineering review is not appropriate at this point in the process because detailed design and construction plans are not required under SEPA and are not available to compare against standards. Project facilities and equipment would have to comply with a variety of codes, however, as noted in the EIS, and inspection provisions exist to ensure compliance with those codes.

Issue HS-12: Potential hazards from viral exposure

Issue: Several comments addressed the possible project relationship to viral hazards, similar to comments assigned to Issue PA-16, but specifically referenced **Section 3.8** of the DEIS. This group includes statements that the DEIS does not analyze potential increased human exposure to hantavirus if rodent populations increase due to declining raptor populations or disagreeing with the conclusion about hantavirus risk, and that no analysis was provided for potential increased exposure to West Nile virus that could result from declining bat populations and increasing mosquito populations.

Applicable Comments: 38-77, 41-12, 41-13

Response:

Viral exposure risks are addressed in **Section 3.8.2.4** of the EIS, and in **Section 3.4.3.2**. Discussion of West Nile virus has been added to the Final EIS. As discussed in the response to Issue PA-16, there is no basis for predicting a measurable or significant decline in bird and/or bat populations, and therefore no basis for predicting or assuming population increase for the vectors that carry the subject diseases.

Issue HS-13: Description of existing hazard conditions

Issue: Two comments objected to specific DEIS information on existing hazards in the project area, including statements that a paragraph on residential hazards does not appear relevant to the DEIS and should be removed; a paragraph on household electrical hazards is not relevant and should be removed; and existing land uses listed in **Section 3.8.1.3** should include rural residential.

Applicable Comments: 38-69, 38-70

Response:

Impact analysis in an EIS requires identification of baseline conditions for a specific element or resource and identification of how those baseline conditions would change as a result of the proposed action. Identification of the types of mechanical and electrical hazards that currently exist in and near the project area is appropriate and necessary content in discussion of the affected environment. **Section 3.8.1.3** accurately states that the Desert Claim project would be located in a rural area consisting *primarily* of farming and ranching uses. This introductory statement complies with SEPA, particularly when the focus of the ensuing shadow flicker analysis is on residences located close to the project. Please see also the responses to Issues LU-1 and LU-6.

5.2.9 Noise (NOI)

Issue NOI-1: Noise impact analysis methods, results and/or conclusions

Issue: More than 20 comments were interpreted as relating primarily to some aspect of the DEIS noise analysis, as distinct from comments about mitigation of noise impacts, and were assigned to Issue NOI-1. This issue includes several general objections or statements of concern over potential noise impacts, such as comments that the DEIS contains insufficient assessment of impacts; there is no statement that residents will experience increased noise; noise from wind farms is not comparable to existing rural noise sources; the potential for inaccurate noise calculations, such as in Lincoln Township case; and suggestions for additional study that could include observations of other wind turbine projects. Some comments addressed consideration of specific noise components in the analysis, such as sound levels for equipment running simultaneously (i.e., multiple turbines), the sound effect of the automatic turbine braking system, sound levels for blasting and tonal noise. Others took exception to the DEIS conclusions about noise impacts, including statements that **Section 3.9.5** contains contradictory language regarding medium sound levels and assessment of no unavoidable adverse impacts; wind turbines on eastern side of project area would result in medium to high impact, as sound levels would increase by 5-10 decibels; disagreement that medium levels of tonal noise would not be a significant impact. Several comments addressed specific inputs to the noise model analysis, indicating concern regarding measuring noise at receptor's level, not based on a 5,200-acre site; model results using more than 4-8 mph wind speeds; use of wind data from previous 2 years to assess applicability of the wind speed estimates; and that the DEIS selected only 4 areas for noise modeling, while there are many areas surrounded by the project where incremental increases may be significant.

Applicable Comments: 12-21, 20-2, 27-24, 28-2, 38-30, 38-83, 38-84, 38-86, 38-111, 42-19, 43-33, 43-34, 43-111, 43-113, 43-115, 43-117, 44-11, 44-12, 50-5, T11-4, T22-2

Response:

The DEIS provides a comprehensive assessment of potential noise impacts from the proposed wind farm. The response to Issue NOI-2 below specifically discusses the legally applicable noise limits and the more stringent alternative impact criteria used in the DEIS.

Although not specifically assessed in the DEIS, the noise impact criteria used in the DEIS could also be considered applicable to birds and wildlife. Typically, because of a lack of research defining more precise information, noise levels considered safe for humans are considered safe for birds and wildlife. Therefore, although noise levels at the nearest locations to individual turbines might not always be conducive to birds and wildlife, the noise levels beyond 1,000 feet from the turbines, which have been shown to be safe for human occupation, would likely be safe for birds and wildlife. See also the response to Issue PA-9.

The EIS noise assessment methodology is comprehensive and cumulative. Long-term sound level measurements were taken at five locations in the project vicinity. These measurements were used to characterize the existing noise environment and were used to model noise levels at all residences within 1,000 feet of the project boundary identified as specific receptor locations. Likewise, projected sound levels at more distant locations were inherently considered in the display of the modeled noise contours. In this way, the residential locations with the greatest potential for noise impacts were specifically considered and potential noise impacts to each were identified. The more distant residences would be unlikely to experience greater noise impacts than those already identified in the EIS. In response to comments on the Draft EIS, an additional sound level measurement was taken east of the easternmost properties and an additional receptor location was included in the noise modeling, although this receptor is more than 1,000 feet from the project boundary. These are included in the updated analysis presented in **Section 3.9**.

In addition, noise contour modeling was included to characterize turbine noise at these more distant locations as well. The model estimated the cumulative sound levels assuming all of the wind turbines were operating concurrently, and the noise assessment at individual receiving locations considered cumulative levels from overall wind turbine noise and existing noise sources. The noise analysis evaluated two scenarios to characterize potential impacts based on both overall noise levels and from potential increases over background sound levels. The first scenario assessed low wind conditions (i.e., 9 mph) when the turbines would be operating but the background sound levels would be lower, which maximized the potential for noise impacts from an increase over background sound levels. The second scenario assessed higher wind conditions (i.e., 18 mph), which result in louder turbine noise but not necessarily larger increases over background sound levels that were inherently louder due to increased background noise.

Although wind speeds higher than 18 mph are expected to occur often, the turbine manufacturer guarantees a maximum sound power level of 104 dBA, which is the sound power level used in the model analysis, with 18 mph wind speeds. Therefore, sound levels greater than those predicted are not expected to occur under any wind speed, and the greatest potential impacts have been adequately identified in the EIS results. In addition, background sound levels at high wind speeds increase markedly, thereby providing even greater masking of turbine noise and reducing the potential for noise impacts from turbines. Based upon 3 years of meteorological data collected by Desert Claim, which was correlated with

public meteorological data, wind speeds in excess of 18 mph are expected 38 percent of the year; in these conditions, background noise would mask turbine noise.

The results of the modeling and assessment clearly show that some residents could experience an increase in overall sound levels. The EIS also indicates that numerous residences could experience adverse noise impacts from the project. However, none of the project impacts are anticipated to be significant, based upon the definition of s significant impacts and the noise impact criteria in the EIS. The noise impact criteria were developed based on numerous local and federal guidelines and regulations designed to protect humans from undue levels of noise.

In response to the comment regarding the fact that much information is available on the Internet regarding wind farm noise impacts, the issue of noise generated by the Desert Claim project was carefully and fully evaluated in the EIS. However, the EIS cannot base a conclusion or assumption of significant noise impacts for the Desert Claim project on anecdotal evidence concerning other projects or situations gleaned from the Internet. Instead, the analysis in the EIS is based upon field measurements taken in the project vicinity and application of applicable federal, state and local noise regulations. Therefore, the process used in the noise assessment conducted for the EIS included identifying the likely noise sources and source noise levels near the project, estimating the cumulative effects at the neighboring residences, and assessing impacts at individual locations. Although some adverse noise impacts were identified, the objective and analytical measures used for this analysis did not result in the identification of impacts considered to be significant.

Blasting noise was not specifically considered in the model analysis because that analysis considers the operational period for this project. Construction noise impacts, which could include intermittent blasting for construction of some turbine foundations, are addressed in detail in **Section 3.9.2.1**. As stated in response WR-3, any blasting required for project construction would be conducted pursuant to state and local regulations.

Several factors that were unknown or relatively uncertain at the time of the Draft EIS could conceivably result in significant noise impacts where none were initially identified. These included the possible existence of high levels of low-frequency noise, tonal noise, or impulse noise from the wind turbines. However, the current technical information available regarding the specific equipment proposed for use in the Desert Claim project indicates that the potential for disturbance from such noise is low with the latest turbine designs. The potential for low-frequency noise has largely been addressed through redesign of the turbine and nacelle. The majority of tonal noise issues have been due to defects in the blades that are identified after installation of the towers, but these can and should be fixed if they occur. Tonal noise due to the mechanical gears and equipment in the nacelle has largely been resolved through better insulation of the nacelle. Impulsive noise due to wind reacting with the blades has been reduced through design and siting improvements. Therefore, although it is possible that some of these types of noise could occur, the available information indicates that it is unlikely. The DEIS (and the FEIS) did, however, indicate that if tonal noise is produced, then the overall levels of noise and/or the noise increase necessary to produce a significant noise impact would likely be somewhat lower than specified in the EIS.

