

## EXHIBIT L

### IMPACTS ON PROTECTED AREAS

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

#### TABLE OF CONTENTS

	<b>Page</b>
L.1 INTRODUCTION.....	L-1
L.1.1 Turbine Layout.....	L-1
L.1.2 Overhead 230-kV Transmission Line .....	L-1
L.1.3 Analysis Area.....	L-1
L.1.4 Zone of Visual Influence .....	L-1
L.2 PROTECTED AREAS AND MAP OF FACILITY LOCATION.....	L-2
L.3 ANALYSIS OF POTENTIAL IMPACTS ON PROTECTED AREAS .....	L-3
L.3.1 Summary of Potential Impacts on Protected Areas from Noise, Traffic, Water, Wastewater, and Visual.....	L-4
L.3.2 Potential Visual Impacts on Protected Areas .....	L-6
L.3.2.1 John Day Fossil Beds National Monument.....	L-6
L.3.2.2 Wilderness Study Areas .....	L-6
L.3.2.3 Spring Basin Wilderness Area .....	L-8
L.3.2.4 John Day Chaparral Access and John Day Chaparral Recreation Association.....	L-8
L.3.2.5 John Day River.....	L-8
L.3.2.6 Deschutes River.....	L-9
L.3.2.7 White River .....	L-10
L.3.2.8 Lower Deschutes Wildlife Area .....	L-10
L.3.2.9 White River Wildlife Area.....	L-11
L.4 CONCLUSION .....	L-11
L.5 REFERENCES.....	L-11

#### TABLES

L-1 Protected Areas Within the 20-Mile Analysis Area .....	L-3
L-2 Potential Facility Visibility from and Distance to Protected Areas Within 20 Miles.....	L-5

#### FIGURE

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



## L.1 INTRODUCTION

EC&R Development, LLC (Applicant) proposes to construct the Brush Canyon Wind Power Facility (Facility) in Wasco and Sherman counties, Oregon. The proposed Facility is expected to provide a nominal electric generating capacity of up to 535 megawatts (MW) from 223 turbines. Figures C-1, C-2, and C-3 in Exhibit C contain maps of the site vicinity, Facility layout, and Facility components, respectively.

Exhibit L responds to the provisions of Oregon Administrative Rule (OAR) 345-021-0010(1)(I). The analysis results provide evidence to support a finding by the Council as required by OAR 345-022-0040.

### L.1.1 Turbine Layout

This Exhibit analyzes potential impacts from 223 1.62-MW turbines. As explained in Exhibit B, the Applicant has not yet selected a final turbine size and type. As such, the Applicant analyzes the worst-case impacts by evaluating the proposed 223-turbine layout and the tallest turbine option. The 1.62-MW turbine is one of the tallest machines currently available that falls within the 1.6- to 2.4-MW range proposed by the Applicant. The ground to blade-tip height of the 1.62-MW turbine is 492 feet (150 meters) from the base of the turbine to the tip of the rotor. Exhibit B provides additional description of the turbines. Figure L-1 shows the preliminary turbine layout.

### L.1.2 Overhead 230-kV Transmission Line

In addition to analyzing impacts from the turbine layout, this Exhibit analyzes impacts from a proposed new overhead, 32-mile-long, 230-kilovolt (kV) transmission line. The proposed transmission line will connect the Facility to the Bonneville Power Administration (BPA) 500-kV transmission line at the existing Buckley substation, which BPA proposes to rebuild. The 230-kV transmission line corridor will extend for approximately 12 miles from the southern Facility collector substation to the northern Facility collector substation, and continue for 20 miles from the northern collector substation to the point of interconnection at Buckley substation. The transmission line will be supported by either wooden H-frame structures or steel monopole structures. The wooden structures would be approximately 85 feet (26 meters) above grade and the steel structures would be approximately 120 feet (37 meters) above grade. Figure L-1 shows the proposed 230-kV transmission line route.

### L.1.3 Analysis Area

In accordance with OAR 345-001-0010(57)(e), the analysis area for “protected areas” consists of the area within the Facility site boundary and 20 miles from the Facility site boundary. For this Exhibit, the “main site boundary” contains all Facility components in addition to approximately 21 miles of the 32 miles of 230-kV transmission line. The long linear portion of the Facility site boundary west of the main site boundary depicted in Figure L-1 contains approximately 11 miles of the 230-kV transmission line. This portion of the Facility site boundary is described as the “transmission line corridor” in this Exhibit.

