

**EXHIBIT I**

**SOILS**

OAR 345-021-0010(1)(i)

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## I.1 INTRODUCTION

**OAR 345-021-0010(1)(i)** *Information from reasonably available sources regarding soil conditions and uses of the site and vicinity, providing evidence to support findings by the Council as required by OAR 345-022-0022, including:*

Response: The evidence provided in this Exhibit demonstrates that the requirements specified in OAR 345-022-0022 have been met, because the Biglow Canyon Wind Farm Facility (Facility) will not result in significant adverse impacts to soils. The potential impacts from erosion will be minimal, and are addressed through erosion control measures required by the National Pollution Discharge Elimination System (NPDES) 1200-C construction permit. A 1200-C permit application will be submitted to ODE and DEQ in October, 2005, and incorporated at that time into this ASC. The Facility will not cause the deposition of salts or chemicals, land application of effluent, or chemical spills.

## I.2 IDENTIFICATION AND DESCRIPTION OF SOIL TYPES

**OAR-345-021-0010(1)(i)(A)** *Identification and description of the major soil types at the site and its vicinity;*

Response: The near-surface soils at the Facility site and vicinity were identified according to the Natural Resource Conservation Survey (NRCS) Soil Survey of Sherman County, Oregon (Macdonald et al., 1999). The Soil Survey of Sherman County, Oregon, includes both general and detailed maps and descriptions of the major soil types (general soil units) and specific soil series that make up the soils of Sherman County and the Facility area.

A generalized soil series map showing the major soil units for the Facility area is provided in Figure I-1. Each of the general soil units includes a number of specific soil series, which are mapped and described at a greater level of detail, but share relatively similar spatial coverage and engineering properties as the more general soil unit. Descriptions of the general soil series units that underlie the Facility area are provided in the following paragraphs.<sup>1</sup>

Anders – The Anders series consists of moderately deep, well-drained soils formed in loess over basalt. Anders soils are on plateaus, benches, and the channeled scablands. Slopes are 0 to 35 percent. The surface layer is dark grayish brown silt loam; the subsurface layer is very dark grayish brown to dark brown. Basalt is typically at depth 27 inches, but ranges from 20 to 40 inches. Permeability of the Anders soil is moderate, with slow to rapid runoff. Anders soils are used for the production of small grain, livestock grazing, recreation, and wildlife habitat. Native vegetation is bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass.

<sup>1</sup> To simplify the description of the various soil units underlying the Facility area (and the map shown in Figure I-1), specific soil series units that share relatively similar spatial coverage and engineering properties have been combined. For example, Ritzville silt loam, 2 to 7 percent slopes, and the Ritzville silt loam, 7 to 15 percent slopes, have been combined and are identified as Ritzville silt loam in this exhibit.

Anderly—The Anderly series consists of moderately deep, well-drained soils that formed mainly in loess overlying basalt. These soils are on uplands and have slopes of 1 to 35 percent. The surface layer is dark grayish brown to very dark brown. The subsurface soils are grayish brown silt loam to very dark grayish brown, grading to brown at depth. Basalt is typically at depth 27 inches, but ranges from 20 to 40 inches. Anderly soils are well drained, with slow to rapid runoff and moderate permeability. Anderly soils are used for production of small grain, livestock grazing, recreation, and wildlife habitat. Native vegetation is bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass.

Endersby—The Endersby series consists of deep, somewhat excessively drained soils that formed in moderately coarse-textured alluvium from mixed materials, including volcanic ash and loess. These soils are in nearly level bottomlands at elevations of 200 to 1,500 feet. Surface and subsurface soils are very dark grayish brown loam, and dark brown fine sandy loam at depth. Depth to very gravelly sand or coarse-textured material is 40 to 60 inches. These somewhat excessively drained soils have slow runoff and moderately rapid permeability. Endersby soils are used primarily for forage crops. Other uses are dry and irrigated small grain, range, pasture, wildlife, and water supply. Vegetation consists of bunchgrasses and forbs.

Lickskillet—The Lickskillet series consists of shallow, well-drained soils that formed in stony colluvium consisting of loess, rock fragments, and residuum weathered from basalt and rhyolite. Lickskillet soils are on uplands and have slopes of 0 to 120 percent; 1 to 5 percent of the surface typically is covered with stones. The surface layer is dark grayish brown, very gravelly loam about 6 inches thick. The subsoil is brown, very gravelly loam about 12 inches thick. Basalt is typically at a depth of 18 inches, but ranges from 12 to 20 inches. Permeability of the Lickskillet soil is moderate with rapid runoff. Most of the soil is used for livestock grazing. Other uses include watershed, recreation, and wildlife habitat. Vegetation is bluebunch wheatgrass, Sandberg bluegrass, Thurber needlegrass, western yarrow, and Wyoming big sagebrush.

Nansene—The Nansene series consists of deep and very deep, well-drained soils that formed in loess. Typically, the surface layer is brown silt loam about 12 inches thick. Subsurface layers are brown silt loam grading to pale brown silt loam at a depth of 60 inches or more. Nansene soils are on north slopes of uplands and have slopes of 2 to 70 percent. In some areas, depth to basalt ranges from 40 to 60 inches. Permeability of Nansene soil is moderate with rapid runoff. Nansene soils are used primarily for livestock grazing. Other uses are wildlife habitat and water supply. Vegetation is mainly Idaho fescue, Sandberg bluegrass, bluebunch wheatgrass, forbs, and shrubs.

Walla Walla—This soil unit consists of deep and very deep, well-drained soils formed in loess on hills at elevations of 200 to 2,500 feet. Slopes are 0 to 65 percent. The surface layer typically is grayish brown silt loam and the subsoil is brown and pale brown silt loam. The substratum to a depth of 60 inches or more is pale brown silt loam. An indurated hardpan has been reported at a depth of 40 to 60 inches. Walla Walla soils are well drained, with slow to rapid runoff and moderate permeability. These soils are used for dryland cropland and irrigated cropland. There is some livestock grazing. Native vegetation is bluebunch wheatgrass, Sandberg bluegrass, big bluegrass, arrowleaf balsamroot, western yarrow, and sagebrush.

Wato—The Wato series consists of very deep, well-drained soils that formed in loess over glaciofluvial deposits on uplands. They have slopes of 0 to 35 percent and are at elevations of 300 to 1,500 feet. The surface layer is very dark brown, very fine sandy loam grading to pale brown very fine sandy loam. Depth to bedrock is more than 60 inches. Wato soils are well drained, with moderately rapid permeability. These soils are used predominantly for production of grain crops. Other uses include hay, pasture, and livestock grazing. Vegetation is mainly bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, and buckwheat.

Other—Other soils identified in the Facility area are associated with Riverwash, Rock outcrop and Rock outcrop complex and Rubble land complex.

### **I.3 IDENTIFICATION AND DESCRIPTION OF LAND USES**

**OAR-345-021-0010(1)(i)(B)** *Identification and description of any land uses on the proposed site and its vicinity, such as growing crops, that require or depend on productive soils;*

Response: Most of the Facility site and its vicinity consists of private agricultural land generally used for dryland wheat production. Sections of the land have also been enrolled in the Conservation Reserve Program (CRP). The Facility will be built within approximately 25,000 acres of land in Sherman County, but permanent facilities, in the aggregate, will occupy approximately 170 acres of the property; facility construction will temporarily disturb 381 acres.

### **I.4 IDENTIFICATION AND ASSESSMENT OF IMPACTS TO SOILS**

**OAR 345-021-0010 (1)(i)(C)** *Identification and assessment of significant potential adverse impact to soils from construction, operation, and retirement of the facility, including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills;*

Response: Facility construction will temporarily disturb 381 acres and the Facility will occupy approximately 170 acres. Unavoidable impacts to soils will involve placement of parts of the Facility on 170 acres of soil. As discussed in the following paragraphs, however, other soil impacts, such as erosion, related to construction, operation, and decommissioning activities, will be limited.

Soil erosion potential at the Facility site is typically moderate to high, with the presence of existing vegetation. Because of steady, relatively high wind speeds, areas of vegetation removal could potentially expose soils to accelerated water and wind erosion until they are stabilized. Excavations for underground cables could also temporarily expose the excavated spoils to wind and water erosion during construction. These conditions will prevail for a relatively limited time period until the cables are laid, trenches are backfilled with the spoil (within 2 weeks of trenching), and the area is re-vegetated. In addition, roadway widening and turbine pad construction will require removal of surface vegetation before construction, thus exposing the soil to the potential for accelerated erosion. Permanent roads and turbine pads will be covered with gravel immediately following exposures, thereby limiting the time for wind or water erosion. Some cut slope with exposed loess could occur after construction of the roads and

turbine pads. Mitigation measures will be used in these areas to limit erosion from wind or water and are discussed here.

Facility construction will require a substantial amount of gravel for concrete and construction of access roads and associated facilities. However, based on field reconnaissance and discussions with aggregate providers in the area,<sup>2</sup> there are sufficient existing quarries in the area to provide all the aggregate needed for the Facility. Accordingly, no soil will be disturbed for the creation of new quarry sites.

Construction will require the use of heavy equipment and haul trucks to deliver aggregates, concrete, water, and similar construction supplies. See Exhibit U for a discussion of projected trips during construction. The repeated traffic of heavy machinery could cause localized soil compaction resulting in temporary loss in agricultural productivity where the trucks are forced to leave existing access roads. Potential loss in agricultural productivity caused by compaction will be temporary, however, as the areas compacted because of heavy equipment traffic will be scarified and re-vegetated as necessary after completion of construction activities. In addition, truck traffic will be limited to designated existing and improved road surfaces, whenever feasible, to limit the extent of the soil compaction.

Facility operations will have no impact on soil erosion. General Facility operation will be constrained to the gravel pad constructed at each turbine site. Each gravel pad will be large enough to permit parking and turning of maintenance or other similar vehicles. Therefore, there should be no ground disturbance during Facility operations. Some surface water could collect on the gravel surface or on structures during periods of precipitation. Drainage collection procedures will be used to capture and route this surface water to drainage ditches. In the event of decommissioning, potential erosion hazards would be similar to those occurring during construction. Soil would be exposed to accelerated soil erosion because of the lack of vegetation during the removal of turbine pads, underground cables, and roadways.

There will be no significant impacts from chemical factors during construction, operation, or retirement. There will be no cooling towers or other facilities that cause salt deposition. No liquid effluent will be produced during construction, operation, or decommissioning of the Facility. Only minimal amounts of chemicals, such as lubricating oils and cleaners for the turbines and pesticides for weed control, will be used at the Facility site. These materials are discussed further in Exhibit G. Chemicals will be stored according to applicable requirements and regulations to limit the risk of adverse effects related to chemical factors. The risk of a chemical spill is negligible and the impacts of any such spill would be limited, because of the small amounts of chemicals that will be transported to the Facility site. See Exhibit G for a discussion of precautions to be taken in handling hazardous materials, such as lubricating oils, and the equipment that will be onsite in the unlikely event of a chemical spill.

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<sup>2</sup> Information about quarries and sand and gravel mines that could provide raw materials for making concrete and serve as sources of road surfacing material is based on phone conversations and information provided by D.H. Blattner & Sons, Inc. (Nik A. Maeder, pers. comm.).

## I.5 DESCRIPTION OF PROPOSED MITIGATION MEASURES

**OAR 345-021-0010(1)(i)(D)** *A description of any measures the applicant proposes to avoid or mitigate adverse impact to soils; and*

Response: Although impacts from turbine footprints are unavoidable, impacts from Facility construction and operation will be minimized whenever possible. Rigorous reclamation measures will be implemented to restore the temporarily disturbed near-surface soils and soils disturbed by the Facility. Construction of roads, turbine foundations, and other facilities will be regulated by an erosion control plan and an NPDES 1200-C construction permit that will require best management practices to minimize possible impacts from erosion or other impacts to soils. The Facility will use existing roads whenever possible; work on the access roads will include grading and re-graveling of existing roads and construction of new roads.

Erosion control measures that will be followed during Facility construction and operation could include the following:

- Maintenance of vegetative buffer strips between the areas affected by construction activities and any receiving waters
- Installation of a sediment fence/straw bale barriers at locations shown on the plans
- Straw mulching and discing at locations adjacent to the road that have suffered impacts
- Planting of designated seed mixes at affected areas adjacent to the roads
- Creation of some construction equipment staging areas during the road work
- Installation of a sediment fence along the downslope side of these staging areas to minimize erosion

Areas affected by the construction will be seeded in the fall when there is adequate soil moisture. They also will be reseeded in the spring, if a healthy cover crop does not grow. The sediment fence, check dams, and other erosion control measures will remain in place until the affected areas have been well vegetated and the risk of erosion has been eliminated.

To the extent possible, haul truck traffic will be limited to improved road surfaces, limiting soil compaction and disturbances. Mitigation efforts to reduce impacts related to soil compaction will include scarifying and reseeding of affected areas after construction has been completed. Proper erosion control methods will be employed to limit soil loss related to water and wind action; all disturbed areas will be reclaimed at the end of construction activities.

Quarry stone or other similar materials will be used in the drainage ditches to mitigate the potential for erosion of the soil. Repair of underground cables could also be required during operations. Exposition of soils during these repairs would be localized and of short duration, and therefore the potential for erosion would be minimal. Sand bags,

straw bales, and silt fences could also be used to restrict the erosion, if periods of precipitation during repair are forecast.

Should the Facility be retired, structures will be removed to 3 feet below the ground surface and soil surfaces will be reseeded, with the exception of the improved farm roads. The retirement plan is described in Exhibit W. The decision whether to reclaim new or expanded access roads will be left to individual landowners.

Decommissioning requirements would include strict implementation of erosion control measures when soil is exposed to prevent erosion. In addition to re-vegetation requirements, these measures would include the use of silt fences, straw bales, mulching, check dams, and other similar erosion control methods.

#### **I.6 MONITORING PROGRAM**

**OAR 345-021-0010(1)(i)(E)** *The applicant's proposed monitoring program, if any, for impact to soils.*

Response: Impacts to soils by Facility construction and operation will be limited because of the mitigation efforts required by an erosion control plan and an NPDES 1200-C construction permit. Accordingly, a formal monitoring program is not merited. Visual observations will take place during construction and operation of the facilities. If problem areas are observed, mitigation and reclamation measures will be implemented and a formal monitoring program will be established in the problem areas.

#### **I.7 CONCLUSION**

Response: The foregoing evidence demonstrates that Facility construction and operation will not result in significant adverse impacts to soils. The potential for erosion during Facility construction will be minimized by adhering to an erosion control plan and an NPDES 1200-C construction permit. Further, all areas of vegetation removal will be reclaimed through reseeded of native vegetation or crops to protect against loss of soil to erosion. Facility operations will have negligible impact on soil erosion.

#### **I.8 REFERENCES**

Macdonald, Gerald D., James M. Lamkin, and Roger H. Borine. 1999. *Soil Survey of Sherman County, Oregon*. Natural Resources Conservation Service, U.S. Department of Agriculture.

Maeder, Nik A. D.H. Blattner & Sons, Avon, Minnesota. Personal communication by conference call on July 29, 2005.



## Figures

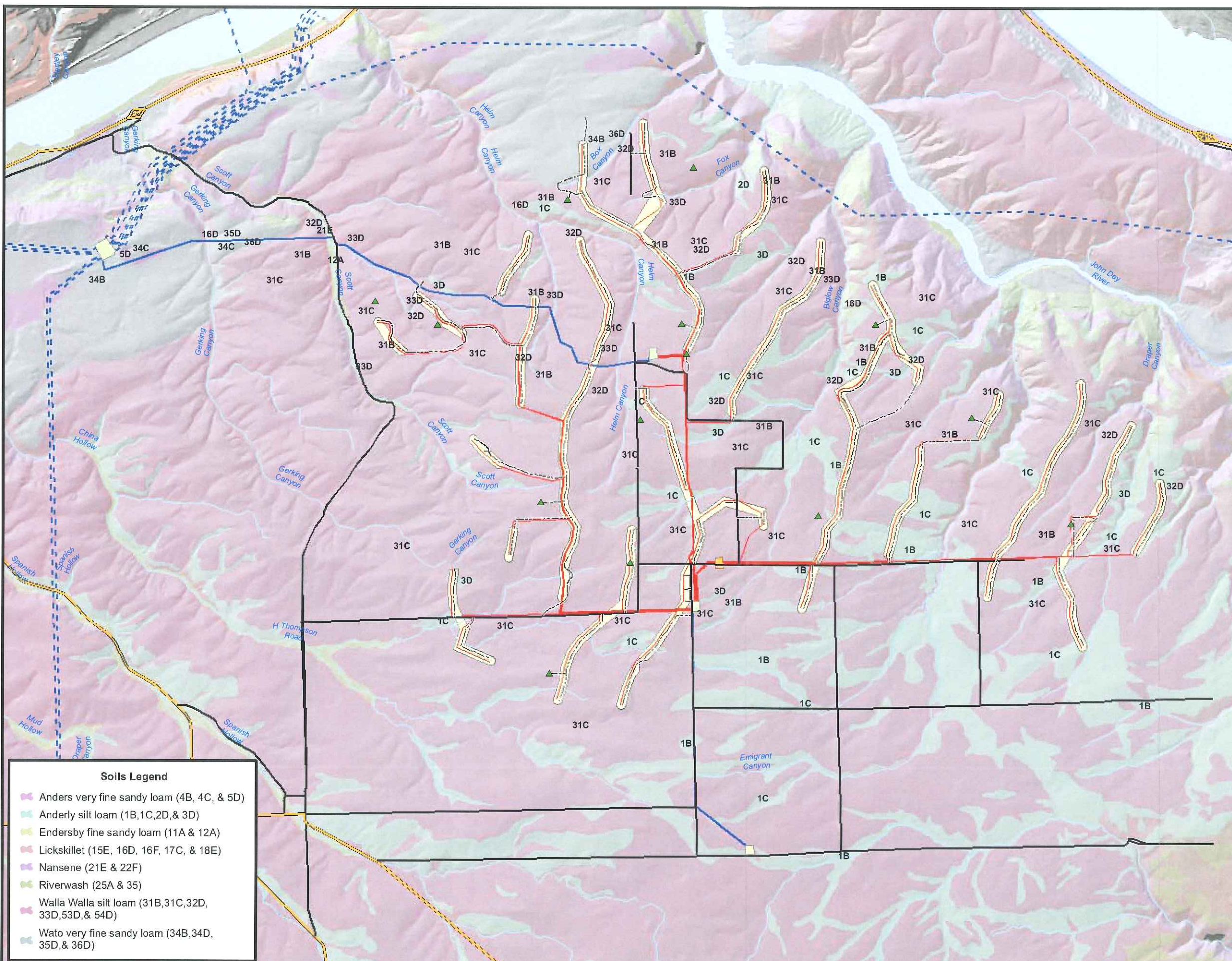


**Figure I-1**  
**Soil Survey Map**  
 Biglow Canyon Wind Farm



**Legend**

- ▲ Proposed Met Tower
- ~ Proposed Facility Access Roads
- ~ Existing Dirt Roads
- ~ Existing Roads
- ~ Existing Highways
- Proposed 34.5-kV Underground Collector System
- Proposed Transmission Line
- - Existing Transmission Line
- Proposed Turbine Corridors
- Existing Substation
- Proposed Substation / Proposed O&M Facility
- Proposed O&M Facility
- ~ Rivers and Lakes



**Soils Legend**

- Anders very fine sandy loam (4B, 4C, & 5D)
- Anderly silt loam (1B,1C,2D,& 3D)
- Endersby fine sandy loam (11A & 12A)
- Lickskillet (15E, 16D, 16F, 17C, & 18E)
- Nansene (21E & 22F)
- Riverwash (25A & 35)
- Walla Walla silt loam (31B,31C,32D, 33D,53D,& 54D)
- Wato very fine sandy loam (34B,34D, 35D, & 36D)



Source:  
 Soil Survey of Sherman County, Oregon (NRCS, 2004)

**ATTACHMENT I-1**  
**NPDES Permit Application**

Note: A completed NPDES permit application will be sent to the Oregon Department of Energy in October 2005.

**EXHIBIT J****WETLANDS**

OAR 345-021-0010(1)(j)

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**FIGURE** (*located after text*)

J-1 Jurisdictional Wetlands and Waters	
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## J.1 INTRODUCTION

**OAR 345-021-0010(1)(j)** *Information based on literature and field study, as appropriate, about significant potential impacts of the proposed facility on wetlands that are within state jurisdiction under ORS Chapter 196, including:*

Response: No impacts to wetlands are anticipated from the proposed Biglow Canyon Wind Farm Facility (Facility).

