

### 3.13 STEENS MOUNTAIN WILDERNESS, WILDERNESS STUDY AREAS, LANDS WITH WILDERNESS CHARACTERISTICS AND WILD AND SCENIC RIVERS

This section discusses existing federal regulations, management goals, and objectives that apply to the Steens Mountain Wilderness Area, Wilderness Study Areas (WSAs), Lands with Wilderness Characteristics (LWC) and Wild and Scenic Rivers (WSRs) in or near the Analysis Area. It also analyzes the potential effects that the Project would have upon the intrinsic wilderness and/or outstanding resource values of each area covered by a special designation or classified as a LWC. While the Project would not directly affect (i.e., there would be no physical Project presence) any lands protected by a special designation or classified as a LWC, it could affect the values inherent to the specially designated areas or LWC. Section 3.7 Recreation also discusses the presence of recreational activities within the Steens Mountain Wilderness Area, WSAs, and WSRs. Likewise, Section 3.9 Visual Resources discusses the potential visual effects from Key Observation Points (KOPs), some of which lie within or near the Wilderness Areas, WSAs, and WSRs.

#### 3.13.1 Methodology

This section was prepared using information from a variety of sources, including the:

- Three Rivers Resource Management Plan.
- Andrews Management Unit Resource Management Plan.
- Steens Mountain Cooperative Management and Protection Area Resource Management Plan.
- Steens Mountain Wilderness and Wild and Scenic Rivers Plan.
- Malheur National Wildlife Refuge Master Plan.
- Oregon BLM Wilderness Study Report, Volume I (1991).
- H-8550-1 Interim Management Policy for Lands under Wilderness Review (IMP) (1995).
- H-8560-1 Manual Handbook for Management of Designated Wilderness Areas (July 1988).
- BLM Manual 8560 for Management of Designated Wilderness Areas (April 1983).
- 8561 Manual for Wilderness Management Plans.
- 8351 Manual for Wild and Scenic Rivers.
- Wilderness Characteristics Inventory for the Proposed North Steens Transmission Line Route and Alternative Routes (BLM-Burns District 2010).
- 43 CFR Part 6300.
- 43 CFR Part 8351.2.

Additional policy and procedural guidance was obtained from the following sources:

- Federal Land Policy and Management Act of 1976, as amended.
- BLM National Environmental Policy Act Handbook (H-1790-1).
- Land Use Planning Handbook (H-1601-1).

This section assessed the temporary (short-term) effects resulting from the use of construction equipment, and permanent (long-term) effects resulting from facility operation of the Proposed Action, alternatives, and No Action Alternative upon the Steens Mountain Wilderness Area, WSAs, LWC, and WSRs. To analyze the effects to values, this section used the analyses conducted for other technical sections within this EIS to

qualitatively and quantitatively describe how the geologic, recreational, fisheries, wildlife, cultural, and historic resources within these special designations would be affected.

In addition, a GIS-based viewshed analysis was conducted to assess the potential for visual effects from various Project features, including turbine towers and transmission line poles, on scenic values in particular. Because of the proximity of the Project to the Steens Mountain Wilderness Area, WSRs, LWC, and WSAs, a 5-mile radius was established around Project facilities to take into account other potential Project effects, such as noise and visual. This Analysis Area included all improvements on the Echanis Wind Energy Project (Echanis Project) site and approximately 5 miles of the proposed transmission line extending from the Echanis substation to the 5-mile radius boundary. Five miles were chosen as the Analysis Area for this section because it would include foreground to middleground views of the Project, as defined by the BLM's VRM methodology, and it is the area where changes would be more noticeable and more likely to trigger public concern (BLM Manual 8410). For a description of visual effects beyond 5 miles, please see Section 3.9 Visual Resources. Also, in response to public comments concerning cumulative visual effects beyond 5 miles from the Project and RFFAs to the CMPA and Steens Wilderness, additional analysis was undertaken. This information is located in Section 3.24 Cumulative Effects.

Where appropriate, potential mitigation measures have been identified to reduce or avoid anticipated adverse effects resulting from construction and operation of the proposed Project. Consistent with BLM Manual 8560, mitigation of effects from projects that occur outside of designated wilderness areas must not be so restrictive as to preclude, or seriously impede, such activities.

The analysis in this section was informed by comments received from the public scoping process that occurred from July to September 2009 and the DEIS comment period from July to September 2010. Several agency representatives, local organizations, and private citizens requested that the EIS investigate the potential effects of the North Steens Transmission Line Project and the Echanis Wind Energy Project upon the designated Steens Mountain Wilderness Area, WSAs, LWC, and WSRs.

### 3.13.2 Affected Environment

No Wilderness Areas, WSAs, LWC, or WSRs would be located within 5 miles of the alignments of Alternative B (including the South Diamond Lane and Hog Wallow Route Options) or Alternative C.

Between 2006 and 2009, the BLM conducted a "Wilderness Characteristics Inventory for the Proposed North Steens Transmission Line Route and Alternative Routes" (BLM-Burns 2010) which determined that the transmission line alternatives would not extend through public lands that possess wilderness characteristics.

The inventory revealed that Alternative B (inclusive of the Diamond Lane and Hog Wallow Route Options) would not be located in any Wilderness Inventory Maintenance (WIM) unit of 5,000 acres or greater. The transmission line would pass through the northwest corner of the Hog Wallow unit. This 7,990-acre unit was found not to have wilderness character in February 1979 (BLM 1979). The rationale was that the land treatments performed on this area were scattered over nearly 45 percent of the area, which reduced that portion of the area that remained in a natural condition to less than 5,000 contiguous acres. The 2011 inventory noted that the boundaries of the Hog Wallow unit had changed so that the parcel has been divided into four smaller WIM units. The 2011 inventory also noted similar land treatments as those identified in 1979 and concluded that the unit did not contain naturalness, solitude, or outstanding opportunities for primitive and unconfined recreation. The unit did contain supplemental values for scenery, but was ultimately found to not have wilderness character.

The inventory of Alternative C determined that the transmission line would cross the Smyth Creek WIM unit. The WIM unit boundary is almost identical to the original inventory subunit (2-23HH), which was part of the larger Stonehouse Unit (2-23) identified in the March 1980, Oregon and Washington Wilderness Review Intensive Inventory. The current WIM unit is approximately 6,582 acres. The 1980 inventory identified land

treatments that were substantially noticeable and that the unit lacked outstanding opportunities for primitive and unconfined recreation as well as solitude. The 2006 survey noted that these land treatments remained. Both the 1980 and 2006 analyses concluded that the Smyth Creek unit lacks wilderness characteristics. Alternative C does extend through additional BLM land near Lava Beds Road, which was inventoried in 1978, but was dropped from further review in 1979.

It should be noted that the Echanis Project is situated on private lands and, therefore, is not considered a Wilderness Area, WSA, or LWC, and no WSRs are situated on these private lands.

