

3.8 CULTURAL RESOURCES

This section describes and summarizes archaeological and cultural resources within the KVWPP study area, identifies potential impacts on these resources, and suggests mitigation measures designed to limit those impacts. The analysis in this section is primarily based on information provided by the Applicant in the ASC (Sagebrush Power Partners LLC 2003a, Section 5.1.6). Where additional information has been used to evaluate the potential impacts associated with the proposal, that information has been referenced.

3.8.1 Background

Historic Preservation Criteria

Cultural properties or resources may include prehistoric or historic sites, districts, buildings, structures, or objects that are listed in, or eligible for listing in, the National Register of Historic Places (NRHP). Artifacts, records, and material remains associated with these properties and traditional cultural properties, which include archaeological, traditional procurement, history or landmark, and religious sites, are also important resources. Several federal and state laws protect cultural resources, such as Section 106 of the National Historic Preservation Act (NHPA) and RCW chapters 27.44 and 27.53.

The NRHP of Historic Places was authorized by the NHPA of 1966 and is the nation's official list of historic properties worthy of preservation. Properties listed in the NRHP include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture, at a local, state, or national level of significance. Within the state of Washington, the Office of Archaeology and Historic Preservation (OAHP), under the direction of the State Historic Preservation Officer, administers the NRHP program.

The following criteria are used in evaluating cultural properties that are more than 50 years old or that have achieved significance in the last 50 years for listing in the NRHP (36 CFR 60.4):

- Properties that are associated with events that have made a significant contribution to the broad patterns of our history; or
- Properties that are associated with the lives of people significant in our past; or
- Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Properties that have yielded, or may be likely to yield, information important to prehistory or history.

Applicable Regulations

Under SEPA, OAHP is the sole agency with technical expertise on cultural resources; it provides formal opinions to local governments and other state agencies on a site's significance and the impact of proposed projects upon such sites.

The American Indian Religious Freedom Act of 1978, as amended in 1996, requires agencies to consult with Indian tribes to determine if an undertaking may affect the practice of traditional religions and the places and physical paraphernalia needed for those practices.

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 requires that federal agencies repatriate Indian ancestral human remains to tribes with cultural or genetic affiliation with such remains and funerary items.

Executive Orders (EOs) 13084 and 13175 establish government-to-government relationships between Indian tribes and the federal government and its agencies. EO 13175, signed in 2000 and revoking the earlier EO 13084, requires that agencies have an accountable process for tribal officials to provide comment and input on regulatory policies that have tribal implications.

The RCW has two chapters that protect cultural resources in the state. RCW chapter 27.44 requires that Indian burial sites, cairns, glyptic markings, and historic graves located on public and private land be protected because they are finite, irreplaceable, and nonrenewable cultural resources. The law encourages voluntary reporting and respectful handling in cases of accidental disturbance. Any person who knowingly removes, mutilates, defaces, injures, or destroys these resources is guilty of a class C felony. Human remains from native Indian graves inadvertently disturbed by construction, mining, logging, agricultural activity, or any other activity shall be reinterred under the supervision of the appropriate Indian tribe. RCW chapter 27.53 states that it is unlawful for any historic or prehistoric archaeological object, resource, or site to be knowingly removed, altered, or excavated, from private and public lands. Disturbance of these resources, without a written permit from OAHP, is a class C felony.

3.8.2 Affected Environment

Area of Potential Effect

The assessment of historic, archaeological, and traditional-use resources was conducted within the Area of Potential Effect (APE) or the geographic area within which the proposed project may affect cultural resources. The APE for cultural resources includes the approximately 231- to 371-acre temporary construction footprint of the project including access roads; turbines, meteorological towers, and electrical pole foundation pads; operation and maintenance, and substation building locations; and construction staging areas. The indirect visual impacts on potentially affected resources in the immediate project vicinity have yet to be determined because information from OAHP regarding the boundaries of the APE is still outstanding. In addition, the OAHP needs to clarify the NRHP eligibility status of the North Branch Canal tunnel to determine indirect visual impacts on this resource (see below for further discussion).

Archaeology, Ethnohistory, and History

Prehistory

The project area is located in the Columbia Plateau physiographic region or the Southern Plateau culture region (Ames et al. 1998; Franklin and Dyrness 1988). The prehistoric record for this region is divided into three broad chronological periods, summarized below:

- Period I (approximately 11,500-6,350 years Before Present [BP]). Period I is subdivided into two sections. Period IA, also known as the Clovis Paleo-Indian, dates between 11,500 and 11,000 years BP, while post-Clovis sites date to Period IB (11,000-6,350 BP). Archaeologists have recorded the majority of post-Clovis sites in the central and eastern portions of the region, with the largest occupations located along the Columbia and Snake rivers and their tributaries (Ames et al. 1998).
- Period II (6,950/6,350-3,850 BP). This period is marked by a decline in quality of stone tools, increased use of varieties of roots and salmon, and the development of semi-subterranean pit houses (Ames et al. 1998).
- Period III (3,850-250 BP). The beginning of Period III saw the widespread reappearance of pit houses; permanent winter village sites described by Euro-American settlers and ethnographers were established late in this period and persisted into the historic period (Ames et al. 1998).