### L.1.4 Zone of Visual Influence

The Applicant conducted a Zone of Visual Influence (ZVI) analysis using Environmental Systems Research Institute (ESRI) ArcGIS software on areas within a 20-mile radius of the proposed Facility site boundary in order to determine the likelihood of Facility turbines and the 230-kV transmission line being visible from protected areas. The ZVI analysis, also called a “seen area” or viewshed analysis, is a conservative modeling tool for depicting areas from which an object could potentially be visible. The Applicant conducted a ZVI analysis of the 223-turbine layout using the 1.62-MW turbine. The 1.62-MW turbine is one of the tallest machines within the 1.6- to 2.4-MW range under consideration by the Applicant. The turbine height used for the ZVI analysis was 150 meters (492 feet) and the support structure height used for the ZVI analysis was 41.5 meters (135 feet). Although the proposed 230-kV transmission line support structures are 36.5 meters (120 feet) above grade, a taller height was used for the analysis because at the time the site visit was conducted in November of 2011, the final support structure height had not been

determined. The ZVI analysis for the taller support structure was retained for this Exhibit, because there would be no appreciable difference in visibility between structures that vary 5 meters (15 feet) in height. Exhibit R (Figure R-1) provides ZVI analysis results for areas within 10 miles of the site boundary. Areas beyond 10 miles from the site boundary are not depicted using a ZVI map because at this distance, while the line-of-sight analysis of the ZVI may predict some visibility of the Facility from select areas, visibility will be poor.

**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:*

**Response:** OAR 345-021-0010(1)(L) requires that the Application for Site Certificate (ASC) for a proposed Facility address impacts on the protected areas defined in OAR 345-022-0040(1)(a-p). For facilities located outside of a defined protected area, OAR 345-022-0040(1) requires the Council to find that “taking into account mitigation, the design, construction and operation of the facility are not likely to result in significant adverse impact on the areas listed [in OAR 345-022-0040(1)(a-p)]” before it can issue a site certificate.

The Applicant performed an analysis of potential Facility impacts on defined protected areas. Maps and geographic information system (GIS) data sources indicating the locations of protected resources were reviewed to determine whether any of the protected areas defined in OAR 345-022-0040(1)(a-p) are located within the 20-mile analysis area. The identified protected areas are listed in Section L.2 and shown on Figure L-1. No protected areas occur within the Facility site boundary.

## L.2 PROTECTED AREAS AND MAP OF FACILITY LOCATION

**OAR 345-021-0010(1)(L)(A)** *A list of the protected areas within the analysis area showing the distance and direction from the proposed facility and the basis for protection by reference to a specific subsection under OAR 345-022-0040(1).*

**OAR 345-021-0010(1)(L)(B)** *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:** Figure L-1 shows the location of the proposed Facility in relation to the protected areas within 20 miles of the site boundary, including the 230-kV transmission line corridor, as required by OAR 345-021-0010(L)(A).

None of the protected areas defined by OAR 345-022-0040(1)(a-p) is located within the Facility site boundary. OAR 345-022-0040(1)(a-p) lists the types of protected areas that must be considered as well as specific protected areas. Thirty protected areas are located within 20 miles of the site boundary. Table L-1 lists these protected areas, the specific OAR 345-022-0040(1)(a-p) rule reference for each area, their approximate distance to the main Facility site boundary or transmission line corridor, and the direction in which the protected area lies from the main site boundary.

**Table L-1. Protected Areas Within the 20-Mile Analysis Area**

Protected Area	OAR 345-022-0040(1) Rule Reference	Approximate Distance to Main Facility Site Boundary or Transmission Line Corridor (Miles) <sup>a</sup>	Direction from Main Facility Site Boundary
John Day Fossil Beds National Monument	(b)	5.8	SE
Lower John Day Wilderness Study Area	(c)	1.7	SE
North Pole Ridge Wilderness Study Area	(c)	2.3	SE
Thirtymile Wilderness Study Area	(c)	1.7	SE
Pats Cabin Wilderness Study Area	(c)	15.0	SE
Sutton Mountain Wilderness Study Area	(c)	18.2	SE
Spring Basin Wilderness Area	(c)	5.9	SE
Oak Springs State Fish Hatchery	(f)	9.3	SW
Cottonwood Canyon State Park	(h)	15.8	NE
Deschutes State Park	(h)	16.4	W
Deschutes – Hilderbrand State Park	(h)	9.3	NW
Deschutes – Oregon Wildlife Heritage Foundation State Park (#1 and #2)	(h)	16.0	N
Deschutes – Somers State Park	(h)	10.2	N
Deschutes River State Recreation Area	(h)	16.6	W
Dyer State Park/Wayside	(h)	18.2	E
John Day, Chaparral Access	(h)	10.0	SE
John Day, Chaparral Recreation Association	(h)	8.6	SE
JS Burres State Park	(h)	16.5	NE
White River Falls State Park	(h)	8.5	NW
Lawrence Memorial Grassland Preserve	(i)	4.9	W
John Day Wild and Scenic River	(k)	1.0	E
John Day State Scenic Waterway	(k)	1.0	E
Deschutes Wild and Scenic River	(k)	5.9	W
Deschutes River State Scenic Waterway	(k)	5.9	W
White River Wild and Scenic River	(k)	8.0	W
White River State Scenic Waterway	(k)	8.0	W
Sherman Experimental Station	(l)	16.2	N
Lower Deschutes Wildlife Area	(p)	14.5	W
White River Wildlife Area	(p)	14.3	W

**Notes:**

<sup>a</sup> Distances to Facility turbines are greater than the distances to the main Facility site boundary.