While the Project and its alternatives would not be directly located within any Wilderness Areas, WSAs, LWCs or WSRs, the Project has the potential to affect their value. BLM policy does not provide buffer zones around wilderness areas or shield them from the influence of activities on adjacent land. The fact that non-wilderness activities or uses could be seen or heard from areas within the wilderness would not, of itself, preclude such activities or uses up to the boundary of the wilderness area. When activities (such as the Proposed Action and action alternatives) are proposed, the BLM must identify the specific impacts upon wilderness resources and upon public use of the wilderness area (BLM Manual 8560.19 *Buffer Zones and Adjacent Lands*).

### 3.13.2.1 Wild and Scenic Rivers

#### *Wild and Scenic Rivers*

##### LEGISLATION, OBJECTIVES AND VALUES

The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 USC 1271 et seq.) to preserve certain rivers with outstanding natural cultural and recreational values in a free-flowing condition for the enjoyment of present and future generations. Under the Act, rivers are classified as wild, scenic, or recreational. These categories are defined as follows:

- Wild river areas – Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- Scenic river areas – Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- Recreational river areas – Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

The Kiger Creek WSR is situated approximately 3 miles at its closest point to the Echanis Project. Other WSRs that are more than 5 miles from the Analysis Area include the Fish Creek WSR and the Donner und Blitzen WSR (Little Blitzen River). All of these rivers have received a “wild” designation. When a WSR is designated, there are three general main goals that guide management of designated river segments including, Free-Flowing Characteristics, Outstandingly Remarkable Values (ORVs), and Wild Classification.

The conservation of free-flowing characteristics assures that the river is free from man-made obstructions and impoundments such as those used for irrigation and/or hydropower. ORVs refer to the specific values in the scenic, geologic, recreational, fisheries, wildlife, cultural, and historic resources that are present within the WSR. Lastly, wild classification relates to those characteristics that support a river’s designation as being “wild.” The Kiger Creek WSR is considered wild and is generally inaccessible except by trail, with watersheds and shorelines that are primitive, and waters that are not polluted.

In general, the ORVs present within the Kiger Creek WSR consist of exceptional scenic values that include a diversity of landforms, varying vegetation patterns that change with canyon elevations, and viewsheds that are largely untouched and in a natural condition. Opportunities for primitive recreation and solitude are also present at Kiger Creek WSR along with excellent fish resources. Geologic features include a moderate to deep glaciated gorge that has exposed layers of Steens Basalt. The Kiger Creek WSR also features a variety of wildlife that includes bighorn sheep, elk, mule deer, and pronghorn antelope, in addition to unique assemblages of vegetative communities.

The Kiger Creek WSR is also situated in the Steens Mountain Wilderness. The Steens Act provided guidance for situations where management requirements differ between the Wild and Scenic Rivers Act and the Wilderness Act. The Steens Act, which is the most recent of the two statutes, directs the Secretary of the Interior to apply the more restrictive requirement in situations where both statutes address a management situation. The Secretary is provided the discretion to decide what provisions are more restrictive. In general, the protection of wilderness resources is more restrictive than those for WSRs with a Wild River designation. Furthermore, the protection of wilderness resources and character would provide adequate protection for ORVs within WSR corridors. The three WSRs closest to the Analysis Area, therefore, would be largely protected by the management principles found within the Steens Mountain Wilderness (BLM 2005).

### 3.13.2.2 Steens Mountain Wilderness Area

#### *Legislation, Management Objectives, and Values*

With the signing of the Wilderness Act of 1964 (Public Law 88-577) a process for delineating and protecting public lands that retained wilderness characteristics was established. In 2000, Congress passed the Steens Act designating the Steens Mountain Cooperative Management and Protection Area (CMPA) which included the Steens Mountain Wilderness. In addition to the Wilderness Act of 1964, the Steens Mountain Wilderness is managed according to the Federal Land Policy and Management Act (FLPMA), BLM Manuals 8560/H-8560-1 (Management of Designated Wilderness Areas), and 8561 (Wilderness Management Plans); BLM's Wilderness Management Regulations at 43 CFR Part 6300; and the specific directives contained within the Steens Act. The Steens Mountain Wilderness represents the only formally designated Wilderness Area located in close proximity to the proposed Project and its alternatives.

Wilderness values, including those present in the Steens Mountain Wilderness, are outlined in section 2(c) of the Wilderness Act and are broken into several categories including naturalness, opportunities for solitude, primitive and unconfined recreation, and supplemental values which may include values associated with ecological, geological, or other features of scientific, education, scenic, or historic importance. Naturalness refers to an area which "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable" (BLM Manual 8560). The Steens Mountain Wilderness is generally considered to be in a natural condition except for areas containing certain human-made elements (BLM 2005).

Opportunities for solitude within the Steens Mountain Wilderness are plentiful because the area features a varied and rugged topography as well as vegetated creek and canyon bottoms that enhance the experience of seclusion and remoteness. There is also an outstanding opportunity throughout the Steens Mountain Wilderness for primitive and unconfined recreation which includes hiking, backpacking, camping, horseback riding, hunting, fishing, photography, and sightseeing. Supplemental values of the Wilderness include geology, scenery, vegetation, wildlife, and historic. Management within the Wilderness is centered upon the protection of naturalness and wildness while providing for public use and primitive recreation in a manner that would leave wilderness unimpaired for future use.

The nearest point of the Steens Mountain Wilderness would be situated approximately 1.5 miles to the south of the Echanis Project. Neither the Echanis Project or any Project transmission line alternatives would bisect or cross the Steens Mountain Wilderness.

### 3.13.2.3 Wilderness Study Areas/Lands with Wilderness Characteristics

#### *Legislation, Management Objectives, and Values*

Wilderness Study Areas are managed in a manner consistent with BLM's WSA IMP (USDI 1995), FLPMA, as well as the Wilderness Act of 1964 (Public Law 85-577). Preservation of wilderness values is the "overriding consideration" of WSA management and WSAs are to be managed under the WSA IMP until Congress makes a determination regarding wilderness designation. The general standard for interim management is that land under wilderness review must be managed so as not to impair suitability for preservation as wilderness. The BLM's management policy is to continue resource uses on lands under wilderness review in a manner that maintains the area's suitability for preservation as wilderness (USDI 1995).

The initial task of identifying areas suitable for wilderness preservation in the State of Oregon has been completed as mandated in FLPMA section 603 and is documented in BLM 1989 Oregon Final Wilderness EIS and the Wilderness Study Report for Oregon (USDI 1991). As currently proposed, none of the action alternatives would be located on lands classified as a WSA or LWC. Project facilities associated with the Echanis Project and the southernmost portions of Alternative B (including the route options) and Alternative C, would be within 5 miles of five WSAs: Lower Stonehouse WSA, Stonehouse WSA, High Steens WSA, West Peak WSA, and Heath Lake WSA; and one LWC (Lower Stonehouse).

The degrees of naturalness in these WSAs range from having an outstanding natural condition (e.g., High Steens WSA) to a relatively natural condition (e.g., Lower Stonehouse WSA and LWC). The WSAs closest to the Echanis Project also offer outstanding opportunities for solitude with vegetation and topographic variation providing the principal forms of screening. Opportunities for primitive and unconfined recreation that includes day hiking, backpacking, camping, horseback riding, hunting, fishing, sightseeing, and photography are also in many cases outstanding. Special features of the WSAs and LWC include geology, botanical, vegetation, wildlife, cultural resources, and scenic qualities, and generally enhance and contribute to the wilderness values in each of the WSAs and LWC.