## J.2 EFFECT ON WATERS OF THE STATE AND WETLANDS

**OAR-345-021-0010(1)(j)(A)** *A determination, as defined in OAR 141-090-0020, of whether construction or operation of the proposed facility would affect any waters of the state, including wetlands, and, if so, a wetland delineation report, as defined in OAR 141-090-0020, describing how those waters would be affected;*

Response

### J.2.1 Methods

Wetlands and waters were delineated in the field after an office review of site-specific literature. U.S. Geological Survey (USGS) 7.5-minute quadrangles (USGS, 1971a, 1971b, 1976, 1987), National Wetland Inventory (NWI) maps (USFWS 1983a, 1983b, 1988, 1991), and a list of hydric soil types for northern Sherman County (NRCS, 2005) were reviewed to identify potential wetlands and waters within the proposed Facility area.

Field investigations were conducted on June 27 and 28 and August 11, 2005. The analysis area included a 400-foot buffer on either side of proposed access roads and the centerline of turbine corridors. The USGS quadrangle map indicates 22 intermittent streams crossing or adjacent to proposed turbine corridors, access roads, and the collector system. The field survey focused on the USGS-mapped intermittent streams and the one NWI-mapped wetland identified as *palustrine open water permanently flooded excavated* (POWHX). None of the soil types in the analysis area are listed as hydric. All crossings were examined in the field for indications of potential jurisdictional status under state and federal guidelines for wetlands and waters of the State or United States. Field methods followed the 1987 *US Army Corps of Engineers Wetland Delineation Manual* (USACE, 1987).

Channels were considered to be jurisdictional waters of the State or United States if they had physical characteristics such as a streambed, discernible banks, and some evidence of surface flow.<sup>1</sup> In addition, a change in plant species or species abundance was considered, along with other factors necessary to determine if the crossing constituted a "water of the State." In keeping with Oregon Department of State Lands (DSL) regulations, intermittent drainages that did not meet wetland criteria were considered

<sup>1</sup> The term "waters of the State" is used in this exhibit in accordance with the definition in Oregon Revised Statute (ORS) 196.800(14), which provides that "waters of this state" are "natural waterways, including all tidal and non-tidal bays, intermittent streams, constantly flowing streams, lakes, wetlands, and other water bodies."

jurisdictional if they drained to a fish-bearing stream. The U.S. Army Corps of Engineers (USACE) regulates intermittent streams with connectivity to navigable waters.

Wetlands are a type of aquatic resource included within the definition of “waters of the State.” Wetlands are identified in ORS 196.800(16) to be “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Field work included determining the presence of wetlands and delineating any that were present.

## **J.2.2 Results**

### **J.2.2.1 Potentially Jurisdictional Waters/Wetlands**

Based on the literature review and field work, 22 crossings of USGS-mapped drainages were found within the analysis area. Of these, eight crossings (labeled 1 through 8 on Figure J-1) of six potentially jurisdictional waters of the State of Oregon and one wetland were identified. All of the potentially jurisdictional waters are associated with ephemeral or intermittent drainages that contained no water during the site visits. The wetland identified as POWHX on the NWI was confirmed in the field.

Impacts to jurisdictional waters will be addressed in a removal-fill permit application to be submitted to ODE and DSL in October 2005 and incorporated into this ASC at that time.

### **J.2.2.2 Non-jurisdictional Areas**

Fourteen of the 22 USGS-mapped crossings investigated did not meet criteria for regulation as jurisdictional waters. The USGS typically bases its mapping of intermittent streams on topography rather than field observation. As a result of extensive land alteration from farming activities, it was difficult to determine during the field investigation whether historical drainages actually were present. To the extent they existed as mapped by USGS, former drainages appear to have been altered by land leveling and related agricultural practices. Physical characteristics indicating the presence of a jurisdictional water body were absent in all of these areas.

### **J.2.2.3 Impacts Assessment**

Table J-1 summarizes impacts to wetlands and jurisdictional waters. Impacts at five drainages (1, 3, 4, 5, and 6) will occur where the underground collector system crosses the channel. Additional impacts to the same five drainages (1, 3, 4, 5, and 6) will occur as a result of the construction of access roads. Drainages 2 and 7 will be affected solely by the widening of an existing road for access.



Table J-1 Wetland and Water Impacts

Resource ID	Resource Type	Description of Impact	Fill/Removal volume (cubic yards)
1	Water of the State	Access Road Crossing	30.2
		Underground Collector System	2.6
3	Water of the State	Underground Collector System	1.6
4	Water of the State	Underground Collector System	2.6
5	Water of the State	Access Road Crossing	39
		Underground Collector System	2.6
6	Water of the State	Access Road Crossing	21.7
		Underground Collector System	1.6
<b>Total Volume of Fill/Removal</b>			<b>101.9</b>

Impacts to drainage 8 will be avoided by siting the collector line towers outside of the drainage channel. The POWHX wetland will not be affected because the collector system will be located so as to avoid any impacts to this resource.<sup>2</sup>

### J.3 MAP OF WETLANDS UNDER STATE JURISDICTION

**OAR-345-021-0010 (1)(j)(B)** *A wetland map, as defined in OAR 141-090-0020, showing the location of any wetlands under state jurisdiction on or near the site and the source of the water for the wetlands, including any wetlands identified in the Statewide Wetland Inventory of the Division of State Lands;*

Response: A map of wetlands and other waters identified within the Facility analysis area is included as Figure J-1 of this Exhibit.

### J.4 DESCRIPTION OF EACH WETLAND IDENTIFIED

**OAR 345-021-0010(1)(j)(C)** *A description of each wetland identified in (A);*

Response: The field surveys resulted in the identification of one wetland and eight crossings of six other waters of the State within the analysis area (Figure J-1). The other potentially jurisdictional waters in the analysis area are identified on the USGS map as intermittent streams, but field study revealed them to be nonexistent or nonjurisdictional.

<sup>2</sup> Because the Facility will not cause impacts to any wetlands, no wetland delineation is provided with this application for site certificate (ASC). Subsequent to the ASC, the Applicant will submit to the Oregon Department of Energy and DSL a fill/removal permit application that includes, pursuant to OAR 141 Division 85, all required information about wetlands and other jurisdictional waters.

#### **J.4.1 Wetlands**

One wetland feature within the analysis area was identified on the NWI map as *palustrine open water permanently flooded excavated* (POWHX) (USFWS, 1983a,b) and has a hydrogeomorphic (HGM) classification of low-gradient nonalluvial riverine wetland (Brinson, 1993).

The NWI designation for this wetland was confirmed in the field. This 0.06-acre wetland is located on the east end of the analysis area, adjacent to Emigrant Springs Lane. The wetland is continuous under the road, connected by a culvert. It is likely that the wetland conditions resulted from the damming of an intermittent stream adjacent to the residence along Emigrant Springs Lane.

#### **J.4.2 Other Waters of the State**

##### **J.4.2.1 Crossings 1 and 2**

A drainage was identified at Fox Canyon. This drainage runs northeast and is a tributary of the John Day River. The drainage flows either intermittently or ephemerally. No water was observed in the channel during the site visit. Upland herbaceous species dominated the channel, which was approximately 5 feet wide and 2 feet deep. Overall, the drainage feature meets the criteria for a water of the State as defined in OAR 141-085-0010 (111)<sup>3</sup> and (84)<sup>4</sup>.

##### **J.4.2.2 Crossing 3**

A drainage was identified in an agricultural field west of Emigrant Canyon. This drainage runs northeast and is a tributary of the John Day River. The drainage flows either intermittently or ephemerally and runs along the toe of the slope adjacent to an active agricultural field. No water was observed in the channel during the site visit. Upland herbaceous species dominated the channel, which was approximately 3 feet wide and 1 foot deep. Overall, the drainage feature meets the criteria for a water of the State as defined in OAR 141-085-0010 (111) and (84).

##### **J.4.2.3 Crossing 4**

A drainage was identified along Medler Lane, east of Scott Canyon Road. This drainage runs northwest and is culverted under Medler Lane. The drainage flows either intermittently or ephemerally and is a tributary of China Hollow, which is a tributary of the Columbia River. No water was observed in the channel during the site visit. The drainage, which is approximately 5 feet wide and 2 feet deep, contained a well-defined

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<sup>3</sup> (111) "Intermittent stream" means any stream that flows during part of every year and that provides spawning, rearing, or food-producing areas for food and game fish.

<sup>4</sup> (84) "Food-producing areas for food and game fish" (as used in ORS 196.800 and these rules) are those stream reaches that flow during part of every year, which contain food and game fish, and all tributaries one stream order classification upstream. For example, if food and game fish are present in a second-order stream, then all its first-order tributaries would be classified under this definition.

channel with upland herbaceous species dominating. Overall, the drainage feature meets the criteria for a water of the State as defined in OAR 141-085-0010 (111) and (84).

#### J.4.2.4 Crossings 5 and 6

A drainage (China Hollow) was identified south of Medler Lane. This drainage runs northwest and is a tributary of the Columbia River. The drainage flows either intermittently or ephemerally. No water was observed in the channel during the site visit. Upland herbaceous species dominated the channel, which was approximately 6 feet wide and 3 feet deep. Overall, the drainage meets the criteria for a water of the State as defined in OAR 141-085-0010 (111) and (84).

#### J.4.2.5 Crossing 7

A drainage was identified just west of Scott Canyon Road and south of Herin Lane. This drainage runs northwest and flows either intermittently or ephemerally as a tributary of the Columbia River. No water was observed in the channel during the site visit. Upland herbaceous species dominated the channel, which was approximately 5 feet wide and 3 feet deep. Overall, this drainage meets the criteria for a water of the State as defined in OAR 141-085-0010 (111) and (84).

#### J.4.2.6 Crossing 8

A drainage was identified west of Helm Canyon, along Herin Lane. This drainage runs north and is a tributary of Helm Canyon, which is a tributary of the Columbia River. This drainage flows either intermittently or ephemerally. No water was observed in the channel during the site visit. Upland herbaceous species dominated the channel, which was approximately 2 feet wide and 2 feet deep. Overall, the drainage meets the criteria for a water of the State as defined in OAR 141-085-0010 (111) and (84).

### J.5 SIGNIFICANT POTENTIAL IMPACTS TO WETLANDS

**OAR 345-021-0010(1)(j)(D)** *A description of significant potential impact to each wetland, if any, including the nature and amount of material the applicant would remove from or place in each wetland and the specific locations where the applicant would remove or fill that material;*

Response: Impacts to the one identified wetland will be avoided.

The Facility will have some impact on the six identified jurisdictional waters because of the need to cross them with access roads, culverts, and underground electrical collection lines. These crossings, cumulatively, will require more than 50 cubic yards (see Table 1) of fill/removal activity and accordingly a fill/removal permit will be sought as part of the Council's siting process. Based on the field survey and characterization of these six ephemeral drainages, the roads, culverts, and underground collection lines can be installed without causing any significant impact.

## **J.6 EVIDENCE THAT FILL AND REMOVAL PERMITS CAN BE ISSUED**

**OAR 345-021-0010(1)(j)(E)** *Evidence that all required fill and removal permits of the Oregon Division of State Lands can be issued to the proposed facility in compliance with ORS 196.800 et seq., including:*

### **J.6.1 Evaluation of Factors Listed in ORS 196.825 and OAR Chapter 141 Division 85**

- (i) *A discussion and evaluation of the factors listed in ORS 196.825 and OAR chapter 141 division 85; and*

Response: ORS 196.800(5) and (12) define “fill” as “the total of deposits by artificial means equal to or exceeding 50 cubic yards or more of material at one location in any waters of this state,” and it defines “removal” as “the taking of more than 50 cubic yards or the equivalent weight in tons of material in any waters of this state in any calendar year, or the movement by artificial means of an equivalent amount of material on or within the bed of such waters, including channel relocation.”

Facility impacts to six ephemeral drainages (cumulatively) will be greater than the 50-cubic-yard permitting threshold (see Table J-1). Therefore, Orion Sherman County Wind Farm LLC (Applicant) will obtain a DSL fill and removal permit under ORS 196.825 and OAR Chapter 141, Division 85.

A discussion of the factors listed in ORS 196.825 and OAR 141 Division 85 will be contained in the fill/removal permit application to be submitted in October 2005 and incorporated into this ASC at that time.

### **J.6.2 Mitigation Measures**

- (ii) *A description of the steps the applicant proposes to mitigate impacts to wetlands;*

Response: The Facility will involve minor impacts to six jurisdictional drainages, but will avoid all impacts to wetlands. Because no impacts to wetlands will occur, proposals to mitigate impacts to wetlands are not included in the fill/removal application or this ASC.

## **J.7 MONITORING PROGRAM, IF ANY, FOR IMPACTS TO WETLANDS**

**OAR 345-021-0010(1)(j)(F)** *The applicant’s proposed monitoring program, if any, for impacts to wetlands.*

Response: There will be no wetland mitigation because no impacts to wetlands will occur. Therefore, no monitoring program is proposed.

## **J.8 REFERENCES**

Brinson, Mark. 1993. *A Hydrogeomorphic Classification for Wetlands*. Wetlands Research Program Technical Report WRP-DE-4. Prepared for U.S. Army Corp of Engineers Waterways Experiment Station. Greenville, North Carolina.

Natural Resources Conservation Service (NRCS). 2005. *Hydric Soils List, Sherman County, Oregon: Detailed Soil Map Legend*. Oregon Soil Survey Reports. State Conservationist, Portland, Oregon.

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U.S. Fish and Wildlife Service (USFWS). 1983a. *National Wetlands Inventory Map: Quinton, Oregon*.

U.S. Fish and Wildlife Service (USFWS). 1983b. *National Wetlands Inventory Map: Rufus, Oregon*.

U.S. Fish and Wildlife Service (USFWS). 1988. *National Wetlands Inventory Map: Wasco, Oregon*.

U.S. Fish and Wildlife Service (USFWS). 1991. *National Wetlands Inventory Map: Klondike, Oregon*.

U.S. Geological Survey (USGS). 1971a. *7.5-minute Topographic Quadrangle Map: Klondike, Oregon*.

U.S. Geological Survey (USGS). 1971b. *7.5-minute Topographic Quadrangle Map: Rufus, Oregon*.

U.S. Geological Survey (USGS). 1976. *7.5-minute Topographic Quadrangle Map: Quinton, Oregon*.

U.S. Geological Survey (USGS). 1987. *7.5-minute Topographic Quadrangle Map: Wasco, Oregon*.



**Figure**

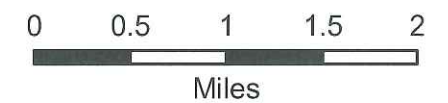
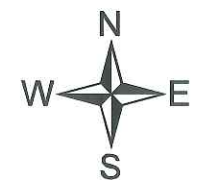
# Figure J-1 Jurisdictional Wetlands & Waters

Biglow Canyon Wind Farm

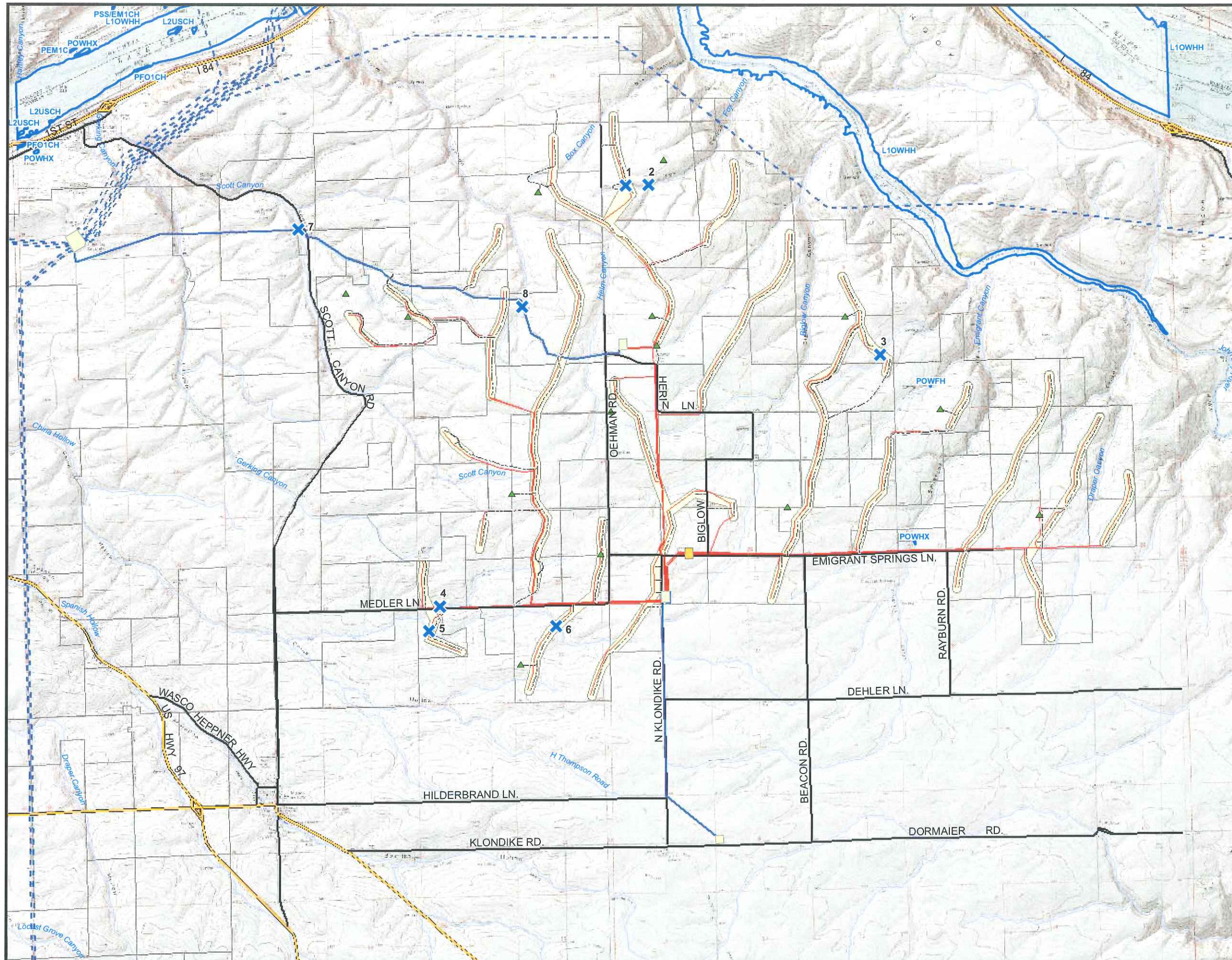


### Legend

- Potential Jurisdictional Waters
- (POWHX) NWI Wetlands
- Proposed Met Tower
- Proposed Facility Access Roads
- Existing Dirt Roads
- Existing Roads
- Existing Highways
- Proposed 34.5-kV Collector System
- Proposed Transmission Line
- Existing Transmission Line
- Proposed Turbine Corridors
- Existing Substation
- Proposed Substation / Proposed O&M Facility
- Proposed O&M Facility
- Streams



Source:  
U.S. Fish & Wildlife Service,  
National Wetlands Inventory  
USGS, 7.5-Minute Quad Maps:  
Klondike (1971), Quinton (1976),  
Rufus (1971), and Wasco (1987)





**EXHIBIT K****LAND USE**

OAR 345-021-0010(1)(k)

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**FIGURES** (*located after text*)

- K-1 Zoning Map
- K-2 Land Use Map
- K-3 Soils – Land Capability Classification

**ATTACHMENT**

- K-1 Landowner Statements Regarding Compatibility with Farming Practices



## K.1 INTRODUCTION AND LAND USE REVIEW PATH

**OAR 345-021-0010(1)(k)** *Information about the proposed facility's compliance with the statewide planning goals adopted by the Land Conservation and Development Commission, providing evidence to support a finding by the Council as required by OAR 345-022-0030. The applicant shall state whether the applicant elects to address the Council's land use standard by obtaining local land use approvals under ORS 469.504(1)(a) or by obtaining a Council determination under ORS 504(1)(b). An applicant may elect different processes for an energy facility and a related or supporting facility but may not otherwise combine the two processes. Notwithstanding OAR 345-021-0090(2), once the applicant has made an election, the applicant may not amend the application to make a different election. In this subsection, "affected local government" means a local government that has land use jurisdiction over any part of the proposed site of the facility.*

**Response:** To issue a site certificate, the Energy Facility Siting Council must find that the Biglow Canyon Wind Farm Facility (Facility) complies with the statewide land use planning goals (goals) adopted by the Land Conservation and Development Commission (LCDC) OAR 345-022-0030(1). Orion Sherman County Wind Farm LLC (Applicant) has elected to seek a Council determination of compliance under ORS 469.504(1)(b). Under this election, a finding of compliance is required when the Council determines that:

**ORS 469.504(1)(b)(A)** *The proposed facility complies with applicable substantive criteria from the affected local government's acknowledged comprehensive plan and land use regulations that are required by the statewide planning goals and in effect on the date the application is submitted, and with any Land Conservation and Development Commission administrative rules and goals and any land use statutes directly applicable to the facility under ORS 197.646(3);*

**ORS 469.504(1)(b)(B)** *For a proposed facility that does not comply with one or more of the applicable substantive criteria...the facility otherwise complies with the statewide planning goals or an exception to any applicable statewide planning goal is justified...; or*

**ORS 469.504(1)(b)(C)** *For a proposed facility that the Council decides, under sections (3) or (6), to evaluate against the statewide planning goals, the proposed facility complies with the applicable statewide planning goals or that an exception to any applicable statewide planning goal is justified... (OAR 345-022-0030(2)(b)).*

**OAR 345-021-0010(1)(k)** *requires that Exhibit K include "evidence to support a finding by the Council as required by [the Land Use Standard]."*

Exhibit K demonstrates the Facility's compliance with the applicable substantive criteria from the Sherman County (County) acknowledged comprehensive plan and land use ordinances and with LCDC administrative rules and goals and any land use statutes directly applicable to the Facility. Exhibit K also demonstrates that a reasons exception to statewide planning Goal 3, agriculture, is justified under ORS 469.504(2).