In response to these comments, MFG personnel visited an operating wind farm that uses similar wind turbines to those proposed for the Desert Claim site. MFG assessed the types of noise produced by the wind turbines with varying wind conditions overnight. During the visit, neither high levels of low-frequency noise nor impulse noise from the turbines were apparent. As noted in the Draft and Final EIS,

low-frequency noise has largely been addressed through redesign of modern turbines, nacelles, and towers. Tonal noise was noticeable and measurable near the base of a turbine under certain wind conditions, but was not measurable 1,000 feet downwind from the turbine. This information has been incorporated into **Section 3.9**.

Issue NOI-2: Setbacks for noise mitigation

Issue: This issue includes multiple comments relating primarily to what should be considered adequate setbacks to mitigate project noise impacts. It includes statements that setbacks from properties should be increased; the DEIS should look at other wind projects to assure that 1,000 feet is adequate; the setback should ensure that a maximum sound level of 35 decibels occurs at residences; minimum setbacks should be increased to 2,000 feet or the distance necessary to obtain 40 decibels at residences; 2,500 feet is the recommended setback; and reference to/support for the setback of 1 mile reportedly applied by Zilkha Renewable Energy for a proposed wind project.

Applicable Comments: 27-25, 29-38, 38-85, 41-36, 42-18, 43-14, 43-112, 43-114, 51-7, T22-4

Response:

The commentors contend that the Washington State noise limit of 70 dBA is not sufficiently protective of residential uses. The DEIS provides a comprehensive discussion of the legally applicable noise limits and the more stringent alternative impact criteria used in the impact assessment for the EIS. Because many of the residences in the project vicinity are located on agricultural property, the state noise limit of 70 dBA 24-hours a day is the legally applicable limit. However, the DEIS clearly acknowledges that a continuous sound level of 70 dBA would result in significant noise impacts to residences, and the applicable noise limits established by the state were determined to not be protective for many of the surrounding residents. Therefore, alternate means of assessing noise impacts were identified, including assessment of impacts based on cumulative increases in sound levels. These alternative impact criteria were based on numerous local and federal guidelines and regulations designed to protect humans from undue impacts of noise. The DEIS used these more stringent alternative noise impact criteria in its assessment of potential noise impacts, concluding that there would not be any high noise impacts (i.e., significant impacts) at any of the receptor locations.

Several commentors suggested that lower sound level limits of 35 to 40 dBA at nearby residences would ensure greater protection from adverse noise impacts. This is true. However, existing laws do not require such low limits. In addition, the noise impact criteria used in the EIS are a compromise intended to protect residences from significant noise impacts, and are not intended to prevent all adverse noise impacts. Economic factors, the desire for new development and the feasibility of additional mitigation are typically taken into consideration when devising noise impact criteria for any development activity. There is no regulation or requirement stipulating that adjacent landowners should be protected from any noise impacts from any project or any nearby land use. The type of requirement suggested by the comment would be unrealistic anywhere in Washington and would likely prevent most or all new development.

The noise impact criteria used for the DEIS assessment identify “medium” adverse impacts and “significant” adverse impacts. The setbacks suggested for this project (i.e., 1,000 feet) were shown to result in adverse noise impacts at several residential locations, but the sound levels would still be

protective of the health and welfare of the citizenry, which is the purpose of noise regulations, and would not constitute significant noise impacts. The proposed setback used for Zilkha's Kittitas Valley Wind Power Project was 1,000 feet from the nearest residence, as specified in the DEIS for that project, and not 1 mile.

Issue NOI-3: Other (than setbacks) mitigation for noise impacts

Issue: Distinct from Issue NOI-2, this category includes comments about noise mitigation measures that do not involve or mention setbacks. It includes statements that the DEIS does not include (contingency) mitigation measures, in the event the noise modeling was incorrect and the project causes greater noise impacts than projected; the project should be decommissioned if unbearable noise pollution occurs; mitigation should include soundproofing or buying out impacted property owners; and the TAC should not only monitor wildlife issues, but should log noise complaints from the community and work to resolve issues, including potential purchase of properties impacted.

Applicable Comments: 27-53, 27-54, 30-12, 30-30, 43-35

Response:

The response to Issue EIS-10 addresses the concept of applying contingency mitigation measures to cover the eventuality of impacts being greater than predicted. Given that no significant noise impacts were identified with the conditions evaluated in the EIS, it is not appropriate for the EIS to prescribe or speculate about additional specific mitigation. As a voluntary mitigation measure, Desert Claim has agreed to purchase turbines with a guaranteed maximum rated sound power level under any wind condition no higher than the 104 dBa used in the analysis; if the turbines were to exceed this sound power level, GE has guaranteed to remedy the situation.

Issue NOI-4: Noise standards appropriate to project/project area

Issue: Two comments pertained to the regulatory standards used in the noise impact analysis, including statements that allowing industrial/agricultural noise standards to apply is not acceptable, as most property in the project area is range land or residential that has little or no ambient noise; the County may need to adopt noise standards based on actual use; and State standards for agricultural properties should be reduced for application in the DEIS.

Applicable Comments: 30-11, 38-81

Response:

The EIS accurately describes the State and County noise standards as they apply to the project. The desirability of those standards and the question of whether they might or might not be revised are beyond the scope of the EIS. As noted in the response to Issue NOI-2, the EIS noise analysis included factors other than the existing noise standards in evaluating what would be adequately protective of people in the project vicinity.

Issue NOI-5: Impacts of low-frequency sound

Issue: Several comments addressed the issue of low-frequency sound and its coverage in the EIS analysis. Specific comments were that the DEIS should explain low-frequency sound and include impacts and relevant mitigation; the cumulative sound effect increases with the number of turbines; low-frequency sound from turbines is a real impact and can only be mitigated by placing turbines well away from homes; the EIS should include low-frequency analysis relating to the sound made when a rotor blade passes in front of the tower structure or the nadir of its rotation. One comment included a reference to an article on effects of low frequency sound on residents near wind turbines in the United Kingdom

Applicable Comments: 30-13, 40-1, 41-15, 41-27, 41-34, 43-15, 43-36

Response:

Low-frequency noise was described and discussed in the Draft EIS. In response to comments on the Draft EIS, a site visit to an operating wind farm was conducted; high levels of low-frequency noise due to the wind turbines was not detected during this visit. As noted in the Draft and Final EIS, most low-frequency noise production has been addressed through redesign of the turbine, tower, blades, and nacelle, and low-frequency noise is not anticipated to cause impacts.

Issue NOI-6: Affected environment description

Issue: One comment requested that project area uses listed in **Section 3.9.1.3** should include residential use.

Applicable Comments: 38-82

Response:

The statement in question accurately notes that the project area is located in a rural area consisting *primarily* of agricultural and ranching uses. Residential land uses in the project vicinity are identified elsewhere in **Section 3.9**, including the lengthy discussion in **Section 3.9.2.2** (pages 3-175 and 176) of local land uses and how they relate to the existing noise standards.

5.2.10 Aesthetics/Light and Glare (ALG)

Issue ALG-1: General nature and magnitude of visual impacts from the project

Issue: Comments interpreted as primarily expressing concern over the visual impacts of the project or noting the magnitude of those impacts were assigned to Issue ALG-1. It includes statements that view impacts would affect residents and visitors; people do not want to see turbines; wind farms should not be located near Highway 97; painting turbines gray will not help; local views would be destroyed; the quality of life (as interpreted visually) would be affected; large changes to the rural landscape are unacceptable; and world-class scenic views would be adversely impacted, regardless of the viewpoint. Several comments in this category specifically referenced the contribution of turbine lighting to visual impacts, including statements about the impacts of

flashing red lights on turbines; that light pollution would occur in Ellensburg and much of the valley; nighttime lighting will be invasive to people within miles of the project and to those who come to the area for stargazing; and impacts will occur especially to residents at higher elevations north of the site. One comment stated that the overall change in the visual character of the Kittitas Valley would occur in direct opposition to Kittitas County's objectives.

Applicable Comments: 12-6, 12-7, 12-8, 12-20, 14-1, 14-5, 21-3, 21-5, 30-16, 33-7, 38-88, 38-112, 41-17, 43-16, 43-17, 44-18, T1-1, T3-3, T19-3, T22-2

Response:

Magnitude of Visual Impacts

Several comments noted that there would be significant visual impacts from the project and that these would affect nearby residents and visitors. These concerns are acknowledged and are generally consistent with the impact analysis presented in the EIS. The purpose of this EIS is to objectively document the range of impacts throughout the affected environment. Using the approach outlined in **Section 3.10**, key views were selected to represent the range of settings and viewer experiences in the affected environment. The evaluation of some key views yielded a high visual impact while others yielded moderate and low impacts, based on consideration of the change in visual quality, viewer exposure, and viewer sensitivity. This approach is not intended to minimize the magnitude of visual impacts, but instead to focus attention on the places with the greatest impacts. In response to the findings of the Draft EIS and the comments, the Final EIS includes supplemental view simulations from several additional key viewpoints.