### 3.13.3 Environmental Consequences and Mitigation

The Proposed Action and alternatives analyzed below (including transmission line route options, design options, and access roads) would require ROW grants from the BLM and USFWS, and easements from approximately 10 to 30 property owners (depending upon the alternative) to construct transmission lines and access roads across private lands. For all action alternatives, the permanent ROW width would be 150 feet. A 40-foot wide ROW would be required on public lands to accommodate new and improved access roads.

Transmission line poles would range in height from 70 to 80 feet, with three sets of cross arms that extend approximately 10 to 11 feet horizontally. Taller poles would be erected on either side of the Blitzen Valley where the transmission line would cross the Malheur National Wildlife Refuge (MNWR). At this location, poles up to 130 feet tall would be secured to concrete footings embedded in rim rock on land administered by the BLM. The distance between the two poles would be more than 1,400 feet, allowing the line to completely span the MNWR.

The 40 to 69 wind turbine towers on the Echanis Project site would vary in height from 213 to 262 feet. The towers, including the wind rotors at the 12-o'clock position, would be approximately 415 feet tall. The exterior of the tower would have a smooth surface. Potential Project effects to values inherent to Steens Mountain Wilderness Area, WSAs, LWC, and WSRs would include construction impacts such as noise and dust from construction equipment, noise from wind turbines and transmission lines, and the visual effects from Project facilities.

The potential short- and long-term effects of the proposed Project on the Steens Mountain Wilderness Area, WSAs, LWC, and WSRs are described below. For the purposes of this analysis, short-term effects relate to construction activities for Alternative B (five months), Alternative C (six months), and the Echanis Project (9 to 12 months). Long-term effects relate to the operational effects associated with the Echanis Project and Alternatives B or Alternative C. For all of these Project components, the long-term effects would occur over the proposed 40-year Project life span.

### 3.13.3.1 Alternative A – No Action

Under the No Action Alternative, no new transmission lines, substations, interconnection stations, or the Echanis Project, would be constructed. Improvements to existing access roads would not occur and new access roads would not be constructed. No new ROW would be obtained from the BLM or USFWS, and the Echanis Project site would remain undeveloped and continue to be used for livestock grazing. Land use and development on private parcels near WSRs, Steens Mountain Wilderness Area, WSAs, and LWC would continue, consistent with Harney County zoning regulations.

### 3.13.3.2 Project Effects Common to All Action Alternatives

The potential Project effects to the Steens Mountain Wilderness Area, WSAs, LWC and WSRs would be identical for all of the action alternatives. For the purposes of this section, the Analysis Area was limited to the area within a 5-mile radius viewshed of Project facilities, which encompassed the Steens Mountain Wilderness Area, WSAs, LWC, and WSRs. This area included the portion of the transmission line route and wind turbines that were common to all alternatives. The transmission line alternatives and route options that would lie beyond the 5-mile radius were not analyzed because neither the Steens Mountain Wilderness Area or any WSAs, LWC, and WSRs would be located within 5 miles of those sections of Alternatives B and C. This section, therefore, analyzes potential Project impacts to the Steens Mountain Wilderness Area, five WSAs, one LWC, and one WSR that fall within the boundaries of the Analysis Area, as defined by the 5-mile radius viewshed (Figures 3.13-1 and 3.13-2). Figures 3.13-1 and 3.13-2 also depict areas beyond 5 miles that would have views of Project facilities. For additional descriptions of the visual effects beyond 5 miles, please see Section 3.9 Visual Resources. Also, in response to public comments concerning the potential cumulative visual effects beyond 5 miles from the Project and RFFAs to the CMPA and Steens Wilderness, additional analysis was undertaken. This information is located in Section 3.24 Cumulative Effects.

## *Wild and Scenic Rivers*

### PERMANENT EFFECTS

Under all of the action alternatives, the potential effects to WSRs would occur from the introduction of man-made structures that would impair views and generate noise during operation. Figures 3.13-1 and 3.13-2 show that the only WSR situated within the 5-mile Analysis Area is the Kiger Creek WSR. Located over 2 miles from the southern tip of the Echanis Project site, the lands situated within the Kiger Creek WSR would not be affected by Project operation noise and would not have views of operating wind turbines. In response to public comments, additional analysis was conducted after the DEIS was issued concerning Project operation noise levels. This analysis determined that noise from the Project would not exceed ambient levels within any WSRs (ambient = 26 dBA; see also Section 3.17 Noise). The noise analysis included in Section 3.17 found that construction related and operation related noise at this distance from the Project could exceed ambient levels (ambient = 26 dBA), but because of the screening topography and the distance from the noise sources, noise levels would fall below the 46 dBA level that would require mitigation for sensitive receptors. No mitigation, therefore, would be required.

Figure 3.13-1 indicates that topographic screening, namely the walls of the Kiger Gorge, would preclude views of the Echanis Project turbines from areas within the boundary of WSR designated lands. Figure 3.13-2 illustrates that 37.9 acres or 2.7 percent of the total 1,420-acre Kiger Creek WSR would have background views of the transmission line where it would cross private and public lands. Because the transmission line

would be approximately 6 miles from the Kiger Creek WSR, it would appear in the background and the effects upon views within the WSR would be low.

Because no Project facilities would be constructed within the Kiger Creek WSR, none of the Project action alternatives would impair the free-flowing characteristics of Kiger Creek or affect the scenic, geologic, recreational, fish, wildlife, vegetation and botanical, cultural, or historic ORVs specific to these WSR designated lands. Lastly, none of the action alternatives would affect the characteristics that support the designation of the Kiger Creek WSR as being “wild.”

#### TEMPORARY EFFECTS

Because of the distance of the Kiger Creek WSR from areas of construction and the presence of screening topography, temporary effects would not occur to the Kiger Creek WSR’s free-flowing characteristics, ORVs, and “wild” characteristics. As indicated in Section 3.17 Noise, construction-related noise levels could potentially rise above ambient levels, but due to the presence of screening topography and the distance between potential noise sources and the WSR, these effects would not require mitigation. In addition, Figures 3.13-1 and 3.13-2 indicate that screening topography would preclude views of construction-related activities.

### *Steens Mountain Wilderness Area*

#### PERMANENT EFFECTS

##### NATURALNESS

The Steens Mountain Wilderness Area would generally retain its natural condition. The Project would be situated approximately 1.5 miles from the Steens Mountain Wilderness. As shown in Figures 3.13-1 and 3.13-2, the Project would be visible from portions of the northernmost part of Steens Mountain Wilderness. No Project facilities, however, would be located within the Wilderness Area and thus would not affect its natural condition.

