

EXHIBIT S

HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES

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

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APPENDIX

S-1 Archeological Inventory for the Golden Hills Wind Project, Sherman County, Oregon (Not for Public Disclosure)

S.1 INTRODUCTION

OAR 345-021-0010(1)(s) Information about historic, cultural, and archaeological resources providing evidence to support a finding by the Council as required by OAR 345-022-0090, including:

Response: This exhibit describes impacts related to the Project on historic, cultural, and archaeological resources in the vicinity. For discussions of Exhibit S, the “analysis area” for archeology is synonymous with the areas of potential effects (APE) from ground disturbances related to project construction, operation and retirement of the facility. The total APE for archaeology is 7,010 acres, including turbine strings on approximately 5,313 acres, crane paths on 127 acres, crane paths and underground collector lines on 146 acres, underground collector lines on 216 acres, existing road improvements on 462 acres, new roads on 58 acres, transmission lines of 360 acres, bridge improvement on 60 acres, laydown areas on 256 acres and substations on 10 acres.

S.2 HISTORIC AND CULTURAL RESOURCES LISTED, OR POSSIBLY ELIGIBLE FOR LISTING, ON THE NATIONAL REGISTER OF HISTORIC PLACES

(A) Historic and cultural resources within the analysis area that have been listed, or would likely be eligible for listing, on the National Register of Historic Places;

Response: “Historic properties” are cultural resources that have been listed on, or determined to be eligible for listing on, the National Register of Historic Places (NRHP). The Oregon State Historic Preservation Office (OSHP) maintains files concerning NRHP-listed sites and determinations of eligibility. At present, one historic property, DeMoss Springs Park, is listed on the NRHP within or immediately adjacent to the analysis area for archeology.

DeMoss Springs Park was listed on the NRHP during March 2007. The park includes approximately 2.5 acres along Barnum Creek and east of U.S. Highway 97. Contributing resources include the property setting, landscape features such as the lawn and large trees, the bandstand, pump house, a basalt retaining wall and bridge remnants (Donovan 2006). Most residential and commercial structures associated with the park and the historic community of DeMoss Springs have been demolished over the years. The project APE should be evaluated to identify possible effects on the setting and integrity of the historic property and in consultation with OSHP.

In addition, the Project crosses portions of the Oregon Trail and the Barlow Cutoff, which are known to be associated with events that have made a significant contribution to the broad patterns of our history (36 CFR 60.4, criterion “a”), and are potentially eligible for the NRHP.

The Oregon Trail alignment bisects the project area at Corridor O (Appendix S-1; Figure 2). The Oregon Trail is designated as a Historic Trail under both federal and Oregon statutes. The alignment of the trail, as compiled by the Oregon State Highway Department in 1959, crosses the APE in section 32 of Township 2 North, Range 17 East, and sections 35 and 36 of Township 2 North, Range 16 East.

Apart from two historic isolated finds located near the presumed route alignment, no physical evidence of the trail was observed at any of the bisections. Farming activity is likely to have obliterated most, if not all, physical traces of the trail. This same physical disturbance makes it difficult to substantively correlate the isolated finds to that of the historic emigrant route.

Oregon Trail Cutoff to the Barlow Road begins at the John Day River Oregon Trail Crossing east of Wasco and runs southwesterly to Grass Valley (follow signs along nearest county roads) and from Grass Valley southwesterly on Highway 216 to Hollenbeck Point where emigrants entered Buck Hollow and the Deschutes River crossing north of present-day Sherar's Bridge.

This historic emigrant route crosses the APE at three points in the southeastern portion of the Project; two of these contacts are virtually perpendicular intersections, but the third falls within proposed turbine Corridor D and associated underground collector route, paralleling for a distance of approximately 2,000 feet (Appendix S-1; Figure 2).

Complete archaeological survey was conducted at each of the above-mentioned contacts (Appendix S-1; Figure 3). No physical evidence of the Barlow Cutoff Route was observed at any of these locations. Farming activity seems to have obliterated most, if not all, physical traces of the trail. This same physical disturbance makes it difficult to substantively correlate the isolated finds to that of the historic emigrant route.

S.3 ARCHAEOLOGICAL OBJECTS AND SITES ON PRIVATE LANDS WITHIN THE ANALYSIS AREA

(B) For private lands, archaeological objects, as defined in ORS 358.905(1)(a), and archaeological sites, as defined in ORS 358.905(1)(c), within the analysis area;

Response: The OSHPO maintains archaeological records of “isolated finds,” (including 9 or fewer artifacts) and archaeological sites within the state. Site file research at OSHPO identified no isolated finds or archaeological sites recorded within the project APE.

S.4 ARCHAEOLOGICAL OBJECTS AND SITES ON PUBLIC LANDS WITHIN THE ANALYSIS AREA

(C) For public lands, archaeological sites, as defined in ORS 358.905 (1)(c) , within the analysis area;

Response: There are no public lands in the project APE.

