

3.10 CULTURAL RESOURCES

This section addresses the identification and evaluation of cultural resources within the Project Area. In general, cultural resources are locations of human activity, occupation, or usage that contain materials, structures, or landscapes that were used, built, or modified by people. Cultural resources include spatially circumscribed areas of human activity, such as pre-contact Native American archaeological sites, currently used Native American traditional practices use areas, historic period ranches, or a district of historic buildings.

3.10.1 Methodology

The process for identifying and evaluating cultural resources and assessing Project effects for this Project was derived from complying with federal and state cultural resource laws and regulations such as the National Historic Preservation Act (NHPA) of 1966, as amended, Archaeological Resources Protection Act (ARPA), Native American Graves Protection and Repatriation Act (NAGPRA), Antiquities Act, American Indian Religious Freedom Act (AIRFA), and Executive Order 13007. This section discusses the applicable cultural resource regulations, and the methods used for identifying and evaluating cultural resources. The first phase was background research and review of site records and previous cultural resources surveys to identify recorded archaeological and architectural/historical resources in the vicinity of the project. The second phase was a survey and inventory within a more focused area of investigation (referred to as the Area of Potential Effect or APE) to identify cultural resources (see Section 3.10.1.1 Area of Potential Effect). The inventory consisted of a pedestrian survey, inspecting ground surfaces within the APE for archaeological and architectural/historical resources.

The analysis was informed by comments from the public scoping process which occurred from July to September 2009 and the DEIS comment period from July to September 2010. Comments from agency representatives, local organizations and private citizens requested the following issues be addressed with regards to cultural resources:

- Evaluation of potential effects to historical and cultural resources, consistent with National Historic Preservation Act and Executive Order 13175.
- Provisions to avoid potential harm to the major cultural sites of the Burns Paiute Tribe.

3.10.1.1 Federal and State Cultural Resource Laws and Regulations

National Historic Preservation Act

Section 106 of the NHPA requires that the lead federal agency with jurisdiction over a federal undertaking (i.e., a project, activity, or program that is funded by a federal agency or that requires a federal permit, license, or approval) consider effects to historic properties before that undertaking occurs. In addition, federal agencies must consult with the Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officers (SHPOs), federally recognized Indian tribes, applicants for federal assistance, local governments, and any other interested parties regarding the proposed undertaking and its potential effects on historic properties. Consultation with ACHP would occur if there is a conflict between Bureau of Land Management (BLM)/U.S. Fish and Wildlife Service (USFWS) and the Oregon SHPO over National Register of Historic Places (NRHP) eligibility of a particular cultural resource. The goal of consultation is to identify historic properties potentially affected by an undertaking, assess the undertaking's effects, and seek ways to avoid, minimize or mitigate any adverse effects on historic properties.

The BLM is the lead federal agency for the Project and is required to comply with NHPA when considering a request for a right-of-way (ROW) through BLM-administered lands, consistent with the policies and guidelines in the Federal Land Policy & Management Act (FLPMA) (43 CFR Part 2800). The BLM's

granting of a ROW request is considered an undertaking (i.e., the issuance of a Federal permit, license or approval) under Section 106 of the NHPA, pursuant to 36 CFR 800. Other Federal agencies that have permitting authority for the Project are also required to comply with the NHPA. For example, the USFWS permitting of a ROW pursuant to 50 CFR Part 29 or the issuance of a Section 404 Permit under the Clean Water Act by the U. S. Army Corps of Engineers (USACE) would be considered undertakings pursuant to 36 CFR 800. ~~Consultation with the Bonneville Power Administration (BPA) is ongoing to determine whether the BPA has any agency actions that could be considered an undertaking associated with this Project.~~

AREA OF POTENTIAL EFFECT

The Project APE (Figure 3.10-1) is defined as the “geographic area or areas within which an undertaking could directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16(d)). The APE for the archaeological resources inventory for the North Steens 230-kV Transmission Line Project is a 400-foot wide corridor centered on the alignment of the proposed transmission line (i.e., 200 feet in both directions perpendicular to the transmission line centerline). In instances where the boundaries of archaeological sites extend beyond the 400 foot boundary, the entire site is defined and recorded. The APE for the architectural resources inventory is an area of 1,500 feet or 750 feet each side of the proposed transmission line. In instances when the boundaries of historical ranch complexes extend beyond the 1,500 foot APE, the entire site or complex is defined and recorded. The APE for the archaeological and architectural resources for the Echanis Wind Energy Project (Echanis Project) turbine sites, temporary and permanent access and overland roads and temporary storage yards/staging areas is 1,500 feet. The Oregon SHPO has concurred with the APE described above (Griffin 2011).

IDENTIFYING AND EVALUATING HISTORIC PROPERTIES

Federal agencies must identify historic properties within the established APE. This is accomplished by reviewing existing data and consulting with the Burns Paiute Tribe (SPT), Oregon SHPO and/or other federal agencies. A “historic property” is defined as any district, site, building, structure, or object that is either listed, or eligible for listing, in the National Register of Historic Places [16 U.S.C. Section 470(w)(5)]. To be considered eligible for listing in the NRHP, a property generally must be greater than 50 years of age, although there are provisions for listing cultural resources of more recent origin if they are of exceptional importance. The criteria (36 CFR 60.4 [a–d]) used to evaluate the significance of a resource are as follows:

- It is associated with events that have made a significant contribution to the broad patterns of American history (Criterion A); or
- It is associated with the lives of past significant persons (Criterion B); or
- It embodies 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 (Criterion C); or
- It has yielded or may be likely to yield, information important in history or prehistory (Criterion D).

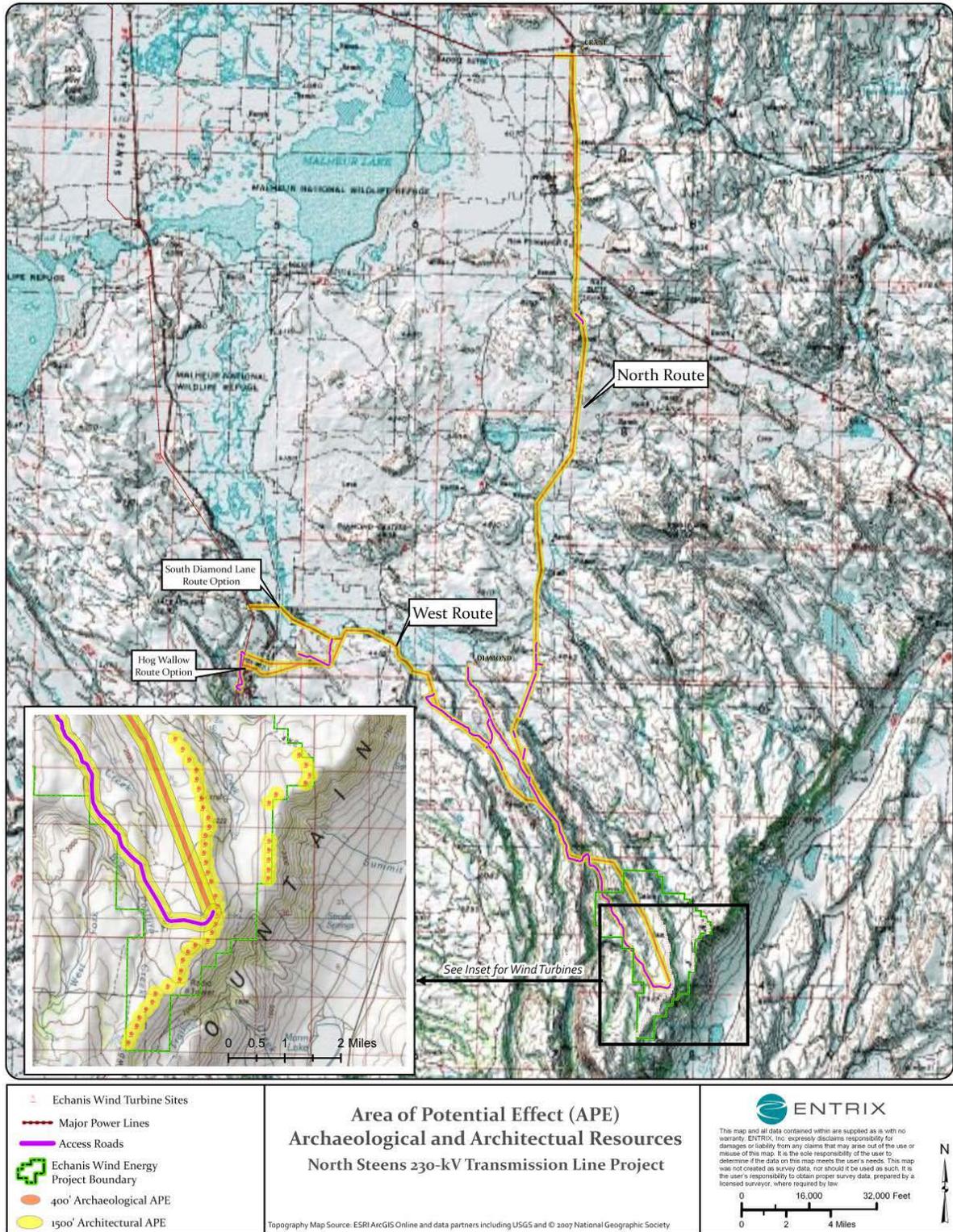


Figure 3.10-1 Project Area of Potential Effect (APE).

While cultural resources could be present within the project area, if they do not meet the requirements for listing in the NRHP, they are not considered historic (or significant) properties under the NHPA. Cultural resources less than 50 years old do not meet the NRHP criteria unless they are of exceptional importance, as described in Criteria Consideration G (36 CFR Part 60) and the National Park Service Bulletin No. 22, “How to Evaluate and Nominate Potential National Register Properties That Have Achieved Significance Within the Last 50 Years.”

ASSESSING PROJECT EFFECTS

If a property is determined eligible for listing or has been previously listed in the NRHP and it is located in the APE, federal agencies must evaluate whether an undertaking adversely affects the historic property. The Criteria of Adverse Effect, found in 36 CFR 800.5, are applied when a project has the potential to

. . . Alter directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.

Examples of adverse effects include physical destruction of a resource; alterations to a property that are not consistent with the Secretary of the Interior’s Standards for the Treatment of Historic Properties; removal from its original location; change in the character of the property’s use or setting; introduction of visual, atmospheric, or audible elements that diminish historic integrity; neglect; and the transfer, lease, or sale of property out of federal ownership (36 CFR 800.5(a) 2). Adverse effects may also include reasonably foreseeable effects that may occur later in time or at greater distances or that may be cumulative.