Turbine Lighting

Several comments noted that turbine lighting would be a significant visual impact. This concern is acknowledged and is generally correct. Turbine lighting is required by the FAA, and is not an option of the developer or Kittitas County. Because the impact of flashing lights cannot be easily captured in a printed photographic simulation format, these impacts are described in text with reference to comparable conditions at other wind farms and other facilities with safety lighting. The site certification application filed with the Washington Energy Facility Site Evaluation Council (EFSEC) for the Wild Horse Wind Power Project in eastern Kittitas County includes a night photo (in Exhibit 18D) of the existing Nine Canyon wind power project near Kennewick, Washington that can be viewed online (**http://www.efsec.wa.gov/wildhorse**). While the Nine Canyon project is considerably smaller than the Desert Claim proposal and the photo was taken from an aircraft rather than a typical viewing position on the ground, it is nevertheless generally indicative of the appearance of wind turbine night lighting.

Impact on Views from Sun East

Several comments noted that views from the Sun East development would be impacted. Most of the Draft EIS key views were taken from publicly accessible viewpoints because these would have the greatest number of potential viewers. Because access to Sun East was restricted, another viewpoint was selected to be representative of views from the Table Mountain Slope Visual Assessment Unit (an area north of the project). In response to the Draft EIS comments and due to the number of homes in Sun East, a supplemental key view specifically from Sun East is included in the Final EIS.

Issue ALG-2: Adequacy of the visual impact analysis and displays presented in the DEIS

Issue: Nearly 20 comments related primarily to the visual impact methods and information materials documented in the DEIS. The most common theme among these comments was criticism critical of the photos and visual simulations, including statements that the DEIS does not accurately depict visual impacts in photos; views selected were not appropriate for determining impacts; the EIS does not address placement of turbines in front of the Cascades; views of foreground and sky appear horizontally overemphasized through use of wide-angle lens; vertical view is de-emphasized; condensed views are misleading; clouds distort view; simulations should be made for each of the 31 residences of non-participating landowners within and outside of the 1,000 feet buffer (up to 2,000 feet), as well as from Sun East; simulations do not depict the visual effect of lights on turbines and blade motion; simulations did not show 3 MW turbines on a cloudless, non-hazy day; visual impact area for key views 1A and 1E appears to be a 90-degree view, but a 270-degree view would be more accurate; **Figure 3.10.6** is misleading, as most residential views would take place toward the NW, NE or N and transmission lines would be behind the turbines; **Figure 3.10.7** view should be shown from the NW portion of Ellensburg and along Dry Creek and Reecer Creek Roads. This category also includes specific comments critical of the graphics and similar aspects of **Section 3.10**, such as statements that **Figure 3.10.4** is difficult to interpret; **Figure 3.10.3** does not clearly show the view shed; **Tables 3.10-2, -3 and -4** appear subjective in use of visual/viewer scales for determining project impact, and this type of subjective scale is inappropriate in the DEIS; the area of impact should identify the number of residents impacted; it is inaccurate to state that few people would be visually impacted; the DEIS assertion that 2 of 16 key views were rated "high" impact is misleading; and a question over the color of the turbines.

Applicable Comments: 24-1, 26-3, 27-26, 27-69, 29-39, 30-15, 36-7, 38-87, 41-16, 41-18, 41-33, 43-118, 44-9, 47-5, 47-6, 51-9, T5-3, T17-2

Response:

Key View Photo Angle

Several comments asserted that the photography presented in the Draft EIS intentionally distorted the perception of the view to de-emphasize the vertical dimension, essentially suggesting that the view angle was too wide. Other comments suggested that the photographs were not as wide as they should be to take in the same range as the human eye. The key views in **Section 3.10** of the Draft EIS were photographed using a 4 megapixel digital camera with a lens equivalent to a 35 mm lens on an SLR camera. This is a common lens for landscape photography and balances the concerns for width and height of the view.

Weather and Seasonal Conditions in Key Views

Several comments noted that the photography intentionally minimized the impact of the turbines by including clouds, haze, or snow. In fact, key views were photographed over several seasons to show the range of conditions in the affected environment—from completely clear on a summer day to partly cloudy on a winter day with snow in the mountains. They were shot over five different visits to the affected environment. Numerous attempted visits were postponed due to unacceptable weather conditions-overcast, rain, or falling snow. In response to the Draft EIS comments, supplemental key views were shot

in June under weather conditions conducive to this type of photography. These key views and the corresponding analyses are included in the Final EIS.

Key View Direction in Relation to Mountains

Several comments noted that the photography intentionally minimized the impact of the turbines by not showing them against nearby mountains. In fact, 13 of the 16 key views in the Draft EIS are directed generally toward the north to include the mountains or foothills. The best views of the more distant mountain peaks such as Mt. Stuart are available from elevated vantage points south of the project area, such as in 1B. Views closer to the project area which show the project more prominently, such as 1E, are also not as elevated and the long views are more bounded by the foothills beyond the project. In response to the Draft EIS comments, two supplemental key views from positions close to the project and directed to the north toward the mountains and foothills are included in the Final EIS.

Property Lines and Non-participating Owner Perspectives

Several comments noted that showing property lines on maps and highlighting the perspectives of non-participating property owners would be important in determining visual impact. From the standpoint of visual analysis, these are not critical distinctions because the key views are representative of the range of possible views in the affected environment. In other words, a close-up view of turbines from a participating property can effectively represent and communicate the visual impact from a similarly situated adjacent non-participating property because the impact is equivalent. Likewise, a distant view from a public sidewalk can effectively represent and communicate the visual impact from a similarly situated adjacent private home or business. In response to the Draft EIS comments, several supplemental key views shot from non-participating properties are included in the Final EIS.

Graphics Clarity

Several comments noted that plan figures such as **Figure 3.10.3** and **Figure 3.10.4** were unclear. These graphics are printed in full color for the Final EIS to improve their legibility.

3 MW Turbines

One comment noted that the key view simulations were minimizing the impact of the turbines by not showing 3 MW turbines. The proposed project does not involve use of 3 MW turbines. The simulations in the Draft EIS depicted the "worst case scenario" because they were based on the maximum turbine envelope (i.e., 80-meter tower and 80-meter rotor) as discussed in **Section 2.2**. The turbines selected for the project—the GEWE 1.5sl--would have less visual impact because they are smaller, using a 65-meter tower and a 77-meter blade, than the turbines depicted in the simulations included in the Draft EIS.

Subjectivity of Methodology

One comment noted that the methodology of the EIS visual analysis—analyzing the vividness, intactness, and unity of key views as well as the exposure and sensitivity of viewers—is subjective and therefore not appropriate for an EIS. In fact, the methodology is widely accepted and has been used extensively by the Federal Highway Administration, the Bureau of Land Management, the Forest Service, the Bonneville Power Administration and other agencies to satisfy the NEPA and SEPA requirements for analysis of

aesthetic and visual impacts. Human reaction to visual quality is necessarily subjective, and visual impact analysis must unavoidably include subjective elements.

Number of Residents

One comment noted that the EIS should indicate the specific number of residents for each visual assessment unit. Sufficient general characterizations about the number of residents were made from the density of housing in each visual assessment unit. The exact number is not critical for the establishment of viewer exposure because exposure is based not only on the quantity of residents, but also on the numbers of other potential viewers such as drivers, workers, recreational users, etc. Exposure is also based on the degree to which viewers are exposed to a view by their physical location and duration of view. The information for the number of residents and other viewers is not readily available, because the boundaries of the visual assessment units do not correspond to those for which population data are available and the population is ever changing as people move in and out of these visual assessment units, so general characterizations are used in this EIS.

Issue ALG-3: Blade glint and glare impacts

Issue: Several comments referenced discussion of blade glint and glare in **Section 3.10**. They include objections to these impacts; statements that blade glint and glare could impact driving on public roads, and associated impacts to road safety should be addressed; and that impacts cannot be minimized if glare occurs from multiple angles from surrounding turbines.

Applicable Comments: 27-27, 29-40, 30-18, 42-20

Response:

The discussion of blade glint and glare in **Section 3.10.2.3** has been supplemented for the Final EIS. While these phenomena can be visible at long distances and can be noticed by drivers, their timing, distance and intensity characteristics are such that significant impacts are not expected.

Issue ALG-4: Mitigation for aesthetic impacts

Issue: This issue includes comments that focus on mitigation for aesthetic impacts, as distinct from the impact focus of Issue ALG-1. These comments include statements that the DEIS does not provide adequate mitigation for visual effects or light and glare impacts; recommend moving turbines 20 miles away or to a location that does not impact an area's aesthetic beauty; there is inadequate guidance on mitigation; use of curtains and trees as mitigation is inadequate; use of screening vegetation; inadequate mitigation could force residents to pursue legal recourse. Several comments stated that residents impacted should be compensated, including buyout of properties. One comment questioned whether it was possible to mitigate the visual impacts of the project.