**L.3 ANALYSIS OF POTENTIAL IMPACTS ON PROTECTED AREAS**

The 30 protected areas located within the 20-mile analysis area range from 1 to approximately 18 miles from the closest portion of the site boundary. The assessment of potential impacts described in this section demonstrates that the design, construction, and operation of the Facility will not cause any direct or indirect noise, traffic, water, or wastewater impacts that will result in significant adverse impacts on these protected areas. The minimal visual impacts that may potentially occur will not significantly impact

any of the protected areas within sight of the Facility. Section L.3.2 provides additional discussion of each protected area that is potentially within sight of the Facility.

**OAR 345-021-0010(1)(L)(C)** *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:*

**L.3.1 Summary of Potential Impacts on Protected Areas from Noise, Traffic, Water, Wastewater, and Visual**

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

**Response:** As described 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 within the 20-mile analysis zone. The closest protected area, the John Day Scenic Waterway, is 1.0 mile from the main site boundary and approximately 3.2 miles from the nearest turbine. Facility-induced noise levels at this distance will not exceed the 45-dBA standard for “quiet areas.”

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

**Response:** A traffic analysis is presented in Exhibit U. Increased traffic resulting from Facility construction or operation will not adversely affect protected areas. The primary transportation route to access the Facility for construction is Interstate 84 (I-84) east to U.S. Route 97 (US 97) south to the Facility area. Some traffic will continue on Oregon Route 218 (OR 218) east into the Facility area. The secondary transportation route is US 97 to Oregon Route 293 (OR 293) into Antelope.

OR 218 and OR 293 generally have one travel lane in each direction. The closest protected area to the Facility that is located near either OR 218 or OR 293 is the Lawrence Memorial Grassland Preserve, located approximately 5 miles to the west of the Facility site boundary between US 97 and OR 293. Construction-related traffic will likely have no effect on the Preserve or access to the Preserve. Clarno State Park and the Clarno Unit of the John Day Fossil Beds National Monument are located along OR 218 to the east of the Facility, but Facility traffic is likely to come from the opposite direction on OR 218. Traffic to the Facility will have limited or no effect on the other protected areas identified in Table L-1.

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

**Response:** Water resources in protected areas will not be affected by Facility construction or operation. As discussed in Exhibit O, Facility water use will be temporary, fairly small in volume, and limited to the construction period, except for a small amount to be used at the operations and maintenance facility. Water will be used during construction for a number of activities, including construction and maintenance of gravel roads, construction of concrete foundations, and dust control. The construction contractor will be responsible for arranging the delivery of water via water trucks from source municipality with an existing water right.

Water for dust suppression will ensure that protected areas are not affected by dust clouds that otherwise might arise during construction. 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:** Wastewater disposal will not affect protected areas. As discussed in Exhibit V, the use of water for construction practices is not anticipated to generate significant runoff. Wastewater will not be discharged into wetlands or other adjacent resources. The only sewage services required by the Facility during construction will be the handling of sewage from portable toilets, which will not affect protected areas. Waste from the portable toilets will be pumped regularly, and disposed of offsite by the construction contractor. During operations, sanitary waste will be handled and disposed of through an onsite septic system.

Wastewater resulting from Facility construction and operation will not affect any of the protected areas in the 20-mile analysis zone.

(v) *Visual impacts of facility structures or plumes.*

**Response:** Potential visual impacts of the proposed Facility are described in Exhibit R. Not all protected areas identified in Table L-1 are analyzed in Exhibit R because the analysis area defined in the Project Order for scenic impacts is smaller than the analysis area defined for protected areas. Therefore, a separate ZVI analysis was conducted for Exhibit L, as described in Section L.1.4, Zone of Visual Influence.

Table L-2 lists the protected areas within the 20-mile analysis area, indicates whether the Facility turbines and the 230-kV transmission line support structures potentially would be visible, and displays the approximate distances to the protected areas from the main site boundary with turbines, and from the 230-kV transmission line corridor.

**Table L-2. Potential Facility Visibility from and Distance to Protected Areas Within 20 Miles**

Protected Area	223 1.62-MW Turbines		230-kV Transmission Line Corridor	
	Is the Facility Potentially Visible?	Approximate Distance to Facility Site Boundary (miles)	Is the Facility Potentially Visible?	Approximate Distance to Closest Part of Transmission Line Corridor (miles)
John Day Fossil Beds National Monument (Clarno Unit)	P	5.8	N	10.5
Lower John Day Wilderness Study Area	P	1.7	P	4.0
North Pole Ridge Wilderness Study Area	P	2.3	P	5.9
Thirtymile Wilderness Study Area	P	1.7	P	4.9
Pats Cabin Wilderness Study Area	P	15.0	N	22.0
Sutton Mountain Wilderness Study Area	P	18.2	N	25.3
Spring Basin Wilderness Area	P	5.9	N	12.1
Oak Springs State Fish Hatchery	N	19.2	N	9.3
Cottonwood Canyon State Park	N	15.8	N	18.6
Deschutes State Park	N	16.4	N	20.5
Deschutes – Hilderbrand State Park	N	14.0	N	9.3
Deschutes – Oregon Wildlife Heritage Foundation State Park (#1 and #2)	N	18.0	N	16.0
Deschutes – Somers State Park	N	14.0	N	10.2
Deschutes River State Recreation Area	N	17.5	N	16.6
Dyer State Park/Wayside	N	18.2	N	22.0
John Day, Chaparral Access	P	10.0	N	15.5
John Day, Chaparral Recreation Association	P	8.6	N	15.2
JS Burres State Park	N	16.5	N	18.5
White River Falls State Park	N	18.6	N	8.5