If a project adversely affects historic properties, then the federal agency must consult with SHPO, other federal agencies involved in the undertaking, and other consulting parties in an attempt to resolve the adverse effects. The parties typically achieve resolution by avoiding historic properties, minimizing impacts, or mitigating for adverse effects. When adverse effects cannot be avoided a Memorandum of Agreement is typically prepared that documents how the adverse effects would be resolved by the federal agency.

Once historic properties are identified within the APE, federal agencies must assess whether project actions would affect the characteristics of a historic property that make it eligible for the NRHP.

CONSULTATION

According to 36 CFR Part 800, certain parties must be consulted in the identification of historic properties, the determination of their eligibility to the NRHP, and the determination of Project effects upon historic properties. These parties include each SHPO whose state would physically include any portion of the APE and each Tribal Historic Preservation Office (THPO) whose reservation lands would physically include any portion of the APE. This Project would not cross any tribal reservation lands.

Section 106 also recognizes the importance of consulting with Indian tribes for federal undertakings that are proposed outside of reservation lands. Specifically, 36 CFR 800.2(c)(2)(ii) notes: “Section 101(d)(6)(B) of the NHPA requires agency official to consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural importance to historic properties that may be affected by an undertaking. This requirement applies regardless of the location of the historic property.”

Native American Graves Protection and Repatriation Act

The NAGPRA applies to all federal and tribal lands. NAGPRA effectively protects tribal burial sites and rights to items of cultural significance, including human remains, funerary objects, sacred objects, and objects of cultural patrimony (25 USC §3001[3]; 43 CFR 10). On federal lands, intentional excavation and removal of Native American human remains and objects from federal or tribal lands for discovery, study, or removal is permissible only if an ARPA permit is issued by a federal land-holding agency. Consultation with Native

Americans must occur prior to the issuance of an ARPA permit and removal of human remains and objects requires the consent of the applicable Native American tribe. NAGPRA applies to all federal lands affected by the proposed Project. Each state has statutes that govern the inadvertent discovery and/or excavation of human remains as well as artifacts on private or state lands. Unanticipated Discovery Plans would be prepared for this Project.

Antiquities Act of 1906 (16 USC 431 et seq.)

The Antiquities Act prohibits the collection, destruction, injury, or excavation of “any historic or prehistoric ruin or monument, or any object of antiquity that is situated on federal land without permission of the appropriate land management agency.” The Antiquities Act also provides for the criminal prosecution, including fines and imprisonment, for individuals who commit one or more of the acts described above.

Archaeological Resources Protection Act of 1979 (ARPA) (25 CFR 262.3)

The ARPA prohibits the unauthorized excavation, removal, or damage of “archaeological resources on federal and Indian lands. Archaeological resources are comprehensively defined to include archaeological sites, structural remains, artifacts, and bones.”

The American Indian Religious Freedom Act of 1978

The AIRFA of 1978 states “... henceforth it shall be the policy of the United States to protect and preserve for American Indians their inherent right and freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites (42 USC 1996).” Under the act, agencies should consult with tribes when projects, policy, or procedure may affect their religious practices.

Executive Order 13007

Executive Order 13007 requires Federal land managing agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites. It also requires agencies to develop procedures for reasonable notification of proposed actions or land management policies that may restrict access to or ceremonial use of, or adversely affect, sacred sites.

Oregon State Regulations

Implementing rules contained in the Oregon Revised Statutes (97.740–97.760; 358.905–358.955; 390.805–390.925; 271.715–271.795; 390.235; 358.605–358.622) and in the Oregon Administrative Rules (736-051-0080 through 0090; 660-023-0200) apply to the inventory, assessment and treatment of cultural resources for this Project. These rules require the identification of historic, archaeological, and cultural resources listed in or eligible for the national, state, or local registers. Measures must be considered to reduce or control impacts to identified historic properties affected by a proposed project. These rules also require the acquisition of archaeological permits for subsurface archaeological testing on lands owned by state or local political subdivisions.

3.10.1.2 Archaeological Methods

This section describes the prehistoric and architectural/historical resources within the Project APE, including a discussion of the background of the area’s cultural resources, and the guidelines for enforcing the protection of any resources that are affected within the Project APE, followed by the assessment of potential effects and recommended measures to mitigate any significant adverse effects.

Below are the methods of the records search, archival and historical research and field survey and inventory of the Project APE for archaeological and architectural/historical resources.

Research

Prior to commencing fieldwork, the Applicant conducted background research of archival and site records on file at the SHPO in Salem, Oregon and the Burns District BLM office in Hines, Oregon (SPT). The records consisted of previously recorded archaeological resources and cultural resources surveys in the vicinity of the APE, and the results of archaeological testing in the region.

Inventory

The Applicant conducted an intensive pedestrian survey/inventory to assess and document archaeological resources within the Project APE, including all associated access roads. The USFWS conducted an inventory/survey of portions of the Project APE on Malheur National Wildlife Refuge (MNWR) lands, including portions of the South Diamond Lane Route Option that occur on USFWS lands.

The Applicant conducted a survey and inventory of a total of approximately 78 miles of the proposed transmission line corridor, which included the Echanis Project APE, the Alternative C – North Route APE, including the APE for the Hog Wallow Route and South Diamond Lane Route Options, and the APE for Alternative C – North Route. The BLM and USFWS did not make determinations of NRHP eligibility of the identified archaeological resources. Instead, the Applicant made recommendations for further research and survey work for potentially significant archaeological sites. The Applicant initially conducted an archaeological survey and inventory of the Echanis Project turbine site locations and the southern 12.5 miles of the proposed transmission line route to where it crosses onto BLM-administered land (the proposed line divides into the West and North Alternative Routes (Alternatives B and C, respectively, 9.9 miles north of the Echanis Project site). The proposed turbine locations range approximately 820 feet to 1,300 feet apart. The A String, consisting of 33 proposed turbine locales, is approximately 6.25 miles in length while the B String, consisting of 14 proposed locales, is approximately 2.66 miles long. The remaining transmission line corridor, consisting of the Alternative B – West Route (including the Hog Wallow Route Option) and the Alternative C – North Route, were surveyed during the fall of 2009. Alternative B – West Route is 18.66 miles long, while the Hog Wallow Route Option adds an additional 2.86 miles to the Alternative B – West Route Alternative. The Alternative C – North Route is 36 miles long. As noted, the southernmost section of the proposed route between the turbine sites and where the line divides into Alternative B – West Route and Alternative C – North Route is 9.9 miles long.

The pedestrian survey was conducted by walking parallel transects spaced 20 meters apart while inspecting the ground surface for archaeological resources. The Oregon SHPO definitions for sites and isolated finds were used. Accordingly, if there were ten or less artifacts, the resource was recorded as an isolate. No subsurface inspections (e.g., shovel probes) were undertaken during this survey. No artifacts were collected during the survey. Photographs were taken of diagnostic and representative artifacts from sites and isolated finds. Recommendations for further work and subsurface testing were made for potentially eligible resources based on the following conditions: the site boundary extended beyond the surveyed APE; the artifact density was too high to inventory completely; artifact type diversity was high; or the potential for intact buried cultural deposits existed, especially for sites not located on bedrock.

3.10.1.3 Architectural/Historical Methods

Research

Prior to conducting the fieldwork, the Applicant obtained information about previously recorded architectural/historical resources within the vicinity of the APE from records on file at the SHPO in Salem,

Oregon. Researchers also obtained additional information concerning the historic development of the area by reviewing archival sources at the Harney County Public Library Western History Room, in Burns, Oregon.

Inventory

The Applicant conducted a field survey and inventory of architectural/historical resources in the Project APE during October 16-19, 2009. The Applicant surveyed major portions of the APE's for all route alternatives and route options. Due to a limited field survey season, realignments to the proposed route alternatives, and newly proposed access and overland roads, certain areas of the Project APE's were not surveyed for architectural/historical resources. Environmental conditions prevented the survey of the Echanis Project site and most of the main access road between Diamond and the Echanis Project site. The Applicant completed additional field surveys of several privately-owned parcels along Alternative C – North Route, and several previously unsurveyed segments of Alternative B – West Route, during the 2010 field season.

In accordance with the Oregon SHPO guidelines for Reconnaissance Level Surveys, the field staff took photographs and GPS points of all buildings and structures within the APE regardless of age. Each resource was assigned a field identification number. All architectural/historical resources within the Project APE were recorded for inclusion in the SHPO historic property database.

3.10.1.4 Native American Consultation

For this Project, the BLM, USFWS, and USACE are required by the NHPA, ARPA, NAGPRA, and AIRFA to consult with Indian tribes for actions that may affect sites of religious or cultural significance. Specifically, these agencies are required to comply with 36 CFR 800-Subpart B which requires them to, not only take into account effects of their undertaking on historic properties, but to consult with any tribes in order to assist in identifying potentially eligible properties and the values that make them eligible. As stated in 36 CFR 800.2(c)(2)(ii)(A), the agency must provide tribes a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects.

As part of the consultation process with Indian Tribes for the Project, the BLM Burns District Office initiated the Section 106 government-to-government consultation process in an April 24, 2009 letter to the Burns Paiute Tribe (BPT). The BLM requested to meet and consult with the BPT (Council) and present the proposed Project. On May 9, 2009 the BLM sent a follow-up letter to the BPT also requesting their participation as a cooperating agency in an EIS to be prepared for the proposed transmission line. The BLM enclosed a proposed Memorandum of Understanding (MOU) between the BPT and the BLM clarifying the NEPA responsibilities of the BPT and the BLM and specified the conditions, time schedules, and procedures to be followed in the development and preparation of the EIS. On June 15, 2009 the BLM and the Council held a Section 106 government-to-government consultation meeting at the Tribal Gathering Center. The BLM briefed the Council on the status of the North Steens Echanis 230-kV Transmission Line Project and the MOU, and invited the Tribe to participate in the EIS as a cooperating agency.

On October 8, 2009 the Legislative Commission on Indian Services in Salem advised the BLM that the federally recognized tribes to be considered as consulting parties in the Section 106 process are the BPT, the Confederated Tribes of Warm Springs, and the Klamath Tribe. On October 29, 2009 BLM sent a letter to the three tribes as well as the other consulting parties inviting them to participate in the Section 106 process and comment on the proposed Project and the APE. On November 10, 2009 the BLM invited the three tribes, federal agencies, and the other consulting parties to participate in a Section 106 Consultation Meeting and Cultural Resources Work Group Session for the Project to be held December 7, 2009 at the BLM District Office in Hines, Oregon.

The USFWS met with the Tribal Council on November 2, 2009 to present information about the portion of the Project's proposed transmission line project that would cross the MNWR. At this meeting arrangements were made to show Council members where Alternative B – West Route would cross MNWR. Two Council members participated in this field trip on November 12, 2009. Formal government-to-government consultation with the BPT began on December 14, 2009 in a formal letter request from the USFWS to the BPT.