## K.2 LAND USE ANALYSIS AREA AND MAP

**OAR 345-021-0010(1)(k)(A)** *Include a map showing the comprehensive plan designations and land use zones of the facility site, all areas that may be temporarily disturbed by any activity related to the design, construction, and operation of the proposed facility and property adjacent to the site.*

Response: Figure K-1 depicts the Facility location, shows the Sherman County Comprehensive Plan (SCCP or Comprehensive Plan) designations and land use zones of the Facility site and property adjacent to the site; shows all areas of the site that might be temporarily disturbed during the design, construction, and operation of the Facility; and identifies a half-mile land use study area around the proposed Facility and all related or supporting facilities. Figure K-2 depicts actual land uses within the study area.

### **K.3 LOCAL LAND USE APPROVAL**

**OAR 345-021-0010(1)(k)(B)** *If the applicant elects to obtain local land use approvals:*

- (i) *Identify the affected local government(s) from which land use approvals will be sought;*
- (ii) *Describe the land use approvals required in order to satisfy the Council's land use standard;*
- (iii) *Describe the status of applicant's application for each land use approval; and*
- (iv) *Provide an estimate of time for issuance of local land use approvals.*

Response: OAR 345-021-0010(1)(k)(B) is not applicable. The Applicant has elected to obtain a Council determination on land use.

### **K.4 ENERGY FACILITY, RELATED AND SUPPORTING FACILITIES, AND ACCESS ROADS**

The Facility is described in Exhibit B of this application. The Facility site consists of fairly level, privately owned agricultural land, primarily in dry land wheat production (National Agricultural Statistics Service, 2002). Farming operations will occur directly adjacent to the turbines and access roads. The turbines and related or supporting facilities will be constructed and sited in a manner that minimizes disruption to existing farm operations.

Temporary impacts to agricultural land will be approximately 353 acres. Permanent impacts to agricultural land will be approximately 150 acres.

### **K.5 COUNCIL DETERMINATION ON LAND USE**

**OAR 345-021-0010 (1)(k)(C).** *If the applicant elects to obtain a Council determination on land use:*

- (i) *Identify the affected local government(s);*

Response: The Facility will be sited solely in Sherman County, which is the affected local government.

- (ii) *Identify the applicable substantive criteria from the affected local government's acknowledged comprehensive plan and land use regulations that are required by the statewide planning goals and that are in effect on the date the application is submitted and describe how the proposed facility complies with those criteria;*

Response: The proposed Energy Facility and all related and supporting facilities will be located within the Exclusive Farm Use (F-1) base zone (EFU zone); see Figure K-1.<sup>1</sup> The

<sup>1</sup> The Natural Hazards Combining District associated with Grass Valley Canyon extends slightly into an area south of Webfoot. The Facility will not be built on any identified hazard area, so the combining district does not apply.

Facility complies with the EFU zone criteria set forth in the Sherman County Zoning Ordinance (SCZO, or Zoning Ordinance) in the manner described in the following section:

**K.5.1 Applicable Local Substantive Criteria—Consistency of Three Facility Components with Applicable Zoning**

**SCZO Section 3.1—Exclusive Farm Use Zone, F-1 Zone**

Consistent with state land use statutes and the SCZO, the Facility is analytically divided into three separate uses of land: *utility facilities* (transmission lines, substations, meteorological towers, and O&M building), *commercial electric generating facilities* (the wind turbines and collector cable network), and *transportation facilities* (access and service roads). These three separate types of land use are addressed, in turn, by SCZO 3.1.2(m), 3.1.3(e)(17), and 3.1.3(f)(1) — all three of which are quoted here:

...

2. Uses Permitted. In the F-1 zone, the following uses and their accessory uses are permitted:

...

(m) Non-Commercial utility facilities necessary for private service or public service.

...

3. Conditional Uses Permitted. In an F-1 zone, the following uses are permitted when authorized in accordance with the requirements of Article 5 of this Ordinance and this Section:

...

(e) Operations conducted for the following uses:

...

17) Commercial utility facilities.

...

(f) Transportation Improvement.

1) Construction, reconstruction, or widening of highways, roads, bridges, or other transportation projects that are (1) not improvements designated in the Transportation System Plan or (2) not designed and constructed as part of a subdivision or planned development subject to site plan and/or conditional use review. Transportation projects shall comply with the Transportation System Plan and applicable standards, and shall address the following criteria...

"A. The project is designed to be compatible with existing land use and social patterns, including noise generation, safety, and zoning.

B. The project is designed to minimize unavoidable environmental impacts to identified wetlands, wildlife habitat, air and water quality, cultural resources, and scenic qualities.

C. *The project preserves or improves the safety and function of the facility through access management, traffic calming, or other design features.*

D. *The project includes provision for bicycle and pedestrian circulations as consistent with the comprehensive plan and other requirements of this ordinance."*

...

The following subsections demonstrate the compliance of each of the three Facility components with the relevant legal standards, in the following order: commercial electric generating facilities, transportation facilities, and utility facilities.

**Energy Generating Facility's Compliance with ORS 215.283(2)(g) and SCZO 3.1.3(e)(17)**

SCZO 3.1.3(e)(17) provides that "commercial utility facilities" located on EFU zoned land are permitted as conditional uses. This section implements ORS 215.283(2)(g), which provides that "commercial utility facilities for the purpose of generating power for public use by sale" are permitted subject to ORS 215.296. Both ORS 215.283(2)(g) and SCZO 3.1.3(e)(17) allow the proposed wind turbine generators as a conditional use in the County's EFU zone.<sup>2</sup> Uses that are conditionally permitted under ORS 215.283(2)(g) must comply with ORS 215.296. The demonstration of compliance follows.

Response: ORS 215.296(1) requires a use allowed under ORS 215.283(2), such as the proposed Facility, to be approved if it does not (1) force a significant change in accepted farm or forest practices on "surrounding lands" devoted to farm or forest use or (2) significantly increase the cost of accepted farm or forest practices on "surrounding lands" devoted to farm or forest use. The Council has previously found that a wind facility located in a rural, dry-land farming and grazing area can meet these statutory tests (see Stateline Wind Project and subsequent amendments to the Stateline site certificate). In the Stateline case, the owners of "surrounding lands" have not complained that the facility (built and operating since 2001) has forced a change in farming practices or increased the cost of such practices. As described in the following paragraphs, the proposed Facility meets the same tests and is not materially different from Stateline in either the facility features or the nature of farming practices on surrounding lands.

Given the self-evident lack of long- or medium-distance impacts of wind facilities on agricultural practices on surrounding lands, a logical boundary for the Facility's "surrounding lands" is lands located within the land use study area, i.e., lands within a half mile of the Facility site boundaries. Actual land uses in this area are shown in Figure K-2. Within this area, land devoted to farming is used to grow wheat or barley (National Agricultural Statistics Service, 2002). There is no forest use within this area. Very little land in this area is irrigated, rainfall is low, and soils and terrain are consistent in type. Accepted farm practices include soil preparation in the spring and fall, sowing, fertilizing, pest and weed management, and harvesting (NRCS, 1999).

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<sup>2</sup> Neither the SCZO nor the statute define the term "commercial utility facilities," but the best reading and the Council's own past practice are consistent with a definition that includes any commercial scale, grid-connected power plant, including a wind facility.

The development and operation of the Facility will have no significant impact on the continuation of these practices or on their cost (see Attachment K-1). The Facility will disturb some agricultural lands temporarily (353 acres, limited to one season of disturbance) and occupy some agricultural land permanently (150 acres). Further, development of the Facility might cause small-scale changes in agricultural practices on immediately surrounding lands: changes in harvest patterns, access to farm fields, processes for delivering and applying fertilizers and other products to crops, and the harvesting of crops. None of these are “significant,” given the primarily temporary nature of much of the disturbance and the small permanent Facility footprint in comparison to the overall acreage in agricultural production in the surrounding lands.

Ground disturbance during construction can encourage weeds that temporarily and minimally interfere with crop yields until eradicated. The development of access roads and turbine tower pads create margins in the wheat fields that can also temporarily cause the spread of weeds. In conjunction with the Sherman County Weed District, the Applicant intends to develop and implement a weed control management plan within the Facility site to minimize the growth and spread of noxious weed species in the areas in which the Facility will be built.

Upon completion of the construction of the Facility, all of the staging and laydown areas will be rehabilitated and made available for agricultural and wildlife use. Furthermore, where necessary and feasible, the Applicant will provide access across construction trenches to fields within the Facility area. The Applicant will undertake measures to avoid or mitigate impacts to soil, such as employing dust-control and erosion-control measures. The Applicant will also consult with area landowners during construction and operation of the Facility to minimize or avoid any adverse impacts to surrounding agricultural practices and to avoid any increase in farming costs caused by the construction or operation of the Facility.

To the maximum extent possible, the Applicant will use existing access roads to minimize the Facility’s impact on resource land. Some new access roads, however, will be required. These roads will not significantly adversely impact farming practices or increase farming costs, during either the construction or the use of these roads. Instead, they will provide farmers with better access to local agricultural lands. Also, during operation of the Facility, these roads will be used infrequently by Facility employees, thus producing minimal, if any, disturbance of surrounding farming practices or increase of costs.

The Facility will also not significantly increase the cost of accepted farm practices on surrounding farm land (see Attachment K-1). Although development and operation of the Facility might cause some minor change to harvesting patterns or various farming practices associated with the application of fertilizers and other products, the changes will not significantly increase the cost of farming in the surrounding area. Moreover, if there is any measurable increase in the cost of agricultural practices, it will occur on lands immediately adjacent to the Facility, which are under lease to the Applicant, and therefore the cost will be more than offset by compensatory lease payments paid to the farmers/lessors.

**New Access Roads Are Transportation Improvements and in Compliance with SCZO 3.1.3(f)(1)**

Any improvements to existing farm roads and the construction of new private roads may be conditionally permitted as “[t]ransportation [i]mprovements,” subject to compliance with the standards in SCZO section 3.1.3(f)(1)(A)-(D).

Response: None of the existing or proposed roads to be used by the Facility are designated in the County Transportation System Plan (TSP) as part of a subdivision. Regarding subsections A-D of 3.1.3(f)(1), a full demonstration of compliance is provided in Section [4.B.1]. To summarize: (1) the use of existing roads, and construction and use of the new access roads, is compatible with existing land uses and social patterns in the area, will produce minimal noise and dust impacts related to the infrequent use of the roads by facility personnel, and will comply with all applicable noise limitation regulations, (2) there are no wetlands impacted by the Facility, (3) the new access roads will not be built near any cultural resource in the Facility area and will have only minimal impact on wildlife habitat and scenic qualities, (4) because of their rural location, the new roads will not require access management, traffic congestion or calming devices, or other traffic engineering design features, and (5) no bicycle or pedestrian circulation facilities are required by the Comprehensive Plan or the SCZO, nor are any such facilities proposed as elements of the new roads.

**Related and Supporting Facilities Compliance with ORS 215.283(1)(d) and SCZO 3.1.2(m)**

The Applicant proposes the development of several related and supporting facilities that qualify as “utility facilities” under the SCZO: (1) underground and aboveground power lines to be used exclusively to collect electric power generated by the Facility and transmit it to a substation located within the Facility boundary, (2) a new electric substation within the Facility boundary that will receive power from the Facility and step up its voltage (two alternatives are proposed), (3) an overhead high-voltage transmission line to carry power from the substation to BPA’s system (3-mile and 7-mile alternatives are proposed), (4) up to 10 permanent meteorological test towers, and (5) a new O&M facility for the Energy Facility. These utility facilities are shown in Figure K-1. All of these facilities will be located on land zoned EFU by the County.

SCZO 3.1.2(m) provides that “utility facilities necessary for private service or public service” are permitted uses allowed outright in the County’s EFU zone. This section implements ORS 215.283(1)(d), which provides that “utility facilities necessary for public service” are permitted uses allowed outright in an EFU zone. A utility facility necessary for public service may be established as provided in ORS 215.275 and ORS 215.283(1)(d).

**ORS 215.275(1)** *ORS 215.275(1) provides that a utility facility established under ORS 215.283(1)(d) is necessary for public service “if the facility must be sited in an exclusive farm use zone in order to provide the service.”*

Response: The proposed Energy Facility and all of the related or supporting utility facilities must be sited on EFU zoned land in order to produce commercial quantities of



energy to the power grid in a safe and economically viable manner.<sup>3</sup> To the Applicant's knowledge, all Oregon wind energy facilities have been located on EFU land; such land seems to hold most, if not all of Oregon's commercially viable wind resource. Nor has the Applicant become aware of any meteorological information concerning significant, developable wind resources on non-EFU land in Sherman County. The only non-EFU land in the area is located in the cities of Moro, Wasco, Rufus, and Biggs Junction. None of these locations has the necessary wind resource, adequate parcels of land, or proximate transmission system necessary to build such a facility.

Given the need for locating the wind generators themselves on EFU land, there is no reasonable alternative to also locating on EFU land the related and supporting utility facilities. The electric collector cable network and transmission lines must connect the generators to each other and to BPA's transmission network, and there is no non-EFU path for such system.<sup>4</sup> The substation must be located within or near the Facility site because the voltage must be stepped up prior to transmitting it 3 or 7 miles to BPA's transmission system. The meteorological towers must of course be located on the Facility site, which is all EFU land. Finally, the O&M facility must be located reasonably near to the Facility in order to give O&M staff the chance to react quickly to operational situations and to stage maintenance that might require larger equipment. Even looking offsite, there is no nearby non-EFU land that would be a suitable location for the O&M facility.

**ORS 215.275(2)** *ORS 215.275(2) provides that to demonstrate the necessity of a utility service, an applicant must show that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone because of one or more of the following factors:*

- (i) *Technical engineering and feasibility*
- (ii) *Locational dependency of the proposed Facility (a utility facility is locationally dependent if it must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands)*
- (iii) *Lack of available urban and non-resource land*
- (iv) *Availability of existing rights of way*
- (v) *Public health and safety*
- (vi) *Other requirements of state or federal agencies*

Response: For the reasons stated in response to ORS 215.275(1), the Facility is locationally dependent [item (ii)] and there is a lack of available urban and non-resource land [item (iii)]. Any alternative site in Sherman County would involve siting the Facility on EFU land. The proposed location is the most direct route for interconnecting the Facility to the energy grid because BPA's new Klondike substation will be located within the Facility boundary adjacent to a Facility substation. There are no available

<sup>3</sup> Technically, ORS 215.275 does not apply to the wind turbine generators, which are permitted under ORS 215.283(2)(g) and the analytic question in this section therefore is, given the wind turbines' permitted location on EFU land, must the related and supporting utility facilities also be located on EFU land.

<sup>4</sup> This is true regardless of whether BPA constructs a new nearby transmission line, which itself would be located on EFU land (see Figure K-1).

urban or non-resource lands in the area on which to site a wind facility or its related and supporting utility facilities. Accordingly, there are no “reasonable alternatives” to consider on non-EFU land.

**ORS 215.275(4).** *ORS 215.275(4) provides that the owner of a utility facility approved under ORS 215.283(1)(d) must be responsible for restoring to its former condition, as nearly as possible, any agricultural land and associated improvements that are damaged or otherwise disturbed during the siting, maintenance, repair, or reconstruction of the Facility.*

Response: Once construction is complete, the Applicant will restore the staging areas to their former, pre-construction condition. The Applicant will similarly restore all areas disturbed during maintenance, repair, or reconstruction of the Facility.

**ORS 215.275(5)** *ORS 215.275(5) provides that the Council must impose clear and objective conditions on an application for a utility facility sited under ORS 215.283(1)(d) to mitigate and minimize the impacts of the proposed Facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on the surrounding farmlands.*

Response: Measures to avoid, minimize, and mitigate for impacts to farm land and farming practices are discussed throughout this exhibit. The Applicant will comply with the conditions imposed by the Council under its Land Use standard.

#### **K.5.2 Applicable Local Substantive Criteria—Provisions Applicable to All Permitted and Conditionally Permitted Uses (All Facility Components)**

The SCZO contains provisions that are applicable to all development proposals. Therefore, unlike the previous sections, which considered the Facility in its three component parts, the following demonstration of compliance considers the Facility as an undivided whole.

##### **SCZO § 3.1.4(c) – Dimensional Standards/Setback Requirements**

*In an F-1 (EFU) Zone, the minimum setback requirements shall be as follows:*

- 1) *The front and rear setbacks from the property line shall be 30 feet, except that the front yard setback from the right-of-way of an arterial or major collector or road shall be 50 feet, unless approved otherwise by the Planning Commission.*
- 2) *Each side yard setback from a property line shall be a minimum of 25 feet, and for parcels or lots involving a non-farm residential use with side yard(s) adjacent to farm lands, said adjacent side yards shall be a minimum of 50 feet, unless approved otherwise by the Planning Commission.*

Response: No new lots will be created by the Facility. All Facility structures will comply with the setback requirements set forth in SCZO 3.1.4(c). All of the wind energy generating turbines and other elements of the Facility (with the exception of underground cable and conduits) will be located at least 50 feet from all property lines. The Applicant will get authorization from Sherman County for any case that does not maintain a 50-foot setback from non-involved property lines.

**SCZO § 4.9(1) – Compliance with State and Federal Agency Rules and Regulations**

*“Approval of any use or development proposal pursuant to the provisions of this Ordinance shall require compliance with and consideration of all applicable State and Federal agency rules and regulations.”*

**Response:** The Council’s rules are designed to identify all applicable non-federally delegated permits, approvals, and regulations needed for construction of the Facility. In particular, Exhibit E identifies all of the federal, state, and local permits and approvals needed to construct the Facility. This ASC provides evidence demonstrating that construction and operation of the Facility will comply with all state and local statutes, rules, and standards. Exhibit E also will provide evidence that for federal permits, the relevant federal agencies have received or will receive the information needed to permit the Facility to comply with all applicable federal rules and regulations.

With respect to applicable federal rules and regulations, the Federal Aviation Administration (FAA) requires the Applicant to provide the FAA with a Notice of Proposed Construction or Alteration. The Applicant will file this notice with the FAA and will notify the Council as soon as the FAA’s response has been received.

The Oregon Department of Environmental Quality’s (DEQ) noise regulations apply to the Facility. As described in Exhibit X, the Facility will comply with all applicable DEQ rules and regulations related to noise generation. No noise permits are required.

As described in Exhibits E and V, the Applicant will apply for and receive a National Pollutant Discharge Elimination System (NPDES) General Construction Stormwater (1200-C) Permit before constructing the Facility. As described in Exhibits P and Q, the Applicant has consulted with the Oregon Department of Fish and Wildlife (ODFW) about potential impacts on bird and wildlife species in the Facility area, and will comply with necessary or mutually agreed upon mitigation measures related to the protection of such species. As described in Exhibit J, the applicant will apply for a removal-fill permit from the Oregon Division of State Lands.