**Table L-2. Potential Facility Visibility from and Distance to Protected Areas Within 20 Miles**

Protected Area	223 1.62-MW Turbines		230-kV Transmission Line Corridor	
	Is the Facility Potentially Visible?	Approximate Distance to Facility Site Boundary (miles)	Is the Facility Potentially Visible?	Approximate Distance to Closest Part of Transmission Line Corridor (miles)
Lawrence Memorial Grassland Preserve	N	4.9	N	9.5
John Day Wild and Scenic River	P	1.0	P (minimal)	5.9
John Day State Scenic Waterway	P	1.0	P (minimal)	5.9
Deschutes Wild and Scenic River	P	13.3	P	5.9
Deschutes River State Scenic Waterway	P	13.3	P	5.9
White River Wild and Scenic River	P	19.5	P	8.0
White River State Scenic Waterway	P	19.5	P	8.0
Sherman Experimental Station	N	16.2	N	17.1
Lower Deschutes Wildlife Area	N	16.0	P	14.5
White River Wildlife Area	P	24.5	P	14.3

Notes: ARC=Agriculture Research Center; N=Not possible; P=Possible.

### L.3.2 Potential Visual Impacts on Protected Areas

Neither the turbines associated with the Facility layout nor the 230-kV transmission line under consideration would visually affect the protected areas identified in Table L-1. The following sections detail the analyses for each protected area. Only those protected areas from which turbines and transmission line support structures could potentially be seen, as shown in Table L-2, are analyzed in this section. See Exhibit R for a further discussion of visual impacts from the Facility.

#### L.3.2.1 John Day Fossil Beds National Monument

The Clarno Unit of the John Day Fossil Beds National Monument is approximately 5.8 miles southeast of the closest part of the main site boundary and approximately 10.5 miles from the transmission line corridor. Facility turbines will be potentially visible from parts of this unit. The Monument's General Plan states that the National Park Service may have concerns with views outside the Monument when actions by parties outside the monument can affect visitor experiences. The area of the Monument from which turbines are most likely to be seen will be at higher elevations. One such area contains human-made, unauthorized trails that will be improved as a permanent trail (the Geoloop Trail) over time. The closest strings of turbines to the trail will be between 8 and 9.7 miles to the west. Turbines will likely be visible in the distance above the irrigated fields of the Clarno area, the John Day River, and hills to the west, but they will be subordinate visual elements seen in the distance. During the night, lights associated with turbines could be potentially seen from the trail, but because the Monument is only open during daylight hours, the lights will not be seen by the public. Impacts from the Facility's turbines will not be substantial. The transmission line corridor will not be visible from the Monument.

#### L.3.2.2 Wilderness Study Areas

The Draft John Day Resource Management Plan (Draft Plan) identifies several wilderness study areas (WSAs) within the Prineville District of the BLM (BLM, 2011a). Five of the WSAs described in the Draft Plan are within the 20-mile analysis area. They are the Lower John Day WSA (25,393 acres), the North Pole Ridge WSA (7,625 acres), the Thirtymile WSA (7,625 acres), Pats Cabin WSA (9,970 acres), and Sutton Mountain WSA (29,400 acres). These five areas were recommended by a BLM wilderness study in 1991 to be designated as wilderness. WSAs are managed by the BLM as wildernesses until they are designated as such or are removed from consideration by the U.S. Congress. As with all BLM lands, wilderness areas are

assigned Visual Resource Management (VRM) classes designed to determine how much change to the viewed landscape is allowed. VRM classes only apply to BLM-managed lands and changes to lands beyond those managed by the BLM do not need to be consistent with BLM visual objectives. Wilderness areas and WSAs are classified as (VRM) Class I, “which requires that natural process dominate the landscape while allowing limited management activity” (BLM, 2011a). VRM Class I areas only allow activities that create a low “level of change to the characteristic landscape” and that do “not attract attention.” The main site boundary is between 1.7 and 18.2 miles away from these five WSAs and the nearest turbines will be between 2.8 and 20.2 miles away.

Until the Draft Plan is approved, it does not yet have any regulatory status. The area including these five WSAs is governed by the *Two Rivers Resource Management Plan* (BLM, 1986). The WSAs are classified as “areas under wilderness review,” and are managed following the guidance of BLM’s Interim Management Policy for Lands Under Wilderness Review, as discussed in the John Day RMP.

#### **Lower John Day Wilderness Study Area**

The Lower John Day WSA is the closest WSA from which the Facility is potentially visible. As indicated in Table L-2, it is approximately 1.7 miles from the main site boundary, and the nearest turbine is approximately 6.5 miles away. The WSA is also 4 miles from the transmission line corridor. The portions of the Lower John Day WSA from which turbines (or parts of turbine blades) could potentially be visible are limited to upper canyon and rim areas, not from the river or adjacent shoreline. At more than 6 miles away, the turbines (or parts of turbine blades) would likely be seen, but would not dominate views or attract the attention of casual observers who might be visiting the upper canyon walls or rim. Parts of the upper canyon walls and rim of the Lower John Day WSA are also within the potentially visible area of the 230-kV transmission line, which would barely be seen, if at all given the distance. The Facility is not likely to create any significant adverse visual impacts on the Lower John Day WSA.