The Section 106 Consultation Meeting and Cultural Resources Work Group Session met at the BLM Burns District office on December 7, 2009. The meeting was attended by the BPT, BLM, USFWS, Harney County Court, ASCC, ENTRIX and the CEP. The Confederated Tribes of Warm Springs and Klamath Tribes were invited but did not attend. The BPT considered the meeting an opportunity to gather Project information that they would share with their tribal council. They requested another Section 106 consultation meeting between the BLM and the Tribal Council to discuss the proposed Project. The BPT also briefly discussed that the Project has the potential to affect sites of religious and cultural significance and that additional consultation would be necessary. The BLM met with the BPT on June 28, 2010 in order to discuss cultural uses of Steens Mountain and the upcoming comment period on the Draft EIS. It was agreed that the Council and BLM should meet after the comment period to further discussions. A meeting was scheduled for August 16, 2010, but was cancelled. BLM wrote a letter to the BPT dated January 12, 2011 that specifically discussed cultural use of Steens Mountain and asked for a meeting with Council to begin detailed discussions. A meeting was scheduled for March 17, 2011, but was also cancelled. As of this writing, no further meetings have been scheduled.

~~The BLM is planning an additional Section 106 government to government consultation meeting between the BLM, USFWS, and the Council.~~ The BLM also contacted the Klamath Tribes and the Confederated Tribes of Warm Springs to determine if the tribes wished to participate in the Section 106 government-to-government consultation process, and comment on the proposed Project and APE.

BLM continues its consultation efforts with the BPT and future Section 106 government to government consultation meetings may be conducted to gain a better understanding of any sites of religious or cultural significance that may be within the Project APE, and to discuss future tribal participation in the Project and consultation.

3.10.2 Affected Environment

3.10.2.1 Prehistory

The Echanis Project is located in the Northern Great Basin. As a distinct prehistoric cultural area, the Great Basin in general, and the northern Great Basin in particular reflect a long, prolific and often contentious history of archaeological study. Beginning in the 1930s and 40s with Luther Cressmen (1940; 1942) and Alex Krieger (1944) debating the association of man with extinct Pleistocene fauna, the archaeology of the Northern Great Basin has provided researchers with a plethora of interpretive material. A major point of emphasis in any discussion of Great Basin archaeology is the role that environmental change has had on cultural history throughout the study area. The topography and environment of the Great Basin, marked by numerous caves and an arid climate, have combined for very good preservation of cultural materials, some with extraordinary time depth for the Americas. On-going research at the Paisley 5 Mile Point Caves has firmly established pre-Clovis human populations in the Northern Great Basin through the dating of human coprolites dated to 14,300 years before present (Gilbert et al. 2008). The Northern Great Basin has also changed dramatically from a land marked by large pluvial lakes and inland seas at the end of the Pleistocene to the high desert environment we see today with observable fluctuations within that larger trend.

There have been several academic documentations of the paleoenvironmental record of the Steens Mountain region and surrounding valleys. One study that focused solely on Steens Mountain was Charlotte Beck's *Steens Mountain Surface Archaeology: The Sites* (1984). Beck's study notes that the subsistence economy of

the Northern Great Basin population was quite generalized – able to rely on a wide variety of resources, depending on availability – and therefore relatively stable over the course of the last 10,000 years. In the course of Beck’s establishment of a local cultural chronology for the Steens Mountain area, this cultural stability was reflected in the large time ranges to which many of the most common projectile points can be assigned. Elko points, for instance, occur from 8,000 BP to the late prehistoric and Humboldt points show up at sites from 10,000 BP to the late prehistoric era (Beck 1984). Nevertheless, Beck was able to establish six chronological periods for the Steens Mountain area based upon projectile point frequencies.

Beck’s Alvord Uplands study unit most closely correlates to the Echanis Project Area. These are locales situated along the 6,000-7,000 ft AMSL eastern scarp overlooking the steep drop to the valley below. This is in contrast to the western side of Steens Mountain, termed the Catlow Upland study unit, with its gentle descent over the course of 20 miles to the Catlow Valley. Beck concludes that the Steens Mountain study area exhibits remarkable cultural continuity throughout the Holocene and that responses to drastic environmental changes were reflected in changes in population aggregation and nucleation, relative frequencies of utilized resources and habitats occupied, but not in technological innovation, wholesale subsistence strategy overhauls or population collapse (Beck 1984, p. 318). Specific to the upland sites on Steens Mountain, Beck noted a greater proportion of worn objects, as well as a larger proportion of multiple tool objects in the Alvord Upland study area in particular (Beck 1984, p. 315). A point of interest are her conclusions regarding the period termed the Altithermal, from ca. 7,000 BP to 5,000 BP, during which time it was hypothesized that a period of warmer, drier conditions led to the drastic reduction or complete desiccation of the basin lakes and thus to an abandonment of the Northern Great Basin by the population (Antevs 1948). Fagan (1974) addressed this question and concluded that while some lowland sites were abandoned during this time period, the people merely moved to more favorable locales in the same general area, including higher elevation sites associated with springs (Fagan 1974, pp. 4-5). Beck, on the other hand, concludes that there was no abandonment of any subarea and that settlement during this warm, dry period was focused around marshes in the Catlow and Alvord basins, suggesting there was enough water in the basins to maintain populations throughout the Holocene (Beck 1984, p. 314).

3.10.2.2 Ethnohistory

At the time of Euro-American contact, the inhabitants of the Northern Great Basin were primarily the Numic-speaking Northern Paiute people. The Northern Paiute occupied the Great Basin portions of California, Nevada and Oregon while the Southern Paiute occupied portions of Arizona, southeastern California, Utah and Nevada. The pre-contact lifestyle was marked by a generalized subsistence economy whereby each tribe or band occupied a specific territory, usually centered on the lakes and marshes found throughout the Northern Great Basin. The diet reflected a broad spectrum that included large game, rabbits and other rodents, grass seeds, roots and nuts. Generally, each band was named for the primary food resource consumed by that particular group. The BPT, for example, identify themselves as the Wadatika, named for the wada seeds traditionally collected along the shores of Malheur Lake. In reality, the Northern Paiute were probably not organized by rigid division of band or tribe but were rather highly fluid family and camp groups. The degree of tribal or band identity probably fluctuated dependent on the availability of resources, as reflected in Beck’s study at Steens Mountain (Beck 1984).

When the first fur-trappers came into the area, there was still a large indigenous population occupying the region (in contrast to the experience of Lewis and Clark traveling down the lower Columbia River noting the apparent decimation of the Chinooks). While traveling in the vicinity of Harney and Malheur lakes in 1826, fur trader Peter Skene Odgen remarked that “it is incredible the number of Indians in this quarter. We cannot go 10 yds. Without finding them . . . No Indian nation so numerous as these in all North America” (The Oregon History Project 2009).

Much of the information known about the Northern Paiutes of southeast Oregon comes from the journals kept by U. S. Army officers in the region during the 1860s. The first regular contact between the Northern Paiute and Euro-Americans came during the 1840s when large numbers of white emigrants passed north of Harney

Basin through the Ontario region on the Oregon Trail on their way to settlements in western Oregon. Minor skirmishes broke out, prompting the U.S. Army to begin scouting the region in 1859 for safer routes as well as pursuing Indians deemed hostile (Gray 1995). After several conflicts between Northern Paiutes and the increasing number of white settlers in the region, the federal government established the Malheur Reservation in 1872 with the intent of concentrating the large and dispersed Northern Paiute population. However, many Northern Paiutes refused to settle on the reservation owing to the reservation's isolation and distance to traditional resource gathering areas. The reservation was short-lived, as continual boundary disputes and confrontations between settlers and the tribes led to further warfare between the U. S. Army and members of the Northern Shoshone and Northern Paiute tribes that left the reservation. Known as the Bannock War of 1878, the conflict ended in a U. S. Army victory that led to the dissolution of the reservation in the early 1880s (Oregon State Archives 2009).

As Euro-American settlement in the region increased, bringing with them grazing livestock, the traditional Northern Paiute lifestyle was finally brought to an end. Many Northern Paiute then began settling near white communities for the economic opportunities, essentially forming Northern Paiute colonies. This system of *de facto* reservations near towns and farm centers was already in place when the federal government began establishing other reservations for the Northern Paiute. In 1934, these small Indian communities were granted federal recognition as independent tribes, such as the Burns Paiute. Their descendants formed the federally recognized BPT, and in 1972 were awarded a 771-acre reservation north of Burns (Oregon State Archives 2009).

3.10.2.3 History

Harney County, located in high desert country in the southeast portion of the state, is the largest county in Oregon comprising 10,228 square miles. Harney County was created from the southern two-thirds of Grant County on February 25, 1889. The county was named after the lake that lies within its territory, which was named in honor of General William S. Harney, commander of the Department of Oregon of the U.S. Army in 1858-1859.

The earliest inhabitants of Harney County were the Northern Paiute Indians. It was not until the first quarter of the 19th century that Euro Americans began to arrive in southeast Oregon, beginning with trappers and explorers followed by traders, miners, soldiers, cattlemen, farmers and other settlers.

Peter Skene Ogden was the first European to explore southeast Oregon when he led a fur brigade for the Hudson Bay Company in 1826. But it was the discovery of gold in eastern Oregon and southwestern Idaho in the early 1860s that brought thousands of prospectors and early settlers to the area, and their presence soon led to violent confrontations with regional tribes. To restore peace, the federal government established several military camps in the area before negotiating a treaty in 1869 with the Northern Paiute that led to the establishment of the Malheur Indian Reservation in 1872. As noted above, the reservation, however was short-lived as further boundary disputes and confrontations between settlers and the tribes led to the dissolution of the reservation by the early 1880s (Oregon State Archives 2009).

During the last quarter of the 19th century, cattle ranchers, attracted by the vast amount of bunch grass and the cattle export outlets in Pendleton, Oregon and Boise, Idaho, and the establishment of the transcontinental railroad at Winnemucca, Nevada at the end of the 19th century, soon began moving their herds into the region. For the next several decades a contentious relationship developed between settlers and cattlemen over land ownership and water rights that often erupted into violence. Through the early 20th century three industries, cattle raising, sheep raising, and timber provided the county's economic base. The availability of public land for homesteading also served as a catalyst to the cattle industry as well as bringing in farmers and sheep men to the area thus creating increased competition for productive land.

The struggle for control over land claims was often bitter as cattlemen with large holdings sought to consolidate their holdings at the expense of smaller landowners. The most famous of the cattlemen was Peter

French, who brought 1,200 head of cattle to the area in 1872 under the direction of Dr. Hugh Glenn, and acquired lands along the Blitzen River for the ranch. Here he established the 'P Ranch' and managed the French-Glenn Livestock Company for Glenn, and for the next quarter of a century sought to consolidate more lands under the ranch's control until his murder in 1897 (Gray 1995; Gall 2009). The ranch continued in operation until 1935 under a variety of owners.