##### SOLITUDE

Opportunities for solitude within Steens Mountain Wilderness are plentiful. The area features a varied and rugged topography, including vegetated creek and canyon bottoms that enhance the experience of seclusion and remoteness. As described above, the Project would be visible from portions of the northernmost part of Steens Mountain Wilderness. In response to public comments, additional analysis was conducted after the DEIS was issued concerning Project operation noise levels. This analysis determined that noise from the Project would not exceed ambient levels within the Steens Mountain Wilderness (ambient = 26 dBA; see also Section 3.17 Noise). No mitigation, therefore, would be required. ~~Some Project operational noise could exceed ambient noise levels in the Wilderness (ambient = 26 dBA) (See Section 3.19). However, noise levels would not rise to levels that would require mitigation for sensitive receptors under OEQC standards (i.e., beyond 36 dBA).~~

This portion of Steens Mountain Wilderness is generally frequented by visitors who travel off main trails because it features steep topography, a lack of trails, and proximity to private property; therefore enhancing opportunities for solitude. Based upon the GIS viewshed analysis, approximately 668 acres (0.4 percent) of Steens Wilderness Area would have foreground to middleground views of the Echanis Project, while approximately 822 acres (0.5 percent) of the Wilderness Area would have foreground to middleground views of the transmission line (Figure 3.13-1 and Figure 3.13-2). Of the acreage noted above, approximately 470.8 acres within the Steens Mountain Wilderness would have views of both the wind turbines on the Echanis Project site as well as the transmission line. These acreage figures include areas within 5 miles of the Project facilities. Figures 3.13-1 and 3.13-2 also depict areas beyond 5 miles that would have views of Project facilities. For additional descriptions of the visual effects beyond 5 miles, please see Section 3.9 Visual Resources. In response to public comments concerning the cumulative visual effects beyond 5 miles from the Project and RFFAs to the CMPA and Steens Wilderness, additional analysis was undertaken. This

information is located in Section 3.24 Cumulative Effects. Opportunities for solitude on those parts of the Steens Mountain Wilderness that would have views of the Project would be diminished. This reduction in opportunities would not change the Steens Mountain Wilderness designation on the affected lands.

#### PRIMITIVE AND UNCONFINED RECREATION

Access to primitive and unconfined recreation would not be affected by Project construction or operation. No road closures are planned for the Echanis Project that would prevent the public from accessing recreation areas. In response to public comments, additional analysis was conducted after the DEIS was issued concerning Project operation noise levels. This analysis determined that noise from the Project would not exceed ambient levels within the Steens Mountain Wilderness (ambient = 26 dBA; see also Section 3.17 Noise). No mitigation, therefore, would be required. ~~During Project operation, noise generated by the wind turbines could potentially rise above the ambient noise levels within the northeastern most portion of the Steens Mountain Wilderness. The ambient noise level throughout the Analysis Area is assumed to be 26 decibels (dBA) and the level where mitigation is required for sensitive receptors is 36 dBA. Due to distance from the noise source and changes in topography, noise levels within the Steens Mountain Wilderness would not rise to levels that would require mitigation for sensitive receptors (see Section 3.17).~~ Project construction and operation would be visible from the Steens Mountain Wilderness, but the visibility of these Project activities would not diminish or restrict opportunities for primitive and unconfined recreation.

#### SUPPLEMENTAL VALUES

No effects to supplemental values embodied within the Steens Mountain Wilderness are anticipated. The 1.5-mile distance from the southernmost turbine of the Echanis Project to the boundary of the Wilderness Area precludes the possibility of effects to the unique geology of the Wilderness Area. The Project would affect the scenery that is located outside of the Wilderness Area, but would not affect the scenery within the Wilderness Area itself. Effects to vegetation, habitat, and wildlife are anticipated in the Analysis Area, but not within the Wilderness Area (see Section 3.5 Wildlife). The potential for effects to historic properties exists within the Analysis Area, but not within Steens Mountain Wilderness (see Section 3.10 Cultural Resources).

#### TEMPORARY EFFECTS

Temporary construction effects to wilderness area values are not expected. The naturalness of the Steens Mountain Wilderness would not be affected because no Project facilities would be located on Wilderness Area properties. The northeastern most portion of the Wilderness Area would have limited views of the construction of the Project, but due to the steep topography, limited access routes, and proximity to private property, effects to solitude are not expected. Solitude within the Wilderness Area would not be affected by construction related noise, which is not expected to rise above ambient levels within the Wilderness Area. No roads are expected to be closed during Project construction, thus there would be no effects to primitive and unconfined recreation. Lastly, effects to supplemental values of Steens Mountain Wilderness from Project construction are not anticipated.

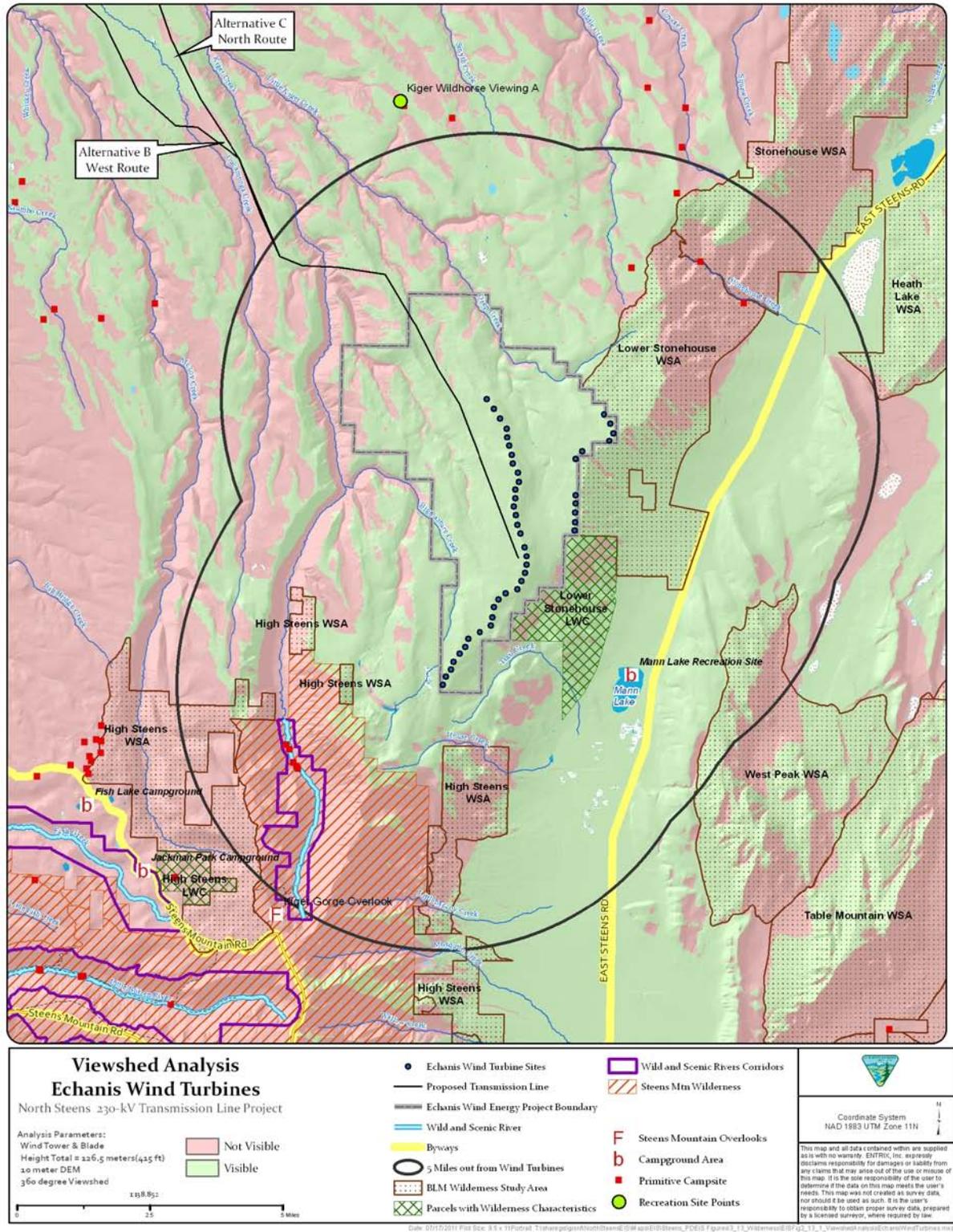


Figure 3.13-1 Echanis Project Viewshed Analysis.