Ethnohistory

During late historic times, the Kittitas Indians occupied the upper Yakima River drainage. Neighboring groups included the Wanapum to the east, the Yakama immediately to the south, and the Mishnapam, Taitnapam, and Klickitat farther south (Schuster 1998). The proposed project is situated in an area ceded by the Kittitas, which is now a part of the Yakama Nation (Ruby and Brown 1986).

Archaeologists and ethnographers have recorded at least nine villages and a network of trails in the Kittitas Valley. Two villages were near the project area. The largest, *Klakla*, had a population of 500 people and was located about 1 mile north of Thorp, opposite the mouth of Taneum Creek, which is about 5 miles south of the project site. *Ti'plas* had a population of 50 and was located at the mouth of Swauk Creek, approximately 2 miles southwest of the project site (Ray 1936).

A trail leading from a section of Swauk Creek north of this village led southeast to Reecer Canyon and Naneum Creek. Another followed the southern bank of the Yakima River west to the upper reaches of the Cle Elum River, with a branch of it extending north into the mountains to reach Wenatchee (Ray 1936). Portions of I-90 follow trail routes used by the Kittitas and other Southern Plateau groups to reach the west side of the Cascades (Glauert and Kunz 1976; Prater 1981).

The arrival of Euro-Americans in the Columbia Plateau was presaged by outbreaks of epidemics that decimated native populations. Euro-American fur traders were followed by incursions of

missionaries and settlers who dislocated native groups (Boyd 1998; Schuster 1982). The first Euro-American settlers arrived in the Plateau around 1853 and by 1855, Isaac Stevens, the first governor of Washington Territory, had compelled the Kittitas, Yakama, and other groups to cede 11 million acres of their territory and agree to relocate to a reservation (Sagebrush Power Partners LLC 2003a, Section 5.1.6.5).

History

Although the horse and trade items arrived in the Kittitas Valley by 1740, the first documented contact between Euro-Americans and indigenous people occurred during the Lewis and Clark expedition in the fall of 1805. Exploration was followed by incursions of Euro-American fur traders under the North West and Hudson's Bay companies.

Euro-American settlers of the Kittitas Valley established cattle ranches in the area, particularly around Thorp, in the 1860s, taking advantage of the abundant grass for feed. Cattle drives reached into Canada and the Puget Sound area via the Snoqualmie Wagon Road and other trails by 1867 (General Land Office 1874, 1892; Prater 1981). Completion of the Northern Pacific Railroad in 1887 caused the wagon road to be used less frequently for moving cattle and farm goods. The road continued to be used and much of its original route is now part of I-90. Other routes, such as the Ellensburg to Cle Elum Road became US 97 (Prater 1981).

Upland logging and valley agriculture spurred the development of sawmills and irrigation features in the Kittitas Valley by the late 1800s and continues to be of importance today (Henderson 1990). The U.S. Reclamation Service began surveys for major irrigation dams and canals in 1905. The Kittitas Reclamation District's main canal system was constructed between 1926 and 1932 and was inventoried by the OAHF in 1985. A tunnel for the North Branch Canal, which is a branch of this system, is located just south of the project's proposed turbine string B. This canal irrigates approximately 2,830 acres southeast of Ellensburg (Soderburg 1985). The NRHP eligibility of this tunnel is not known at this time.

Agency and Tribal Consultation

The Yakama Nation was identified as the primary tribe with ceded lands in which the Kittitas Valley Wind Power Project is located. The Applicant contacted the Yakama Nation during the application development phase. The purpose of communication was to scope and address tribal concerns relative to cultural resources that could be affected by the proposed project.

In the spring and fall of 2002, the Applicant and its representatives initiated interactions with the Yakama Nation through written correspondence. The purpose of these initial tribal communications was to:

- Provide a general description of the proposed Kittitas Valley Wind Power Project;
- Invite the Tribe to participate in cultural resource investigation work at the project site, including development of an oral history of the area and participation in field surveys and construction monitoring; and

- Set up meetings between the Applicant and Tribe to more specifically discuss project features, and to solicit and identify tribal concerns associated with sensitive areas and potential impacts on cultural resources. To date, no meetings have taken place.