S.5 SIGNIFICANT POTENTIAL IMPACTS OF CONSTRUCTION, OPERATION, AND RETIREMENT OF THE FACILITY ON HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES

(D) The significant potential impacts, if any, of the construction, operation, and retirement of the proposed facility on the resources described in paragraphs (A), (B), and (C) and a plan for protection of those resources that includes at least the following:

S.5.1 Methodology

(i) A description of any discovery measures, such as surveys, inventories, and limited subsurface testing work, recommended by the State Historic Preservation Officer and the National Park Service of the U.S. Department of Interior for the purpose of locating, identifying, and assessing the significance of resources listed in paragraphs (A), (B), and (C);

Response: Archival research was conducted at the OSHPO in Salem to review archaeological site records and reports. Additional background literature research was conducted at the Sherman County Historical Society and Museum in Moro, Oregon, and at Wasco County Library in the Dalles, Oregon. Consultation was also undertaken with Native American groups including the Confederated Tribes of the Warm Springs Reservation, the Confederated Tribes and Bands of the Yakama Indian Nation, the Colville Confederated

Tribes, the Confederated Tribes of the Umatilla Indian Reservation, and the Nez Perce Tribe. Copies of letters initiating consultations with Native American tribes are provided in Appendix S-1. No responses from Native American tribes have been received at this time.

Archaeological field investigations were initiated during May and June 2007. The archaeological field investigations were conducted in conformance with professional standards and guidelines of the OSHPO (OSHPO 2006). A pedestrian survey was conducted in areas with good ground visibility in order to identify surface artifacts associated with prehistoric period and historic period archaeological sites. Portions of the project APE that were planted in crops were not surveyed due to poor ground visibility. In portions of the APE where surface visibility was deemed adequate, surface survey was performed by three to six archaeologists walking transects spaced no greater than 25 meters. During the field survey, all archaeological sites, isolates, and historic structures identified within the project APE were documented and mapped using a Trimble GeoXT global positioning system (GPS) unit. Photographs were taken of all cultural resource settings and intermittently throughout the survey area to document landforms, vegetation coverage, and identified disturbances. No subsurface testing or collection of artifacts was conducted at any sites, localities, or isolated finds. Where ground visibility was limited due to vegetation/crop coverage, no surface testing was conducted due to land owner requirements. Special care was taken to identify landforms that were heavily covered with vegetation and may potentially have deeply buried soils likely to contain cultural materials. No such areas were noted. Since the time of the initial pedestrian survey, some project changes have occurred. Therefore, OSHPO may determine that additional archaeological investigations may be required.

S.5.2 Survey and Inventory Results

(ii) The results of surveys, inventories, and subsurface testing work recommended by the state and federal agencies listed in subparagraph (i), together with an explanation by the applicant of any variations from the survey, inventory, or testing recommended;

Response: In total, 3810 acres of the APE were surveyed for the presence of archaeological sites, isolated finds, and potential historic properties. The pedestrian survey included approximately 54 percent of the total project APE. As a result of the initial pedestrian survey, eight archeological sites were identified including two prehistoric-period sites and six historic-period sites. In addition, seven isolated finds were identified, including two prehistoric and five historic isolates. Each of these resources is discussed in Appendix S-1, and full Oregon State Archaeological Inventory forms were prepared and are included in Appendix S-1. Vegetation at the time of the pedestrian survey prevented investigation of approximately 46 percent of the project APE. In addition, since the time of the initial pedestrian survey, some project design modifications have been proposed that should be evaluated for possible effects on archaeologically sensitive areas. Therefore, it is expected that additional archaeological investigations may be required within the project APE.

Recently issued OSHPO guidelines (OSHPO 2006:4) state that archaeological surveys are not required for 100 percent of all locations within development projects. Instead, OSHPO recommends that an agency-approved archaeological sensitivity model be developed to identify areas of high, medium and low probability for prehistoric period and historic period archaeological sites. OSHPO further recommends that 100 percent of high probability areas within a project APE should be surveyed, 20 percent of medium probability areas should be surveyed, and 5 percent of low probability areas should be surveyed. As a check on the validity of low probability zones, OSHPO recommends that at least 20 percent should be surveyed of the overall project area.

An archaeological sensitivity model will be submitted to SHPO that identifies high probability areas, areas that have been surveyed during the preliminary pedestrian survey, and areas that are recommended for additional archaeological surveys. The initial pedestrian survey might be sufficiently rigorous to satisfy OSHPO guidelines for medium and low probability areas. However, several high probability areas could not be surveyed due to standing crops. This plan must be approved by OSHPO. Additional archaeological investigations will include surface reconnaissance in areas of good surface visibility, and shovel probe excavations at a maximum of 30 meter intervals in areas with dense vegetation cover, including croplands, streamside forests and sagebrush flats.

Once consultations with OSHPO regarding sensitivity models have been completed, any additional archaeological survey, inventory, and/or testing deemed necessary will be undertaken.