Applicable Comments: 27-55, 30-17, 30-31, 41-28, 43-37, 44-10, 47-8, 50-1, T11-3

Response:

Purpose of Mitigation

Several comments noted that the mitigation measures were inadequate. **Section 3.10** acknowledges that there are significant unavoidable adverse impacts that would remain, even with implementation of mitigation measures. To "mitigate" means to make less severe, soften, or diminish. Twenty-nine specific measures dealing with mitigation that can *contribute* to this objective are included in **Section 3.10.5**. The measures range from visual integration issues, such as relocating turbines to create smaller clusters, to ecological restoration issues such as replacing native vegetation in non-road disturbed surfaces. In response to the Draft EIS analysis and comments, the applicant has modified the project configuration to reduce impacts. An evaluation of the modified layout is included in the Final EIS. In terms of visual impact, however, the mitigation measures identified in the EIS cannot make the project disappear, as is acknowledged in the EIS. There is no SEPA requirement that project impacts be mitigated to a level of insignificance.

Property Values

Several comments noted impacts to property values and suggested financial compensation as a potential mitigation measure. The EIS does not include compensation as a mitigation measure for aesthetics and light and glare, nor does it address possible impacts to property values because these are beyond the required scope for SEPA documents (see response to Issue NS-1). The mitigation measures discussed in **Section 3.10.5** are within the realm of those typically applied to visual impacts.

Turbine Color

One comment noted that painting the turbines gray would not help. The Draft EIS did not suggest painting the turbines gray. A potential mitigation measure for visual integration states, "use low-reflectivity, neutral-color finishes for turbines, equipment boxes, substation equipments, and operation and management building. Earth tone finish would blend in best with the surrounding landscape."

Issue ALG-5: Source of shadow flicker

Issue: One comment noted that a DEIS statement that shadow flicker can arise within or near houses is incorrect and should be removed, as a residence does not cause or contribute to the phenomena.

Applicable Comments: 38-89

Response:

The Draft EIS statement in question describes where the shadow flicker can occur but does not indicate that houses *cause* shadow flicker, and is an acceptable statement of this impact issue.

5.2.11 Recreation (RC)

Issue RC-1: Recreation impacts and mitigation

Issue: This category includes comments relating primarily to the discussion of direct or indirect recreation impacts and/or associated mitigation in **Section 3.11** of the DEIS. Specific comments address concern regarding removal of hunting rights; impacts on snowmobiling, biking, and other activities; and impacts to non-participating landowners and their rights to recreate, as many purchased their land solely for recreation. One comment stated that the DEIS assertion that the project would not impact recreation conflicts with a statement that the public would be barred from the project area. Another said the DEIS should reflect independent research done in association with realtors that would reveal a greater level of recreational benefit in the project area.

Applicable Comments: 16-7, 17-4, 27-28, 27-56, 29-41

Response:

Comments 16-7 and 17-4 state that the Draft EIS indicates the public would be barred from the project area, but Kittitas County is aware of no such statement in the Draft EIS. **Section 3.11.2.2** states that, with one possible exception, "recreational activities previously allowed by permission of project-area landowners would be allowed to continue." Similarly, this comment seems to misinterpret the Draft EIS discussion of hunting. The Draft EIS indicated that *project area* lands would likely be closed to hunting to avoid possible damage to the turbines; if this condition did occur (WDFW has expressed reservations about a complete hunting closure), it would apply only to lands within the project boundary and not to the properties of adjacent or nearby landowners. The general public does not currently have the right to hunt, fish, snowmobile, bike or otherwise recreate on private project-area lands, and any project operational measures that might restrict on-site recreational activities would not apply beyond the project boundary.

While it is no doubt true that many people buy property in the Kittitas Valley because of interest in recreational pursuits, it does not follow that their ability to enjoy those pursuits would be prevented or significantly diminished as a result of the project. The EIS analysis indicated that project impacts on birds and other wildlife would be insignificant, so the presumption of reducing wildlife watching opportunities in Comment 27-56 is unfounded. With respect to stargazing activities, it is not plausible that operation of approximately 40 to 50 small, blinking red lights at an elevation well below that of Lion Rock would have any identifiable effect on the ability to observe celestial features from popular local vantage points. The ability to view objects in the night sky is and would remain dependent primarily on the amount of skyglow created by urban development in locations such as Ellensburg, Yakima and Wenatchee, and on domestic lighting associated with rural developed uses.

Issue RC-2: Tourist interest in the project

Issue: One comment questioned a DEIS statement about the level of tourist interest in the project.

Applicable Comments: 29-42

Response:

The EIS discussion of possible tourist activity at the project is based on documented experience at operating wind farms, as indicated by the references cited in the text. Consideration of possible tourist activity in the EIS is largely based on concern by Kittitas County staff that the project should include measures to accommodate visitors and thereby avoid potential transportation-related impacts.

Issue RC-3: Traffic disruption during construction

Issue: A comment noted that the DEIS identifies traffic impacts (delays) to residents and visitors, and stated that the project traffic plan needs to address resident access as a priority.

Applicable Comments: 38-90

Response:

As indicated in the response to Issue PD-16, maintenance of reasonable local access for affected residents is one of the primary purposes of a project construction traffic management plan.

5.2.12 Ground Transportation (GT)

Issue GT-1: Baseline transportation conditions

Issue: WSDOT provided several comments noting additional information or clarifications to the DEIS information about baseline transportation conditions. These include statements that I-90 is classified as rural interstate with a posted speed limit of 70 mph; US 97 is an urban-principal arterial in vicinity of Dolarway Rd/Cascade Way Extension intersection, and is a fully-controlled limited access facility; north of that intersection, US 97 is a rural-principal arterial; access to US 97 from the site is proposed via existing public road connections; all loads transported on WSDOT rights-of-way must be within legal size and load limits or have proper permits; there is an over-height restriction on eastbound I-90 at Exit 62; and corrected an orientation of the left turn from Cascade Way Extension onto SR 97. One comment listed upcoming WSDOT projects that might affect project-related transportation.

Applicable Comments: 2-1, 2-2, 2-4, 2-7, 2-8

Response:

Kittitas County appreciates this information about road network characteristics and future highway projects. Information has been added to **Section 3.12** as necessary.

Issue GT-2: Potential use of SR 970

Issue: One comment stated that if SR 970 from Cle Elum to the junction of US 97 is used for transportation of project components, this action must be included in EIS with additional supporting analysis.

Applicable Comments: 2-3

Response:

The applicant has not identified proposed use of SR 970 for transport of components to the project area. Kittitas County and the applicant are aware that analysis would be needed if use of this route were proposed.

Issue GT-3: Project-related transportation plans

Issue: This issue includes comments specific to project transportation plans discussed in the DEIS. Two comments requested that WSDOT be able to review and comment on the proposed Construction Management Plan and Tourism Management Plan as they pertain to WSDOT facilities. Another comment stated that the tourism plan should be required prior to construction, and should be designed to minimize impacts to the environment and the community.

Applicable Comments: 2-5, 2-6, 38-92

Response:

WSDOT will be on the distribution list for the Construction Management Plan and Tourism Management Plan. Comment 38-92 is consistent with the intended timing and purpose of the tourism plan, as discussed in **Section 3.12.5.2**.

Issue GT-4: Emergency access route

Issue: A comment requested that the applicant construct a west-east road connecting Smithson Road and Wilson Creek Road, to allow for improved fire control, emergency, and maintenance and operations access rather than requiring an 11-mile detour.

Applicable Comments: 3-8

Response:

The project has been modified in response to this comment. The modified project configuration presented and evaluated in the Final EIS includes a modified project access road system with a road segment that accomplishes the objectives identified in this comment.

Issue GT-5: Project tourist facilities

Issue: One comment stated that the applicant should locate a tourist kiosk along SR 97 or Smithson Road, and that the DEIS should specify the size and that the applicant would be responsible for operation and management of the facility.

Applicable Comments: 3-9

Response:

Discussion of the proposed tourist facility in **Section 2.2** has been updated for the Final EIS.

Issue GT-6: Road maintenance conditions

Issue: A comment stated that the development agreement should require that roads be maintained in their current condition throughout the construction process.

Applicable Comments: 38-93

Response:

As discussed in the response to Issue PD-16, this request is not practicable or feasible.

Issue GT-7: Mitigation of construction dust impacts

Issue: One comment referenced to **Section 3.12** indicated that the DEIS makes no mention of mitigation of dust impacts from construction.

Applicable Comments: 43-18

Response:

Construction dust impacts and associated mitigation are addressed in **Section 3.2**, Air Quality.

5.2.13 Air Transportation (AT)

Issue AT-1: Potential impacts on VFR traffic pattern

Issue: Two comments primarily addressing some aspect of the potential project conflict with the VFR traffic pattern identified in the DEIS were assigned to Issue AT-1. They include specific statements that impacts to VFR airspace would be excessive and compromise the ability of Bowers Field to operate in a safe and efficient manner; the DEIS provides no justification for this impact; and noting use of Bowers Field by 185 flight students, which results in 44,000 airport operations, in addition to the 39,000 operations. One comment requested clarification of the reason for the dramatic alteration of the Category A and B airspaces.