During the first decade of the 20th century, the increasing consolidation of holdings by the larger landowners led some small ranchers to sell their operations and leave the county. Some of the large ranches that were established during those years still exist, such as the Bell-A-Ranch and the 350,000 acre Whitehorse Ranch. The Whitehorse Ranch has been in continuous operation since 1869 (Whitehorse Ranch 2009; Gall 2009).

In addition to cattle grazing, Steens Mountain was the open summer range land for over 100,000 sheep each year from the late 1880s to 1934, when the Taylor Grazing Act required all livestock operators to own land that would serve as a base for their operations.

A fierce political battle also developed over the selection of the county seat, which ended with the community of Burns being selected. Burns, the county's principal town, was established in 1884 and incorporated as the county's administrative center upon the county's creation in 1889. Burns was named for the Scottish poet Robert Burns by early settler and County Commissioner George McGowan. During the 1880s, Burns reportedly consisted of a hotel, a saloon, and a scattering of small businesses, residences and ranches.

3.10.2.4 Field Survey Results

Archaeological Resources

The Applicant identified a total of 134 newly identified archaeological resources in the Project APE (Table 3.10-1). Of these resources, 57 are sites and 77 are isolated finds. Three (including one feature) archaeological sites were identified in the Echanis Wind Energy Project APE, 24 sites were identified in the Alternative B – West Route and Hog Wallow Route Option APE, and 31 sites were identified in the Alternative C – North Route APE. Fifteen isolates were identified in the Echanis Wind Energy Project APE, forty-two isolates were identified in the Alternative B – West Route Alternative and Hog Wallow Route Option APE, and 20 isolates were recorded in the Alternative C – North Route APE. The Applicant did not reassess any previously identified archaeological resources within the Project APE.

The Applicant and the USFWS preliminarily identified 37 eligible or potentially eligible NRHP archaeological resources within the Project APE. Of these resources, two sites and one cultural feature are in the proposed Echanis Project APE, 24 sites are in the Alternative B – West Route Alternative APE, ten are within the Alternative C – North Route APE, and three sites are located in both the Hog Wallow Route Option and the Alternative B – West Route APE.

The archaeological resources identified in the archaeological APE and listed in Table 3.10-1 consists mainly of prehistoric lithic scatters (stone tools or flakes), rock features, and ground stones (type of stone tools); as well as historic period cans, bottles/glass, rock alignments, building and structural remains, and miscellaneous early and mid-20th century refuse and debris.

Table 3.10-1 Archaeological Resources Identified in the Archaeological APE.

Site #	Location	Land Ownership	Site Type	Description	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action
Isolate 1	Wind Farm	Private	Historic	Cans	Not Eligible/Not Eligible	No Further Work
Feature 1	Wind Farm	Private	Historic	Rock alignment	Potentially Eligible/Unevaluated	Further Research/Survey
Isolate 2	Wind Farm	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 3	Wind Farm	Private	Historic	Tin top	Not Eligible/Not Eligible	No Further Work
Isolate 4	Wind Farm	Private	Historic	Cans	Not Eligible/Not Eligible	No Further Work
Site 1	Wind Farm	Private	Pre-contact	Rockshelter, lithic scatter	Potentially Eligible/Unevaluated	Further Research/Survey
Isolate 16	Wind Farm	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 17	Wind Farm	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 18	Wind Farm	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 19	Wind Farm	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 6	Wind Farm	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 7	Wind Farm	Private	Multi-component	Lithic, shell casing	Not Eligible/Not Eligible	No Further Work
Isolate 8	Wind Farm	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 9	Wind Farm	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 13	Wind Farm	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Site 3	Wind Farm	Private	Pre-contact	Lithic scatter	Potentially Eligible/Unevaluated	Further Research/Survey
Isolate 14	Wind Farm	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 15	Wind Farm	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Feature 3	West Route	Private	Historic	Rock alignment/ gap fencing	Not Eligible/Not Eligible	No Further Work
Isolate 20	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 21	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 22	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 23	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 24	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 25	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Site 1	West Route	Private	Historic	Debris scatter, modern refuse	Not Eligible/Not Eligible	No Further Work
Site 2	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 26	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 27	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 28	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 29	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 30	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 31	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Site 3	West Route	Private	Historic	Debris scatter, modern refuse	Not Eligible/Not Eligible	No Further Work

SECTION 3
AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION

Table 3.10-1 Archaeological Resources Identified in the Archaeological APE.

Site #	Location	Land Ownership	Site Type	Description	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action
Site 5	West Route	Private	Pre-contact	Lithic	Not Eligible/Undetermined	Further Research/Survey
Isolate 33	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 32	West Route	Private	Historic	Lid	Not Eligible/Not Eligible	No Further Work
Site 4	West Route	Private	Pre-contact	Lithic scatter	Potentially Eligible/Unevaluated	Further Research/Survey
Site 6	West Route	Private	Pre-contact	Lithic	Not Eligible/Undetermined	Further Research/Survey
Site 7	West Route	Private	Pre-contact	Lithic scatter	Potentially Eligible/Undetermined	Further Research/Survey
Isolate 34	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
35HA1266	West Route	Private/USFWS	Pre-contact	Lithic scatter	Potentially Eligible/Unevaluated	Further Research/Survey
Isolate 36	West Route	USFWS	Pre-contact	Lithic	<u>Not Eligible/Not Eligible</u>	<u>No Further Work</u>
Isolate 37	West Route	USFWS	Pre-contact	Lithic	<u>Not Eligible/Not Eligible</u>	<u>No Further Work</u>
Isolate 43	West Route	USFWS	Pre-contact	Lithic	<u>Not Eligible/Not Eligible</u>	<u>No Further Work</u>
Isolate 44	West Route	USFWS	Pre-contact	Lithic	<u>Not Eligible/Not Eligible</u>	<u>No Further Work</u>
Isolate 41	West Route	USFWS	Pre-contact	Lithic	<u>Not Eligible/Not Eligible</u>	<u>No Further Work</u>
Isolate 45	West Route	USFWS	Pre-contact	Lithic	<u>Not Eligible/Not Eligible</u>	<u>No Further Work</u>
Site 10	West Route	USFWS	Pre-contact	Lithic	<u>Potentially Eligible/Unevaluated</u>	<u>Further Research/Survey</u>
Site 11	West Route	USFWS	Pre-contact	Lithic	<u>Potentially Eligible/Unevaluated</u>	<u>Further Research/Survey</u>
Site 12	West Route	USFWS	Pre-contact	Lithic	<u>Potentially Eligible/Unevaluated</u>	<u>Further Research/Survey</u>
Site 13	West Route	USFWS	Pre-contact	Lithic	<u>Potentially Eligible/Unevaluated</u>	<u>Further Research/Survey</u>
Isolate 47	West Route	USFWS	Pre-contact	Lithic	<u>Not Eligible/Not Eligible</u>	<u>No Further Work</u>
Site 9	West Route	USFWS	Pre-contact	Lithic	<u>Potentially Eligible/Unevaluated</u>	<u>Further Research/Survey</u>
Isolate 48	West Route	USFWS	Pre-contact	Lithic	<u>Not Eligible/Not Eligible</u>	<u>No Further Work</u>
Site 14	West Route	USFWS	Pre-contact	Lithic	<u>Potentially Eligible/Unevaluated</u>	<u>Further Research/Survey</u>
Isolate 42	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 39	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Site 100	West Route	BLM	Historic	Mid-20 th century debris scatter	Not Eligible/Not Eligible	No Further Work
Site 15	West Route	BLM	Pre-contact	Lithic scatter	Potentially Eligible/Unevaluated	Further Research/Survey
Isolate 38	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 50	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 52	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work

Table 3.10-1 Archaeological Resources Identified in the Archaeological APE.

Site #	Location	Land Ownership	Site Type	Description	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action
Site 16	West Route	BLM	Historic	Mid-20 th century debris scatter	Not Eligible/Not Eligible	No Further Work
Site 17	West Route	BLM	Historic	Lithic	Potentially Eligible/Unevaluated	Further Research/Survey
Isolate 51	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 59	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 60	West Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 62	West Route (Hog Wallow Route Option)	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 63	West Route (Hog Wallow Route Option)	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 53	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 54	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 58	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 65	West Route (Hog Wallow Route Option)	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 55	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 56	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 57	West Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
35HA8	West Route and the Hog Wallow Route Option	USFWS	Pre-contact	Lithic, groundstone, and faunal remains	Eligible/Eligible	Avoidance
35HA997	<u>West Route and the Hog Wallow Route Option</u>	USFWS	Pre-contact	Lithic	Potentially Eligible/Unevaluated	Avoidance, Further Research
35HA1000	<u>West Route and the Hog Wallow Route Option</u>	USFWS	Pre-contact	Lithic	Potentially Eligible/Unevaluated	Avoidance, Further Research
35HA1002	West Route	USFWS	Pre-contact	Lithic	Potentially Eligible/Unevaluated	Avoidance, Further Research
Site FWS1	West Route	USFWS	Pre-contact	Lithic, groundstone, and faunal remains	Potentially Eligible/Unevaluated	Avoidance, Further Research
<u>Site 52</u>	<u>West Route</u>	<u>USFWS</u>	<u>Historic</u>	<u>Refuse scatter</u>	<u>Potentially Eligible/Unevaluated</u>	<u>Avoidance, Further Research</u>
<u>35HA0007</u>	<u>West Route</u>	<u>USFWS</u>	<u>Pre-contact</u>	<u>Lithic, groundstone, shell</u>	<u>Potentially Eligible/Unevaluated</u>	<u>Avoidance, Further Research</u>
<u>Isolate 104</u>	<u>West Route</u>	<u>USFWS</u>	<u>Pre-contact</u>	<u>Lithic</u>	<u>Not Eligible/Not Eligible</u>	<u>No Further Work</u>

Table 3.10-1 Archaeological Resources Identified in the Archaeological APE.