**SCZO § 4.13 Additional Conditions to Development Proposals**

*The County may require additional conditions for development proposals.*

1. *The proposed use shall not reduce the level of service (LOS) below a D rating for the public transportation system. For developments that are likely to generate more than a V/C ratio of 75 or greater, the applicant shall provide adequate information, such as a traffic impact study or traffic counts, to demonstrate the level of impact to the surrounding road system. The developer shall be required to mitigate impacts attributable to the project.*
2. *The determination of the scope, area, and content of the traffic impact study shall be coordinated with the provider of the affected transportation facility, i.e., city, county, state.*
3. *Dedication of land for roads, transit facilities, sidewalks, bikeways, paths, or access ways shall be required where necessary to mitigate the impacts to the existing transportation system caused by the proposed use.*
4. *Construction of improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, access ways, paths, or roads that serve the proposed use where necessary to mitigate the impacts to the existing transportation system caused by the proposed use.*

Response: The Applicant will comply with all conditions of approval necessary to comply with the Zoning Ordinance and the Council’s land use standard. The Applicant addresses the transportation and access provisions in Section IV.B.1. The Facility will not reduce the level of service for public transportation below a D rating, nor will it generate a V/C ratio of 75 or greater. No land must be dedicated for transportation facilities by the Facility, and no transportation mitigation improvements are necessary.

**SCZO § 11.1 Design & Improvement Standards and Requirements, Compliance Required**

*Any land division or development and the improvements required, whether by subdivision, partitioning, creation of a street or other right of way, zoning approval, or other land development requiring approval pursuant to the provisions of this Ordinance, shall be in compliance with the design and improvement standards and requirements set forth in this Article, in any other applicable provisions of this Ordinance, in any other provisions of any other applicable County or affected City ordinance, and in any applicable provision of State statutes or administrative rules.*

Response: The Council’s rules governing the Application for Site Certificate (ASC) are designed to identify all applicable design and improvement standards, permits, approvals, and regulations needed for construction of the Facility. In particular, Exhibit E identifies all of the federal, state, and local permits and approvals needed to construct the Facility. Elsewhere in Exhibit K, all of the applicable County design standards are identified. No land division, public improvements, subdivision or partition approval, public street, other public improvement, or zone change is required in order to site the Facility. For the reasons described in Exhibit K and in the ASC, the Facility complies with this provision.

**SCZO § 11.2 Design & Improvement Standards and Requirements, Zoning or Other Land Development Permit or Approval**

*Prior to the construction, alteration, reconstruction, expansion, or change of use of any structure, lot, or parcel for which a permit or other land development approvals required by this Ordinance, a permit or approval shall be obtained from the County or the designated official.*

Response: The Council has exclusive jurisdiction to issue site certificates for energy facilities that fall under its jurisdiction, such as this proposed Facility. The Applicant has elected to seek a Council determination of compliance with the Council’s land use standard. This exhibit K demonstrates compliance with that standard. Upon the Council’s approval of a site certificate for the Facility, including a finding of compliance with the land use standard, the Council will direct the County to issue all necessary land use permits approved by the Council [see ORS 469.401(3)]. No construction, alteration, reconstruction, expansion, or change of use of any structure, lot, or parcel will be effected until the County issues those permits.

**K.5.3 Applicable Local Substantive Criteria—SCZO Section 5.2 General Conditional Use Provisions (Energy Facility, Access Roads, and Associated Equipment)**

*In determining whether or not a Conditional Use proposal shall be approved or denied, it shall be determined that the following criteria are either met or can be met through compliance with specific conditions of approval.*

1. *The proposal is compatible with the applicable provisions of the County Comprehensive Plan and applicable Policies.*
2. *The proposal is in compliance with the requirements set forth by the applicable primary Zone, by any other applicable combining zone, and other provisions of this Ordinance that are determined applicable to the subject use.*
3. *That, for a proposal requiring approval or permits from other local, state, and/or federal agencies, evidence of such approval or permit compliance is established or can be assured prior to final approval.*
4. *The proposal is in compliance with specific standards, conditions, and limitations set forth for the subject use in this Article and other specific relative standards required by this or other County Ordinance.*
5. *That no approval be granted for any use which is or is expected to be found to exceed resource or public facility carrying capacities, or for any use which is found to not be in compliance with air, water, land, and solid waste or noise pollution standards.*
6. *That no approval be granted for any use violation of this Ordinance.*

Response: Each criterion is addressed separately below.

**SCZO § 5.2.1. Compliance with Applicable Comprehensive-Plan Goals and Policies**

1. *The proposal is compatible with the applicable provisions of the County Comprehensive Plan and applicable Policies.*

Response: Comprehensive plan goals and policies generally apply to the County's planning function in general rather than to individual development applications. In the following discussion, the Applicant has identified those goals and policies that could be relevant to the ASC and has shown how the Facility complies with such goals and policies.

**SCCP § VIII Planning Process and Citizen Involvement**

*Finding I. This Plan was drafted to conform with the State-wide planning goals relating to agricultural lands (goal 3); air, water, and land resource quality (goal 6); areas subject to natural hazards (goal 7); and open spaces, scenic sites/areas, and natural resources (goal 5).*

Response: As demonstrated in this exhibit and other ASC exhibits (e.g., Exhibits H, O, P, Q, R, S, and T), the Facility complies with the cited State-wide planning goals. With respect to development on non-high-value farm land, OAR 660-033-0130(22) provides that "[a] power generation facility shall not preclude more than 20 acres from use as a commercial agricultural enterprise unless an exception is taken pursuant to OAR chapter 600, division 4." The County does not have a similar local comprehensive plan provision. Accordingly, OAR 660-033-0130(22) applies directly to this Facility. As discussed in this exhibit, the Facility will remove approximately 150 (permanent) acres from agricultural production and the Facility must obtain a Goal 3 reasons exception under the criteria set forth in ORS 469.504(2)(c). A Goal 3 reasons exception is requested and justified in section F of this exhibit.

*Goal II. To provide the opportunity for all citizens and effected [sic] agencies to participate in the planning process.*

*Policy I. All land use planning meetings shall be advertised in a general circulation newspaper and be open to the public.*

*Policy II. All effected [sic] agencies and effected [sic] landowners shall be notified by written notice of any proposed site specific land use change."*

Response: Because the Applicant has elected to seek a Council determination of compliance with the land use standard, the Council's procedures (rather than the County's specific procedures at SCZO § 5.6) will apply to the land use determination. The Council's process includes opportunities for written and oral comment concerning the application by the public and by governmental agencies. Following the submittal of the application, determination of completeness, and public notice in local newspapers, the Department will conduct a public information meeting concerning the application. Thereafter, a public hearing will be held on the Council's proposed order, offering another opportunity for public input. The Council's process also provides affected public agencies and area landowners with notice of the application and an opportunity to provide comment (see e.g., ORS 469.370; ORS 469.505; OAR Chapter 345, Divisions 15 and 21).

The Applicant has consulted with the U.S. Fish and Wildlife Service (USFWS), the Sherman County Planning Department (County Planning Department), the U.S. Bureau of Land Management (BLM), the Oregon State Historical Preservation Office (SHPO), and the Oregon Natural Heritage Information Center (ONHIC). These agencies, offices, and organizations have provided information regarding the Facility site and adjacent lands, including information about listed and sensitive species within the analysis area. The Oregon Department of Agriculture (ODA) was contacted for information about plant distribution and protection and conservation programs. The ODFW was contacted for information on fish and wildlife habitat requirements and distribution (Kohl, K. and R. Morgan, ODFW, pers. comm).

#### SCCP § XI Physical Characteristics

*Goal V. Improve or maintain the existing quality of the physical environment within the County.*

*Policy I. The County Court recognizes the Policy Advisory Committee and the Agricultural Sub-Committee recommendations for a state-wide non-point source pollution control program as the appropriate implementation technique to achieve the intent of Public Law 95.217.*

*Policy II. Erosion control provisions shall be incorporated into the subdivision ordinance. These shall require that the best practical methods be used to control erosion from road and building construction sides as well as other changes in land use which may degrade the quality of the land, air, and water.*

Response: The Facility will maintain the existing quality of the physical environment within the County by having no significant adverse impacts on that environment. Construction of the Facility will not create a pollution source. Most of the Facility site consists of agricultural fields, where bare soils are often exposed to wind and water. This Facility will not significantly increase the amount of exposed soils (see Exhibit I).

Temporary impacts to land within the Facility area will occur with the creation of the staging areas and excavation for underground power lines not located near the roads. To minimize soil exposure during installation of the power lines, the Applicant will endeavor to open the smallest necessary sections of trench during each day of construction, and will backfill the trenches as soon as is practical after the power lines have been set in the trenches. Establishment of staging areas will involve stripping and temporarily stockpiling topsoil before placing gravel on the laydown areas. Because stockpiling will occur during the time of year when rainfall is lowest, very little erosion will result from precipitation. The Facility will be constructed pursuant to an NPDES General Construction Stormwater (1200-C) Permit issued by the DEQ. The NPDES permit will require the use of best management practices to minimize the potential for erosion.

Best management practices will also be used to minimize the impacts of wind erosion. In actively farmed areas, the wheat crop will protect the stockpiles from wind erosion. In other areas, straw bales or other similar soil containment features will be used during construction of the Facility. As needed, water trucks will be used to keep wind borne erosion losses to a minimum. After the need for the staging areas ends, the staging area locations will be brought back to their original contours, topsoil will be spread in these areas, and they will be revegetated or prepared for the planting of wheat or barley, or for use as range land. Any disturbed Conservation Reserve Program (CRP) areas and other non-cropped vegetated areas will be revegetated with the appropriate species.

*Goal VI. To protect life and property from natural disasters and hazards.*

Response: The Facility site contains no designated hazard areas.

*Goal VII. Provide for the rational development and conservation of the aggregate resources within the County.*

Response: The facility site contains no designated aggregate resources.

*Goal VIII. To provide a detailed investigation of the County's groundwater resources.*

Response: The Facility will use a small amount of groundwater. The new O&M building will be served by a new well. No water rights are required to drill this well because Oregon law allows a commercial use with up to 5,000 gallons per day of water from groundwater wells without a water right or permit.

*Goal IX. To maintain the multiple use management concept on Bureau of Land Management Lands within Sherman County.*

Response: The facility site does not include any BLM lands.

*Goal X. Preserve the integrity of the Sherman County Landscape.*

*Policy I. Trees should be considered an important feature of the landscape and therefore the County Court shall encourage the retention of this resource when practical.*

Response: The Facility site occurs in a largely treeless landscape. The Facility is not expected to have any impacts on trees. Upland trees were located near Emigrant Springs, Webfoot, and scattered residences throughout the study area, but development of the Facility will not require the removal of any trees (see Exhibit P).

*Goal XI. To maintain all species of fish and wildlife at optimum levels and prevent the serious depletion of any indigenous species.*

*Policy I. Fish and Wildlife management policies should be implemented to enhance the public enjoyment of wildlife and fish in a manner that is compatible with the primary uses of the lands and waters.*

Response: As described in Exhibits P and Q, construction and operation of the Facility will be consistent with ODFW's habitat mitigation goals and standards, and will not cause any significant adverse impact to protected or sensitive plant or animal species.

*Policy III. Fence rows, ditch banks, and brush patches should be considered for retention of wildlife use.*

Response: No fence rows, ditch banks, or brush patches will be affected by the Facility, as the Facility site is in large-scale wheat crop production.

*Policy IV. The existing habitat plantings and water developments constructed for wildlife use shall be maintained by the Oregon Department of Fish and Wildlife. Additional planting and guzzler developments will be encouraged. Long-term agreements between landowners and the Department of Fish and Wildlife for the maintenance of such sites shall be encouraged.*

*Policy V. The County Extension agent shall encourage the use of pesticides, which have a low toxicity to wildlife, fish, and people.*

Response: As described in Exhibit P, the study area provides only limited wildlife habitat. Therefore the Facility is not expected to have a significant impact on wildlife populations. A monitoring plan will be developed in consultation with ODFW to evaluate actual impacts.

Use of pesticides is not proposed with the Facility, and use of herbicides for weed control will be pursuant to a weed management plan developed in consultation with the County.

*Goal XII. Provide for the rational use of all resources within the designated Deschutes and John Day Oregon State Scenic Waterways.*

Response: Exhibit T evaluates impacts to recreation resources. The Facility site is not located in or near either the Deschutes or the John Day scenic waterway (see Exhibit R). Traffic routes for construction will originate near I-84/US 97 Biggs Junction. Increased construction traffic will probably result in short-term delays, particularly on hill climbs on US 97, but will not be detrimental to recreational opportunities near the Deschutes or the John Day scenic waterway. Long-term detrimental impacts (i.e., increased traffic as a result of operation) are not anticipated.

*Goal XIII. Attempt to maintain the diversity of plan[t] and animal species within the County.*

*Policy I. The following sites or areas shall be considered as critical habitat, unique vegetative and/or natural areas: Department of Fish and Wildlife plantings and guzzlers; and areas containing plant species listed on either the Provisional List of Endangered or Threatened Plant Species or the listing of Endangered and Threatened Plant Species in the United States.*

*Policy II. The County Court shall encourage the preservation of these critical habitats, unique vegetative and/or natural areas. Landowners will be encouraged to provide long-term protection to these areas...*



Response: As described in Exhibits P and Q, construction and operation of the Facility will be consistent with ODFW's habitat mitigation goals and standards, and will not cause any significant adverse impact to protected or sensitive plant or animal species.

SCCP § XII Social Characteristics

*Goal XIV. To improve or maintain the current level of social services available with the County and to assure the provision of public facilities consistent with the intensity of land use.*

*Policy I. The County Court shall encourage the location of industries, businesses, and commercial service agricultural developments within the County consistent with the desired population growth and other goals and policies herein contained.*

...

*Policy XIX. The continuing loss of economic opportunities for residents of the County is of great concern to the citizenry. The reduction of need for agricultural based jobs due to improved farming technology and practices, the inability to keep families employed or offer employment opportunities to attract new citizens or the children of existing residents results in a stagnant or declining population. It is therefore a matter of great urgency that the County Court make every effort to streamline its land use approval and amendment process. It is likewise a matter of great urgency that the Court give increased consideration to land use applications which will increase economic diversity and employment opportunities. This increased consideration shall not be made to the detriment of existing residential structures. This consideration should focus on long-term job creation and should not be used as a means to allow residential and commercial uses to locate outside urban growth and rural service center (communities) boundaries.*

Response: Regarding Policy I, Exhibit U indicates that the personnel necessary to construct and operate the Facility, and their families, to the extent they move to the Sherman County area from other areas, will not have a significant impact on the provision of local services.

Facility construction is anticipated to take approximately 10 months and to employ an estimated 250 workers at peak construction periods. A significant number of these workers are expected to be local employees. Construction workers will include locally hired workers for road and turbine pad construction, as local expertise and availability permit. When feasible, preference will be given to local workers. Approximately 15 to 20 permanent O&M employees will be required once the Facility is operational.

Development of the Facility will increase economic diversity within the County and offer non-agricultural employment opportunities for local residents. Operation of the Facility is projected to produce significant annual tax revenue and/or payments in lieu for the County. When the acreage needed for the Facility is converted to non-farm use, the County will receive deferred property tax payments. Thereafter, the land on which the Facility is constructed will be taxed at a higher assessed value. For example, the tax revenues from the nearby Klondike I facility were calculated to be approximately \$20,000 per turbine in the first year (2002-2003) of operation (Renewable Northwest Project, 2004). The Facility's additional tax revenue will contribute to improved local services such as roads, schools, police, and fire protection, that benefit the entire area

while not creating any significant new impacts to public facilities or services. Of the tax revenues created by the development of the Klondike I facility, about one-third (\$115,000) went into the County's General Fund, another one-third (\$113,000) was allocated to County schools, and the remainder was divided between roads, the health district, corrections, and fire protection (Renewable Northwest Project, 2004).

[Goal XIV] *Policy IV. The County will support and assist efforts to secure adequate hospital or emergency clinic facilities to serve the needs of the local residents.*

...

*Policy VI. The County Court shall continue to cooperate with the school districts within the County to assure the provision of educational facilities in an efficient manner consistent with the demands of the Sherman County populace.*

...

*Policy VIII. Sanitary landfills shall continue to be provided for the use of the County citizenry. The County will continue to provide the leadership in the location and development of such sites.*

Response: The Facility is not expected to have any adverse impacts on the availability of social services, such as hospital or emergency service facilities, educational facilities, or sanitary landfills. Exhibit U evaluates the capacity of service providers in the Facility area. Sunrise Disposal and Recycling provides solid waste service for all of Sherman County, including the existing operations and maintenance facility for Klondike I and for parts of Gilliam County. Sunrise Disposal also operates a transfer station that is open to the public on the second and fourth Saturdays of each month. Refuse and recycling are transported via truck to the Columbia Ridge Recycling and Landfill site near Arlington. Columbia Ridge is a large regional facility that accepts refuse from both Oregon and Washington.

Solid waste that will be generated in the construction and operation of the proposed Facility is described in Exhibit V. The Facility will generate minimal construction waste and, when it is operational, very little solid waste that will require offsite disposal. The nearest landfill is the Columbia Ridge Recycling and Landfill Center near Arlington. The landfill is not projected to reach capacity for at least 98 years (Castner, K., pers. comm.) and conversations with landfill operators did not identify any concerns regarding solid waste generation from construction or operation of the Klondike III project.

[Goal XIV] *Policy X. The County road system shall be maintained and improved consistent with the needs of the Sherman County citizenry.*

...

*Policy XII. The construction of new public roads and highways shall be located whenever possible to avoid dividing existing farming units.*

Response: No new public roads or highways will be constructed as part of the Facility. The preliminary design and layout for the private access roads and for the improvements to existing public roads have been developed by the Applicant. Public road improvements will probably exceed road standards for the road classifications in the TSP and Zoning Ordinance, because roads will require a more substantial section to bear the weight of the vehicles and turbine components than would usually be

constructed by the County. The improved public and new private roads will enhance access by land managers and farmers to their fields and will improve existing conditions for all users of the public road system. The new private access roads will be designed and constructed to minimize dividing existing farming units.

[Goal XIV] Policy XX. Transportation Planning Policies (Ord No. 21-05-2003)

A. *The Transportation System Plan and Land Use Review Policies*

...

2. *All development proposals, plan amendments, or zone changes shall conform with the adopted Transportation System Plan.*
3. *Operation, maintenance, repair, and preservation of existing transportation facilities shall be allowed without land use review, except where specifically regulated.*

Response: No new public roads are proposed with this application and, thus, no roads are proposed that would not conform with the County's TSP. The proposal will result in upgrades to existing roads, either meeting or exceeding the road classification standards for the roads that have a classification.

...

B. *Local-State Coordination Policies*

...

2. *The County shall provide notice to ODOT of land use applications and development permits for properties that have direct frontage or direct access onto a state highway. Information that should be conveyed to reviewers includes project location, proposed land use action, and location of project access points.*

...

C. *Protection of Transportation Facilities Policies*

...

2. *The County shall include a consideration of a proposal's impact on existing or planned transportation facilities in all land use decisions.*
3. *The County shall protect the function of existing or planned roadways or roadway corridors through the application of appropriate land use regulations.*

Response: The Facility will not have direct frontage or direct access onto any state highway or road, thus this policy does not require that ODOT be notified. Construction vehicles that must access the Facility site will use public roads. Travel routes are shown in Exhibit U, Figure U-1. The primary route for construction traffic will begin at the I-84/US 97 interchange at Biggs Junction and proceed south on US 97 to the US 97/OR 206 intersection. At that intersection, construction-related traffic will travel on OR 206 through the City of Wasco and then use County roads to access the Facility site.

Construction and operation of the Facility will cause no significant degradation of any existing or planned County transportation facility. The Applicant will commit to

restoring to pre-existing conditions any County roads affected by construction equipment and traffic. Some slight local traffic delays might occur during construction, but the roads near the Facility are not heavily used and alternative routes are available for local traffic.