Applicable Comments: 3-1, 43-19

Response:

Comment 3-1 does not seem to be consistent with the impact analysis presented in **Section 3.13.2.1** of the Draft EIS. The Draft EIS analysis described a minor potential conflict of 27 turbines with the VFR airspace for Category D aircraft, which rarely, if ever, use Bowers Field. The reference to dramatic alteration of Category A and B airspace is unclear, as the Draft EIS did not propose or suggest a specific change to Category A and B airspace. Comment 3-1 includes aspects of mitigation for this VFR conflict,

which is addressed in the response to Issue AT-2. Flight activity by the 185 flight-school students is discussed in the Draft EIS, and is included in the reported statistics for use of Bowers Field.

Issue AT-2: Mitigation options for VFR traffic pattern issue

Issue: This issue includes multiple comments that primarily address some aspect of the potential mitigation measures for the VFR traffic pattern conflict discussed in the EIS, as opposed to the impact itself. It includes specific requests to confirm with the FAA the minimum possible change in VFR airspace; clarify that the reduction in airspace would be temporary (assuming turbines are removed at the end of 30 yrs); resolve the issue prior to issuance of EIS; and include a condition that provides for removal of turbines that interfere with airspace in the event that Category D VFR traffic diverted to the south increase to a level above 50 percent. Other comments state that the proposed change in the traffic pattern would impact progress by the Airport Advisory Committee and the County to address noise, safety, security, planning for future improvements and residential property concerns; changing the VFR traffic pattern is not normal and would create adverse impacts from moving all patterns to the south; modification of established traffic patterns to accommodate the turbines is not acceptable; the project should not take priority over Bowers Field; remove the 27 turbines or lower their heights; and the applicant has not taken initiative to explore modifications to the project, so mitigation for air transport issues is unresolved.

Applicable Comments: 3-2, 6-4, 12-25, 27-29, 27-57, 27-63, 29-43, 38-94, 42-21, 43-20, 43-21, 43-38, 43-119, T4-4, T22-1

Response:

Subsequent to the Draft EIS, further investigation of the VFR traffic pattern issue led to identification of options for mitigation actions to resolve this issue in addition to those proposed in the Draft EIS. One of those options is being pursued by Kittitas County. Kittitas County's Airport Advisory Committee adopted a recommendation to raise the VFR traffic pattern altitude for Bowers Field for large/jet aircraft from 800 feet to 1,500 feet. It elected to do this to make the traffic pattern altitude consistent with typical aviation practice and to address potential health and safety issues caused by such aircraft using Bowers Field; it did not elect to do this in order to mitigate potential impacts from the project. This change to the approach elevation would eliminate the potential impacts from the 27 over-height turbines discussed in the Draft EIS. On July 6, 2004, the Board of County Commissioners approved the Bowers Field Master Plan. As part of that plan, the County determined it would apply to the FAA to raise the approach elevation for large/jet aircraft. The County expects the FAA to approve its request. Consequently, the mitigation option of changing to a right-hand VFR traffic pattern at Bowers Field is no longer under active consideration, and comments concerning this possible action are moot. The discussion of this issue in **Section 3.13** has been updated accordingly.

Issue AT-3: Potential impact on IFR operations

Issue: Several comments addressed the DEIS coverage of potential impacts to instrument (IFR) flight operations. Comments stated that the DEIS fails to address IFR operations with supporting documentation (an FAA-performed Obstacle Evaluation) by claiming that IFR operations would not be affected; should analyze both approved and proposed IFR operations; perform an Obstacle

Evaluation; consideration of existing instrument approaches does not account for circle-to-land maneuvering to all runways, which determination is to be made by FAA; DEIS discards future instrument approaches as hypothetical, but applications for these approaches have been submitted; and instrument approaches are being designed by FAA for each of the four runways.

Applicable Comments: 3-3, 3-5, 6-5, 6-7, 6-8

Response:

Section 3.13.2 of the Final EIS includes additional discussion of IFR operations, in response to these comments.

Issue AT-4: Status of air traffic review for Wild Horse project

Issue: Two comments stated that FAA approval (through an Obstacle Evaluation) of the Wild Horse project is incorrectly used throughout the DEIS to substantiate a conclusion of non-significant impact, which could result in cumulative impacts to air transportation.

Applicable Comments: 3-4, 6-6

Response:

These comments are incorrect in claiming that the Draft EIS reported the FAA had approved the Wild Horse project, and misinterpret the Draft EIS discussion of cumulative impacts. With respect to Alternative 1 and the proposed Wild Horse project, the Draft EIS reported (**Section 3.13.3.1**) that Zilkha had filed a notice for the project with the FAA and, as of October 2003, had not received a response form the agency. The Draft EIS also stated that, based on the distance between the site and Bowers Field, Zilkha anticipated that the Wild Horse turbines would not be considered obstructions. (This discussion has been updated for the Final EIS.) **Section 4.13** of the Draft EIS, addressing cumulative impacts, stated that available information for the Kittitas Valley and Wild Horse projects indicated those projects would not present conflicts with operations at Bowers Field or other facilities. Based on that information, **Section 4.13** essentially concluded that the potential collective impacts on air transportation were those of the Desert Claim project.

Issue AT-5: Resolution of air transportation issues

Issue: One comment stated that air transportation issues have not been addressed to come to a reasonable determination, while additional research and discussions with FAA could resolve issues.

Applicable Comments: 3-6

Response:

Kittitas County agrees that the air transportation issues identified in the Draft EIS are resolvable. Based on further discussion and investigation subsequent to the Draft EIS, it appears these issues have been resolved, and the potential impacts identified in the Draft EIS eliminated.

Issue AT-6: Turbine lighting plan

Issue: Three comments addressed the turbine lighting plan discussed in **Section 3.13**. One requested clarification on the intent of shielding versus lighting orientation, as the turbine lighting needs to ensure safe aircraft operations and minimize impacts to public. One comment expressed concern over lighting impacts, while another addressed the effect of the project layout on the number of towers requiring lights.

Applicable Comments: 3-7, 38-95, 43-22

Response:

Comment 3-7 appears to be in reference to a statement in **Section 3.10.5** of the Draft EIS (addressing mitigation of aesthetic impacts), to the effect that visual impacts could be reduced if the turbine safety lights were shielded to reduce their visibility to people on the ground. The Final EIS acknowledges that aviation safety is the paramount function of the turbine lighting plan, and that shielding of the lights would not likely be acceptable to the FAA.

The EIS addresses a lighting plan that, based on the opinion of the County's aviation consultant, is assumed to be sufficient for the project defined by the Desert Claim Wind Power LLC application and described in **Section 2.2**. No alternative project configuration has been identified or evaluated in the EIS, so the question posed by comment 38-95 is not pertinent to the scope of the EIS. With respect to Comment 43-22, the EIS adequately discloses the visual impacts of the turbine safety lights. It should be noted that these lights are required because of the height of the structures, and not because of their proximity to an airport; lights would be required on a large number of the turbines regardless of the project location.

Issue AT-7: Additional air transportation issues

Issue: Several comments appearing to relate primarily to aspects of air operations other than VFR traffic pattern and IFR procedures were assigned to Issue AT-7. They include statements of general concern regarding impacts on the operational capability of the airport; that inaccuracies regarding operations of the four available runways result in invalid conclusions in DEIS; that no consideration is given to aircraft operating for other purposes than arriving and departing Ellensburg Airport, operating in the traffic pattern, or executing instrument approaches; there is no recognition of agricultural aircraft, helicopters or the CWU flight program; that the project would decrease training and practice areas, impact minimum safe altitudes and decrease margins of safety in event of engine failure; that a small landing strip (Flying Rock Ranch) lies close to the proposed turbines and planes land on it daily; and that small planes fly over the area daily.

Applicable Comments: 6-2, 6-3, 6-9, 12-23, 12-24, 43-39, 44-15, 48-7, T4-3

Response:

Section 3.13.2 has been supplemented for the Final EIS to provide additional information on these other aspects of air transportation near the project area. As was the case for the Draft EIS, the impact analysis documented in the Final EIS likewise concludes that impacts to air transportation would be insignificant.

5.2.14 Public Services & Utilities (PSU)

Issue PSU-1: Water supply for fire fighting

Issue: One comment made a request to provide a water supply for fire fighting at locations beyond the boundaries of contracted fire districts (i.e., mobile, aboveground, underground).

Applicable Comments: 4-4

Response:

Specific identification of water supply sources for fire fighting and other project purposes is a logical component of future, more detailed plans for project construction and operation. Those plans will be subject to review and approval by the Kittitas County Community Development Services Department, including the Fire Marshal.