Site #	Location	Land Ownership	Site Type	Description	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action
<u>Site 43</u>	<u>West Route</u>	<u>USFWS</u>	<u>Pre-contact</u>	<u>Lithic</u>	<u>Potentially Eligible/Unevaluated</u>	<u>Avoidance, Further Research</u>
<u>Site 45</u>	<u>West Route</u>	<u>USFWS</u>	<u>Pre-contact</u>	<u>Lithic</u>	<u>Potentially Eligible/Unevaluated</u>	<u>Avoidance, Further Research</u>
<u>Site 44</u>	<u>West Route</u>	<u>USFWS</u>	<u>Multi-component</u>	<u>Habitation, lithic, historic</u>	<u>Potentially Eligible/Unevaluated</u>	<u>Avoidance, Further Research</u>
<u>Site 11</u>	<u>West Route</u>	<u>USFWS</u>	<u>Pre-contact</u>	<u>Lithic</u>	<u>Potentially Eligible/Unevaluated</u>	<u>Avoidance, Further Research</u>
<u>Site 8</u>	<u>West Route</u>	<u>USFWS</u>	<u>Pre-contact</u>	<u>Lithic</u>	<u>Potentially Eligible/Unevaluated</u>	<u>Avoidance, Further Research</u>
<u>Site 13</u>	<u>West Route</u>	<u>USFWS</u>	<u>Pre-contact</u>	<u>Lithic</u>	<u>Potentially Eligible/Unevaluated</u>	<u>Avoidance, Further Research</u>
<u>Isolate 40</u>	<u>West Route</u>	<u>USFWS</u>	<u>Pre-contact</u>	<u>Lithic</u>	<u>Not Eligible/Not Eligible</u>	<u>No Further Work</u>
Site 19	North Route	Private	Pre-contact	Lithic scatter, rock feature	Potentially Eligible/Unevaluated	Further Research/Survey
Site 21	North Route	BLM	Pre-contact	Lithic, groundstone and faunal scatter	Potentially Eligible/Unevaluated	Further Research/Survey
Site 22	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Site 23	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Site 24	North Route	BLM	Pre-contact	Lithic scatter	Potentially Eligible/Unevaluated	Further Research/Survey
Isolate 69	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 70	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 71	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 72	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 73	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 74	North Route	BLM	Historic	Bottles	Not Eligible/Not Eligible	No Further Work
Site 25	North Route	BLM	Pre-contact	Lithic scatter, groundstone	Potentially Eligible/Unevaluated	Further Research/Survey
Site 26	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 75	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 76	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 77	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 78	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 79	North Route	BLM	Multi-component	Lithic, wheel rim	Not Eligible/Not Eligible	No Further Work
Site 27	North Route	BLM/Private	Pre-contact	Lithic scatter	Potentially Eligible/Unevaluated	Further Research/Survey

Table 3.10-1 Archaeological Resources Identified in the Archaeological APE.

Site #	Location	Land Ownership	Site Type	Description	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action
Site 28	North Route	Private	Multi-component	Lithic, historic hearth with refuse	Not Eligible/Not Eligible	No Further Work
Isolate 82	North Route	Private	Historic	Bottle	Not Eligible/Not Eligible	No Further Work
Site 29	North Route	Private	Historic	Refuse dump	Not Eligible/Not Eligible	No Further Work
Isolate 81	North Route	Private	Historic	Bottle	Not Eligible/Not Eligible	No Further Work
Site 30	North Route	Private	Historic	Refuse dump	Not Eligible/Not Eligible	No Further Work
Site 31	North Route	Private	Historic	Refuse dump	Not Eligible/Not Eligible	No Further Work
Site 32	North Route	Private	Precontact	Dispersed refuse dump	Not Eligible/Not Eligible	No Further Work
Site 33	North Route	Private	Multi-component	Lithic, rock features	Not Eligible/Not Eligible	No Further Work
Isolate 85	North Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 86	North Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 87	North Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Site 34	North Route	Private	Pre-contact	Lithic scatter, groundstone	Potentially Eligible/Unevaluated	Further Research/Survey
Site 35	North Route	Private	Pre-contact	Lithic scatter, groundstone	Potentially Eligible/Unevaluated	Further Research/Survey
Isolate 88	North Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Site 36	North Route	Private	Pre-contact	Lithic and groundstone	Not Eligible/Not Eligible	No Further Work
Site 37	North Route	Private	Multi-component	Lithic scatter, historic and modern debris, Coontown remnants	Potentially Eligible/Unevaluated	Further Research/Survey
Site 38	North Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Site 39 (Feature 4)	North Route	Private	Pre-contact or Historic	Rock pile	Not Eligible/Not Eligible	No Further Work
Isolate 89	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 90	North Route	BLM	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Isolate 92	North Route	Private	Pre-contact	Lithic	Not Eligible/Not Eligible	No Further Work
Site 40	North Route	Private	Pre-contact	Lithic scatter	Potentially Eligible/Unevaluated	Further Research/Survey
Site 42 (Feature 5)	North Route	State of Oregon	Historic	Rock alignment, gap fencing	Not Eligible/Not Eligible	No Further Work
Site 41	North Route	Private	Historic/ Multiple component	Disturbed refuse scatter	Potentially Eligible (Pre-contact portion)/Unevaluated	No Further Work

*This is a preliminary recommendation and determination of NRHP eligibility. Additional research and survey efforts can provide a more definitive determination of eligibility.

Architectural/Historical Resources

The Applicant conducted a Reconnaissance Level Survey (RLS) of the architectural/historical APE as stipulated in the *Guidelines for Conducting Historic Resource Surveys in Oregon* (SHPO 2008). During the field inventory, the Applicant recorded 27 architectural/historical resources within the Project APE (Table 3.10-2). The USFWS identified one historic resource within the Project APE and recommended that it was eligible for the NRHP. The Applicant recommended to BLM that 20 architectural/historical resources were not eligible or out of the period of significance (built after 1959) for NRHP consideration. The USFWS rejected the Applicant’s eligibility determination for one of the identified historic resources (HR-26). Thus, only seven of the 28 identified architectural/historical resources are eligible for the NRHP based upon their age and integrity, pursuant to SHPO guidelines for the RLS (SHPO 2008).

The RLS is designed to deal with a large group of buildings/structures over a large geographic area, such as the Project’s linear APE. The primary purpose is to provide a “first cut” of buildings in a given area and to identify architectural/historical resources that are eligible for listing in the NRHP. The RLS involves only a visual evaluation of properties, not an assessment of associated historical events or individuals. Age and physical integrity are the only two factors used in evaluating the identified architectural/historical resources within the Project APE (SHPO 2008).

Although the State of Oregon only uses age and integrity to determine initial NRHP eligibility consideration during the RLS, the determination is not necessarily conclusive. The lead federal agency can chose to conduct more research to specifically determine if a property is eligible for the NRHP. Specific information on important residents and the history of a particular resource can only be obtained through additional historical research conducted as part of an Intensive Level Survey (ILS), the next level of survey.

The architectural/historical resources identified within the Project APE and listed in Table 3.10-2 consist mainly of wood or metal frame, vernacular farmstead/ranch buildings and agricultural outbuildings, wooden bridges, lined/unlined canals, and abandoned commercial buildings.

Table 3.10-2 Architectural/Historical Resources within the Project APE.

HR Number	Location	Land Ownership	Resource Type	Approximate Year of Construction	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action
HR-2	Saddle Butte Road, North Route	Private	Ranch Complex	1950	Eligible/Eligible	Avoidance
HR-3	57043 Hwy 78, North Route	Private	Farmstead	1980	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-4	56464 Hwy 78, North Route	Private	Farmstead	1950	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-5	Hwy 78, North Route	Private	Agricultural Building	2000	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-7	55328 Hwy 78, North Route	Private	Farmstead	2000	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-8	54422 Hwy 78, North Route	Private	Farmstead	1960	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-9	54421 Hwy 78, North Route	Private	Farmstead	2000	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-10	54360 Hwy 78, North Route	Private	Farmstead	1960	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-11	53741 Hwy 78, North Route	Private	Thompson Ranch	1940	Eligible/Eligible	Avoidance

Table 3.10-2 Architectural/Historical Resources within the Project APE.

HR Number	Location	Land Ownership	Resource Type	Approximate Year of Construction	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action
HR-12	53439 Hwy 78, North Route	Private	Farmstead	1990	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-13	53441 Hwy 78, North Route	Private	Farmstead	1930	Eligible/Eligible	Avoidance
HR-14	52667 Hwy 78, North Route	Private	Farmstead	1980	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-15	52451 Hwy 78, North Route	Private	New Princeton Post Office and Residence	1990	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-16	58830 Virginia Valley Road, North Route	Private	Farmstead	1970	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-17	60664 Virginia Valley Road, North Route	Private	Farmstead	1960	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-18	60630 Virginia Valley Road, North Route	Private	Farmstead	1990	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-22	Coon Town Road, North Route	Private	Coon Town Ghost Town	1884	Eligible/Eligible	Avoidance
HR-23	Coon Town Road, North Route	Private	Coon Town Quarry	1980	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-25	50915 Happy Valley Road, North Route	Private	Rod Otley Ranch	1940	Eligible/Eligible	Avoidance
HR-26	South Diamond Lane, South Diamond Lane Route Option	County	County-owned Bridge	1950	<u>Not Eligible (Lacks Physical Integrity/Not Eligible)</u>	<u>No Further Work</u>
HR-28	South Diamond Lane, South Diamond Lane Route Option	USFWS	Unnamed Canal	1930	Not Eligible (Lacks Physical Integrity/Not Eligible)	No Further Work
HR-29	36662 South Diamond Lane, West Route	Private	Anderson Ranch	1980	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-30	37862 South Diamond Lane, West Route	Private	Farmstead	1980	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-31	39168 South Diamond Lane, West Route	Private	Tree Top Ranches	1970	Not Eligible (Not in Period)/Not Eligible	No Further Work
HR-37	Coon Town Road, North Route	Private	Coon Town Bridge	1950	Eligible/Eligible	Avoidance
HR 39	Diamond Grain Camp Road, North Route	Private	Hay Barns on Otley Ranch	2000	Not Eligible (Not In Period)/Not Eligible	No Further Work

Table 3.10-2 Architectural/Historical Resources within the Project APE.

HR Number	Location	Land Ownership	Resource Type	Approximate Year of Construction	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action
HR-41	Hwy 205, West Route	USFWS	Center Canal	1940	Not Eligible (Lacks Physical Integrity/Not Eligible)	No Further Work
<u>FWS-H1</u>	<u>Hwy 205, West Route, Hog Wallow Option</u>	<u>USFWS</u>	<u>Peter French Historic Gate</u>	<u>1880</u>	<u>Eligible/Eligible</u>	<u>Avoidance</u>

*This is a preliminary recommendation and determination of NRHP eligibility. Additional research and survey efforts can provide a more definitive determination of eligibility.

3.10.3 Environmental Effects and Mitigation

3.10.3.1 Project Effects and Mitigation

If the BLM or USFWS determines that the Project would have an effect on an identified cultural resource within the Project APE, then the agency, under 36 CFR 800.5, would determine if the undertaking has an adverse effect on the particular cultural resource in question. An adverse effect would be found when an undertaking could alter any of the characteristics of a property that qualify the property for listing in the NRHP in a manner that diminishes the integrity of the property’s location, design, setting, materials, workmanship, feeling or association.

Federal agencies are required to consult with cooperating parties when there are potentially adverse effects. The consultation should attempt to resolve adverse effects and develop mitigation measures as necessary. The following mitigation or avoidance measures are applicable for historic properties for a finding of No Adverse Effect:

- Avoidance through transmission route or access road variation or relocation,
- Avoidance through boring or horizontal direct drilling (for underground sections of the line),
- Avoidance by narrowing the construction corridor (“neck down”),
- Avoidance through the use of existing roadways as Project access roads.