All road work will be conducted in compliance with the Facility's erosion control plan, required as part of the facility's NPDES Construction Stormwater (1200-C) Permit. The erosion control plan will include both general best management practices for erosion control during and after construction, and permanent drainage and erosion control facilities as necessary to allow storm water passage while minimizing or eliminating damage to local roads or to adjacent areas and while minimizing or eliminating increased sedimentation of intermittent streams in the vicinity of the Facility

*Goal XV. To protect historical, cultural, and archeological resources from encroachment by incompatible land uses and vandalism.*

*Policy I. The following areas and structures shall be considered historically, archaeologically, or culturally significant: all archeological sites; the Sherman County Courthouse; portions of the Old Oregon Trail which are visible and pass over rangeland; and the old Union Pacific Railroad bed through DeMoss Park.*

*Policy II. The County Court shall encourage the preservation of these archaeologically or culturally significant areas. Landowners will be encouraged to provide long term protection to these areas.*

Response: As described in Exhibit S, the Facility will not adversely impact historical, cultural, or archeological resources. The Facility will not have any impact on the areas or structures listed in Policy I.

#### SCCP § XIII Housing

*Goal XVI. To encourage the provision of sound affordable housing units for the citizenry of the County.*

Response: As described in Exhibit U, the Facility is not expected to affect long-term housing availability in the County. The housing vacancy rate is sufficient to accommodate new permanent employees. Temporary housing needs during construction can be accommodated by existing housing stock or hotel and motel rooms available in Wasco, The Dalles, and other nearby communities. No impacts on the supply of affordable housing are expected to occur as a result of construction personnel moving to the local area during the development of the Facility. Temporary construction employees are likely to use hotels or rentals for the short-term needs, but the numbers are not significant enough to pose a concern, given the number of communities nearby. Permanent employees probably can afford housing in the median price housing market.

#### SCCP § XIV Economics

*Goal XVII. Diversify the economic base of the County and maintain the viability of the agricultural sector.*

...

*Policy II. Appropriate provisions shall be incorporated into the zoning, subdivision, and other necessary ordinances to assure conservation and retention of agricultural lands in*

*agricultural uses. At a minimum, agricultural lands shall be zoned as exclusive farm use and taxed accordingly.*

Response: The Facility will substantially contribute to the diversification of the County's economic base. Allowing the development of the Facility is consistent with the purposes of the EFU zone, which allows for the development of commercial utility facilities as a conditional use. Furthermore, the additional revenues received by farmers from wind facility lease payments will provide a stable and predictable source of income that will supplement farm revenues and help assure that lessor-landowner's farming operations can remain viable in years with lower crop yields or prices.

#### SCCP § XV Energy

*Goal XVIII. Conserve energy resources.*

*Policy I. Cooperate with public agencies and private individuals in the use and development of renewable resources.*

*Policy III. New high voltage electrical transmission lines with nominal voltage in excess of 230 kV and gas transmission line shall be constructed within or adjacent to the existing electrical and gas transmission line right-of-way, respectively. Upon approval of the County Court, the General Standards for Issuance of Site Certificates, Energy Facility Siting Council (OAR 345-80-010 through OAR 345-80-051) may be utilized for proposals deviating from the existing rights-of-way will be considered a plan amendment and subject to the approval of the Sherman County Court.*

Response: The Energy Facility is a renewable wind resource facility. The County has recognized that it has "solar and wind resources which have not been utilized since widespread use of electricity was introduced" (Comprehensive Plan § XV Finding III). This application represents a new opportunity to develop those resources.

Wind power is a clean and renewable source of energy. Wind facilities do not emit greenhouse gases or particulates, do not produce hazardous wastes, and do not deplete other natural resources. The construction of the Facility is consistent with and implements Policy I.

Transmission lines associated with the Facility are described in Exhibit B and will be reviewed by the Council pursuant to its siting standards; accordingly, although the citation in the SCCP is obsolete, its intention will be preserved.

#### SCCP § XVI Land Use

*Goal XIX. To provide an orderly and efficient use of the lands within Sherman County.*

...

*Policy IV. Commercial businesses, except those related to agricultural uses, should be located within the incorporated cities or within areas served by the Biggs or Kent special service districts.*

Response: The County's EFU zone expressly permits the proposed Facility. The Facility site is locationally dependent and, accordingly, cannot be sited within any of the area's incorporated cities. Furthermore, the Facility will not have a large impact on services in

the County. Its co-location and compatibility with existing and ongoing agricultural activities provides an example of orderly and efficient land use.

Section XVII Comprehensive Land Use Plan Map

*Cropland. Cropland is the "prime agricultural" lands within the County. Lands so designated shall be preserved for exclusive farm use. All uses, which are not directly or indirectly related to farm use shall be limited to those, which provide public service and could not be provided for within other lands.*

Response: As noted, the County's EFU zone and state statutes allow commercial generation facilities as conditional uses of EFU land. The Facility is dependent on an optimal wind resource and proximity to transmission facilities. Accordingly, it cannot be located within any of the nearby cities. The Facility will be co-located and compatible with existing and ongoing agricultural activities and other wind energy generating facilities. Although the Facility will permanently remove approximately 150 acres from agricultural enterprises, a reasons exception to Goal 3 is warranted as described in this exhibit.

**SCZO § 5.2.2 Compliance with Applicable Provisions**

*The proposal is in compliance with the requirements set forth by the applicable primary Zone, by any other applicable combining zone, and other provisions of this Ordinance that are determined applicable to the subject use.*

Response: The following criteria are applicable to the Facility as described in the following discussion.

**SCZO § 3.1.3(f1) – Transportation Standards (Access Roads)**

- 1) *Construction, reconstruction, or widening of highways, roads, bridges, or other transportation projects that are (1) not improvements designated in the Transportation System Plan; or (2) not designed and constructed as part of a subdivision or planned development subject to site plan and/or conditional use review. Transportation projects shall comply with the Transportation System Plan and applicable standards, and shall address the following criteria ...*
  - A. *The project is designed to be compatible with existing land use and social patterns including noise generation, safety, and zoning.*

Response: The permanent and temporary access roads are a permitted use in the EFU zone and will be compatible with the existing land uses in the rural agricultural area of the Facility site. The new private access roads will be constructed to access the Facility turbines and will extend from the County roads as shown in the map in Figure U-1. These roads will be 16 to 20 feet wide, with shoulders of 5 to 6 feet, to total up to 30 feet. During construction, road sections 35 feet wide, including shoulders, will be temporarily disturbed in order to construct the private access roads. To the maximum extent possible, these roads will be located adjacent to the turbine towers to minimize the length of these roads.

The permanent private access roads will not increase traffic in the area but will provide improved access by land managers and farmers to their fields. As explained in Exhibit X, the Facility, including the new access roads, will meet DEQ noise standards.

The primary route for construction traffic will begin at the I-84/US 97 interchange at Biggs Junction and proceed south on US 97 to the US 97/OR 206 intersection. At that intersection, construction-related traffic will travel on OR 206 through the City of Wasco and then use County roads to access the Facility site.

Construction-related traffic might cause brief traffic delays when trucks deliver the turbines and other Facility equipment, but these delays are unlikely to impair the function of the public roadways. Once the Facility has been constructed, trips generated by the 15 to 20 operational staff will not have any perceptible effect on the functioning of the roads or highways in the vicinity of the Facility, because general usage of these highways and roads is low and will remain low.

Permanent staff for the Facility, assumed to be between 15 and 20 employees, will use the improved local road system. Because few trips will be generated by these employees and existing usage is low, no adverse impacts to the road system as a result of new permanent staff are anticipated.

- B. The project is designed to minimize unavoidable environmental impacts to identified wetlands, wildlife habitat, air and water quality, cultural resources, and scenic qualities.*

Response: A thorough discussion of these issues is found in Exhibits J, O, P, Q, R, S, and T. Construction of new roads will affect about 136 acres of grassland habitat, and 268 acres of low shrub/shrub-steppe habitat (see Exhibit P). A total of 6.2 acres of non-agricultural land will be affected. Based on wetland analysis, no significant impacts to wetlands and other waters of the state are anticipated as a result of the proposed Facility (see Exhibit J). Although locations within the Facility boundary were noted as having wetlands or other waters of the state, potential significant impacts will be avoided through appropriate siting and construction techniques. As demonstrated in Exhibits P and Q, there is no suitable habitat for federal or state listed species. A cultural resource survey was conducted and results are described in Exhibit S. No significant archaeological resources or historic-period resources were found that are eligible for listing in the National Register.

There will be no substantial adverse impacts on air quality from the construction of the Facility and no impacts from its operation. The construction activities for site preparation will probably create dust, but this will not be significant in a rural area where farming also creates dust. Standard best management practices to control dust and wind erosion will be used, such as sprinkling the site periodically.

- C. The project preserves or improves the safety and function of the facility through access management, traffic calming, or other design features.*

Response: Several local roadways might have to be improved to accommodate construction-related traffic. Many of the existing local roads are in poor condition, so the proposed improvements will have a long-term beneficial effect for those who use these roads. There is little traffic on roads in the area, so access management, traffic-calming, or other such features designed to reduce traffic conflicts are not necessary.

- D. The project includes provision for bicycle and pedestrian circulations as consistent with the comprehensive plan and other requirements of this ordinance.*

Response: No bicycle or pedestrian facilities are appropriate for the Facility area. The access roads will be located in a rural agricultural area where pedestrian and bicycle facilities are not required by the County's ordinances or plans.

SCZO § 4.13 Additional Conditions to Development Proposals (Access Roads)

**The County may require additional conditions for development proposals.**

1. *The proposed use shall not reduce the level of service (LOS) below a D rating for the public transportation system. For developments that are likely to generate more than a V/C ratio of 75 or greater, the applicant shall provide adequate information, such as a traffic impact study or traffic counts, to demonstrate the level of impact to the surrounding road system. The developer shall be required to mitigate impacts attributable to the project.*
2. *The determination of the scope, area, and content of the traffic impact study shall be coordinated with the provider of the affected transportation facility, i.e., city, county, state.*
3. *Dedication of land for roads, transit facilities, sidewalks, bikeways, paths, or access ways shall be required where necessary to mitigate the impacts to the existing transportation system caused by the proposed use.*
4. *Construction of improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, access ways, paths, or roads that serve the proposed use where necessary to mitigate the impacts to the existing transportation system caused by the proposed use.*

Response: The Applicant will comply with all conditions of approval necessary to achieve compliance with the Zoning Ordinance and the Council's land use standard. Once completed, the Facility will not generate a significant number of trips (see Exhibit U, U.4.7). Traffic levels on area roads are low and will not increase beyond the network capacity with the addition of Facility traffic. Reconstruction of poor or damaged roads will be all of the mitigation necessary to address impacts from the Facility.

SCZO § 4.14 Access Management (Access Roads)

Response: The access management provisions of the Zoning Ordinance do not apply to the proposed Facility.

SCZO § 11.8 Design & Improvement Standards and Requirements, Streets and Other Public Facilities (Access Roads)

Response: The Council's rules governing the ASC are designed to identify all applicable design and improvement standards, permits, approvals, and regulations needed for construction of the Facility. In particular, Exhibit E identifies all of the federal, state, and local permits and approvals needed to construct the Facility. Elsewhere in this exhibit, all of the applicable County design standards are identified. No land division, public improvements, subdivision or partition approval, public street, other public improvement, or zone change is required in order to site the Facility. For the reasons described in this exhibit and in the ASC, the facility complies with this provision.



**SCZO § 5.2.3 Other Permits**

*That, for a proposal requiring approval or permits from other local, state, and/or federal agencies, evidence of such approval or permit compliance is established or can be assured prior to final approval.*

**Response:** The Council's rules governing the ASC are designed to identify all applicable permits, approvals, and regulations needed for construction of the Facility. In particular, Exhibit E identifies all of the federal, state, and local permits and approvals needed to construct the Facility. This ASC provides evidence demonstrating that construction and operation of the Facility will comply with all state and local statutes, rules, and standards applicable to the permit. Exhibit E also provides evidence that for federal permits, the responsible agency has received that permit information.

**SCZO § 5.2.3 Compliance with Specific Standards**

*The proposal is in compliance with specific standards, conditions, and limitations set forth for the subject use in this Article and other specific relative standards required by this or other County Ordinance.*

**Response:** The Energy Facility complies with this criterion as described in the following discussion.

**SCZO § 5.8(14) – Specific Requirements for Non-farm Uses in F-1 Zone, Public Facilities and Services (Energy Facility, Access Roads)**

- (a) *Public facilities including, but not limited to, utility substations, ...electrical generation and transmission devices...shall be located so as to best serve the County or area with minimum impact on neighborhoods, and with consideration for natural or aesthetic values.*
- (b) *Structures shall be designed to be as unobtrusive as possible. Wherever feasible, all utility components shall be placed underground.*
- (c) *Public facilities and services proposed within a wetland or riparian area shall provide findings that: Such location is required and a public need exists; and Dredge, fill and adverse impacts are avoided or minimized.*

**Response:** This section provides criteria for conditional uses. Under the terms of the SCZO and state law [e.g., *Brentmar v. Jackson County*, 321 Or 481, 900 P2d 1030 (1995)], conditional use criteria cannot be applied to non-farm uses that are outright permitted uses. Accordingly, these criteria do not apply to the new substations, the power lines, the new O&M facility, the staging areas, or the access roads proposed by the Applicant, as they are permitted, as of right, as "non-commercial utility facilities necessary for private service or public service," SCZO 3.1.2(m), and "utility facilities necessary for public service," ORS 215.283(1)(d). Nonetheless, as described in Exhibits J and P, none of these proposed Facility elements will be located within a wetland or riparian area. The power lines will be placed underground, except for one above ground power line. Furthermore, the location of these facilities will have no known significant adverse impact on scenic and aesthetic values; historic, cultural, and archeological resources; recreational opportunities; or protected areas (see Exhibits L, R, S, and T). The facilities will be located in a rural area with no impact on residential neighborhoods.

The section 5.8(14) criteria do apply to the Energy Facility, which is conditionally permitted by the County. The Facility will not be located in wetland or riparian areas (see Exhibits J and P). The location of the Facility will have minimal adverse impacts on scenic and aesthetic values; historic, cultural, and archeological resources; recreational opportunities; and protected areas (see Exhibits L, R, S, and T). The Facility will be located in a rural area with little impact on neighborhoods.

SCZO § 5.8(16) – Specific Requirements for Non-farm Uses in F-1 Zone, Non-farm Uses (Energy Facility, Access Roads, and Associated Construction Areas)

*Non-farm uses...may be approved upon a findings [sic] that each such use:*

(a) *Is compatible with farm uses described in ORS 215.203(2);*

Response: This section 5.8(16) provides criteria for conditional uses. As noted, conditional use criteria cannot be applied to non-farm uses permitted as of right. Accordingly, these criteria do not apply to the new substations, the power lines, the new O&M facility, the staging areas, or the access roads proposed by the Applicant, as they are permitted, as of right, as “non-commercial utility facilities necessary for private service or public service,” SCZO 3.1.2(m), and “utility facilities necessary for public service,” ORS 215.283(1)(d).

As previously noted, the Energy Facility is consistent with the purposes of the EFU zone, which allows for the development of commercial energy generating facilities as a conditional use.

Based on the statements of nearby farm owners and operators of parcels directly affected by the Facility, the Energy Facility will be compatible with farm uses (see Attachment K-1). Two common sources of conflict between farm and non-farm uses are the ability of farmers to maneuver equipment or vehicles around obstacles (such as turbines) and timely access to parcels without conflicts with non-farm related traffic or construction-related delays. For this Facility, access roads will be located to minimize disturbance and maximize transportation efficiency. Existing County roads and private farm roads will be used to the extent feasible.

Construction and use of access roads raise a potential for increased weed spreading. The Applicant has been in contact with the County weed officer and is working with him to develop a plan to minimize potential invasion by weed species. This plan will include parameters for reseeding bare ground areas, vegetation management, and methods for minimizing the potential for non-local vehicle contamination.

The Facility will have minimal impact on farm uses, and the Applicant will take steps to minimize any disruption to farming practices. Wherever feasible, turbines and transmission interconnection lines will be placed along the margins of cultivated areas to reduce the potential for conflict with farm operations. The Facility will require approximately 150 acres of land to be permanently removed from farm use while 353 acres of farm land will be affected temporarily (by construction laydown sites). The amount removed from production is a small percentage of the farm land in the vicinity of the Facility.

Because of the minimal amount of land being permanently disturbed and the mitigation measures taken by the Applicant, the Facility is compatible with the farm uses of the property.

(b) *Does not interfere seriously with accepted farming practices on adjacent lands devoted to farm use;*

Response: Adjacent F-1 lands contain primarily dryland wheat and barley crop farming. The Facility will not seriously interfere with accepted farming practices on adjacent lands. "Accepted farming practices" is defined at ORS 215.203(2)(c) as "a mode of operation that is common to farms of a similar nature, necessary for the operation of such farms to obtain a profit in money, and customarily utilized in conjunction with farm use."

The land adjacent to the sites where the turbines, access roads, and construction areas will be located is devoted to the production of wheat or barley crops. Although the presence of the turbine pads and turbines will have an impact on the use of adjacent land, the Facility will not seriously interfere with farm practices, based on the statements of farm owners and operators (see Attachment K-1). Farmers noted that some minor changes to plowing and harvesting patterns will be required, but none that will seriously interfere with accepted farming practices on adjacent farm land.

The Applicant has had discussions with County crop dusters, as well as with the leaseholding landowners, about the issue of aerial spraying around the turbines (Gray, Brett and K. McCullough, pers. comm.). The crop dusters do not anticipate having trouble avoiding the turbines, as they are accustomed to avoiding similar facilities, including power transmission lines. In addition, the local landowners already manually spray around fence lines to cover surface areas missed during crop dusting and as a primary method of spraying. A similar approach will be used for areas missed by crop dusters because of the presence of the Facility turbines.

Weed management will be undertaken by the Applicant during construction. The Applicant will also closely coordinate with farmers to ensure adequate and timely access to properties during critical periods in the farming cycle, such as harvest.

(c) *Does not materially alter the overall land use pattern of the area;*

Response: The overall land use pattern of the area consists of wheat or barley crops with some rangeland where the soil is poor or too steep to cultivate (NRCS, 1999). The analysis area for the Facility is described in Section K.2 as one-half mile from facilities. Beyond the analysis area, and except for incorporated towns and rural nodes, the topography similarly consists of rolling hills and drainages with wheat farming as the main use. In 1997, 80 percent of the land in Sherman County was in farm land, with 30 percent in harvested cropland (Loy and Allan, 2001). Agricultural areas enrolled in the Conservation Reserve Program (CRP) are found throughout the analysis area, occurring as narrow strips in previously plowed drainage ways and as large blocks in other areas. CRP areas have been planted with a mix of native and non-native bunchgrasses with the primary intent of increasing wildlife habitat in the area. No cattle grazing is expected to occur in the Facility area. Similarly, proposed access roads, turbine facilities, staging areas, the new O&M facility, and underground and

aboveground power lines and access roads will not materially alter the land use pattern in the area.

The Facility will not materially alter the overall land use pattern in the area (see Figure K-2). Although the Facility will temporarily and permanently affect a fairly small acreage, it is not expected that the agricultural use of any larger tracts of land will cease or change. Local farmers will be able to maneuver around the turbine strings and across the gravel access roads, although sowing and harvesting patterns in the immediate vicinity of the strings will involve minor changes. Since the farming is dryland, there are no irrigation patterns to be affected. The average size of farms in Sherman County is over 2,000 acres, although several in the area are significantly smaller. The Facility will be located exclusively on tracts of land where its footprint is small in comparison to the total farmed acreage in the tract and thus there is negligible likelihood that the Facility will change the pattern of land use by causing certain tracts to go out of farm use.

The Facility and access roads will not materially alter the stability of this existing land use pattern because the Facility is compatible with farming when it is limited to a reasonably small percentage of the area farmed. Land uses may be induced to change by altering factors that affect value, either lowering or raising it. In this case, some of the optimum sites for the wind energy generation will be taken by this Facility and will maximize the value of this land for energy generation. The land leases provide an additional source of private income without creating major obstacles to farming. The stability of this lease income will help stabilize the inherent volatility associated with farming.

- d) Is situated upon generally unsuitable land for the production of farm crops and livestock, considering the terrain, adverse soil or land conditions, drainage and flooding, vegetation, location and size of the tract, and the availability of necessary support resources for agriculture;*

Response: The roads, turbines, and associated construction areas are proposed for land currently being farmed for wheat and barley. Figure K-2 shows actual land uses and Figure K-3 shows soil qualities. The soils in the area, absent sufficient rainfall or irrigation, do not support any other crops except perhaps hay (NRCS, 1999). Soils that support the wheat and barley farming are not top quality soils; they are Class IIc soils (NRCS, 1999). The chief positive characteristics of these soils is that they are deep and well drained. These soils, however, do not support a diversity of crops, nor crops that are of high value. They also do not generally support livestock in the County. The price of wheat has dropped steadily over the last 10 years, and there is increasing evidence that maintaining production of wheat and barley on such lands is becoming uneconomical. In addition, the wind turbines displace minor amounts of land on parcels that vary in size, but are generally large enough to accommodate both farm and wind energy uses. As a result, the displacement impacts are minor and are offset by the lease allowances, which create stability in the economy of each farmer and compensate for the volatility of crop production and prices.