Issue PSU-2: Fire protection service and coordination

Issue: Comments relating primarily to provision of fire protection service to the project in operation, as discussed in **Section 3.14** (and not primarily to fire hazards discussed in **Section 3.8**) were assigned to Issue PSU-2. This category includes several specific requests involving fire service coordination, such as to ensure site addressing in accordance with Kittitas County Public Works requirements; provide emergency contact information to appropriate emergency response agencies on an annual basis; establish and maintain agreements for provision of emergency services; provide for emergency training for workers and protection of adjoining property owners; and, in coordination with the County, provide worker training to reduce accidental fire starts and develop long-term plan for fire risk reduction. Other comments requested additional information regarding how fire fighters would access the site in the event of a fire, or stated that a fire-fighting plan was needed. Some comments addressed the ability to use aircraft for fighting fires in the area, including comments that past fires have been extinguished with aircraft assistance and that the EIS provides no specific information regarding fire response plans for aircraft. One comment inquired about the responsibility for costs of fighting fires that might be caused by the project.

Applicable Comments: 4-5, 4-6, 4-7, 4-8, 4-9, 4-10, 11-7, 29-34, 43-9, 43-23, T13-1, T23-4

Response:

The points contained within Comments 4-5 through 4-10 appear to be reasonable requests, and to be generally consistent with the discussion of mitigation in **Section 3.14.5**. Final determination of fire protection measures that would be required for the project will be the responsibility of the Kittitas County Board of County Commissioners, through the conditions of approval and a development agreement if the project is approved.

The EIS addresses the continued ability of firefighters to use aircraft in the vicinity of the project. Specific aspects of coordination of such activity would depend on the direction provided by future fire service agreements, which are also discussed in the EIS. Similarly, specific plans for fire protection at the

project would depend largely on the outlines of those fire service agreements. It is not common practice for wind energy facilities or other types of development to require detailed fire protection plans at the time the SEPA review is conducted; such measures are typically prepared following project approval, but prior to construction.

Issue PSU-3: Fire station location

Issue: This issue includes three comments noting the DEIS indicates the location of Fairview Fire Station as on Highway 97, while the actual location is at the corner of Fairview Road and Brickmill Road.

Applicable Comments: 22-1, 38-96, T14-1

Response:

The Final EIS has been revised to note the correct station location.

Issue PSU-4: Project impacts to water supplies

Issue: One comment expressed concern over impacts to water supply from wells and lack of consideration for irrigation.

Applicable Comments: 29-44

Response:

Section 3.14.2.4 of the EIS documents the conclusion that construction or operation of the project would not result in significant adverse impacts to water supplies. This discussion notes the conclusion is based on the project characteristics described in **Section 2.2** and the water resources impact analysis documented in **Section 3.3**.

Issue PSU-5: Law enforcement services

Issue: One comment noted concern over the potential for increased calls to police as result of trespass by visitors curious about the project.

Applicable Comments: 41-20

Response:

Comment 41-20 is generally consistent with an observation provided in **Section 3.13.2.2** that vandalism and trespassing could contribute to increased calls. The EIS notes that site security service and regular patrolling would be present, however, and concludes there would not be significant impacts on law enforcement services. Such problems have not been reported at operating wind farms elsewhere in the Pacific Northwest.

5.2.15 Population, Housing and Employment (PHE)

Issue PHE-1: Project effects on tourism

Issue: Two comments related to the DEIS discussion of potential project influence on tourism in **Section 3.15**. They include statements that an expanded literature review should be performed, as there is ample evidence of negative impacts on tourism, and that the DEIS provides no evidence that turbines would have no effect or a positive effect on tourism, while the opposite is likely to occur.

Applicable Comments: 27-30, 42-12

Response:

The EIS cites references indicating that the project might prompt some interest on the part of visitors; it does not indicate that there would be a large stream of visitors or a substantial volume of tourism benefits. Comment 27-30 states that there is ample evidence that commercial wind installations reduce tourism in the long run, but provides no supporting evidence for that point and does not cite references that include such evidence. While it is generally accepted that many recreational visitors to Kittitas County value the relatively unspoiled scenery, the claim in Comment 42-12 that these visitors would avoid the County if wind turbines were developed is a personal opinion that is not supported by any submitted empirical evidence. Many recreational visitors to Kittitas County use the forested areas in the upper county and would typically not be exposed to views of wind turbines. Some anglers and boaters using the Yakima River might be exposed to views of wind turbines, but it is doubtful that many of these users would choose to recreate elsewhere in response to distant views of wind turbines on the way to their recreational destination. The Desert Claim project is not located in an area of intensive recreational use, the primary recreation attractions in Kittitas County are located at some distance from the Desert Claim project site (and the locations for the other proposed wind projects), and development of the wind energy project(s) is not likely to have a significant effect on the baseline level of recreational use in the County.

Issue PHE-2: Significance of population, housing and employment impacts

Issue: One comment stated that the conclusion on population, housing and employment impacts in **Section 1.9.15** conflicts with those described for aesthetics, light and glare in **Section 1.9.10**.

Applicable Comments: 27-64

Response:

The referenced statement in **Section 1.9.15** that there would not be significant impacts to population, housing or employment is accurately reflective of the impact analysis and conclusions documented in **Section 3.15** of the EIS, which addresses the local population, housing stock and employment in the local economy. The referenced statement in **Section 1.9.10** is accurately reflective of the impact analysis and conclusions documented in **Section 3.10** of the EIS, which concludes that the project would result in significant visual impacts and that project facilities would be visible to residences, travel ways and other viewpoints in various areas of Kittitas County. There is nothing inconsistent between these two

conclusions. To the contrary, the comment appears to confuse impacts to housing stock with visual impacts that would apply to some residences.

Issue PHE-3: Housing impacts during construction

Issue: A comment noted that meeting the housing demands of construction workers would be difficult.

Applicable Comments: 29-45

Response:

This comment is inconsistent with the results of the impacts analysis documented in **Section 3.15**, which noted that some construction workers would be local residents while others would stay in local hotels and motels or commute from other population centers. The additional demand for rental units during the project construction period would be minor, and certainly much less than the 150 units asserted in the comment.

Issue PHE-4: Consideration of economic impacts

Issue: A comment stated that the DEIS appears slanted, because some economic impacts are considered on page 4-24, but not all.

Applicable Comments: 38-113

Response:

Comment 38-113 does not indicate which other economic information is missing from the EIS in the opinion of the reviewer. The information provided in **Section 4.15.3** is consistent with the employment-related information presented in **Section 3.15** of the Desert Claim EIS, and with the topical coverage included by the Washington Energy Facility Site Evaluation Council in the EIS for the Kittitas Valley wind power project.

5.2.16 Fiscal Conditions (FIS)

Issue FIS-1: Tax revenue benefits of the project

Issue: Issue FIS-1 includes several comments relating primarily to the influence of the project on local government tax revenues and/or rate reductions. Individual comments typically state that the DEIS sufficiently captures the potential economic development benefits to the County (i.e., tax revenues for school districts, state schools, and other services); one provides additional information indicating the value of the new construction tax base and corresponding reductions in tax rates for all taxing districts as a result of the project.

Applicable Comments: 8-1, 9-4, T2-1, T23-3

Response:

Kittitas County appreciates the new information, particularly with respect to the clarification of the tax treatment of new construction value. The information has been applied in the Final EIS, as appropriate.

Issue FIS-2: Time scope of fiscal analysis

Issue: Several comments specifically addressed the time scope of the fiscal analysis presented in the DEIS. They include several statements to the effect that a full 30-year depreciated tax base analysis (rather than just a first-year analysis) should be provided, and that the project will benefit from accelerated depreciation subsidies, which leads the reader to assume that tax revenue would be greater than in actuality.

Applicable Comments: 27-31, 30-19, 41-21, 51-11

Response:

Section 3.16.2 has been revised somewhat for the Final EIS, to provide additional information concerning potential tax revenues over the expected life of the project. The discussion emphasizes the uncertainty that applies to future revenues, because the depreciation schedule has not been set and is unknown at this time.

Issue FIS-3: Overall adequacy of the fiscal impact analysis

Issue: Comments relating primarily to aspects of the fiscal analysis other than the time scope were assigned to Issue FIS-3. Most of these comments address the potential for adverse impacts to the local tax base and/or economy, including statements that the DEIS should discuss the fiscal impact of the no action alternative, assumed to be housing development, and that a wind plant would bring more benefit than a fossil fuel plant; economic impacts to Ellensburg and Kittitas County have yet to be realized, nor has the EIS documented the costs; it seems like the project would cause a considerable revenue loss, based on the lost value from new home construction; the DEIS statement about increased property values should be revised, as the analysis should factor in property value increases and decreases; and the EIS should identify impacts to the tax base/economic health of Ellensburg if residential growth is slowed or stopped in the project area.