#### **North Pole Ridge Wilderness Study Area**

Part of the North Pole Ridge WSA is also within the potential visible area of Facility turbines and 230-kV transmission line. As is the case with the Lower John Day WSA, the areas from which these Facility components might be seen are restricted to higher elevation areas. The North Pole Ridge WSA is approximately 2.3 miles from the main site boundary, and the nearest turbine is approximately 2.8 miles away. The WSA is also 5.9 miles from the transmission line corridor. The closest turbines (or parts of turbine blades) would likely be seen from these upper elevation areas, but would not dominate views, change the characteristic viewed landscape, or likely attract the attention of casual observers who might be visiting these parts of the WSA. The 230-kV transmission line will likely not be seen from the upper areas. The Facility is not likely to create any significant adverse visual impacts on the North Pole Ridge WSA.

#### **Thirtymile Wilderness Study Area**

Part of the Thirtymile WSA is also within the potential visible area of Facility turbines and 230-kV transmission line. As with the previously described WSAs, the portions of the Thirtymile WSA from which these Facility components might be seen are restricted to higher elevation areas. The Thirtymile WSA is approximately 1.7 miles from the main site boundary, and the nearest turbine is approximately 4.1 miles away. The WSA is also 4.9 miles from the transmission line corridor. The Facility is not likely to create any significant adverse visual impacts on the Thirtymile WSA.

#### **Pats Cabin Wilderness Study Area**

Part of the North Pole Ridge WSA is also within the potential visible area of Facility turbines and transmission line support structures. As is the case with the Lower John Day WSA, the areas from which

these Facility components might be seen are restricted to upper canyon and rim areas. The Pats Cabin WSA is approximately 15.0 miles from the main site boundary and 22.0 miles from the transmission line corridor, which is outside of the analysis area for protected areas. The Facility is not likely to create any significant adverse visual impacts on the Pats Cabin WSA.

### **Sutton Mountain Wilderness Study Area**

Part of the Sutton Mountain WSA is also within the potential visible area of Facility turbines and transmission line support structures. As is the case with the Lower John Day WSA, the areas from which these Facility components might be seen are restricted to upper canyon and rim areas. The Sutton Mountain WSA is approximately 18.2 miles from the main site boundary and 25.3 miles from the transmission line corridor, which is outside of the analysis area for protected areas. The Facility is not likely to create any significant adverse visual impacts on the Sutton Mountain WSA.

### **L.3.2.3 Spring Basin Wilderness Area**

The Spring Basin Wilderness Area was officially designated as a Wilderness Area in 2009. It encompasses 6,378 acres in the John Day River canyon. Parts of this wilderness area, particularly those at higher elevations, are within the potentially visible area of Facility turbines. A management plan is not yet available, but wilderness areas are classified as VRM Class I lands, “which requires that natural process dominate the landscape while allowing limited management activities” that “only create a low level of change to the characteristic landscape” and do “not attract attention” (BLM, 2011b). The Spring Basin Wilderness Area is approximately 5.9 miles from the main site boundary and the nearest turbine is approximately 8.0 miles away. At these distances, the Facility will be in the background distance zone (BLM, 2011b). While turbines (or parts of turbine blades) may be seen from this wilderness area, they would have little influence on the character of the viewed landscape. The turbines would likely not attract the attention of casual observers using the Wilderness Area.

The Spring Basin Wilderness Area is 12.1 miles from the 230-kV transmission line. Based on the ZVI assessment that was conducted, the 230-kV transmission will not be visible.

The Facility is not likely to create any significant adverse visual impacts on the Spring Basin Wilderness Area.

### **L.3.2.4 John Day Chaparral Access and John Day Chaparral Recreation Association**

The John Day Chaparral Access area (71 acres) and the John Day Chaparral Recreation Association (144 acres) are parcels of land located near the John Day River in the vicinity of Clarno. The state of Oregon owns both parcels and the Oregon Parks and Recreation Department (OPRD) manages them. Most of the land on these parcels is leased for agriculture or maintained for open space (OPRD, 2012). Neither parcel has its own management plan. Part of the John Day Chaparral Access area is leased to the BLM by OPRD to provide public river access. The John Day Chaparral Access area is approximately 10 miles from the main site boundary, and the nearest turbine will be approximately 11 miles away. The 230-kV transmission line corridor will be located between 15.5 and 15.2 miles away and will not be visible from either parcel. Though turbines (or parts of turbine blades) may be visible from parts of the two parcels, they would be background features and would not create any significant adverse impacts.