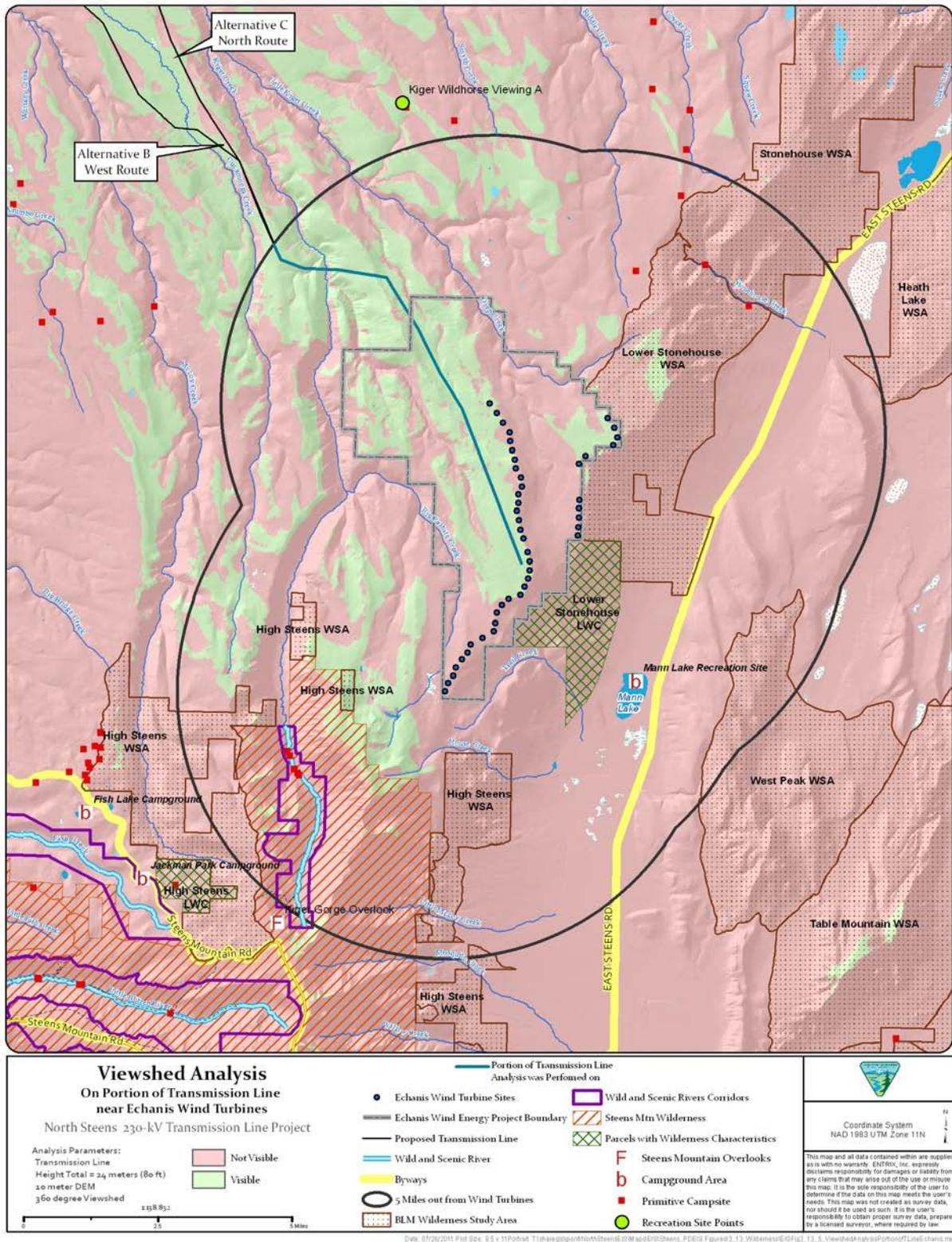


Figure 3.13-2 Transmission Line Viewshed Analysis.

## Wilderness Study Areas/Lands with Wilderness Characteristics

### PERMANENT EFFECTS

#### NATURALNESS

The High Steens WSA, Lower Stonehouse WSA, Stonehouse WSA, Heath Lake WSA, and West Peak WSA and Lower Stonehouse LWC are all located within a 5-mile radius of the Analysis Area. In general, these WSAs and LWC would retain their natural condition; existing manmade intrusions are minimal and only modestly noticeable. Project features on the Echanis Project site would be visible from portions of all five of the WSAs and the one LWC. Wind turbines would be located within a few hundred meters of Lower Stonehouse WSA, about 0.5 mile from High Steens WSA, about 3.0 miles from West Peak WSA, 4.0 miles from Stonehouse WSA, 4.5 miles from Heath Lake WSA and approximately 656 feet (200 meters) from Lower Stonehouse LWC. The wind turbines would be most visible from the Lower Stonehouse WSA and Lower Stonehouse LWC, which abut the eastern boundary of the Echanis Project site. No Project facilities would be constructed within any of the WSAs or LWC and, thus, all of the WSAs and LWC would retain their naturalness values.

#### SOLITUDE

Opportunities for solitude within four of the five WSAs (with the Lower Stonehouse WSA and LWC as the exception) are generally plentiful because the area features a varied and rugged topography, as well as vegetated creek and canyon bottoms, that enhance the experience of seclusion and remoteness. Because of the distance from wind turbines and the beneficial effect of topographic screening, noise from the Project operations would not exceed ambient noise levels in the West Peak WSA, Heath Lake WSA, Stonehouse WSA, or High Steens WSA (see Section 3.17 Noise). ~~Noise would exceed ambient noise levels in the High Steens WSA, but would be below state standards that require mitigation (below 36 dBA).~~ Noise levels in the Lower Stonehouse WSA and LWC, would exceed ambient levels ~~and OEQC standards~~, due to the close proximity of the wind turbines but would not exceed OEQC standards (see Section 3.17 Noise). It should be noted that the December 1989 Oregon Wilderness EIS states that the Lower Stonehouse WSA would support only a limited number of users. The effects to solitude have been diminished further since the 1989 Wilderness EIS, from past wildland fires and upgrading of the East Steens Road. A majority of the eastern portion of the WSA can be seen from the East Steens Road.