If adverse effects to the resource or resources cannot be avoided, BLM would develop a Memorandum of Agreement which outlines a mitigation plan to resolve the adverse effects for the historic property or properties in question.

Archaeological Resources

The Applicant, BLM, and USFWS preliminarily identified 37 archaeological resources eligible or potentially eligible for listing in the NRHP under Criterion D within the Project APE. Within the Echanis Project APE, there are two NRHP eligible or potentially eligible sites and one NRHP eligible cultural feature that would be affected. There are 24 preliminarily determined NRHP eligible or potentially eligible sites that would be affected within the Alternative B – West Route APE, ten NRHP eligible or potentially eligible sites that would be affected within the Alternative C – North Route APE, and three NRHP eligible sites are located in both the Hog Wallow Route Option and the Alternative B – West Route APE that would be affected.

The Applicant did not make preliminary NRHP eligibility recommendations for archaeological sites that are located on USFWS administered land based on an understanding that USFWS cultural resources staff would make any NRHP eligibility recommendations regarding these sites. However, site 35HA1266 is situated on both private and USFWS administered land within the Alternative B – West Route APE. The portion of

35HA1266 that falls on private land is recommended for avoidance and/or further inventory. In addition to site 35HA1266, there are 24 sites on USFWS administered land that the agency determined eligible or potentially eligible for the NRHP. Based on research conducted at site 35HA8, the site is eligible for listing in the NRHP. Sites 35HA997, 35HA1000, 35HA1002 and Site FWS1 are considered to be potentially eligible for listing. All 24 of the sites on USFWS administered lands are recommended for avoidance.

Architectural/Historical Resources

The seven architectural/historical resources within the APE that are eligible for listing in the NRHP were evaluated for potential effects from the Project. The Applicant identified six NRHP eligible architectural/historical resources in the Alternative C – North Route APE and one in the South Diamond Lane Route Option APE. The USFWS identified one additional NRHP eligible historical resource in the Hog Wallow Route Option APE.

The criteria listed below were used to evaluate temporary/short-term and permanent/long-term effects to architectural/historical properties:

- Demolition or Alteration of a Property: Demolition or extensive alteration of all or part of the resource.
- Isolation/Alteration of Surrounding Environment: Temporary or permanent restrictions of access to a historic resource or a change in the setting of the property's setting.
- Traffic Congestion/Parking/Access: Congestion arising from changes in traffic patterns, parking, and access to architectural/historical resources.
- Visual: Removal of architectural/historical resources adjacent to a historic property or the introduction of modern construction that is out of character with or alters the resource's historical setting.
- Introduction of New Construction: Addition of new construction that is not compatible with the existing architecture of historical resources.
- Structural Instability: Introduction of vibration during construction or operation that would cause damage to architectural/historical resources.
- Noise: Introduction of audible elements that are out of character with the historic resource and its established use such that its use may be altered or abandoned.
- Change of Use: The change in use of a historic resource brought about by construction or operation-related activities that make it no longer physically or financially feasible or desirable to maintain the current use.
- Vibration: Construction or operation techniques that would create vibrations such that a resource may experience damages such as the loosening of paint or mortar, cracking of mortar or plaster, weakening of structural elements, or crumbling masonry.
- Temporary Dirt/Unintended Damage: Introduction of atmospheric elements that may alter or damage an architectural/historical resource.
- Neglect: Neglect of a resource resulting in its deterioration or demolition. This is a potential effect under no-build alternatives

3.10.3.2 Alternative A – No Action

No Action represents the existing condition of cultural resources within the proposed Project Area. No Action would involve no construction of the proposed Echanis Project and the main access road, additional associated transmission lines, interconnection stations, and access/overland roads. There would be no improvements to existing access roads. No Action would have no adverse effects on NRHP eligible cultural resources.

3.10.3.3 Echanis Project Effects Common to All Action Alternatives

In April 2007, Harney County approved a conditional use permit application submitted by Columbia Energy Partners (CEP) to construct and operate a wind farm on the Project site on a 10,500 acre privately-owned site on Steens Mountain, including the main access road between Diamond and the Echanis Project site. The proposed turbine locations range approximately 820 feet to 1,300 feet apart. The A String, consisting of 33 proposed turbine locales, is approximately 6.25 miles in length while the B String, consisting of 14 proposed locales, is approximately 2.66 miles long.

Archaeological Resources

The Applicant identified two archaeological sites, one historic cultural feature, and 15 isolates in the Echanis Project APE. Of these 18 archaeological resources, the two archaeological sites and the one historic cultural feature were preliminarily determined to be potentially eligible for listing in the NRHP as shown in Table 3.10-3.

The preliminarily determined NRHP eligible archaeological resources identified in the Echanis Project APE and listed in Table 3.10-3 consists of prehistoric lithic scatters (stone tools or flakes) and a historic period rock alignment.

Table 3.10-3 Potentially Eligible Archaeological Resources Located in the APE for the Echanis Project.

Site #	Location	Site Type	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action	Project Effects
Site 1	Wind Farm and Main Access Road	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 3	Wind Farm and Main Access Road	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Feature 1	Wind Farm and Main Access Road	Historic	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD

*This is a preliminary recommendation and determination of NRHP eligibility. Additional research and survey efforts can provide a more definitive determination of eligibility.

PERMANENT EFFECTS

The Project would cause permanent or long-term effects to NRHP eligible archaeological sites through direct disturbance and/or indirect visual effects. The sites are located within the Echanis Project APE and may be adversely affected by construction of the main access road to the Echanis Project site, placement of turbines, installation of the overhead and underground power collection system, construction of onsite access roads (i.e., string roads), and increased human activity related to ongoing maintenance. While no traditional cultural properties (TCP's) or sacred sites eligible for the NRHP have been identified within the APE to date, such sites if identified could experience long-term visual effects. These sensitive areas may also include important archaeological sites that could be adversely affected.

TEMPORARY EFFECTS

Temporary or short-term effects would be associated with construction activities, including ground disturbance required to construct the main access road to the Echanis Project site and to install turbines, overhead and underground power collection systems, and string roads. Construction activities, including blasting, could create noise and vibration that would affect archaeological resources and stockpiling construction materials and equipment could cause short term visual effects. None of these activities would be expected to adversely affect NRHP eligible archaeological resources within the APE.

MITIGATION

The Best Management Practices (BMPs) and Project Design Features (PDFs) described in Section 2 and Appendix A (A.1.7 and A.3.7) were incorporated into the action alternatives and were designed to reduce the impacts to the Project site.

Archaeological Resources

The two potentially NRHP eligible archaeological resources and the one historic cultural feature within the Echanis Project APE would be avoided, if possible, by relocating or reconfiguring project-related facilities on the Echanis Project site or along the alignment of the main access road. If avoidance would not be possible, further testing and formal evaluations for eligibility for listing in the NRHP would be conducted for each identified resource, as described in Appendix A (A.1.7 and A.3.7).

Architectural/Historical Resources

Since no survey and inventory of architectural/historical resources was conducted in this APE, no NRHP eligible architectural/historical resources were identified and no project effects were determined.

3.10.3.4 Alternative B – West Route (Proposed Action)

Archaeological Resources

Sixty-four archaeological resources were identified in the Alternative B – West Route and the Hog Wallow Route Option, including 29 sites, and 35 isolates. Of the 64 archaeological resources, sites 4, 7, 35HA1266, 15, 17, 35HA8, 35HA997, 35HA1000, 35HA1002, FWS1, 52, 35HA0007, 43, 44, 45, 11, 8, and 13 were preliminarily determined to be eligible or potentially eligible for listing in the NRHP, and are listed in Table 3.10-4. The NRHP eligible 35HA8, 35HA997, and 35HA1000 are also located in the Hog Wallow Route Option.

The preliminarily determined NRHP eligible archaeological resources identified in the Alternative B – West Route and Hog Wallow Route Option APE consists mainly of prehistoric lithic scatters (stone tools or flakes) and ground stones (type of stone tool).

Table 3.10-4 NRHP Eligible Archaeological Resources Located in the APE for Alternative B – West Route and the Hog Wallow Route Option.

Site #	Location	Site Type	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action	Project Effects
Site 4	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 7	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
35HA1266	West Route	Pre-contact	Potentially Eligible (Previously evaluated as not eligible)/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 15	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 17	West Route	Historic	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
35HA8	West Route and Hog Wallow Route Option	Pre-contact	Eligible/Eligible	Avoidance	TBD
35HA997	West Route and Hog Wallow Route Option	Pre-contact	Potentially Eligible/Unevaluated	Avoidance	TBD
35HA1000	West Route and Hog Wallow Route Option	Pre-contact	Potentially Eligible/Unevaluated	Avoidance	TBD

Site #	Location	Site Type	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action	Project Effects
35HA1002	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance	TBD
Site FWS1	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance	TBD
Site 52	West Route	Historic	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
35HA0007	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 43	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 45	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 44	West Route	Multi-component	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 11	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 8	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 13	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD

*This is a preliminary recommendation and determination of NRHP eligibility. Additional research and survey efforts can provide a more definitive determination of eligibility.

Architectural/Historical Resources

Five architectural/historical resources were identified in the Alternative B – West Route APE; HR-29, HR-30, HR-31, HR-41 and FWS-H1. Four are recommended as not eligible for listing in the NRHP, however, one, FWS-H1 is recommended as eligible for listing on the NRHP.

PERMANENT EFFECTS

Archaeological Resources

All eighteen of the preliminarily determined NRHP eligible and potentially eligible archaeological sites within the Alternative B – West Route APE would experience permanent adverse effects from the proposed Project through direct disturbance and/or indirect visual effects. Permanent adverse effects could result from the installation of transmission poles, construction of access roads, and increased human activity related to regular long-term maintenance activities. While no TCP's or sacred sites eligible for the NRHP have been identified within the APE, such properties or sites, if identified, could experience long-term visual effects and may also include archaeological sites that could be permanently affected.

Architectural/Historical Resources

The preliminarily determined NRHP eligible historic site within Hog Wallow Route Option would experience permanent adverse effects from the proposed Project through direct disturbance and/or indirect visual effects. Permanent adverse effects could result from the installation of transmission poles, and increased human activity related to regular long-term maintenance activities.

TEMPORARY EFFECTS

Archaeological Resources

Temporary or short-term effects associated with construction activities would include ground disturbance required to install the transmission lines and poles, use of tensioning and pulling sites, and use of temporary storage and laydown areas. Construction activities, including blasting, could create noise and vibration that would affect archaeological resources and stockpiling construction materials and equipment would cause

short term visual effects. None of these activities would be expected to adversely affect NRHP eligible archaeological resources within the APE.