Applicable Comments: 9-5, 29-9, 31-1, 38-98, 43-82, T14-3, T20-2

Response:

Section 3.16.3.3 addresses expected fiscal conditions under the No Action Alternative, which would involve continued rural uses within the proposed project area and likely continued expansion of low-density residential uses. The EIS does not include a specific forecast of how many units might be developed or what their tax base value might be, but notes that no significant additional revenues or expenditures would be anticipated because rural residential development provides small, incremental increases to the tax base while commensurately increasing demands for services on the County that generally offset increased tax revenues. As noted elsewhere in the EIS, if the Desert Claim project is not approved it is conceivable that another developer might propose to construct a different energy facility with a similar capacity. Whether that would happen is uncertain, however, and the location and type of

such a facility are even more uncertain. Therefore, because such a scenario is speculative, it is not reasonable to presume development of a different energy facility in Kittitas County as part of the no action scenario, or attempt to evaluate the fiscal aspects of such a development in the EIS.

Comment 29-9 is not consistent with the content of **Section 3.16** of the EIS, which provides a complete investigation of prospective revenues and service costs associated with the proposed project. That evaluation does not, and need not, include estimation of the potential tax base value of housing development within the project area because such development is not part of the proposal and is speculative. The information regarding the $180 million capital value of the project is appropriate for the EIS so that decision-makers can weigh this investment and its related minimal need for service expenditures against the potential value and expenditure cost of future housing development within the 5,237-acre project area at 100 percent of the density allowed under current zoning. Comments 31-1 and T20-2 do not provide citations to empirical evidence or explanations for the claimed 10-fold turnover in the value of a $300,000 housing investment, but that multiplier is far in excess of the ratios commonly cited in standard economics literature.

With respect to Comment 43-82, there is no basis for the apparent assumption that the tax base and economic health of Ellensburg is dependent on future residential growth in the project area and surrounding vicinity. This portion of Kittitas County is not a focus of recent economic development or residential growth and is not likely to be, based on current planning direction; growth in the County has been and will likely remain focused in other areas. Comment 38-98 apparently misinterprets a statement on page 3-291 of the Draft EIS, which specifically states that property values and consumer expenditures (associated with long-term spin-off economic activity) *have not been* estimated or included in the EIS. The comment objects to the inclusion of values that have not been provided.

Issue FIS-4: Project impact on utility rates

Issue: Two comments on **Section 3.16** involved utility rates. Specific points in these comments were that the DEIS should include estimates of increased utility rates to County residents with the introduction of 180 MW of intermittent power to the regional grid; savings in property tax rates would be lost by these increases; and skepticism that the project would generate enough revenue to offset costs and that the County would derive income from the project tax base.

Applicable Comments: 41-24, 48-2

Response:

Possible project effects on the price of electricity are addressed in **Section 3.5** (Energy and Natural Resources) of the EIS. Because the project is unlikely to have any identifiable effect on electric rates for local consumers, there is no need to address such a change in the fiscal analysis. See also the response to Issue ENR-1. Comment 48-2 appears to inappropriately mingle accelerated tax write-offs (presumably in reference to the federal production tax credit for wind energy) and decommissioning costs with potential changes to the County's property tax base.

5.3 OTHER ISSUES

A large number of the 943 individual comments on the Draft EIS addressed issues that did not specifically pertain to the scope and/or substance of the EIS, and did not identify programmatic/policy issues or element/resource issues discussed above. Many of the comments in this category addressed issues or concerns that go beyond the scope of a SEPA review and are not EIS topics required under the SEPA statute and regulations. Another large group of comments conveyed the writer's or speaker's opinion about the merits of the proposal but did not address a substantive EIS issue relating to alternatives, impacts or mitigation. Some individuals expressed support for the proposed action or for renewable energy or wind energy, in general. Many others voiced opposition to the project or, more broadly, to the siting of wind turbines in Kittitas County. A third large group of comments are statements of opinion, values or beliefs related to the proposal, the various entities involved in the project and the review process, or to the desired approach for making a decision on the project. Comments in this group are related in various ways to the EIS and/or to the project addressed in the EIS, but they are not comments about a specific, substantive aspect of the Draft EIS.

The County grouped these non-substantive comments into three "Other" issue categories, classified as Non-SEPA Issues, Support/Opposition and Value/Belief Statements. Multiple individual issues exist in each of these categories. The following content in **Section 5.3.1** includes explanations as to why the topics identified as Non-SEPA Issues are not addressed in the EIS. Because the comments classified as Support/Opposition and Value/Belief Statements do not address the substance of the EIS, it is not possible or appropriate to provide a substantive response in the Final EIS. The decision makers who will undertake final action on the proposed project may consider all three forms of this input when evaluating the proposal, however.

5.3.1 Non-SEPA Issues (NS)

Issue NS-1: Impact of proposed project on area property values

Issue: More than 30 comments addressed the relationship of the project to values of property near the project area. These are primarily comments that property values would be adversely affected and/or that property values should be considered in the EIS. This category includes statements of concern over housing resale values; that the DEIS contains insufficient discussion; that a potential domino effect could result in lower home sales, rodeo attendance and business revenues; the County should monitor impacts on property values; the project will impact values of residential, agricultural and recreational lands; and the analysis should examine the impact to property value for every home in Northwest Valley areas 1A and 1E. It includes comments that the DEIS should address compensation for loss in property values, and statement that groups who promote the agenda of wind developers performed the property value studies cited in the literature summary.

Applicable Comments: 7-2, 12-27, 15-11, 16-11, 17-5, 18-4, 20-4, 24-2, 26-1, 27-71, 28-1, 30-2, 32-4, 36-9, 38-33, 38-62, 38-97, 39-3, 43-86, 47-7, 50-2, 51-10, T3-5, T4-7, T5-1, T16-1, T19-2, T22-8, T23-5, T24-5, T30-2

Response:

The SEPA rules (WAC 197-11-448) do not require agencies to address concerns such as property values in an EIS, because the statute and the rules envision general welfare, social, economic and other considerations as factors decision makers would evaluate *apart from* the environmental impacts addressed in an EIS. Property values, taxes and prospective legal costs clearly fall within the realm of "social policy analysis (such as fiscal and welfare policies…,)" which is specifically identified in WAC 197-11-448 (3) as an example of information not required to be discussed in an EIS. Moreover, appellate court decisions have consistently affirmed that economic considerations, including impacts on property values, are beyond the zone of interest encompassed by SEPA. While it may be proper for the Kittitas County Board of County Commissioners to consider issues such as economic impacts to property values in their deliberations over project approval, it is not necessary or required to do so in the project EIS. Note that, concurrent with the release of the Draft EIS, Kittitas County published a summary of existing published studies on property value effects of wind energy facilities.

Issue NS-2: Impact on the quality of life

Issue: Two comments stated that the project would diminish the quality of life for the entire area.

Applicable Comments: 21-4, T3-6

Response:

Similar to the situation regarding property values, the SEPA rules (WAC 197-11-448) do not require agencies to address concerns such as the quality of life in an EIS because the statute and the rules envision general welfare, social, economic and other considerations as factors decision makers would evaluate *apart from* the environmental impacts addressed in an EIS. Quality of life considerations also fall within the realm of social policy analysis. In addition, expectations or perceptions of decreased quality of life as a result of an action are typically based on specific causal factors such as noise, traffic, visual impacts and incompatible land uses, which are standard topics in SEPA documents.

Issue NS-3: Wind energy business practices and tax status

Issue: This issue includes comments that wind turbine operators engage in unfair business practices by receiving subsidies and tax credits intended to promote environmentally sound energy production, when the activities cause harm to the environment; it should be more affordable for individuals to engage in green energy projects; noted lawsuits against wind developers elsewhere for take of species protected under the Migratory Bird Treaty Act, and for unfair competition and unfair business practices.

Applicable Comments: 30-23, 34-1, 36-2

Response:

Again, business practices, tax treatment of the wind energy industry, and lawsuits are topics within the realm of social policy analysis and are not appropriate to the scope of an EIS (WAC 197-11-448).

Issue NS-4: Cost-benefit analysis

Issue: One comment stated that the DEIS makes an inadequate attempt at cost-benefit analysis of the project, and the discussion of cumulative impact costs of the project is inadequate.

Applicable Comments: 47-9

Response:

WAC 197-11-450 specifically states that a cost-benefit analysis is not required by SEPA. The EIS does not include a cost-benefit analysis of the proposed project, nor does it represent any of the content as constituting a cost-benefit analysis. See also the response to Issue NS-1.

Issue NS-5: Potential for legal action

Issue: Two comments addressed the possibility for lawsuits against the County or the applicant related to the project, including specific statements that aircraft accidents caused by the wind turbines could result in legal action against the County, there will be lawsuits with the County over involvement on land values, and parties will file a lawsuit if the companies do not set aside a fund to compensate residents.

Applicable Comments: 35-2, 48-8

Response:

The potential for legal action associated with a prospective agency decision is not a topic of analysis required by the SEPA rules and is not an appropriate topic for inclusion in an EIS. Threats of contemplated legal action are also not consistent with SEPA guidance for commenting on environmental documents (WAC 197-11-550).

Issue NS-6: Stress on residents and associated impacts

Issue: One comment stated that the DEIS does not mention the unending stress that has already been placed on non-participant residents by the proposal and the potential impacts, medical or otherwise, of the proposal.