Noise at the Lower Stonehouse WSA and LWC would further diminish the already limited opportunities for solitude, making it difficult for a visitor to find seclusion and isolation from the developed world along the western margins of each parcel. The effect on a visitor's desired experience would vary with each individual. For some visitors who travel off of the main trails, the disruption to quiet and solitude would be short-term and fleeting as they move through the area. There are no improved recreational areas in the Lower Stonehouse WSA and LWC and, therefore, long-term effects would not occur to visitors. Exhibit B to the Harney County Conditional Use Permit (20070853) issued to CEP for the Echanis Project on April 18, 2007 included a requirement that the Project comply with applicable noise standards. This requirement would apply to the noise levels on the Lower Stonehouse WSA and LWC, as described above.

As shown in Figures 3.13-1 and 3.13-2, the Project would be visible from within all five of the WSAs and the LWC. Table 3.13-1 reflects the respective acreages of areas within the five WSAs and one LWC that would have views of the Project in the foreground to middleground area. Notable visual effects would occur within the West Peak WSA, Lower Stonehouse WSA and LWC, and High Steens WSA. The visibility of wind turbines from these three WSAs and one LWC would diminish opportunities for solitude, making it less likely for a visitor traveling through these areas to find total seclusion and isolation from the developed world.

**Table 3.13-1 Acres of WSAs and LWCs with Views of the Echanis Project Wind Turbines and Transmission Lines Within 5 miles of Project Facilities**

Names of WSA	Acres of WSA with Views of Wind Turbines (% of total WSA)	Acres of WSAs with Views of Transmission Lines (% of total WSA)
Heath Lake WSA	64.7 (0.3%)	0.0
High Steens WSA	924.2 (6.6%)	183.0 (1.3%)
Lower Stonehouse WSA	4,646.1 (62.4%)	342.5 (4.6%)
Stonehouse WSA	765.6 (3.4%)	0.0
West Peak WSA	1,261.5 (14.7%)	0.0
Lower Stonehouse LWC	1,667.2 (76.6%)	0.0

Assumptions: 10 DEM; wind tower and blade height total = 126 meters (415 ft); transmission tower heights = 24 meters (80 ft); 360 degree viewshed. No vegetation assumed. For effects on views beyond 5 miles, please see Section 3.9 Visual Resources.

**PRIMITIVE AND UNCONFINED RECREATION**

Primitive and Unconfined Recreation is contingent upon nonmotorized and undeveloped types of outdoor recreation activities and generally refers to wilderness recreation opportunities such as nature study, hiking, photography, backpacking, fishing, hunting, and other related activities. As currently proposed, the Echanis Project does not propose closure of any roads that would affect existing opportunities for primitive and unconfined recreation in any of the WSAs and LWC. During Project operation, noise from wind turbines would exceed ambient levels and OEQC standards within the western ~~southern~~ portion of the Lower Stonehouse WSA and LWC and would require mitigation for sensitive receptors (if they exist). In response to comments on the DEIS, the BLM reviewed additional information supplied by CEP from Siemans (wind turbine manufacturers) concerning noise generated by the turbine models to be used for this Project. Based upon the specifications of these turbines, noise modeling, as displayed in Figure 3.13-3 shows the noise ISO bands for the 55, 50, 45, and 40 dbA levels. As shown in that figure, noise levels would be at background levels north and west of the Echanis Project site. Outside of the east and southeast Project boundaries the noise levels would reach 40 to 45 dbA in the Lower Stonehouse WSA and the 40 dbA in the Lower Stonehouse LWC. Outside of the southwest boundary noise levels would range from 40 to 50 dbA, but this would occur on private lands. While the threshold for mitigation for sensitive receptors is for noise above 36 dBA, the Lower Stonehouse WSA and LWC do not appear to be frequented by recreators and they are not easily accessible by road or trail. Sensitive receptors typically consist of recreational sites, residences, businesses, etc. that would be sensitive to long term exposure to noise. Due to the lack of recreational opportunities and minimal access no effects to sensitive receptors situated within the western margins of the Lower Stonehouse WSA and LWC are anticipated. This analysis also revealed that noise generated by the wind turbines would not exceed ambient levels in the High Steens WSA. Project operation noise that extended into the High Steens WSA would also exceed ambient levels but would not require mitigation (see Section 3.17) because noise levels would not exceed the threshold for mitigation for sensitive receptors, as noted in Section 3.17 (i.e., above 36 dBA). Excessive noise would diminish opportunities for primitive and unconfined recreation in the Lower Stonehouse WSA and LWC. Primitive campsites situated along Stonehouse Creek would not be affected by noise effects, because of their distance (about 3 miles) from the turbines and their sheltered position within a canyon.

To minimize the effects of noise upon potential opportunities for primitive and unconfined recreation in the Lower Stonehouse WSA and LWC, the Applicant would comply with the conditions of approval related to noise as set forth in Exhibit B to the Harney County Conditional Use Permit No. 07-14 issued on April 18, 2007, and revised May 21, 2008. These conditions include provisions that would reduce the effects to the WSAs/LWC. These conditions require operating the Project so that noise does not exceed allowable