EFSEC has also been actively coordinating with the Yakama Nation on this project. For example, the Yakama Nation is on EFSEC's project mailing list, and the Tribe has been notified of all public meetings concerning this project, including the March 12 agency scoping meeting and public hearing, and May 1 land use consistency hearing. EFSEC has also informally consulted with the Tribe in telephone conversations undertaken in the spring of 2003. During these conversations, a representative of the Yakama Nation indicated concerns regarding the cumulative effect of multiple wind power projects on tribal lands (see Section 3.14, Cumulative Impacts, for further discussion).

Previous Cultural Investigations in the Project Area

Archaeologists have conducted relatively few investigations in the upper Yakima River basin. Eastern Washington University (EWU) surveyed a Puget Sound Energy transmission line corridor between Hyak and Vantage in 1990, locating several archaeological sites on the opposite side of the Yakima River from the KVVWPP (DePuydt 1990). EWU also surveyed a portion of US 97 located about 2 miles northwest of turbine string G, where a prehistoric stone flake site was recorded on a river terrace (Holstine and Gough 1994). Central Washington University surveyed 17 sections in the Reecer Canyon U.S. Geological Survey quadrangle, east of US 97, where one site composed of stone flakes was recorded (Bicchieri 1994).

Historical Research Associates (HRA) surveyed a proposed 235-mile-long pipeline corridor from western Washington to the Tri-Cities area. This survey recorded one prehistoric and 61 historic period isolates (fewer than 10 artifacts) and three historic period sites from just east of Snoqualmie Pass to Swauk Creek. None of these finds is located in the proposed project area (HRA 1996). HRA also surveyed a proposed Bonneville Seattle-to-Spokane fiber-optic cable line, recording historic can fragments that are located outside of the proposed project area (Thompson 1998).

Lithic Analysts conducted the archaeological survey for the proposed KVVWPP. The work consisted of a background records search and pedestrian survey of the proposed turbine string locations, proposed and existing access roads, proposed underground and overhead electrical lines, proposed O&M facility, and proposed substation locations where ground disturbance could occur. As a result of the survey, Lithic Analysts recorded two prehistoric stone tool and flake sites. Site 1 appears to be a scatter of formed tools and several types of lithic material (chalcedony, chert, jasper, and opal) exhibiting initial stages of flaking. Site 2 consists of several nodules of different material and hundreds of small flakes, possibly representing a single flintknapping event. No remnants of the trails noted on the 1874 and 1892 General Land Office maps were observed during the survey (Flenniken and Trautman 2002).

3.8.3 Impacts of Proposed Action

This section describes the potential direct and indirect impacts on known cultural resources from development of the KVVWPP. Direct impacts would result from construction, operation, or decommissioning-related activities that would physically disturb a cultural resource. Indirect impacts would be caused by development located near a cultural resource that does not directly disturb the site, but changes the setting of the area or offers increased opportunities for human disturbance. These types of direct and indirect impacts could be associated with construction, operations and maintenance, or decommissioning of any of the proposed project elements, including the wind turbines and meteorological towers, 19 miles of new gravel access roads, additional power lines, O&M facility, and substations. Indirect impacts on offsite cultural resources are not anticipated because the project is not expected to substantially induce regional growth to the extent that it would result in significant changes to offsite cultural resources. Table 3.8-1 summarizes potential cultural resource impacts under the three project scenarios.

Table 3.8-1: Summary of Potential Cultural Resources Impacts

	82 Turbines/3 MW (Lower End Scenario)	121 Turbines/1.5 MW (Middle Scenario)	150 Turbines/1.3 MW (Upper End Scenario)
Construction Impacts			
Potential for direct disturbance to archaeological sites	Slightly less than middle scenario because of smaller construction footprint	Two recorded prehistoric archaeological sites identified at project site	Slightly more than middle scenario because of larger construction footprint
Potential for direct effects on Native American Resources	Unknown; tribal consultation ongoing	Unknown; tribal consultation ongoing	Unknown; tribal consultation ongoing
Operations and Maintenance Impacts			
Potential for direct impacts on cultural resources	None anticipated	None anticipated	None anticipated
Potential for indirect visual impacts on North Branch Canal tunnel and other NRHP-eligible resources	Unknown; waiting to consult with OAHP	Unknown; waiting to consult with OAHP	Unknown; waiting to consult with OAHP
Decommissioning Impacts			
	Similar to those described for construction, above	Similar to those described for construction, above	Similar to those described for construction, above

Source: Sagebrush Power Partners LLC 2003a, f.