### **L.3.2.5 John Day River**

#### **Wild and Scenic River**

The entire portion of the John Day River that passes through the analysis area has been designated as part of the Federal Wild and Scenic River system (National Wild and Scenic Rivers, 2011). Federal Wild and Scenic River designation applies to federal lands within the designated corridor (0.25 miles from the bank

of either side of the river). The ZVI analysis indicates that turbines potentially will be seen from scattered locations along the upper elevations of the river corridor. The closest part of the main site boundary will be approximately 1.0 mile away, but the closest potentially visible turbines will be approximately 5.5 miles west of the river. The VRM classification of the BLM lands in these areas from which the turbines will be potentially visible is Class II and will likely remain so when the *Draft John Day Basin Management Plan* is adopted. Adoption of the draft plan is targeted for late in 2012 (BLM, 2012). Although the Facility turbines are not located on BLM lands and does not need to conform to BLM objectives, a Class II designation permits management activities (on BLM lands) that result in changes to the existing character of the landscape, provided that they do not attract the attention of the casual observer. At distances of more than 5.5 miles away, the Facility turbines will likely more than satisfy the requirements of Class II VRM.

The ZVI analysis indicates that the closest part of the Facility's transmission line corridor will be approximately 5.9 miles away. In addition, a review of the ZVI shows that the transmission line route is not likely to be seen from the river, but if parts of the transmission line route are visible, they will only be seen from the upper slopes of the river corridor. Note that most of corridor is located within the John Day River canyon and does not extend far enough to reach the canyon rim. The Facility is not likely to create any significant adverse visual impacts on this protected area.

### State Scenic Waterway

The segment of the John Day River that passes within the 20-mile analysis area is also designated as a State Scenic Waterway by the State of Oregon, pursuant to the Oregon State Scenic Waterways Act, Oregon Revised Statute (ORS) 390.805-390.925. State designation includes the river itself and related adjacent lands. ORS 390.805 defines "related adjacent land" as land within  $\frac{1}{4}$  mile of the bank of both sides of a scenic waterway. Scenic River Areas are administered to preserve their undeveloped character, and maintain or enhance their high scenic quality, recreation, fish, and wildlife values while allowing continued agricultural use. The closest part of the main site boundary will be approximately 1.0 miles away, and the closest part of the Facility's transmission line route is approximately 5.9 miles away. Given this distance, the Facility is not within the areas considered "related adjacent lands," and therefore, enforcement of guidelines associated with the scenic waterway designation will not apply. Because of the distance of the turbines from portions of the river from which some will potentially be visible, the turbines will likely not attract the attention of the casual observer from the river, nearby shoreline, or uplands in the corridor. Accordingly, adverse visual impacts to the John Day River will not be significant.

### **L.3.2.6 Deschutes River**

#### Wild and Scenic River

The entire portion of the Deschutes River that passes through the analysis area has been designated as part of the Federal Wild and Scenic River system (National Wild and Scenic Rivers, 2011). Federal Wild and Scenic River designation applies to federal lands within the designated corridor (0.25 miles from the bank of either side of the river). Turbines potentially will be seen from scattered locations along the upper elevations of the river corridor. The closest part of the main site boundary will be approximately 13.3 miles away, though the closest Facility turbine will be approximately 16.0 miles away and is unlikely to be visible from the river itself. The closest part of the Facility's transmission line corridor will be approximately 5.9 miles away. In addition, a review of the ZVI shows that the transmission line route is not likely to be seen from the river, but if parts of the transmission line route are visible, they will only be seen from the upper slopes of the river corridor. The Facility is not likely to create any significant adverse visual impacts on this protected area.

### State Scenic Waterway

The segment of the Deschutes River that passes within the 20-mile analysis area is designated as a State Scenic Waterway by the State of Oregon, pursuant to the Oregon State Scenic Waterways Act, Oregon Revised Statute (ORS) 390.805-390.925. State designation includes the river itself and related adjacent lands. ORS 390.805 defines “related adjacent land” as land within ¼ mile of the bank of both sides of a scenic waterway. Scenic River Areas are administered to preserve their undeveloped character, and maintain or enhance their high scenic quality, recreation, fish, and wildlife values while allowing continued agricultural use. The closest part of the main site boundary will be approximately 13.3 miles away, and the closest part of the Facility’s transmission line route is approximately 5.9 miles away. Given this distance, the Facility is not within the areas considered “related adjacent lands,” and likewise, the Facility is not likely to be visible from the scenic waterway. The Facility is not likely to create any significant adverse visual impacts on this protected area.

#### **L.3.2.7 White River**

##### Wild and Scenic River

The entire portion of the White River that passes through the analysis area has been designated as part of the Federal Wild and Scenic River system (National Wild and Scenic Rivers, 2011). Federal Wild and Scenic River designation applies to federal lands within the designated corridor (0.25 mile from the bank of either side of the river). The ZVI analysis indicates that turbines potentially will be seen from scattered locations along the upper elevations of the river corridor. The closest part of the main site boundary will be approximately 19.5 miles away, though the closest Facility turbine will be approximately 21 miles away and is unlikely to be seen from the river. The closest part of the Facility’s transmission line corridor will be approximately 8.0 miles away. In addition, a review of the ZVI shows that the transmission line route is not likely to be seen from the river, but if parts of the transmission line route are visible, they will only be seen from the upper slopes of the river corridor. The Facility is not likely to create any significant adverse visual impacts on this protected area.