Applicable Comments: 30-27

Response:

Potential impacts that might be associated with stress would reasonably be considered topics involving social policy analysis and/or quality of life; these are topics that need not be considered under SEPA (WAC 197-11-448) and cannot be objectively evaluated in an EIS. Specific environmental impacts associated with development of the project have been addressed in the EIS.

5.3.2 Support/Opposition (SO)

The SEPA Rules (WAC 197-11-550) provide that comments on an EIS shall be as specific as possible and may address either the adequacy of the environmental document or the merits of the alternatives or both. Comments that are limited to expressing support for, or opposition to, an action or an alternative do not address the substance of an EIS and do not provide the basis for a specific response. Therefore, these comments are acknowledged without further response. Comments of this nature were assigned to six issue categories.

Issue SO-1: Renewable energy

Issue: One comment expressed support for renewable energy systems in general.

Applicable Comments: 5-1

Issue SO-2: No Action Alternative

Issue: Several comments expressed support for the No Action Alternative, and/or requested the County to select this alternative.

Applicable Comments: 5-16, 17-12, 36-19

Issue SO-3: Wind energy

Issue: Three comments urged Kittitas County to bear in mind the benefits of wind energy, as a pollution-free renewable resource, stated the need for wind energy, or expressed support for wind energy over other energy sources.

Applicable Comments: 9-6, T25-2, T30-4

Issue SO-4: Alternative 1

Issue: Multiple comments generally or specifically expressed support for Alternative 1. They include statements that the Wild Horse wind farm in the Whiskey Dick area is more appropriate for this type of industrial development; that the Wild Horse site has a greater area to accommodate the project; Alternative 1 will not intrude on the lives of so many people; and the wind farm should be in a lightly populated area, such as east of Ellensburg.

Applicable Comments: 13-1, 16-14, 27-38, 28-4, 43-57, 43-68, 43-73, 43-77, 43-87, 43-88, 43-102, 43-116, 43-124, T12-6

Issue SO-5: Proposed Action/Desert Claim project/applicant

Issue: This category includes comments expressing opposition to (primarily) or support for (in some cases) the proposed Desert Claim project and/or to the DEIS as it relates to the project location. It includes statements that urge decision-makers to consider their decision as if the turbines were proposed near their homes; that "we don't want you here, you are not welcome;" do not allow

project at this location; and there is no reason for wind turbines to be located in populated areas such as the greater area of Ellensburg.

Applicable Comments: 16-15, 17-2, 17-11, 21-2, 23-3, 24-6, 27-73, 28-3, 32-1, 35-1, 39-5, 42-24, 46-2, T3-1, T4-1, T10-1, T13-6, T14-6, T15-1, T20-1, T21-1, T28-1

Issue SO-6: Wind turbines in Kittitas County

Issue: A number of comments expressed opinions about the general acceptability of locating wind turbines in Kittitas County. This issue includes statements opposing wind turbines anywhere in the County, supporting wind turbines in the right place, and suggesting that wind farms be located away from populated areas and out of view.

Applicable Comments: 19-2, 52-1 (also letters 53 through 78), T6-1, T17-1, T24-7

5.3.3 Value/Belief Statements (VB)

A substantial number of the comments from the Draft EIS review were statements based on the values or beliefs of the commentors relating in some way to topics addressed in the Draft EIS. Similar to the Support/Opposition comments, these comments do not address the substance of the EIS and do not provide the basis for a specific response. In addition, because these statements are based on personal values and beliefs, there is no "right" or "wrong" associated with the statements and a response would be inappropriate. Comments of this nature were interpreted as representing 12 separate issues.

Issue VB-1: Adequacy of federal and state wildlife protections

Issue: One comment expressed the belief that federal and state laws and regulations provide little protection for most avian species.

Applicable Comments: 5-2

Issue VB-2: Motivations relating to the project

Issue: This category includes comments expressing opinions about the motives and behavior of the applicant and/or landowners participating in the project. It includes statements that the project is all about money; the applicant does not care about residents or environment; the money promised to the County is an unacceptable carrot; the developer may cut corners on project to save money; 8 landowners will benefit to the detriment of hundreds of others for the benefit of unreliable, expensive and minimal electrical energy to be sent out of state so that a French company will profit; the motivation to make money should not be allowed to ride roughshod over obligations to protect the citizenry; and non-participating landowners will incur all of the impacts of the project and receive none of the benefits.

Applicable Comments: 11-10, 27-37, 27-62, 27-65, 30-14, 33-8, 43-85, 44-17, T14-4, T19-1

Issue VB-3: Opinions about the overall merits of the project

Issue: Multiple comments stating opinions (positive and negative) about the long-term effects of the project or its desirability were assigned to Issue VB-3. They include statements that windmills will result in a significant negative impact to the area; wind farms will change the area forever; there will be no turning back; many residents have been in area for generations and have worked hard to enjoy the lifestyle and the project threatens to destroy this experience; concern for quality of life once in retirement; the DEIS assertion that the project would not be detrimental or injurious to public health, peace, safety, or to the character of the surrounding neighborhood is false; wind generated electricity has been shown to be of no benefit to the County and will destroy the quality of life; the impacts and the power generated are not worth the tax reduction; the County would be better served with homes and ranchettes in the area; electricity from windmills is not enough to justify the harm they will do; and the project would provide economic benefits.

Applicable Comments: 11-11, 12-15, 16-13, 31-2, 36-18, 38-120, 48-9; 49-1, 52-2 (also letters 53 through 78), T23-1, T30-3

Issue VB-4: Opinions about objectivity of the EIS and supporting studies

Issue: Several comments expressed opinions about the objectivity of the information presented in the EIS and/or the objectivity of the EIS preparers, without reference to specific points of technical disagreement over policy/programmatic or resource issues. This category includes statements that the wildlife consultant was hired by applicant to minimize avian mortality estimates and is obviously prone to bias in supporting its client's objectives; about being appalled at the DEIS; the document is biased toward the applicant; many studies and information contained in the DEIS were selectively provided by wind power advocates and taken at face value; there was apparent disinterest in public comments during the January 20 meeting, as if not intending to re-evaluate the DEIS conclusions; many comments are not based on reality, but a vision; the DEIS appears constructed to support the proposed project; and comparisons in the DEIS change based on the intended result, with impacts compared against larger areas if the intended result is to be diminished and against smaller areas if the intended result is to appear greater.

Applicable Comments: 15-4, 16-1, 18-3, 30-6, 38-116, 45-2, 51-2

Issue VB-5: Commentary on level of local support for or opposition to the project

Issue: This category includes opinions regarding how the local community views the Desert Claim project, including statements that the only long-time residents who support the project are those who would gain financially; a substantial majority of people oppose the wind farms; and that three groups are in favor of wind farms, with a description of each group and their motivations.

Applicable Comments: 18-1, 21-1, 33-1, T3-2

Issue VB-6: Opinions on whose views and rights should have priority

Issue: Several comments expressing opinions about how individual or group preferences or rights should be factored into the decision, including statements that the feelings and judgments of residents who are impacted should have priority; property rights are important to everyone, and if a property owner uses his land to construct a wind turbine, he is infringing on the property rights of others around him; and 8 landowners' choices should not be allowed to impact 350 other landowners' lives.

Applicable Comments: 21-6, 39-2, 43-75, T3-7, T23-6

Issue VB-7: Acceptability of impacts on non-participating landowners

Issue: Several comments expressed the opinion that none of the impacts from the proposed project should cross the property line of any non-participating adjacent landowner without permission from the landowner; the impact to neighboring, non-participating home owners is enough to deny siting of the proposed project; and if project could result in discouraging residential uses, this is enough reason to site the proposed project.

Applicable Comments: 41-13, 41-19, 41-26, 42-13

Issue VB-8: Value of existing views

Issue: One comment stated that the views in the Kittitas Valley are one of the greatest resources of the County, are not a renewable resource, and that the County Commissioners should protect the views, whatever the cost.

Applicable Comments: 39-4

Issue VB-9: Precedent for future wind energy development

Issue: A comment stated the opinion that construction of one wind turbine in the Kittitas Valley will result in numerous other wind turbine projects in the Kittitas Valley.

Applicable Comments: 47-11

Issue VB-10: Kittitas County planning approach

Issue: This category includes two comments reflecting opinions relating to Kittitas County planning efforts or how the County might evaluate the project. They express disbelief that the County Commissioners would walk over the constituents, harming so many citizens for the benefit of eight landowners, and state that the position of the current County government is to allow individual enterprise to dominate the broader interests of the community, which should make it clear to residents that their home sites are not safe from schemes that make money for developers.

Applicable Comments: 27-46, 33-3

Issue VB-11: Preference for nuclear power

Issue: One comment stated that it is unbelievable that residents would be forced to pay increased electrical bills when the capability exists to build nuclear power plants, and the commentor would welcome nuclear power on his/her property.

Applicable Comments: 32-2

Issue VB-12: Need for electrical expertise

Issue: One comment suggested that perhaps decision makers should be required to be electrical engineers, or should consult the experts on important decisions such as this.

Applicable Comments: 48-5