- (e) Complies with other applicable significant resource provisions; and*

Response: There are no known other significant resource provisions applicable to the Facility.

(f) *Complies with such other conditions as deemed necessary.*

Response: The Applicant will comply with all conditions of approval imposed by the Council in granting the site certificate.

**SCZO § 5.2.5. Resource Carrying Capacities**

*That no approval be granted for any use which is or expected to be found to exceed resource or public facility carrying capacities, or for any use which is found to not be in compliance with air, water, land, and solid waste or noise pollution standards.*

Response: As described in this ASC, the Facility will not exceed resource or public facility carrying capacities and the Applicant will comply with all applicable air, water, land, solid-waste, and noise pollution standards and proposes that such compliance be included as a condition of approval (see Exhibits E, I, J, O, P, Q, V, and X).

**SCZO § 5.2.6. Violation of Ordinance**

*That no approval be granted for any use violation of this Ordinance.*

Response: There are no use violations related to the Facility.

**K.5.4 Directly Applicable Administrative Rules, Statewide Planning Goals, and Land Use Statutes**

Identify all Land Conservation and Development Commission administrative rules, statewide planning goals, and land use statutes directly applicable to the facility under ORS 197.646(3) and describe how the proposed facility complies with those rules, goals, and statutes;

Response:

**Goal 3 Exception**

The Facility will occupy a mixture of high-value and non-high-value farm soils. OAR 660-033-0120(22) places 12-acre (high-value) and 20-acre (non-high-value) limits on the use of farm land without an exception to Goal 3. The Zoning Ordinance does not contain a similar criterion. Under ORS 197.646(3), the administrative rule criteria directly apply to the development proposal. In addition, SCZO § 5.8(16)(d) requires that conditionally permitted non-farm uses be situated on land that is generally unsuitable for the production of farm crops and livestock.

The Energy Facility and access roads will be located on 142 acres of EFU farm land. Accordingly, a Goal 3 exception is required for the Energy Facility and access roads.<sup>5</sup> The Applicant demonstrates that a reasons exception is warranted. ORS 469.504(2) provides the controlling criteria for exceptions proposed for energy facilities under the jurisdiction of the Council.

An “exception” is a “decision to exclude certain land from the requirements of [an] applicable statewide goal[.]” [OAR 660-004-0000(2)]. The need for an exclusion arises when a goal does not permit a particular use. For local jurisdictions, the exceptions

<sup>5</sup> No Goal 3 exception is required for the related and supporting “utility facilities” because they are allowed outright under ORS 215.283(1)(d) and SCZO 3.1.2(m). The entire Facility minus the utility facilities will occupy 142 acres. Thus the requested exception is for 142 acres. The Applicant reserves the right to take the position that roads are not required to be counted toward the 12/20- acre limit.

process is authorized by Goal 2 (Land Use Planning) and ORS 197.732 and governed by the criteria in OAR 660-004-0000, et seq.

State law provides a different exception path, including somewhat different criteria, for energy facilities [ORS 469.504(2), OAR 345-022-0030(4)]. The relevant Council criteria, and the Applicant's responses, are set forth in the following discussion. In this case, an exception is warranted to allow a locationally dependent facility that will fulfill important state and County goals by providing energy while minimizing impacts on local farming practices.

### **Need for the Goal 3 Exception**

The Energy Facility and access roads will preclude from agricultural use approximately 142 acres of farmland, 39 acres of which are non-high-value farmland and of which 103 acres are high-value farmland. This acreage does not include areas affected by related and supporting "utility facilities," because they are permitted uses in the F-1 zone. The exception acreage also does not include acreage leased to the Applicant but which will not be disturbed or precluded from agricultural use.

Since the acreage precluded from agricultural use is more than the 12/20-acre limit in OAR 660 division 33, an exception to Goal 3 is required.

### **Demonstration that a "Reasons" Exception is Appropriate**

The Applicant requests a "reasons" exception pursuant to OAR 345-022-0030(4)(c). This type of exception requires three showings, as described in the following subsections.

#### **Reasons Justify the Exception**

*"Reasons justify why the state policy embodied in the applicable goal should not apply" [(OAR 45-022-0030(4)(c)(A)].*

#### **Response:**

The general state policy embodied in Goal 3 is "[t]o preserve and maintain agricultural lands." As discussed in this Exhibit, the Facility will not have significant adverse effects on accepted farm or forest practices. However, the ASC must nonetheless demonstrate why the "policy" contained in the 12- and 20-acre limitations should not apply to the Facility.

As set forth here, there are several reasons for not applying the Goal 3 acreage limitation to the Facility. These reasons are the same as those relied upon by the Council in its Stateline decisions, which granted and expanded a Goal 3 exception on facts that are materially identical to the Biglow Canyon situation.

#### **The Use Is Locationally Dependent and Cannot be Developed on Non-Resource Lands**

The proposed Energy Facility and all of the related or supporting facilities must be sited on EFU zoned land in order to produce commercial quantities of energy to the power grid in a safe and economically viable manner. To the Applicant's knowledge, all Oregon wind projects have been located on EFU land; such land seems to hold most, if not all, of Oregon's commercially viable wind resource. Nor has the Applicant become aware of any meteorological information concerning significant, developable wind resources on non-EFU land in Sherman County. The only non-EFU land in the area is

located in the cities of Moro, Wasco, Rufus, and Biggs Junction. None of these locations has the necessary wind resource, adequate parcels of land, or proximate transmission system necessary to build the Facility.

*The Facility Will Further Important State Policies*

Sherman County's comprehensive plan contains policies pointing out that the County has undeveloped solar and wind resources and encouraging the County to "cooperate with public agencies and private individuals in the use and development of renewable resources" (SCCP, Section XV, Finding III and Policy I).

The state of Oregon recently published a Renewable Energy Action Plan for the state (ODOE, 2005). The Plan calls for significant, additional development of renewable resources, including wind energy. Further, Statewide Land Use Planning Goal 13 calls for the development of renewable energy resources. The Oregon Legislative Assembly has enacted numerous tax credits and economic development incentives favoring renewable energy development. Oregon's numerous statutory programs together reflect a thoroughgoing state policy of supporting renewable energy development. See, for example, ORS 757.612 (creating system benefit charge, a portion of the funds from which go to renewable energy); ORS 757.603(2) (requiring Oregon electric utilities to provide retail customers with at least one option including significant percentage of renewable energy).

On balance, the Facility will produce a significant advancement of important County and State policies while causing only a minor inconsistency with the policies behind Goal 3.

*The Facility Will Advance the State and County Policies of Furthering Efficient Development and Economic Growth*

As described in this Exhibit, the Energy Facility will encourage the efficient siting of land uses. The Facility will facilitate multiple uses of land. The Facility will allow access to farmland on those acres occupied by turbines and other facilities.

The Facility will benefit the local economy through employment opportunities, particularly during construction, and contributions to the local tax base. The number of construction jobs will fluctuate during the construction period of approximately 10 months, ranging from approximately 50 to 250 jobs. Operation of the Facility will require 15 to 20 full-time employees. These permanent jobs will contribute to the local economy. In addition, the capital investment in the Facility is estimated to be at least \$200 million, and the Facility is expected to provide substantial tax revenues to the County over its lifespan, with insubstantial countervailing public service demands.

The affected landowners will also benefit. In return for granting leases and easements over small amounts of their farmland, the landowners will receive significant financial compensation.

*EESE Consequences Favor the Exception*

*"The significant environmental, economic, social, and energy consequences anticipated as a result of the proposed facility have been identified and adverse impacts will be mitigated in accordance with rules of the Council applicable to the siting of the proposed facility" [OAR 345-022-0030(4)(c)(B)].*

Response:

**Environmental.** The Facility's environmental consequences are discussed thoroughly in Exhibits J, L, P, and Q. These exhibits identify potential environmental consequences of Facility construction and operation, and demonstrate that the Facility, including proposed mitigation measures, will not cause any significant adverse environmental consequences.

**Socioeconomic.** The Facility's socioeconomic consequences will not be adverse. As demonstrated in Exhibits R, S, and T, the Facility will have no significant adverse impacts on scenic, cultural, historical, archeological, or recreational resources. Exhibit U also demonstrates that the Facility will not have significant adverse impacts on community services such as housing, sewer, water supply, waste disposal, health care, education, and transportation. As discussed previously, the Facility will create jobs and contribute significant income to the County. These benefits should be measured against the relatively small amount of agricultural activity that will be displaced by the Facility and as compared with impacts on agricultural activity that can occur from utility facilities that would be permitted outright.

**Energy.** The energy consequences of the Facility will be positive, as is the fact that the Facility will produce renewable, emissions-free energy.

The Facility Is Compatible with Other Adjacent Uses

*"The Proposed Facility is compatible with other adjacent uses...[(OAR 345-22-0030(4)(c)(C)]*

Response:

Adjacent land uses are dry land farming and some irrigated farming (see Figure K-2). The construction and operation of the Facility will be compatible with these uses. Attachment K-1 contains statements from surrounding landowner/farmers explaining the Facility's compatibility with their uses of land. Additional detail on compatibility is also provided throughout Exhibit K.

Conclusion

In summary, there are compelling reasons why siting the Facility on agricultural land is necessary and justifies making an exception to Goal 3.

Energy Generating Facility's and New Access Roads' Compliance with ORS 215.283(2)(g) and ORS 215.296

ORS 215.296 requires application of specific conditional use criteria for uses permitted by ORS 215.283(2), including ORS 215.283(2)(g) – commercial generating facilities. While the SCZO applies significant conditional use provisions, it does not expressly apply the specific conditional use criteria listed in ORS 215.296. Accordingly, under ORS 197.646(3), the statutory criteria apply directly to the Energy Facility. Similarly, the conditional use criteria in ORS 215.296 are also applicable to the access roads as required by ORS 215.283(3)(b) and OAR 660-012-0065 which are discussed here.

**Energy Facility.** See Section II.A.1.

**Access Roads' Compliance with ORS 215.283(2)(g) and ORS 215.296.** See Section II.A.1.



Related and Supporting Facilities' Compliance with ORS 215.283(71)(d) and SCZO 3.1.2(m)

See Section II.A.3.

Access Roads' Compliance with OAR 660-12-0065

In pertinent part, OAR 660-012-0065 provides:

(3) *The following transportation improvements are consistent with goals 3, 4, 11, and 14 subject to the requirements of this rule:*

...

(o) *Transportation facilities, services, and improvements other than those listed in this rule that serve local travel needs. The travel capacity and level of service of facilities and improvements serving local travel needs shall be limited to that necessary to support rural land uses identified in the acknowledged comprehensive plan or to provide adequate emergency access.*

...

(5) *For transportation uses or improvements listed in subsection (3)(d) to (g) and (o) of this rule within an exclusive farm use (EFU) or forest zone, a jurisdiction shall, in addition to demonstrating compliance with the requirements of ORS 215.296:*

(a) *Identify reasonable build design alternatives, such as alternative alignments, that are safe and can be constructed at a reasonable cost, not considering raw land costs, with available technology. Until adoption of a local TSP pursuant to the requirements of OAR 660-012-0035, the jurisdiction shall consider design and operations alternatives within the project area that would not result in a substantial reduction in peak hour travel time for projects in the urban fringe that would significantly reduce peak hour travel time. A determination that a project will significantly reduce peak hour travel time is based on OAR 660-012-0035(10). The jurisdiction need not consider alternatives that are inconsistent with applicable standards or not approved by a registered professional engineer.*

(b) *Assess the effects of the identified alternatives on farm and forest practices, considering impacts to farm and forest lands, structures, and facilities, considering the effects of traffic on the movement of farm and forest vehicles and equipment, and considering the effects of access to parcels created on farm and forest lands; and*

(c) *Select from the identified alternatives, the one, or combination of identified alternatives that has the least impact on lands in the immediate vicinity devoted to farm or forest use.*

No new road alignments are proposed. Improvements to local roads to accommodate the weight and size of turbine components are proposed. The improvements will bring local roads closer to the County's proposed standards and might exceed them in some cases. No changes to road capacity will result; however, widening roads to include shoulders will assist farmers in maneuvering equipment without impeding traffic in both directions.

Restoration of Site

ORS 215.275(4) provides that the owner of a utility facility approved under ORS 215.213 (1)(d) or 215.283 (1)(d) shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land to a depth of 3 feet and associated improvements

that are damaged or otherwise disturbed by the siting, maintenance, repair, or reconstruction of the Facility. Nothing in this section prevents the owner of a utility facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration.

As discussed in detail previously, the Applicant will restore the site to its original contours, spread topsoil on the site, and reseed for crops or other vegetation. Any disturbed CRP areas and other non-cropped vegetated areas will be revegetated with the appropriate species.

Conditions of Approval

ORS 215.275(5) provides that the governing body of the county or its designee shall impose clear and objective conditions on an application for utility facility siting under ORS 215.213 (1)(d) or 215.283 (1)(d) to mitigate and minimize the impacts of the proposed Facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on the surrounding farmlands.

The impacts from the Facility will not force significant changes in farm practices or a significant increase in costs for farms directly affected. The Applicant intends to mitigate any impacts to area farmers, including coordinating with farmers concerning timely and adequate access during construction of the Facility, weed management during construction and operation of the Facility, restoration of disturbed areas during construction and after construction is completed to a depth of 3 feet, and lease payments to lessors/farmers.

**K.6 FEDERAL LAND MANAGEMENT PLANS**

**OAR 345-021-0010(1)(k)(D)** *If the proposed facility will be located on federal land:*

- (i) *Identify the applicable land management plan adopted by the federal agency with jurisdiction over the federal land;*
- (ii) *Explain any differences between state or local land use requirements and federal land management requirements;*
- (iii) *Describe how the proposed facility complies with the applicable federal land management plan;*
- (iv) *Describe any federal land use approvals required for the proposed facility and the status of application for each required federal land use approval;*
- (v) *Provide an estimate of time for issuance of federal land use approvals; and*
- (vi) *If federal law or the land management plan conflicts with any applicable state or local land use requirements, explain the differences in the conflicting requirements, state whether the applicant requests Council waiver of the land use standard described under paragraph (B) or (C) of this subsection and explain the basis for the waiver.*

Response: These provisions are not applicable to the Facility. No parts of the Facility will be located on federal land.

**K.7 REFERENCES**

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- U.S. Natural Resources Conservation Service (NRCS). 1999. *Soil Survey of Sherman County, Oregon*. U.S. Department of Agriculture, Washington, D.C. 122 pp.: ill., map; 28 cm. + 32 folded map sheets.



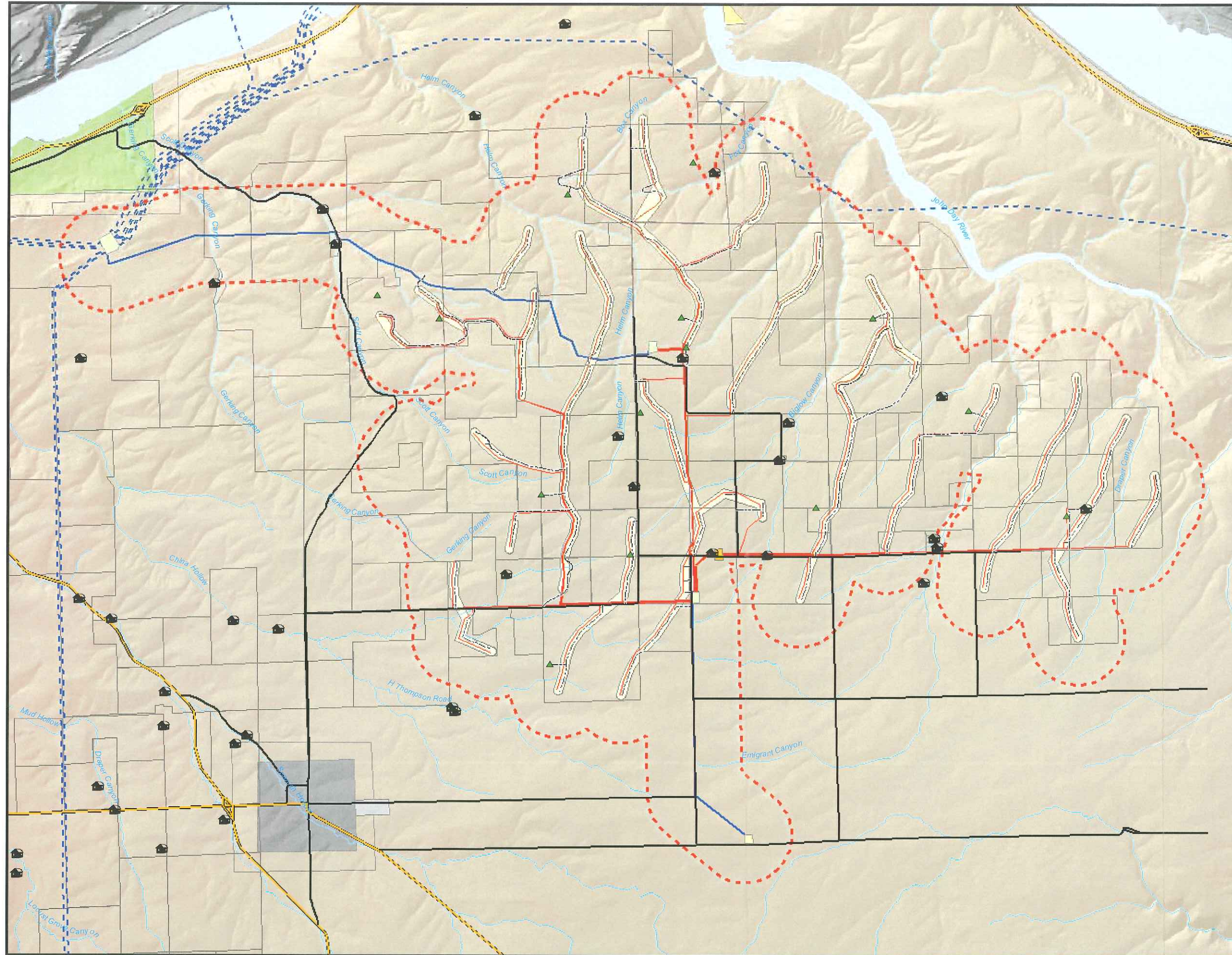
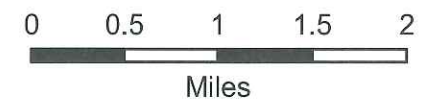
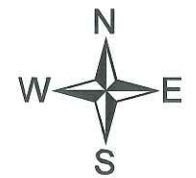
## Figures

**Figure K-1**  
**Zoning Map**  
 Biglow Canyon Wind Farm



**Legend**

- ▲ Proposed Met Tower
- 🏠 House
- 🛤 Proposed Facility Access Roads
- 🛤 Existing Dirt Roads
- 🛤 Existing Roads
- 🛤 Existing Highways
- Proposed 34.5-kV Underground Collector System
- Proposed Transmission Line
- Existing Transmission Line
- 📏 Proposed Turbine Corridors
- 🟡 Existing Substation
- 🟡 Proposed Substation / Proposed O&M Facility
- 🟡 Proposed O&M Facility
- 🌊 Rivers and Lakes
- 📏 Tax Lots
- Zoning**
- 🟡 Ag
- 🏠 Airport
- 🟡 Rural Commercial
- 🟡 Rural Residential
- 🟡 Refuge
- 🟡 Urban
- 📏 1/2-mile Land Use Analysis Area