### State Scenic Waterway

The segment of the White River that passes within the 20-mile analysis area is designated as a State Scenic Waterway by the State of Oregon, pursuant to the Oregon State Scenic Waterways Act, Oregon Revised Statute (ORS) 390.805-390.925. State designation includes the river itself and related adjacent lands. ORS 390.805 defines “related adjacent land” as land within ¼ mile of the bank of both sides of a scenic waterway. Scenic Waterways are administered to preserve their undeveloped character and maintain or enhance their high scenic quality, recreation, fish, and wildlife values while allowing continued agricultural use. The closest part of the main site boundary will be approximately 19.5 miles away, and the closest part of the Facility’s transmission line route is approximately 8.0 miles away. Given this distance, the Facility is not within the areas considered “related adjacent lands,” and likewise, the Facility is not likely to be visible from the scenic waterway. The Facility is not likely to create any significant adverse visual impacts on this protected area.

#### **L.3.2.8 Lower Deschutes Wildlife Area**

The Lower Deschutes Wildlife Area is located along the northern section of the Deschutes River, just west of the City of Moro. The wildlife area is managed by ODFW for wildlife habitat and recreation including wildlife viewing, hunting, and fishing (ODFW, 2011). Wildlife areas (like other ODFW-managed lands) do not have visual resource management objectives. The closest part of the wildlife area to the main site boundary is 16.0 miles away and the closest part of the transmission line corridor is 14.5 miles away. Turbines and the transmission line route could potentially be seen from this wildlife area, but at that

distance, they would be insignificant features and would not likely be detectable by the casual observer. The Facility is not likely to create any significant adverse visual impacts on this protected area.

#### L.3.2.9 White River Wildlife Area

The White River Wildlife Area is located north and south of the White River and along Badger and Tygh Creeks. The wildlife area is managed by ODFW for wildlife habitat and recreation including wildlife viewing, hunting, and fishing (ODFW, 2011). Wildlife areas (like other ODFW-managed lands) do not have visual resource management objectives. The closest part of the wildlife area to the transmission line corridor is 14.3 miles away, and the closest part of the wildlife area to the main site boundary is 24.5 miles away, which is outside of the analysis area for protected areas. The Facility is not likely to create any significant adverse visual impacts on this protected area.

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

**Response:** The 20-mile Facility analysis area is not located in or near any of the Class 1 Prevention of Significant Deterioration Areas (Class 1 Area) described in OAR 340-204-0050. Therefore, Facility construction and operation will not impact the air quality of Class 1 Areas.

## L.4 CONCLUSION

The proposed Facility is not likely to have a significant adverse impact on the protected areas identified in OAR 345-022-0040(1)(a-p) and described in Tables L-1 and L- 2. The Facility will comply with applicable regulatory guidelines concerning protected areas discussed in OAR 345-021-0010(1)(L)(A- C). As a result of this finding of no significant adverse impacts, mitigation is not proposed. Based on the evidence provided in this Exhibit, the Council may find that the standard in OAR 345-022-0040 has been satisfied.