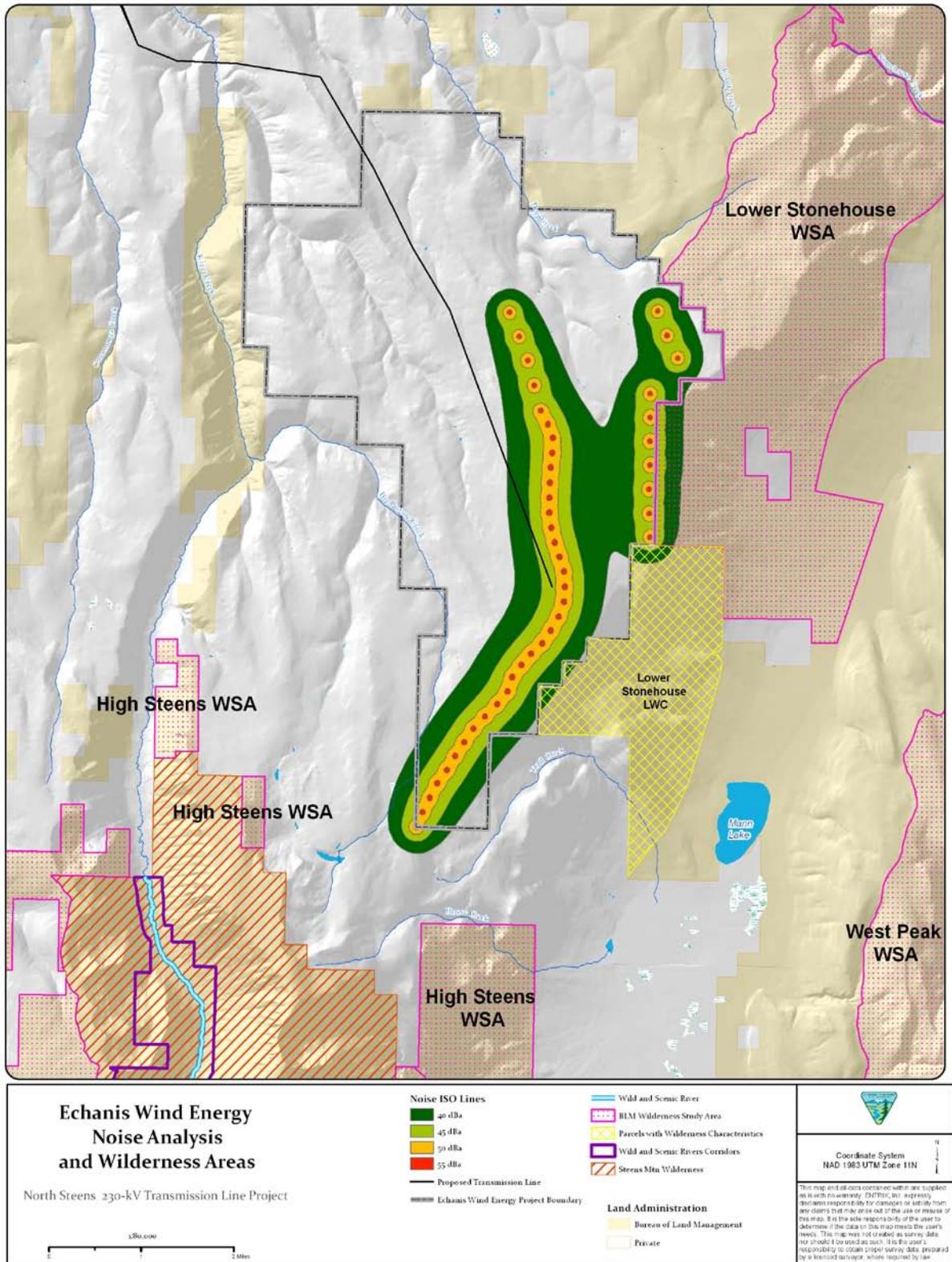


Figure 3.13-3 Echanis Wind Energy Noise Analysis and Wilderness Areas.

statistical noise levels in any one hour, as measured at off-site sensitive receptors, under applicable OEQC noise standards. Additional mitigation is described later in this section.

As illustrated in Figures 3.13-1 and 3.13-2, the Project would be visible from within all five of the WSAs and one LWC. Project visibility, however, would not affect the opportunities for primitive and unconfined recreation within the WSAs and LWC. Opportunities for primitive and unconfined recreation would still exist in all WSAs and LWC and no Project-related facilities would visibly obstruct, preclude or impair access to these forms of recreation.

### SUPPLEMENTAL VALUES

In general, supplemental wilderness values present in the five WSAs and LWC include geology, botanical, vegetation, wildlife, cultural resources, and scenic qualities. Each of these values generally enhances and contributes to each of the WSAs wilderness values. The east rim of Steens Mountain, which is situated within the Lower Stonehouse WSA and LWC, High Steens WSA, and Stonehouse WSA, provides spectacular scenic values with views of the surrounding area, including Alvord Basin and Sheepshead Mountains. The views atop the rim and looking east would not be affected. West facing views would be affected by the close proximity of the wind turbines on the Echanis Project site, particularly in the Lower Stonehouse WSA and LWC.

Due to the proximity of the Project to the Lower Stonehouse WSA and LWC, there would be effects to scenery that lie just beyond the LWC and WSA's western border on private property. To minimize the effects to the scenic values that lie beyond the Lower Stonehouse LWC and WSA's western border, the Applicant would comply with the conditions of approval for visual resources as set forth in Exhibit B to the Harney County Conditional Use Permit No. 07-14 issued on April 18, 2007, and revised on May 21, 2008. These conditions include coloring exterior components of the wind turbines so that they are off-white or light gray for the blades, towers, and nacelles and using flat, semi-gloss, or galvanized finishes to minimize the glare and reduce visibility. The conditions also require operating the Project so that noise does not exceed allowable statistical noise levels in any one hour, as measured at off-site sensitive receptors, under applicable OEQC noise standards, and using hooded site lighting to minimize light during evening hours (not including lights, as required by the FAA).

The High Steens WSA, West Peak WSA, Heath Lake WSA, and Stonehouse WSA would have views of the Project. The areas that would have views of the Project are not served by any BLM-designated trails and, therefore, would only affect visitors who recreate off main trails or who use cattle trails. The Project, therefore, would affect the scenic characteristics that extend beyond the boundaries of these WSAs. Effects would likely occur to vegetation, habitat, and wildlife in the Analysis Area, but not within any of the WSAs (see Section 3.5 Wildlife). The potential for effects to historic properties exists within the Analysis Area, but not within the WSAs (see Section 3.10 Cultural Resources).

### TEMPORARY EFFECTS

Temporary construction effects to wilderness values are only expected within the Lower Stonehouse WSA and LWC and High Steens WSA, which are located immediately east of a proposed string of turbines on the Echanis Project site and about 0.5 mile south of the southernmost turbine, respectively. The naturalness of these two WSAs and the one LWC would not be affected because no Project-related construction would occur on WSA and LWC properties, thereby not affecting the natural condition of these areas.

The Lower Stonehouse WSA and LWC would have unobstructed views of Project-related construction activities and would be subject to Project-related noise in excess of the ambient noise levels (i.e., above 26 dBA) (see Section 3.17 Noise). Excessive noise would diminish the opportunities for solitude, making it difficult for a visitor to find seclusion and isolation from the developed world. In addition, periodic maintenance activities that would occur along the string of turbines closest to the Stonehouse WSA could also affect the experiences of solitude within the Stonehouse WSA. The effects on a visitor's desired experience

would vary with each individual. For some visitors, the disruption of quiet and solitude would be short-term and fleeting as they move through the area. The effect would be greater for visitors who stay in the affected area for a longer period.

Opportunities for primitive and unconfined recreation within the Lower Stonehouse WSA and LWC as well as the High Steens WSA would be affected by Project construction noise levels. To minimize the effects of noise, the Applicant would comply with the conditions of approval for noise as set forth in Exhibit B to the Harney County Conditional Use Permit No. 07-14 issued on April 18, 2007, and revised on May 21, 2008. These conditions include a requirement for operating the Project so that noise does not exceed allowable statistical noise levels in any one hour, as measured at off-site sensitive receptors, under applicable OEQC noise standards.

Primitive campsites situated along Stonehouse Creek would not be affected by noise because of their distance (about 3 miles) from the turbines and their sheltered position within a canyon. No roads would be closed during Project construction and, thus, there would be no limits to access of primitive and unconfined recreation. The Project's temporary effects caused by construction, construction-related activities, and maintenance would not affect the unique geology of the LWC or any of the WSAs, because there would be no construction-related activities within the LWC and WSAs.

The Project's construction would affect the scenery outside of the High Steens WSA and Lower Stonehouse WSA and LWC, but would not affect the scenery within any of the WSAs or LWC. To minimize the effects to wilderness values, the Applicant would comply with the conditions of approval for visual resources as set forth in Exhibit B to the Harney County Conditional Use Permit No. 07-14 issued on April 18, 2007, and revised on May 21, 2008. These conditions include coloring exterior components of the wind turbines so that they are off-white or light gray for the blades, towers, and nacelles, and using flat, semi-gloss, or galvanized finishes to minimize the glare and reduce visibility. The conditions also require using hooded site lighting to minimize light during evening hours (not including lights, as required by the FAA). Construction would affect vegetation, habitat, and wildlife in the Analysis Area, but not within the WSAs and LWC (see Section 3.5). Historic properties could be affected within the Analysis Area, but not within the WSAs and LWC (see Section 3.10).