Architectural/Historical Resources

Temporary or short-term effects associated with construction activities would include ground disturbance required to install the transmission lines and poles, use of tensioning and pulling sites, and use of temporary storage and laydown areas. Construction activities, including blasting, could create noise and vibration that would affect architectural/historical resources and stockpiling construction materials and equipment would cause short term visual effects. Blasting in the vicinity of the NRHP eligible site in the Hog Wallow Route - Option APE has the potential to have a permanent adverse effect on the site.

FUTURE CONSTRUCTION PHASE – UPGRADE TO 230-kV

The upgrade of the initial single-circuit transmission line to a double-circuit 230-kV transmission line would require a second construction phase at a future date when additional capacity is required on the transmission line. During the second construction phase, the Alternative B – West Route would experience construction related effects as described above, including the temporary or short-term disruptive effects due to noise, vibration, and dirt, of which may impart visual effects. These effects would be short-term, and no adverse effects to NRHP eligible archaeological resources within the APE would be anticipated. There would be no adverse effects to NRHP eligible architectural/historical resources since none were identified in this alternative.

MITIGATION

The Best Management Practices (BMPs) and Project Design Features (PDFs) described in Section 2 and Appendix A (A.1.7 and A.3.7) were incorporated into the action alternatives and were designed to reduce the impacts to the Project site. Because no NRHP eligible architectural/historical resources were identified within the APE, no mitigation related to architectural/historical resources is proposed for this alternative.

3.10.3.5 South Diamond Lane Route Option

Archaeological Resources

Fifty archeological resources, including 15 sites and 35 isolates were identified in the South Diamond Lane Route Option APE (Table 3.10-5). NRHP Eligible Archaeological Resources Located in the APE for the South Diamond Lane Route Option.

Table 3.10-5 NRHP Eligible Archaeological Resources Located in the APE for the South Diamond Lane Route Option.

<u>Site #</u>	<u>Location</u>	<u>Site Type</u>	<u>*NRHP Eligibility (Applicant Recommendation/BLM Determination)</u>	<u>Recommended Action</u>	<u>Project Effects</u>
Site 4	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 7	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
35HA1266	West Route	Pre-contact	Potentially Eligible (Previously evaluated as not eligible)/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 15	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 17	West Route	Historic	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD

Site #	Location	Site Type	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action	Project Effects
35HA1002	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance	TBD
Site FWS1	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance	TBD
Site 52	West Route	Historic	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
35HA0007	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 43	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 45	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 44	West Route	Multi-component	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 11	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 8	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 13	West Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD

*This is a preliminary recommendation and determination of NRHP eligibility. Additional research and survey efforts can provide a more definitive determination of eligibility.

Architectural/Historical Resources

Two architectural/historical resources were identified in the South Diamond Lane Route Option APE (Table 3.10-6). They include HR-26 (County-owned Bridge) and HR-28 (Center Canal). Neither HR 26 nor HR-28 is eligible for listing in the NRHP therefore no adverse effects are anticipated.

Table 3.10-6 — NRHP Eligible Architectural/Historical Resources Located in the APE for the South Diamond Lane Route Option.

HR Number	Location	Resource Type	Approximate Year of Construction	NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action
HR-26	South Diamond Lane, South Diamond Lane Route Option	Bridge	1950	Eligible/Eligible	Avoidance

PERMANENT EFFECTS

Archaeological Resources

All fifteen of the preliminarily determined NRHP eligible and potentially eligible archaeological sites within the South Diamond Lane Route Option APE would experience permanent adverse effects from the proposed Project through direct disturbance and/or indirect visual effects. Permanent adverse effects could result from the installation of transmission poles, construction of access roads, and increased human activity related to regular long-term maintenance activities. While no TCP's or sacred sites eligible for the NRHP have been identified within the APE, such properties or sites, if identified, could experience long-term visual effects and may also include archaeological sites that could be permanently affected.

Architectural/Historical Resources

The permanent or long-term effects of Project actions on HR-26 would be visual. Even though the transmission line and poles would be placed close to the bridge, the poles and transmission line would tend to

blend in with the existing landscape and infrastructure (roadway). HR 26, which crosses the Donner und Blitzen River on South Diamond Lane (see HR 26 on Tables 3.10.2 and 3.10.7), would be improved prior to being used to transport wind turbine components to the Echanis Project site. The Project Applicant, in cooperation with Harney County, would revise the approaches to the bridge and remove the overburden layer from bridge deck to remove the current load limit. These improvements would not be expected to alter the existing integrity of this resource and its NRHP eligibility. No NRHP eligible resources would be affected by this alternative.

TEMPORARY EFFECTS

Archaeological Resources

Temporary or short-term effects associated with construction activities would include ground disturbance required to install the transmission lines and poles, use of tensioning and pulling sites, and use of temporary storage and laydown areas. Construction activities, including blasting, could create noise and vibration that would affect archaeological resources and stockpiling construction materials and equipment would cause short term visual effects. None of these activities would be expected to adversely affect NRHP eligible archaeological resources within the APE.

Architectural/Historical Resources

~~Temporary or short term effects associated with construction activities would include installation of the transmission lines and poles, use of tensioning and pulling sites, and use of temporary storage and laydown areas. Construction activities could create noise and vibration that would affect HR 26 and stockpiling construction materials and equipment would cause short term visual effects. None of these activities would be expected to adversely affect this NRHP eligible architectural/historical resource. No NRHP eligible resources would be affected by this alternative.~~

FUTURE CONSTRUCTION PHASE – UPGRADE TO 230-KV

The upgrade of the initial single-circuit transmission line to a double-circuit 230-kV transmission line would require a second construction phase at a future date when additional capacity is required on the transmission line. During the second construction phase, the South Diamond Lane Route Option would experience similar temporary construction related effects as described above, including the temporary or short term disruptive effects due to noise, vibration, and stockpiling construction materials and equipment which would cause short term visual effects. No NRHP eligible resources would be affected by this alternative. ~~Because these effects would be short term, no adverse affects on HR 26 would be anticipated.~~

MITIGATION

No additional mitigation measures would be required because PDFs and BMPs were incorporated into the action alternatives and would be implemented to reduce the cultural effects (see Section 2 and Appendix A.1.7 and A.3.7).

~~Because the transmission line poles and transmission line would tend to blend in with the existing landscape and infrastructure (including HR 26), the visual effects on HR 26 would be minimal and would not warrant mitigation. In addition, the revisions to the bridge approaches and removal of the overburden layer from the bridge deck are not expected to alter the existing integrity of this resource and its NRHP eligibility, therefore Hog Wallow Route Option~~

Archaeological Resources

Three preliminarily determined NRHP eligible archaeological resources (35HA8, 35HA997 and 35HA1000) were identified in the Hog Wallow Route Option APE. These sites (which are also in the Alternative B – West Route APE) consist mainly of prehistoric lithic scatters and faunal remains.

Architectural/Historical Resources

The USFWS identified one (FWS-H1- an historic gate) NRHP eligible architectural/historical resources in the Hog Wallow Route Option APE.

PERMANENT EFFECTS

Archaeological Resources

Sites 35HA8, 35HA997 and 35HA1000 would experience permanent adverse effects from the proposed Project through direct disturbance and/or indirect visual effects. Permanent adverse effects could result from the installation of transmission poles, construction of access roads, and increased human activity related to regular long-term maintenance activities. While no TCP's or sacred sites eligible for the NRHP have been identified within the APE, such properties or sites, if identified, could experience long-term visual effects and may also include archaeological sites that could be permanently affected.

Architectural/Historical Resources

The permanent or long-term effects of Project actions on FWS-H1 would be visual. Even though the transmission line and poles would span the adjacent canyon, they would be visible from this site and would affect the visual integrity of the site.

TEMPORARY EFFECTS

Archaeological Resources

Temporary or short-term effects associated with construction activities would include ground disturbance required to install the transmission lines and poles, use of tensioning and pulling sites, and use of temporary storage and laydown areas. Construction activities, including blasting, could create noise and vibration that would affect archaeological resources and stockpiling construction materials and equipment would cause short term visual effects. None of these activities would be expected to adversely affect NRHP eligible archaeological resources within the APE.

Architectural/Historical Resources

Temporary or short-term effects associated with construction activities would include ground disturbance required to install the transmission lines and poles, use of tensioning and pulling sites, and use of temporary storage and laydown areas. Construction activities, including blasting, could create noise and vibration that would affect archaeological resources and stockpiling construction materials and equipment would cause short term visual effects. Blasting within the vicinity of FWS-H1 would have the potential to collapse the stacked stone wall associated with the historic gate. This would adversely affect this NRHP eligible historical resource within the APE.

FUTURE CONSTRUCTION PHASE – UPGRADE TO 230-KV

The upgrade of the initial single-circuit transmission line to a full double-circuit 230-kV transmission line would require a second construction phase at a future date when additional capacity is required on the transmission line. During the second construction phase, the Alternative B – West Route and the Hog Wallow Route Option would experience similar temporary construction related effects as described above, including the temporary or short term disruptive effects due to noise, vibration, and dirt, of which may impart visual effects. Since there no NRHP eligible cultural resources located in this option, then there are no temporary or short-term effects to be considered.

MITIGATION

The Best Management Practices (BMPs) and Project Design Features (PDFs) described in Section 2 and Appendix A (A.1.7 and A.3.7) were incorporated into the action alternatives and were designed to reduce the impacts to the Project site.

Archaeological Resources

Sites 35HA8, 35HA997 and 35HA1000 would be avoided, if possible, by relocating the transmission line, changing pole placement, shifting the alignment of access roads, and narrowing the construction corridor. If avoidance would not be possible, further testing and formal evaluations for eligibility for listing in the NRHP would be conducted for each resource as described in Appendix A (A.1.7 and A.3.7).

Architectural/Historical Resources

Historic site FWS-H1 would be avoided, if possible, by relocating the transmission line, changing pole placement, shifting the alignment of access roads, and narrowing the construction corridor. If avoidance is not possible, further testing and formal evaluations for eligibility for listing in the NRHP would be conducted for FWS-H1 using HABS/HAR documentation procedures

3.10.3.6 115-kV Transmission Line Option

The 115-kV Transmission Line Option would be a reduced capacity design configuration constructed along the same transmission line alignments described above for the Alternative B – West Route and the South Diamond Lane and Hog Wallow Route Options. The line location, pole heights, pole spacing, ROW widths, construction methods, interconnection points, and access requirements would be the same as for Alternative B – West Route, and the two route options described above.