S.5.3 Measures Designed to Prevent Destruction of Historic, Cultural, and Archaeological Resources

(iii) A list of measures to prevent destruction of the resources identified during surveys, inventories, and subsurface testing referred to in subparagraph (i) or discovered during construction; and

Response: All eight of the archeological sites associated with the study are considered potentially eligible for nomination to the NRHP, and are recommended for avoidance during construction, operation, and retirement of the proposed facilities. Archaeological sites and historic homesteads will be temporarily flagged in the field and on project construction maps before and during construction. Archaeological construction monitors will be present during construction in selected locations to prevent accidental damage to these cultural resources. Additional consultations will be conducted with OSHPO concerning approved avoidance and/or mitigation measures for the Oregon Trail and Barlow Cutoff.

Avoidance strategies for the eight archaeological sites documented in Appendix S-1 are summarized below:

GH Site 1: This prehistoric lithic scatter is situated along Corridor B (Appendix S-1; Figure 4). It will be avoided by re-routing the proposed three foot wide underground collection line trench to pass north of, and outside the established archaeological site boundary. Because this modification will occur within the existing corridor surveyed for the study, no supplemental archaeological inventory is required.

GH Site 2: A historic era refuse deposit located atop a slight rise within an uncultivated portion of agricultural wheat field. A portion of the site lies within a proposed laydown area west of Corridor A (Appendix S-1; Figure 4). The small portion of the laydown area that overlaps the archaeological site will not be utilized, ensuring avoidance.

GH Site 3: A series of historic features and artifacts, GH Site 3 was identified in the laydown area west of Corridor A (Appendix S-1; Figure 4). This portion of the proposed laydown area that overlaps the archaeological site will not be utilized, ensuring avoidance.

GH Site 4: GH Site 4 is located in an area of proposed underground connector west of Corridor A (Figure 4). The underground collector cable route will be moved to the north or south to avoid the archeological site.

GH Site 5: GH Site 5 is located in a proposed underground collector route east of Corridor E (Appendix S-1; Figure 4). The site will be avoided by installing underground collector line via directional boring.

GH Site 6: GH Site 6, a historic wooden pole telegraph transmission line, is located along the southern end of a proposed transmission line east of Corridor A (Appendix S-1; Figure 4). The proposed transmission line, with poles spaced at intervals of 400-500 feet, will avoid GH Site 6 by overhead spanning the features that comprise the archaeological site.

GH Site 7: GH Site 7 is a prehistoric site located along the alternate transmission line route north of Spanish Hollow and U.S Highway 97 (Appendix S-1; Figure 4). The proposed transmission line route has now been realigned to avoid this site. Supplemental archaeological inventory may be required along the realignment route.

GH Site 8: GH Site 8 is located at the north end of the proposed alternate transmission line (Appendix S-1; Figure 4). The proposed transmission line, with poles spaced at intervals of 700 to 800 feet, will avoid GH Site 8 by spanning the features that comprise the archaeological site.

In the event that the Project is changed, or expanded beyond the areas recently surveyed for cultural resources, the Applicant will commission additional cultural resources surveys. The Applicant will design all new or additional facilities to avoid impacts at archaeological sites recommended by the Project archaeological consultant and OSHPO. Only those sites found eligible or potentially eligible to the NRHP need be avoided. A Cultural Resource Management Plan (CRMP) will be developed by the Applicant in coordination with the OSHPO. The CRMP will include specific protocols and procedures for protecting cultural resources, including any additional archeological sites and possible human remains (pursuant to ORS 97.745(4)) accidentally discovered during construction.

In the event that the Project is changed, or expanded beyond the areas recently surveyed for cultural resources, the Applicant will commission additional cultural resources surveys and will design all new or additional facilities to avoid impacts to archeological sites and human remains.

S.5.4 Permit Application

(iv) A completed copy of any permit applications submitted pursuant to ORS 358.920. Notwithstanding OAR 345-021-0000(4), the applicant shall include copies of the permit applications as part of the site certificate application. If the same information required by subparagraphs (i) through (iii) above is contained in the permit applications, then the applicant may provide cross-references to the relevant sections of the permit applications in substitution.

Response: No permit applications have been submitted to the OSHPO pursuant to ORS 358.920 because no subsurface testing on public or private land was conducted (recorded sites and general site location and history do not warrant subsurface testing). In the event that heretofore undiscovered archaeological sites are inadvertently disturbed during construction, construction work will cease and the Applicant will direct its archaeologist to apply for necessary archaeological excavation permits from the SHPO. This requirement will be included in the CRMP.

S.6 PROPOSED MONITORING PROGRAM

(E) The applicant's proposed monitoring program, if any, for impacts to historic, cultural, and archaeological resources during construction, operation and retirement of the proposed facility;

Response: During construction in archeologically sensitive locations, such as near recorded archeological sites, on-site archaeological monitors will be present to ensure that no accidental damage to known cultural resources occurs, if required by OSHPO. The CRMP

will address long-term management of the known/recorded resources and will include a section on accidental discovery of cultural resources. This section will provide a detailed plan of protocols and procedures (measures) to be followed if cultural resources are accidentally discovered during construction or operation of the facilities.

S.7 REFERENCES

OSHPO 2006. Oregon State Historic Preservation Office Standards for Conducting Cultural Resources Inventories. Salem, OR.

APPENDIX S-1
Cultural Resources Survey Report
(Contains Sensitive Archaeological Site Location
Information, Not for Public Disclosure)