#### MITIGATION

While PDFs and BMPs listed in Appendix A (A.1.8 and A.3.8) would reduce Project effects, long-term noise and visual changes could affect opportunities for solitude in the WSAs and LWC as well as the Steens Mountain Wilderness in addition to primitive and unconfined recreation in the Lower Stonehouse WSA and LWC. While visitors to the area would largely be transitory and recreationists would likely seek alternative areas to experience the wilderness values of solitude and primitive and unconfined recreation, additional potential mitigation could further minimize these effects. Potential mitigation measures could include:

- shifting the turbine layout to the north and west approximately 0.25 to 0.5 mile, to a lower elevation, thus reducing the visibility of the turbines for the Steens Mountain Wilderness, WSAs, and LWCs. This measure would also reduce noise levels to ambient levels for the Lower Stone House WSA and LWC;
- banning commercial messages or symbols (such as logos), trademarks, and messages on turbines towers, and/or ancillary structures; and
- developing aesthetic offsets where corrective or ameliorative actions are needed to improve the existing condition. Examples could include reclaiming unnecessary roads in the area, cleanup of illegal dumps or trash, or rehabilitation of existing erosion or disturbed areas.

No other potential mitigation measures were identified through a selective analysis of wind energy environmental impact statements for projects involving federal lands, including the *Wind Energy*

Development Programmatic EIS (BLM 2005) and West Butte Wind Power Right of Way EIS (BLM 2011). The implementation of these measures would be beyond BLM's direct jurisdiction, because the Echanis Wind Energy Project would be located on private land.

### 3.13.3.3 Light Pollution and Glare

While the 1989 Oregon Wilderness EIS does not specifically identify the nighttime sky as a characteristic of the Steens Mountain Wilderness, WSAs, or WSRs in the Analysis Area, the lack of human-made light in the area make it an ideal location for observing the nighttime sky. Some visitors come to the area to engage in stargazing activities. The Project could affect these activities. The effects from Project-related light pollution and glare are discussed in more detail in Section 3.9 Visual Resources.

### 3.13.3.4 Residual Effects after Mitigation

Even with the potential mitigation measures, the Lower Stonehouse WSA and LWC would likely still have unobstructed views of Project-related construction activities and would be subject to Project-related noise in excess of ambient noise levels. In addition, maintenance activities for turbines could affect the experiences of solitude in this area. Residual effects that would last at least as long as the life of the Project (an expected 40 years) would include effects on a visitor's desired experience. For some visitors, the disruption of quiet and solitude would be short-term and fleeting as they moved through the area. The effect would be greater for visitors who stay in the affected area for a longer period.

### 3.13.3.5 Summary Comparison of Alternatives

The effects upon the Wilderness Area, WSAs, WSRs, and LWC from development of the Echanis Project and each transmission line alternative are summarized in Table 3.13-2.

**Table 3.13-2 Summary of Effects for the Steens Mountain Wilderness Area, Wilderness Study Areas, and Wild and Scenic Rivers**

Alternative A – No Action	Alternative B			Alternative C – North Route (Preferred Alternative)	
	Echanis Wind Energy Project	West Route – Proposed Action	S. Diamond Lane Route Option		Hog Wallow Route Option
<p>No new transmission lines, substations, interconnection stations, or the Echanis Wind Energy Project, would be constructed.</p> <p>Improvements to existing access roads would not be needed and new access roads would not be constructed.</p> <p>No new ROW would be obtained from the BLM or USFWS, and the Echanis Project site would remain undeveloped and continue to be used for livestock grazing.</p> <p>Land use and development on private parcels near the WSRs, the Steens Mountain Wilderness Area, LWC, and WSAs would continue consistent with Harney County zoning regulations.</p>	<p>The Project is situated approximately 1.5 miles from the Steens Mountain Wilderness, and approximately 668 acres (0.4%) of the Steens Wilderness Area would have fore- to middle-ground views of the Project where opportunities for solitude would be diminished.</p> <p>No Project facilities would be located within the Steens Mountain Wilderness.</p> <p>During construction, the northeastern most portion of the Wilderness Area would have limited views of construction of the Project, but due to the steep topography, limited access routes, and proximity to private property, effects to solitude are not expected.</p> <p>Wind turbines would be located within a few hundred meters of the Lower Stonehouse <u>WSA and Lower Stonehouse LWC</u>, about 0.5 mile from the High Steens WSA, 3.0 miles from the West Peak WSA, 4.0 miles from the Stonehouse WSA, and 4.5 miles from the Heath Lake WSA. Project features would be visible from portions of all five of these WSAs.</p> <p>Opportunities for primitive and unconfined recreation would still exist in all WSAs, no facilities would impair access to these forms of recreation, and no Project facilities would be constructed within any WSAs <u>or LWC</u> so that all would retain their naturalness values.</p> <p>During operations, noise from wind turbines would exceed ambient levels within the southern portion of the Lower Stonehouse WSA <u>and LWC</u>, and would diminish opportunities for primitive and unconfined recreation.</p> <p>During construction, the Lower Stonehouse WSA <u>and LWC</u> would have unobstructed views of Project-related construction activities and would be subject to Project-related noise in excess of ambient noise levels. In addition, maintenance activities for turbines could affect experiences of solitude in this area.</p>	<p>Approximately 37.9 acres or 2.7% of the total 1,420-acre Kiger Creek WSR would have background views of the transmission line where it would cross private and public lands, but effects would be minimal.</p> <p>No Wilderness Areas, WSAs, LWC, and WSR's are located within 5 miles of the northern portions of the transmission line alternatives located to the north of the Analysis Area. However, one Wilderness Area, five WSAs, <u>one LWC</u>, and one WSR do fall within the boundaries of the Analysis Area, as defined by the 5-mile radius viewshed.</p> <p>Approximately 822 acres (0.5%) of the Wilderness Area would have foreground to middleground views of the transmission line.</p> <p>Opportunities for solitude on those parts of the Steens Mountain Wilderness that would have views of the Project would be diminished.</p> <p>No Project facilities would be located within the Steens Mountain Wilderness.</p> <p>Opportunities for primitive and unconfined recreation would still exist in all WSAs, no facilities would impair access to these forms of recreation, and no Project facilities would be constructed within any WSAs so that all would retain their naturalness values.</p>	<p>Project effects to the Steens Mountain Wilderness Area, WSAs, LWC, and WSRs would be the same as for the Alternative B – West Route.</p>	<p>Project effects to the Steens Mountain Wilderness Area, WSAs, LWC, and WSRs would be the same as for the Alternative B – West Route.</p>	<p>Project effects to the Steens Mountain Wilderness Area, WSAs, LWC, and WSRs would be the same as for the Alternative B – West Route.</p>

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