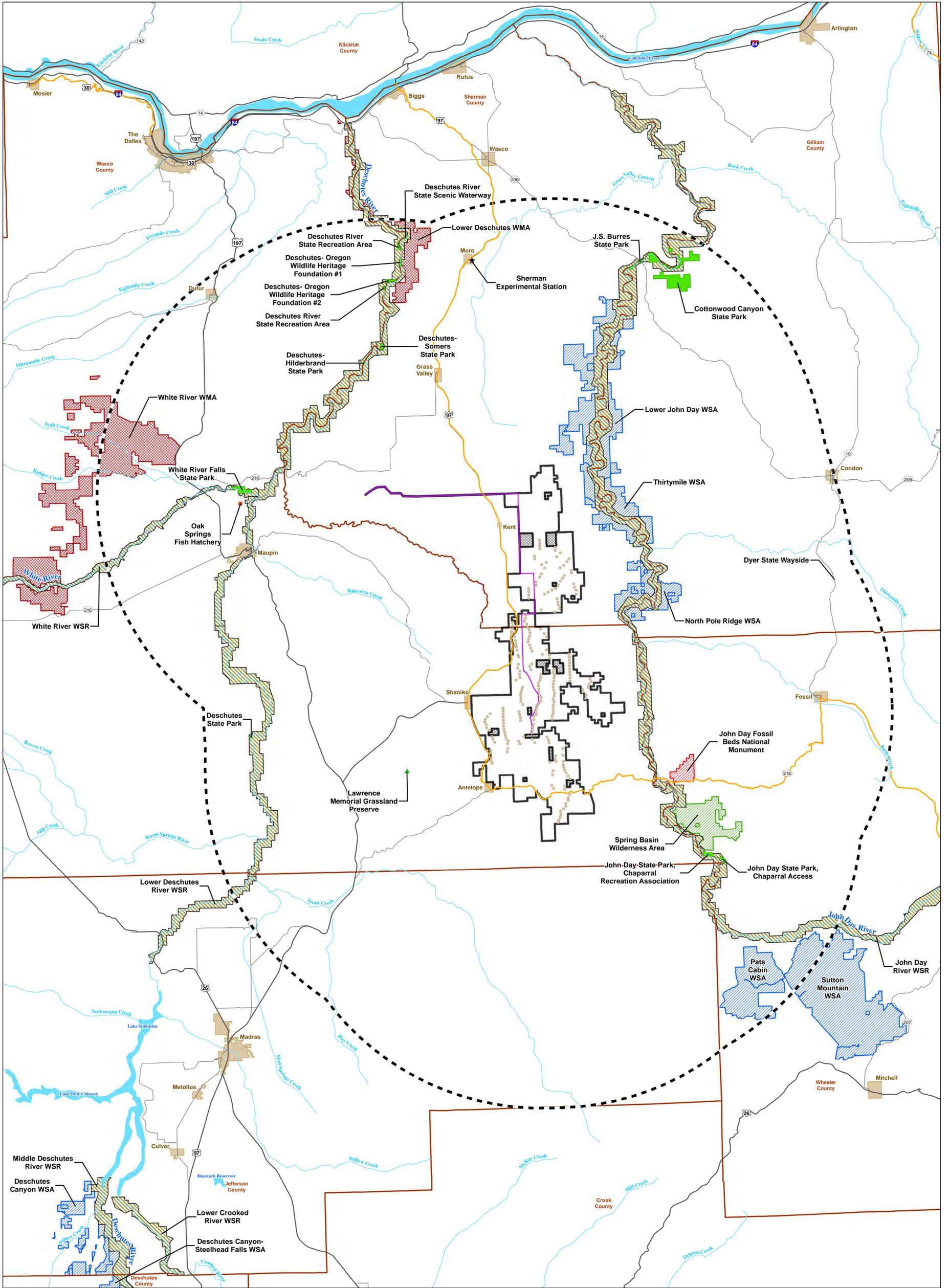
## L.5 REFERENCES

- Bureau of Land Management (BLM), U.S. Department of the Interior. 1986. *Two Rivers Resource Management Plan*. June 1986.
- Bureau of Land Management (BLM), U.S. Department of the Interior. 2011a. *Draft John Day River Management Plan and Environmental Impact Statement*. Volume 1. [http://www.blm.gov/or/districts/prineville/plans/files/jdr\\_deis\\_vol1.pdf](http://www.blm.gov/or/districts/prineville/plans/files/jdr_deis_vol1.pdf).
- Bureau of Land Management (BLM), U.S. Department of the Interior. 2011b. *Manual 8400 – Visual Resource Management*. <http://www.blm.gov/nstc/VRM/8400.html>. Accessed December 6, 2011.
- Bureau of Land Management (BLM), U.S. Department of the Interior. 2012. Personal communication between Jim Beaupre, Outdoor Recreation Planner, Prineville District Office of Bureau of Land Management, Prineville, Oregon, and M. Greenig, CH2M HILL. February 7, 2012.
- National Wild and Scenic Rivers. 2011. <http://www.rivers.gov/wildriverslist.html>. Accessed December 6, 2011.
- Oregon Department of Fish and Wildlife (ODFW). 2011. [http://www.dfw.state.or.us/resources/visitors/high\\_desert.asp](http://www.dfw.state.or.us/resources/visitors/high_desert.asp). Accessed December 6, 2011.
- Oregon Parks and Recreation Department (OPRD). 2011. *Cottonwood Canyon State Park Comprehensive Plan, Volume 1*. July 2011.

Oregon Parks and Recreation Department (OPRD). 2012. Personal communication between Greg Ciannella, Planner, Scenic Waterways Program, Bend, Oregon, and M. Greenig, CH2M HILL. February 7, 2012.

# Figure

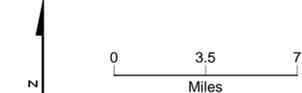




**LEGEND**

	Main Site Boundary		National Monument
	Area Not Included in Site Boundary		Wilderness Study Area (WSA)
	Proposed 230-kV Transmission Line		Wilderness Area
	Protected Areas Analysis Area (20-mile)		Wildlife Management Area (WMA)
	Facility Turbine Layout (223 Turbines)		Highway
	Natural Heritage Site		Major Road
	Fish Hatchery		River
	Agricultural Experimental Station		Water
	Journey Through Time Scenic Byway (US 97)		City Limit
	State Park		County Boundary
	Wild and Scenic River (WSR) and State Scenic Waterway		

- Notes:**
- Heritage Site Data Source: Natural Heritage Advisory Council
  - Hatchery and WMA Data Source: Oregon Department of Fish and Wildlife
  - Experimental Station Data Source: U.S. Geological Survey
  - Scenic Byway Data Source: Oregon Department of Transportation
  - Parks Data Source: Oregon Parks and Recreation
  - WSR and Wilderness Data Source: Bureau of Land Management
  - Forest, Grassland and Monument Data Source: Oregon Department of Forestry
  - Conservation Area Data Source: Oregon Natural Desert Association



**FIGURE L-1  
Protected Areas**

Brush Canyon Wind Power Facility  
Application for Site Certificate