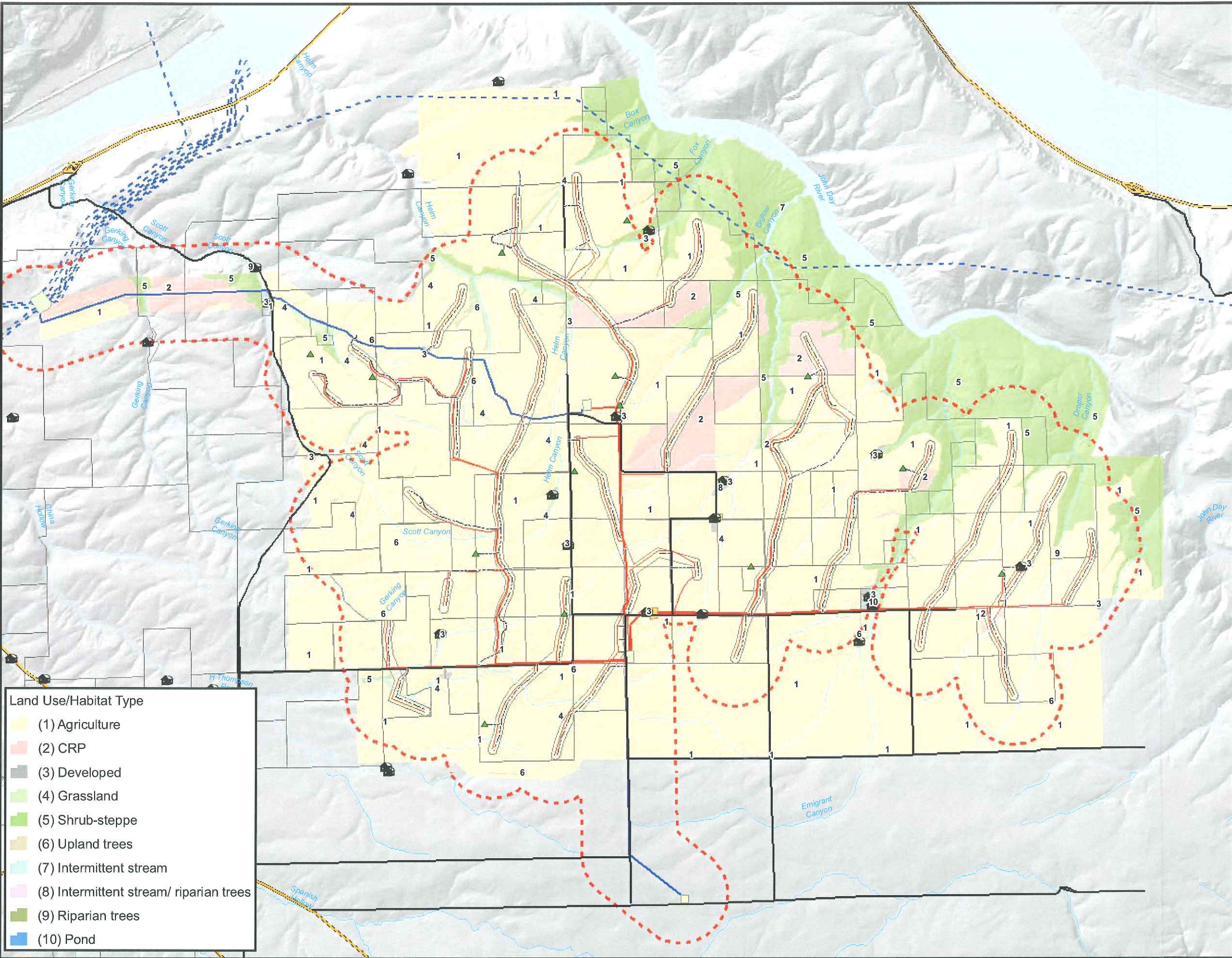
# Figure K-2 Land Use Map

Biglow Canyon Wind Farm

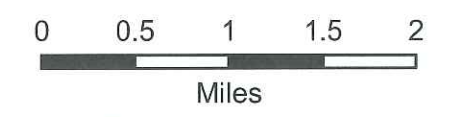
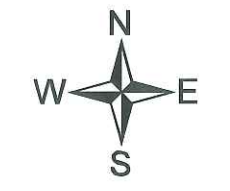


### Legend

- ▲ Proposed Met Tower
- 🏠 House
- ↘ Proposed Facility Access Roads
- ↘ Existing Dirt Roads
- ↘ Existing Roads
- ↘ Existing Highways
- Proposed 34.5-kV Underground Collector System
- Proposed Transmission Line
- - Existing Transmission Line
- ▭ Proposed Turbine Corridors
- ▭ Existing Substation
- ▭ Proposed Substation / Proposed O&M Facility
- ▭ Proposed O&M Facility
- 🌊 Rivers and Lakes
- ⊕ Tax Lots
- ⋯ 1/2-mile Land Use Analysis Area



Land Use/Habitat Type	
1	Agriculture
2	CRP
3	Developed
4	Grassland
5	Shrub-steppe
6	Upland trees
7	Intermittent stream
8	Intermittent stream/ riparian trees
9	Riparian trees
10	Pond



Data Collected by West, Inc. (2005)

**Figure K-3**  
**Soils - Land Capability Classification**

Biglow Canyon Wind Farm

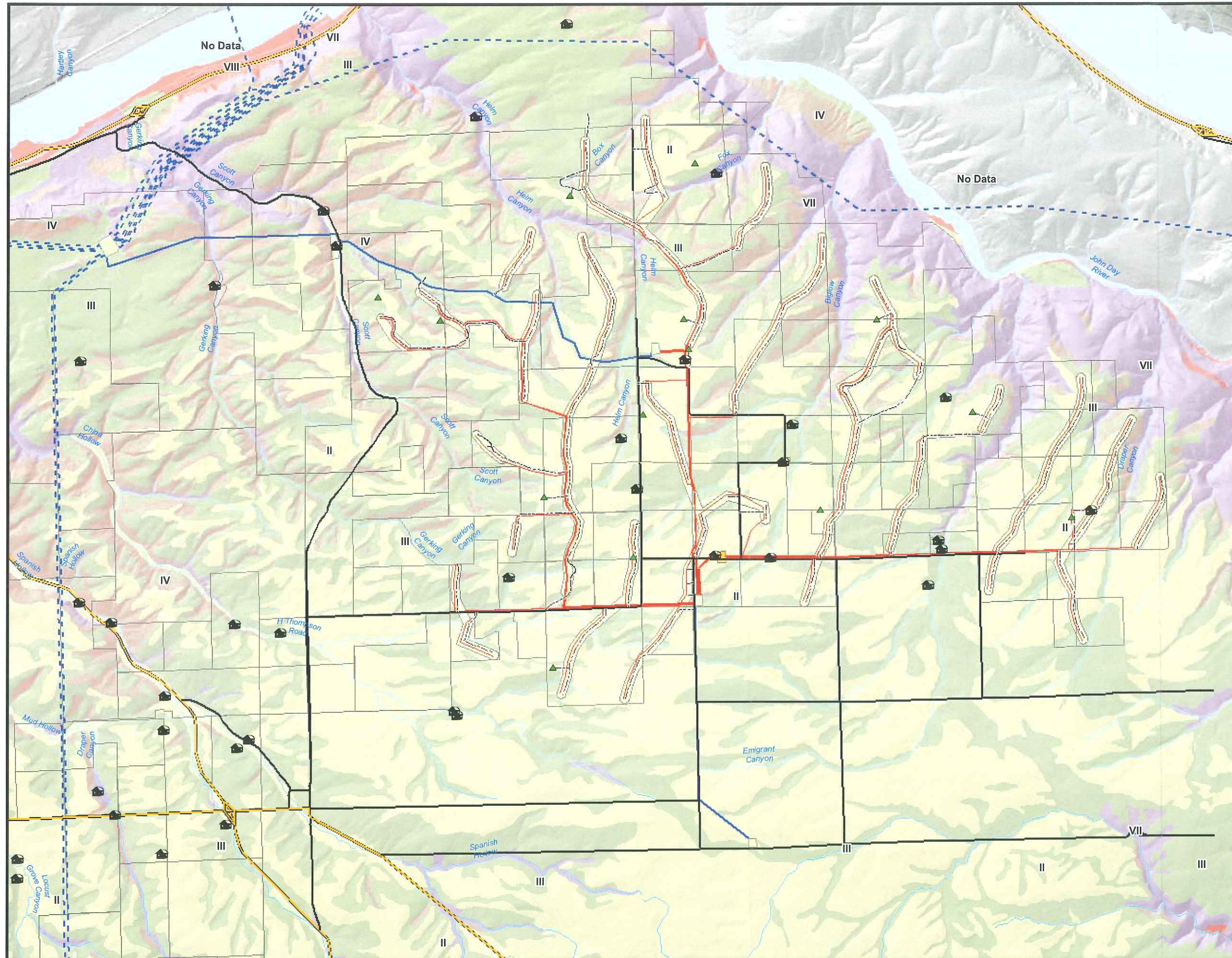


**Legend**

- ▲ Proposed Met Tower
  - 🏠 House
  - ↔ Proposed Facility Access Roads
  - ↔ Existing Dirt Roads
  - ↔ Existing Roads
  - ↔ Existing Highways
  - Proposed 34.5-kV Underground Collector System
  - Existing Transmission Line
  - Proposed Transmission Line
  - Existing Transmission Line
  - Proposed Turbine Corridors
  - Existing Substation
  - Proposed Substation / Proposed O&M Facility
  - Proposed O&M Facility
  - 🌊 Rivers and Lakes
  - ⊕ Tax Lots
- Land Capability Classification**
- Class II
  - Class III
  - Class IV
  - Class VI
  - Class VII
  - Class VIII
  - No Data



Source:  
 Soil Survey of Sherman County, Oregon (NRCS, 2004)  
 Soil Survey of Gilliam County, Oregon (NRCS, 2004)  
 Soil Survey of Klickitat County, Washington (NRCS, 2004)





ATTACHMENT K-1

**Landowner Statements Regarding Compatibility  
with Farming Practices**



## Landowner Statement Regarding Compatibility with Farming Practices Biglow Canyon Wind Project (Lessor)

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As a farmer, I value the rural farming way of life and I would not support any project I thought would harm or change that way of life. I support the Biglow Canyon project because I'm convinced it can be built and operated in a way the fits in with and supports the existing land uses and the community that depends on them.

Thank you for considering my opinion.

Name: Dewey Thomas

Address: P.O. Box 153 404 N. Hwy 97  
WASCO, OR 97065

Signature: Dewey Thomas

Date: 9-26-05

## Landowner Statement Regarding Compatibility with Farming Practices Biglow Canyon Wind Project (Lessor)

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Thank you for considering my opinion.

Name: Norman + Marilyn Freidley

Address: P.O. Box 46  
Wasco, OR 97065

Signature: Marilyn Freidley, Norman Freidley

Date: 9-26-05

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Thank you for considering my opinion.

Name:

Maureen M. Ardley Chair

Address:

James Well Farm

Signature:

Maureen M. Ardley Chair

Date:

9-26-05

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Thank you for considering my opinion.

Name: KEUT THOMAS Melva Thomas

Address: 28509 EMIGRANT SPRINGS LANE  
WASCO, ORE. 97065

Signature: Kent Thomas Melva Thomas

Date: 9-25-05

## Landowner Statement Regarding Compatibility with Farming Practices Biglow Canyon Wind Project (Lessor)

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Thank you for considering my opinion.

Name:

Delta Johnson

Address:

97327 Emigrant Spring Lane  
Wasco, Ore. 97065

Signature:

Delta Johnson by POA Les Tracy

Date:

9/25/2005

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Thank you for considering my opinion.

Name: Barbara J Gray  
B. J. Gray

Address: 97327 Emigrant Sp Lane  
Wasco, Or. 97065

Signature: Barbara J Gray  
B. J. Gray

Date: 9/25/2005



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Thank you for considering my opinion.

Name: Brett & Treva Gray

Address: 92642 Emigrant Spr Ln.  
Wasco, Ore 97065

Signature: Brett Gray Treva Gray

Date: 9-25-05

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Thank you for considering my opinion.

Name: JOHN & NANCY FIELDS

Address: 75960 HWY 97  
WASCO, OR 97065

Signature: John Fields Nancy Fields

Date: 9/25/05

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Thank you for considering my opinion.

Name: James K. McCullough + Kathy McCullough

Address: PO Box 194

Wasco Ore: 97065

Signature: J.K. McCullough + Kathy McCullough

Date: 9-27-05

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Thank you for considering my opinion.

Name: Macnab Inc.

Address: P.O. Box 194

Wasco, OR 97065

Signature: Harry Macnab (president)

Date: 9-26-05

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Thank you for considering my opinion.

Name: Doug Medler

Address: P.O. Box 1287

The Dalles OR 97052

Signature: Doug Medler

Date: 9-27-05

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Thank you for considering my opinion.

Name: Arde Schauf Robert E. Schauf

Address: 7695 Tucker Road  
Amity, Ore. 97101

Signature: \_\_\_\_\_

Date: Sept. 27, 2008

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Thank you for considering my opinion.

Name:

Marlene J Kaufman

Address:

2202 N E 156<sup>th</sup> Ave  
Portland, OR 97230

Signature:

Marlene J Kaufman

Date:

09 27 05

## Landowner Statement Regarding Compatibility with Farming Practices Biglow Canyon Wind Project (Non-Lessor)

I make this statement in support of the Biglow Canyon Wind Project's application for a site certificate from the Oregon Energy Facility Siting County.

I own land in Sherman County, Oregon located in and around the wind project area and I actively use this land as a part of a commercial agricultural enterprise. No portions of the project will occupy my land, but some portions of the project will be located within one-half mile of portions of my land.

Based on talking with Orion about their plans for Biglow, and on my observation of the construction and operation of the nearby Klondike Wind Project, I have come to the conclusion that development of Biglow will be compatible with my ongoing agricultural operations. In particular:

- The project won't change the basic pattern of land use in the surrounding area. I'm not aware of anybody who's going to stop farming as a result of the project's development, or start using their land for some different purpose. Basically, once the project is up and running we expect things to go on pretty much as before.

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Thank you for considering my opinion.

Name: Mac Five Farm, LLC

Address: 3440 NW Vaughn St  
Portland, OR 97210

Signature: By: Shukla W. Howard, Gen Mgr

Date: 09/28/05



**EXHIBIT L****IMPACTS ON PROTECTED AREAS**

OAR 345-021-0010(1)(L)

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L.5 REFERENCES.....	L-7

**TABLE**

L-1 Protected Areas Located Within a 20-Mile Radius of the Biglow Canyon Wind Farm Facility Site .....	L-2
---	-----

**FIGURE** (*located after text*)

L-1 Protected Areas	
---------------------	--



## L.1 INTRODUCTION

Exhibit L addresses impacts the proposed Biglow Canyon Wind Farm Facility (Facility) will have on Protected Areas in the Facility analysis area. This Exhibit responds to the provisions of OAR 345-021-0010(1)(L), which requires the submission of:

**OAR 345-021-0010(1)(L)** *Information about the proposed facility's impact on Protected Areas, providing evidence to support a finding by the Council as required by OAR 345-022-0040, including:*

OAR 345-022-0040 requires that the application for site certificate for the proposed Energy Facility address impacts to Protected Areas as defined in OAR 345-022-0040(1)(a)(p). Except under special circumstances, as defined in OAR 345-022-0040(2), the Council will not issue a site certificate for a proposed facility located in a Protected Area. For facilities located outside these areas, the Council "must find that, taking into account mitigation, the design, construction, and operation of the facility are not likely to result in significant adverse impact [to Protected Areas]."

Overview: In response to these requirements, a systematic analysis was undertaken. The first step was to review the list of categories of Protected Areas defined in OAR 345-022-0040, and then to consult area maps and other data sources to determine whether any areas or sites meeting the definitions of these Protected Areas are located either on the Facility site or a within the 20-mile analysis area around it. Once identified, these Protected Areas were listed in Table L-1, and their locations indicated on the analysis area map presented as Figure L-1. For each Protected Area, the data presented in the other exhibits prepared for this site certificate application were reviewed, and in some cases, supplemental analysis was carried out, to determine whether the Facility will be likely to have adverse effects on the Protected Area, and if so, whether those effects will be significant.

The results of this analysis process are presented here in a sequence directly related to the organization of the application requirements contained in OAR 345-021-0010(1)(L), and the results provide evidence to support a finding by the Council as required by OAR 345-022-0040.

## L.2 MAP OF PROPOSED FACILITY IN RELATION TO PROTECTED AREAS

**OAR 345-021-0010(1)(L)(A)** *A map showing the location of the proposed facility in relation to the Protected Areas listed in OAR 345-022-0040 located within the analysis area:*

Response: The analysis area for impacts on Protected Areas includes the area within the Facility site and extends 20 miles beyond the site boundary. Figure L-1 is a map on which the boundary of the analysis area has been drawn; it indicates the locations of the Protected Areas that have been identified as lying within it. Table L-1 lists these Protected Areas and their approximate minimum distance from the proposed Facility. No Protected Areas as defined by OAR 345-022-0040 lie within the Facility site itself.

**Table L- 1. Protected Areas Located Within a 20-Mile Radius of the Biglow Canyon Wind Farm Facility Site**

Map Reference Number	Protected Area	Distance to Nearest Turbine (miles)
1	Columbia River Gorge National Scenic Area	10
2	Deschutes River State Recreation Area and Heritage Landing	11
3	Deschutes Federal Wild and Scenic River/State Scenic Waterway	15
4	Lower Deschutes Wildlife Area	11
5	Columbia Basin Agricultural Research Center, Moro	9
6	John Day Wildlife Refuge	1
7	John Day Federal Wild and Scenic River/State Scenic Waterway	1
8	J.S. Burres State Park	10
9	Maryhill State Park	10
10	Goldendale Observatory State Park	14
11	Brooks Memorial State Park	16

### L.3 POTENTIAL IMPACTS

**OAR 345-021-0010(1)(L)(B)** *A description of significant potential impacts of the proposed facility, if any, on the Protected Areas including, but not limited to, potential impacts such as:*

Response: The results of the evaluation of the Facility's impacts on Protected Areas are described here.

- (i) *Noise resulting from facility construction or operation;*

Response: As detailed in Exhibit X, projected noise levels resulting from Facility construction and operation will meet requirements contained in Oregon Department of Environmental Quality rules.

Given projected noise levels and the distance between turbine locations and Protected Areas, noise resulting from Facility construction and operation will not significantly affect the Protected Areas in the 20-mile analysis zone. At the closest Protected Areas, the John Day Wildlife Refuge and the John Day Federal Wild and Scenic River Reach, Facility-induced noise levels will not exceed the 45-dBA standard for "quiet areas," a standard the Council has applied to wildlife refuges even where, as in this case, the refuge is not expressly designated as a quiet area.

- (ii) *Increased traffic resulting from facility construction or operation;*

Response: A detailed traffic analysis is presented in Exhibit U. Increased traffic resulting from Facility construction or operation will not adversely impact Protected Areas.

The primary transportation route for Facility construction vehicles will begin from either eastbound or westbound I-84, and continue south on US 97 (from Biggs, Oregon) to the community of Wasco. Construction traffic might also approach the site from the south on US 97. From Wasco, the primary transportation route will continue east and then southeast on ORE 206 before heading due east on either Klondike Road or Hildebrand Lane. Vehicles then will progress north on North Klondike Road to various county roads to access individual turbine string roads. County roads include segments of Medler Lane, Emigrant Springs Road, Oehman Road, Biglow Road, Beacon Road, and Herin Lane.

State, county, or local roadways might be temporarily affected by traffic increases from construction vehicles accessing the site. Potential construction and operational impacts to traffic safety or maintenance on state highways from this Facility are anticipated to be inconsequential, as the state highway system (I-84, US 97, and ORE 206) was constructed to design, safety, and load-bearing standards. These roadways can accommodate vehicles at the legal load limit, thereby reducing the potential for significant traffic safety and maintenance impacts.

Temporary impacts such as short-term traffic delays on US 97 and local roads might have some occasional, limited effects on access to Protected Areas associated with the John Day River [John Day Wildlife Refuge, John Day Federal Wild and Scenic River (WSR), and John Day State Scenic Waterway], the Columbia Basin Agriculture Research Center in Moro, and J.S. Burres State Park. Several passing lanes on US 97 will alleviate potential impacts. Traffic demands on local roads are currently low. Potential effects are expected to be temporary and negligible, and will not have detrimental impacts on these or the other Protected Areas in the 20-mile radius analysis area. Long-term negative impacts from traffic will be negligible, because the Facility will employ only 15 to 20 people.

County and local roadways might require improvement before construction can begin, and might need to be monitored during construction to ensure and protect the quality of the roadway after the Facility has been completed. Local road improvements will enhance segments of the secondary access route to the John Day River via McDonald Ferry Lane, and thus will have some positive impacts on accessibility to Protected Areas associated with the river.