Construction Impacts

Ground-disturbing activity during construction could potentially affect the two prehistoric archaeological sites recorded at the project site. These two sites are located near proposed turbine string G and the Bonneville substation. Potential direct impacts would occur under the upper end scenario because it would involve the greatest extent of excavation activity along and in the vicinity of turbine string G. Construction requirements at the proposed Bonneville substation would be the same under all three scenarios. These archaeological sites should be avoided during construction to prevent any damage to either of them. Implementation of the Applicant's

proposed mitigation measure (see Section 3.8.5) would ensure that potential impact to known and unknown resources in the project area during construction activities would be minimized.

Representatives of the Yakama Nation did not comment on the archaeological survey process or observe the pre-construction fieldwork, and tribal consultation is ongoing. If no significant tribal resources, such as natural resource gathering, or history, cultural, and religious areas are discovered or if they would not be affected by the project, construction of the proposed facilities would not affect cultural resources and no mitigation would be necessary. However, if significant resources were found that would be affected by the project, appropriate mitigation measures should be devised before construction begins (see Section 3.8.5, Mitigation Measures).

Direct Operations and Maintenance Impacts

No direct impacts to any known cultural resources would occur during normal operation and maintenance of the project. Assuming that resources were identified but significant adverse effects were successfully avoided during construction, it is unlikely that operation and maintenance activities would result in direct harm to avoided cultural resources.

Indirect Operations and Maintenance Impacts

Project operations under the three project scenarios could lead to indirect impacts on potentially significant cultural resources in the project area. In particular, indirect impacts could involve the loss of integrity in the historic setting of the North Branch Canal tunnel caused by changes in the visual environment. The severity of this potential indirect impact is unknown because the comparative visual effect of 150 smaller turbines versus 82 larger turbines is inherently subjective and would depend upon the individual viewer. Furthermore, the NRHP-eligibility status of the North Branch Canal tunnel is presently unknown, although additional information on the status of this resource and the potential APE for visual impacts has been requested from the OAHP. In the absence of this information, the potential for indirect impacts on cultural resources in the KVVPP area is identified as an unresolved issue.

In addition, tribal consultation is ongoing. If significant resources, such as areas important in Yakama history or cultural and religious practices, were found that would be indirectly affected by the project, appropriate mitigation measures should be devised before construction begins (see Section 3.8.5, Mitigation Measures).

Decommissioning Impacts

Impacts from decommissioning of the project are similar to those described above for construction activities. The two prehistoric sites recorded near proposed turbine string G and the proposed Bonneville substation should be avoided during facility removal to prevent any damage to the sites.

3.8.4 Impacts of No Action Alternative

Because no construction is proposed under this alternative, no impacts on cultural resources would occur, as long as land use in the project area remains the same. Other energy generation facilities would likely be constructed in the region and could cause impacts on cultural resources, but specific impacts would depend on the location and design of the facility.

3.8.5 Mitigation Measures

Mitigation Measures Proposed by the Applicant

A qualified archaeologist would monitor the ground-disturbing activities; the Yakama Nation would be contacted prior to these activities and invited to have representatives present during all ground disturbances. If intact archaeological resources or human burials are encountered during construction, the construction foreman would immediately direct activities that could further disturb the deposits away from their vicinity. The construction foreman or Sagebrush Power Partners LLC would then contact Dr. Robert G. Whitlam, Washington State Archaeologist, the Yakama Nation, and other pertinent parties who would determine how the materials should be treated. The area would be secured and placed off limits for anyone but authorized personnel.

Additional Recommended Mitigation Measures

Because tribal consultation is ongoing and cultural resources significant to the Yakama Nation may yet be identified, mitigation measures appropriate for these resources should be developed by the Applicant and approved by EFSEC and the Yakama Nation before construction begins. It is recommended that the Yakama Nation be involved in establishing procedures to be followed in the event of any unanticipated finds during the construction and decommissioning phases of the proposed project.

3.8.6 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts on cultural resources have been identified at this time. Any unforeseen direct disturbance of cultural resource sites would be mitigated through the process described in Section 3.8.5. However, if OAHP determines that: (1) the boundaries of the APE for visual impacts extend beyond the ground disturbance areas and (2) the North Branch Canal tunnel is an NRHP-eligible historic resource, there is the potential for the project to result in significant unavoidable indirect adverse impacts from changes in the visual setting of this and other resources. The ability to avoid or mitigate this visual change would depend on the severity and nature of this potent indirect impact. Should consultation with the Yakama Nation identify significant tribal resources, such as natural resource gathering, or history, cultural, and religious areas, there is the potential for the project to result in significant unavoidable direct or indirect adverse impacts from construction or operation. Since the potential for both direct and indirect impacts on cultural impacts is an issue to be resolved, the likelihood of significant unavoidable adverse impacts is similarly unresolved.