In conclusion, increased traffic resulting from Facility construction or operation will not adversely impact Protected Areas.

(iii) *Water use during facility construction or operation;*

Response: There will be no potential impacts to water resources in Protected Areas. As discussed in Exhibit O, Facility water use will be temporary, fairly small in volume, and limited to the construction period (except for a very small amount to be used at the operations and maintenance facility). Specifically, water will be used during construction for concrete mixing, road compaction, and dust suppression. The construction contractor will be responsible for arranging for

delivery of water to the site via water trucks from an established source with an existing water right. The city of Wasco has agreed to provide Orion Sherman County Wind Farm LLC (Applicant) contractors with municipal water for construction activities.

Water for dust suppression will have a positive effect on nearby Protected Areas by minimizing the creation of dust clouds during the construction period. Other water uses during Facility construction or operation will not affect any of the Protected Areas within the 20-mile analysis zone.

- (iv) *Wastewater disposal resulting from facility construction or operation;*

Response: There will be no potential wastewater impacts. As discussed in Exhibit V, the use of water for construction practices is not anticipated to generate runoff. Wastewater will not be discharged into wetlands or other adjacent resources. Sanitary effluent will be treated via the proposed septic tank and stormwater will infiltrate onsite.

Wastewater resulting from facility construction or operation will not affect any of the Protected Areas in the 20-mile analysis zone.

- (v) *Visual impacts of facility structures, including cooling tower or other plumes, if any; and*

Response: The visual impacts of the Facility are evaluated in detail in Exhibit R. Because some of the Protected Areas are not included among the classes of sites for which evaluations were required in Exhibit R, supplemental analysis was conducted to determine the extent to which the Facility will be visible from the Protected Areas not evaluated in Exhibit R and to assess the nature and degree of impacts on the aesthetic values associated with the Protected Area status of these sites.

To provide a basis for determining whether the Facility will be visible from the Protected Areas identified, the results of the Zones of Visual Influence (ZVI) analysis described in Exhibit R was overlaid on the map presented as Figure L-1.<sup>1</sup> Review of this map makes it possible to identify those Protected Areas from which the Facility might be visible, and for which evaluation of Facility visual impacts is required. As pointed out in Exhibit R, the visibility pattern the ZVI analysis presents is highly conservative in that it calculates a line-of-sight from the tips of the rotors at their highest positions. In some areas where Facility visibility is being indicated, the only parts of the Facility that might be visible will be the tips of the blades. In addition, the ZVI analysis does not take into account the screening role of structures and trees. As a result, there might be localized areas where Facility visibility is indicated but views of the turbines will, in reality, be screened by trees or structures in the foreground of the view. Finally, the ZVI analysis does not consider attenuating factors such as haze, distance, weather, or landscape background.

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<sup>1</sup> The ZVI model and methods are described in Exhibit R.

Review of the ZVI analysis presented in Figure L-1 indicates that the Facility's turbines will not be visible from the Deschutes River State Recreation Area and Heritage Landing, the Deschutes Federal Wild and Scenic River/State Scenic Waterway, the Lower Deschutes Wildlife Area, J.S. Burres State Park, and Goldendale Observatory State Park. Because the Facility will not be visible from these Protected Areas, it is assumed that it will have no visual impacts on these sites.

The visibility of the Facility from the Columbia River Gorge National Scenic Area (CRGNSA) is evaluated in detail in Exhibit R, which contains a map (Figure R-2) of the part of the CRGNSA that lies within 30 miles of the Facility site. In the CRGNSA, a total of 26 key viewing areas are given special attention. Of these 26 areas, 3 lie within the Facility's 20-mile Protected Areas analysis zone. The views from these three key viewing areas are evaluated in Exhibit R. The Exhibit R analysis concludes the following: at the distances from which the turbines will be visible from these viewing areas, they will have a generally low level of visibility, will occupy a very small part of the view, will not be dominant elements of the view, will not lead to a substantial alteration of the overall view character and quality, and will thus not have significant adverse impacts on these views.

The Columbia Basin Agriculture Research Station at Moro is a 234-acre agricultural research facility that includes experimental fields, a shop, an office, a weather station, and agricultural equipment. The ZVI analysis presented in Figure L-1 indicates that the Facility's turbines will be visible to some degree in the background (9 miles distant) of the view from this facility. An interview with the director of this facility indicates that the research station is not managed for scenic quality (Petrie, pers. comm.). Thus, the visibility of the turbines in distant views from the facility will not constitute a significant impact on this Protected Area.

The Exhibit R analysis of the Facility's visibility from the canyon of the John Day River and the ZVI analysis in Figure L-1 both indicate that the Facility will be visible to varying degrees from the segments of the river and the land within  $\frac{1}{4}$  mile of its banks that lie within the John Day Wildlife Refuge, the John Day Federal WSR, and the John Day State Scenic Waterway.

The John Day Wildlife Refuge is managed for wildlife and wildlife habitat and not for scenic quality (Kohl, pers. comm.). Accordingly, the limited views of Facility turbines, as described in Exhibit R, will not constitute a significant adverse impact on this Protected Area.

The John Day Federal WSR and the John Day State Scenic Waterway are both managed for outstanding scenic quality (BLM, 1986; BLM, 2000; BLM, 2001). As described in Exhibit R, the areas protected by these special designations extend only  $\frac{1}{4}$  mile beyond each bank of the river, and these designations do not provide for regulation of activities on privately owned lands beyond this area. Nonetheless, Exhibit R contains a thorough analysis of the Facility's potential visual impacts on these areas.

The Exhibit R analysis indicates that small numbers of turbines might be visible to some degree along approximately 20 percent of the river length between Tumwater Falls and McDonald Crossing. The Exhibit R analysis concludes that because the numbers of turbines will be small, and to a large degree only parts of the turbines will be visible, the turbines will not tend to dominate the views from within the canyon, thereby their effects on the character and quality of the views seen from the river and the lands immediately alongside it will be limited. An additional variable to consider in weighing the relative importance of changes to views from this area is that because public access is limited, relatively few people see the views from this reach of the river. As a result, although there will be some visible changes in the views from parts of these two river-related Protected Areas, the impacts will be less than significant.

As the ZVI data on Figure L-1 indicate, the Facility will be visible to some degree from areas of Maryhill State Park, a 99-acre camping park located on the Washington bank of the Columbia River, adjacent to the US 97 bridge. The park is adjacent to the community of Maryhill, approximately 10 miles northwest of the closest Facility turbine. The ZVI pattern in Figure L-1 overstates the potential visibility of the turbines from the park to some degree, because much of the park has a tree cover. The tree cover provides campers and picnickers with shade and wind protection, and also screens the views from the park toward the bluffs above the south side of the river on which the turbines will be located. Because of the small numbers of turbines that will be visible from the park, and because of the viewing distances entailed (10 miles and more, making the turbines relatively small elements in the overall landscape), the turbines will not dominate the views from the park looking southeast across the river, and will not have a substantial adverse effect on the character and quality of these views.

Brooks Memorial State Park is a 700-acre camping park sited in an area of pine forests located north of Goldendale, Washington, approximately 16 miles north of the Facility site. Although the ZVI analysis presented in Figure L-1 indicates that the Facility might be visible from the park, the potential visibility is overstated because the ZVI analysis did not take into account the presence of the park's forest cover, which tends to block many of the views from the park toward the Facility site. However, from open areas, particularly in the park's upper reaches, there are views toward the distant ridges to the south where the Facility will be located. However, because the turbines will be located 16 miles and farther from the park, to the extent to which they will be visible, they will appear as small elements in the overall landscape, will not dominate the view, and will not create a substantial alteration of the view's character and quality. As a result, the Facility's visual impacts on this Protected Area will be less than significant.

- (vi) *Visual impacts from air emissions resulting from facility construction or operation, including, but not limited to, impacts on Class 1 visual resources as described in OAR 340-204-0050;*



Response: During construction, dust might be generated during road construction, temporary batch plant operation, and clearing activities for the turbine pads. Dust will be controlled through the construction period by watering. Potential impacts are anticipated to be temporary and negligible.

Because Facility operation will create no air emissions, the Facility will have no impacts on air quality during the operational period. As a consequence, during both the construction and operation periods, there will be no air emission impacts that adversely affect views from the Protected Areas.

The minor dust-related issues that might occur during the construction period have no potential for adverse impacts on Class I Prevention of Significant Deterioration Areas. The Facility does not lie within a Class I area, and the closest Class I area, the Mount Hood Wilderness, lies over 45 mile to the west of the Facility site.

#### L.4 CONCLUSION

The proposed Facility will comply with all applicable regulatory guidelines concerning Protected Areas as previously discussed in OAR 345-021-0010(I)(L)(A) and (B). The design, construction, and operation of the proposed Facility are not likely to result in significant adverse impacts to Protected Areas, and the Council may find that the standard in OAR 345-022-0040 has been satisfied.

#### L.5 REFERENCES

Bureau of Land Management (BLM). 1986. *Two Rivers Resource Management Plan Record of Decision*. U.S. Department of the Interior. June 1986.

Bureau of Land Management (BLM). 2000. *John Day River Proposed Management Plan, Two Rivers and John Day Resource Management Plan Amendments and Final Environmental Impact Statement*. U.S. Department of the Interior. June 2000.

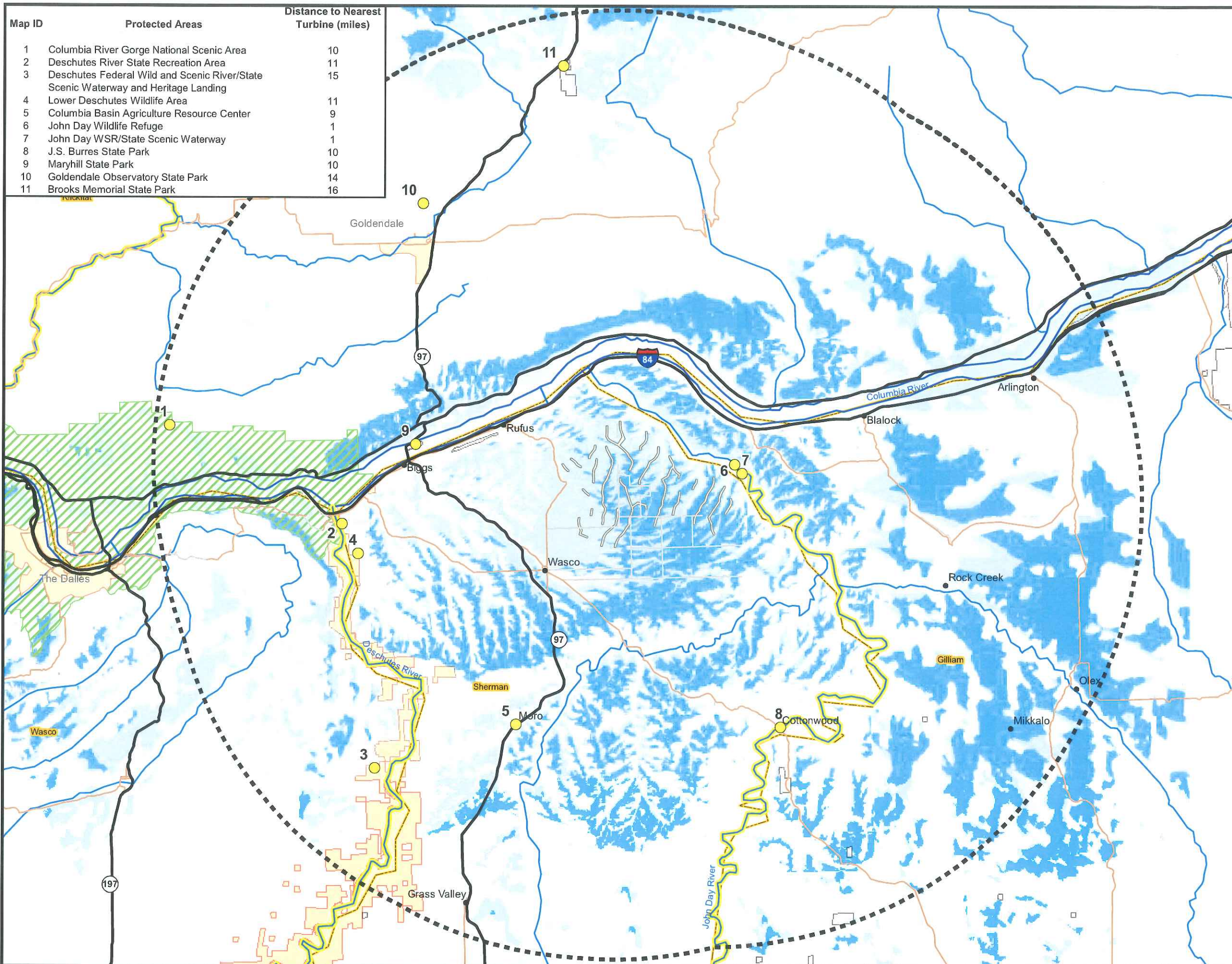
Bureau of Land Management (BLM). 2001. *Record of Decision John Day River Management Plan, Two Rivers, John Day, and Baker Resource Management Plan Amendments*. U.S. Department of the Interior. February 2001.

Houck, Jan. 2005. Scenic Waterway Coordinator. Oregon Department of Parks and Recreation. Personal communication via telephone conversation with Sean Sullivan. March 7, 2005. Cited in Klondike III Wind Project Exhibit L, April 1, 2005.

Kohl, Keith. 2005. District Wildlife Biologist. Mid-Columbia District. Oregon Department of Fish and Wildlife. Personal communication via telephone conversation with Sean Sullivan. March 7, 2005. Cited in Klondike III Wind Project Exhibit L, April 1, 2005.

Petrie, Steve. 2005. Director, Columbia Basin Agriculture Research Center (Moro), Oregon State University. Personal communication via telephone conversation with Sean Sullivan. March 10, 2005. Cited in Klondike III Wind Project Exhibit L, April 1, 2005.

## Figures



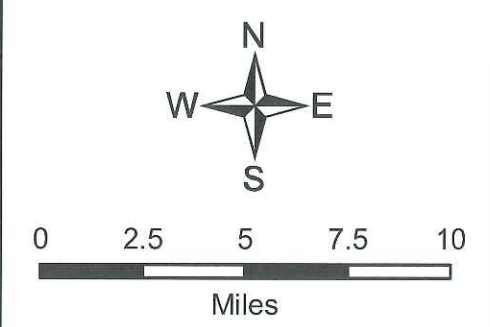
Map ID	Protected Areas	Distance to Nearest Turbine (miles)
1	Columbia River Gorge National Scenic Area	10
2	Deschutes River State Recreation Area	11
3	Deschutes Federal Wild and Scenic River/State Scenic Waterway and Heritage Landing	15
4	Lower Deschutes Wildlife Area	11
5	Columbia Basin Agriculture Resource Center	9
6	John Day Wildlife Refuge	1
7	John Day WSR/State Scenic Waterway	1
8	J.S. Burres State Park	10
9	Maryhill State Park	10
10	Goldendale Observatory State Park	14
11	Brooks Memorial State Park	16

**Figure L-1**  
**Protected Areas**  
 Biglow Canyon Wind Farm



- Legend**
- Protected Area
  - Local Road
  - Major Road
  - Highway
  - Wild and Scenic Rivers
  - Lakes and Rivers
  - Proposed Turbine Corridors
  - ▨ Columbia River Gorge National Scenic Area Boundary
  - ⊖ 20-Mile Radius Analysis Area
  - Counties
  - City Limits
  - ▨ Deschutes River State Recreation Area
  - ▨ State Parks and Wildlife Areas

- Areas From Which Turbine and/or Blades Have the Potential to be Visible (ZVI)**
- Numbers of Turbines Visible, Assuming 150 Turbines, 85-Meter (279-Foot) Hub Height, and 100-Meter (328-Foot) Rotor Length
- 0 - 1 turbines
  - 2 - 20 turbines
  - 21 - 99 turbines
  - 100 - 150 turbines



**EXHIBIT M**

**FINANCIAL ANALYSIS**

OAR 345-021-0010(1)(m)

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**M.1 INTRODUCTION**

**OAR 345-021-0010(1)(m)** *Information about the applicant's financial capability, providing evidence to support a finding by the Council as required by OAR 345-022-0050(2). Nothing in this subsection shall require the disclosure of information or records protected from public disclosure by any provision of state or federal law. The applicant shall include:*

See sections M.2 through M.4.

**M.2 OPINION OF LEGAL COUNSEL**

**OAR 345-021-0010(1)(m)(A)** *An opinion or opinions from legal counsel stating that, to counsel's best knowledge, the applicant has the legal authority to construct and operate the facility without violating its bond indenture provisions, articles of incorporation, common stock covenants, or similar agreements;*

Response: See Attachment M-1, which contains a letter from Stoel Rives LLP, special Oregon counsel for Orion Sherman County Wind Farm LLC (Applicant).

**M.3 BOND, SECURITY, OR OTHER FINANCIAL INSTRUMENT**

**OAR 345-021-0010(1)(m)(B)** *The type and amount of the applicant's proposed bond or letter of credit to meet the requirements of OAR 345-022-0050; and*

Response: A Letter of Credit, Surety Bond or other form of security acceptable to the Oregon Department of Energy will be provided to meet the requirements of OAR-345-022-0500. For the calculation of the amount of the security, please see Exhibit W.

**M.4 EVIDENCE OF REASONABLE LIKELIHOOD OF OBTAINING SECURITY**

**OAR 345-021-0010(1)(m)(C)** *Evidence that the applicant has a reasonable likelihood of obtaining the proposed bond or letter of credit in the amount proposed in paragraph (B), before beginning construction of the facility.*

Response: The Applicant will work with a major utility, energy company, or financial institution to provide the security required under OAR 345-022-0050.

Since its formation in late 1998, the Applicant's parent company, Orion Energy LLC, has developed and financed seven wind energy projects in the United States totaling more than 500 megawatts. Orion's sister company, RDC Developments Ltd., developed and financed the largest wind energy project completed in the United Kingdom to date. Orion has been successful in partnering with major utility and energy companies and financial institutions to finance the development of its projects, initiate construction, and enter commercial operation, as well as to meet the performance and credit requirements under its agreements.

For a list of Orion's successful projects and a partial list of its partners, please see Exhibit D, Table D-1.

ATTACHMENT M-1  
**Legal Counsel Opinion**







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October 6, 2005

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Oregon Department of Energy  
625 Marion Street NE  
Salem, OR 97310

**Re: Application of Orion Sherman County Wind Farm LLC**

Ladies and Gentlemen:

We have acted as special Oregon counsel for Orion Sherman County Wind Farm LLC, a Delaware limited liability company ("Applicant"), in connection with the application (the "Application") to the Oregon Energy Facility Siting Council to which this opinion is appended. In that connection, we have examined the organizational documents of Applicant and such other documents, company records, certificates of officials and other instruments, and have conducted such other investigations of fact and law, as we have deemed necessary or advisable for purposes of this opinion.

In rendering this opinion, we have assumed the genuineness of all signatures, the authenticity of all documents provided to us as originals and the conformity to authentic original documents of all documents provided to us as certified, conformed or photostatic copies. As to questions of fact material to the following opinion, when relevant facts were not independently established, we have relied upon representations of Applicant in the Application, certificates of officers of Applicant and certificates of public officials.

Based upon the foregoing, and subject to the qualifications below, to the best of our knowledge Applicant has the legal authority to construct and operate the Project (as described in the Application) without violating its bond indenture provisions, articles of organization or operating agreement, or any membership interest covenants, or similar agreements.

Oregon  
Washington  
California  
Utah  
Idaho



Oregon Department of Energy  
625 Marion Street NE  
Salem, OR 97310  
October 6, 2005  
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This opinion is limited to matters governed by the laws of the State of Oregon as they exist at the date hereof, and we express no opinion as to the law of any other jurisdiction. In addition, our opinion pertains solely to the authority of Applicant under its organizational documents and other agreements known to us, and we express no opinion as to the applicability or effect of any federal, state or local laws (including all rules and regulations promulgated thereunder) that may be applicable to the construction and operation of the Project.

This opinion is rendered solely to The Oregon Department of Energy in connection with the above-referenced matter. This opinion may not be relied upon for any other purpose or relied upon by or furnished to any other person without our prior written consent.

Very truly yours,

A handwritten signature in black ink, appearing to read "Peter D. Mostow", written over a horizontal line.

Peter D. Mostow  
for  
STOEL RIVES LLP