PERMANENT AND TEMPORARY EFFECTS

The type of permanent and temporary effects of this design option to preliminarily determined NRHP eligible cultural resources would be the same as described for Alternative B – West Route and the South Diamond Lane and Hog Wallow Route Options. The only notable differences between this design option and others would be that this option would not require a second round of construction to upgrade the line to 230-kV. This option would have lower overall temporary construction related effects such as noise and disruptions due to the presence of workers and equipment, and visual effects from the stockpiling materials. Construction equipment operations and maintenance activities would be the same or less than described for Alternative B – West Route, and the two route options above.

MITIGATION

No additional mitigation measures would be required because PDFs and BMPs were incorporated into the action alternatives and would be implemented to reduce the cultural effects (see Section 2 and Appendix A.1.7 and A.3.7).

~~Because the transmission line poles and transmission line would tend to blend in with the existing landscape and infrastructure (including HR 26), the visual effects on HR 26 under the Hog Wallow Route Option would be minimal and would not warrant mitigation.~~

3.10.3.7 Alternative C – North Route (Preferred Alternative)

Archaeological Resources

The Applicant identified 42 archaeological resources in the Alternative C - North Route APE, including 23 sites and 20 isolates (Table 3.10-7). Of the 43 resources, sites 19, 21, 24, 25, 27, 34, 35, 37, 40, and 41 were preliminarily determined to be potentially eligible for listing in the NRHP. The Applicant did not identify any reported rock art resources among the potentially eligible archaeological sites within the project APE. Further research and survey efforts could possibly determine if any of these potentially eligible sites include rock art sites. The Coon Town Petroglyph site, 35HA35, is located just outside the Project APE.

The preliminarily determined NRHP eligible archaeological resources identified in the Alternative C – North Route consists mainly of prehistoric lithic scatters (stone tools or flakes), ground stones (type of stone tool); and miscellaneous historic period refuse, debris, and building remains.

Table 3.10-7 Archaeological Resources Located in the APE for Alternative C – North Route.

HR Number	Location	Site Type	*NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action	Project Effects
Site 19	North Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 21	North Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 24	North Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 25	North Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 27	North Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 34	North Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 35	North Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 37	North Route	Multi-component	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 40	North Route	Pre-contact	Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD
Site 41	North Route	Multi-component	Pre-contact Portion Potentially Eligible/Unevaluated	Avoidance, Further Research/Survey	TBD

*This is a preliminary recommendation and determination of NRHP eligibility. Additional research and survey efforts can provide a more definitive determination of eligibility.

Architectural/Historical Resources

The Applicant identified 21 architectural/historical resources in the Alternative C – North Route (Table 3.10-8). Of the 21 resources, HR-2, HR-11, HR-13, HR-22, HR-25, and HR-37 are eligible for listing in the NRHP.

The architectural/historical resources identified within the Project APE consists mainly of wood or metal frame, vernacular farmstead/ranch buildings and agricultural outbuildings and structures; wooden bridges, and abandoned commercial buildings.

PERMANENT EFFECTS

Archaeological Resources

All ten of the preliminarily determined NRHP eligible and potentially eligible archaeological sites within Alternative C – North Route APE would experience permanent adverse effects from the proposed Project through direct disturbance and/or indirect visual effects. Permanent adverse effects could result from the installation of transmission poles, construction of access roads, and increased human activity related to regular long-term maintenance activities. While no TCP's or sacred sites eligible for the NRHP have been identified within the APE, such properties or sites, if identified, could experience long-term visual effects and may also include archaeological sites that could be permanently affected.

Table 3.10-8 NRHP Eligible Architectural/Historical Resources Located in Alternative C – North Route APE.

HR Number	Location	Resource Type	Approximate Year of Construction	NRHP Eligibility (Applicant Recommendation/BLM Determination)	Recommended Action	Project Effects
HR-2	Saddle Butte Road, North Route	Ranch Complex	1950	Eligible/Eligible	Avoidance	No Historic Properties Affected
HR-11	53741 Hwy 78, North Route	Thompson Ranch	1940	Eligible/Eligible	Avoidance	No Historic Properties Affected
HR-13	53441 Hwy 78, North Route	Farmstead	1930	Eligible/Eligible	Avoidance	No Historic Properties Affected
HR-22	Coon Town Road, North Route	Coon Town Ghost Town	1884	Eligible/Eligible	Avoidance	No Historic Properties Affected
HR-25	50915 Happy Valley Road, North Route	Smyth/Rod Otley Ranch	1940	Eligible/Eligible	Avoidance	No Historic Properties Affected
HR-37	Coon Town Road, North Route	Coon Town Bridge	1940	Eligible/Eligible	Avoidance	No Historic Properties Affected

Architectural/Historical Resources

The permanent or long-term effects of Project actions in Alternative C – North Route would be visual. The six NRHP eligible architectural/historical properties within the APE are located a significant distance from the proposed transmission lines and/or along existing roadways. Due to the distance between the proposed transmission lines and the architectural/historical resources, and the poles that tend to blend in with the existing landscape and infrastructure (roadway), neither is a significant visual effect to the resources. Additionally, none of the resources are oriented to take advantage of a specific vista in which power lines are proposed. These visual effects, therefore, are not adverse. For example, the Thompson Ranch (HR-11) and Smyth Ranch (HR-25) are located at the end of a short drive off a main road. These properties are sufficiently screened by deciduous trees and other landscape elements to limit views of the proposed transmission lines.

TEMPORARY EFFECTS

Archaeological Resources

Temporary or short-term effects associated with construction activities would include ground disturbance required to install the transmission lines and poles, use of tensioning and pulling sites, and use of temporary storage and laydown areas. Construction activities, including blasting, could create noise and vibration that would affect archaeological resources and stockpiling construction materials and equipment would cause short-term visual effects. None of these activities would be expected to adversely affect NRHP eligible archaeological resources within the APE.

Architectural/Historical Resources

Temporary or short-term effects associated with construction activities would include installation of the transmission lines and poles, use of tensioning and pulling sites, and use of temporary storage and laydown areas. Construction activities could create noise and vibration that would affect architectural/historical resources and stockpiling construction materials and equipment would cause short-term visual effects. None of these activities would be expected to adversely affect NRHP eligible architectural/historical resources within the APE.

FUTURE CONSTRUCTION PHASE – UPGRADE TO 230-kV

The upgrade of the initial single-circuit transmission line to a double-circuit 230-kV transmission line would require a second construction phase at a future date when additional capacity is required on the transmission line. During the second construction phase, the Alternative C – North Route would experience similar temporary construction related effects as described above, including the temporary or short-term disruptive effects from noise, vibration, and stockpiling construction materials and equipment. None of these activities are expected to adversely affect NRHP eligible archaeological sites or architectural/historical resources within the APE.

MITIGATION

No additional mitigation measures would be required because PDFs and BMPs were incorporated into the action alternatives and would be implemented to reduce the cultural effects (see Section 2 and Appendix A.1.7 and A.3.7). The proposed Project would have no adverse effect on the six NRHP eligible architectural/historical properties within the Alternative C – North Route APE. Therefore, no mitigation is recommended.

3.10.3.8 115-kV Transmission Line Option

The 115-kV Transmission Line Option would be a reduced capacity design configuration constructed along the same transmission line alignments described above for Alternative C – North Route. The line location, pole heights, pole spacing, ROW widths, construction methods, interconnection points, and access requirements would be the same as for Alternative C – North Route.

Archaeological and Architectural/Historical Resources

The number and types of NRHP eligible archaeological and architectural/historical resources would be the same as identified in the Alternative C – North Route, and the 115-kV Transmission Line Option.

PERMANENT AND TEMPORARY EFFECTS

The permanent and temporary effects of this design option on preliminarily determined NRHP eligible cultural resources would be the same as described for Alternative C – North Route, and the 115-kV Transmission Line Option. The only notable differences between this design option and others would be that this option would not require a second round of construction to upgrade the line to 230-kV, nor would equipment upgrades be required at the interconnection station. This option would have lower overall temporary construction related effects such as noise and disruptions due to the presence of workers and equipment, and visual effects from the stockpiling materials. Thus, construction equipment operations and maintenance activities would be the same or less as described for Alternative C – North Route.

MITIGATION

No additional mitigation measures would be required because PDFs and BMPs were incorporated into the action alternatives and would be implemented to reduce the cultural effects (see Section 2 and Appendix A.1.7 and A.3.7). The six NRHP eligible architectural/historical properties within the APE are located far from the proposed transmission lines and/or along existing roadways, and because none of these properties are oriented to take advantage of a specific vista in which transmission lines or poles would be noticeable, the visual effects of Alternative C – North Route on these properties would be negligible.

3.10.3.9 Residual Effects after Mitigation

There would be no anticipated residual effects to cultural resources after mitigation measure have been implemented.

3.10.3.10 Summary Comparison of Alternatives

The effects on archaeological resources and architectural/historic resources from development of the Echanis Project and the transmission line alternatives and route options are summarized in Table 3.10-9.

Table 3.10-9 Summary of Effects - Cultural Resources.

	Alternative A No Action	Echanis Wind Energy Project	Alternative B			Alternative C – North Route (Preferred Alternative)
			West Route (Proposed Action)	S. Diamond Lane Route Option	Hog Wallow Route Option	
Archaeological Resources	No Action would have no adverse effects on NRHP eligible archaeological resources.	No temporary adverse effects to NRHP eligible archaeological resources. There would be permanent or long-term effects to NRHP eligible archaeological sites through direct disturbance and/or indirect visual effects. Avoidance is recommended for all potentially eligible sites. If avoidance is not possible, further testing and formal evaluations for NRHP eligibility should be conducted for each resource. Formal evaluations would include further documentation and inventory, and boundary delineation through testing.	No adverse temporary effects to NRHP eligible archaeological resources. There would be permanent or long-term effects to NRHP eligible archaeological sites through direct disturbance and/or indirect visual effects. Avoidance is recommended for all potentially eligible sites. If avoidance is not possible, further testing and formal evaluations for NRHP eligibility should be conducted for each resource. Formal evaluations would include further documentation and inventory, and boundary delineation through testing.	<u>No adverse temporary effects to NRHP eligible archaeological resources. There would be permanent or long-term effects to NRHP eligible archaeological sites through direct disturbance and/or indirect visual effects. Avoidance is recommended for all potentially eligible sites. If avoidance is not possible, further testing and formal evaluations for NRHP eligibility should be conducted for each resource. Formal evaluations would include further documentation and inventory, and boundary delineation through testing.</u>	No adverse temporary effects to the NRHP eligible archaeological resources. There would be permanent or long-term effects to the NRHP eligible archaeological sites through direct disturbance and/or indirect visual effects. Avoidance is recommended for all potentially eligible sites. If avoidance is not possible, further testing and formal evaluations for NRHP eligibility should be conducted for the resource. Formal evaluations would include further documentation and inventory, and boundary delineation through testing.	No temporary adverse effects to NRHP eligible archaeological resources. There would be permanent or long-term effects to NRHP eligible archaeological sites through direct disturbance and/or indirect visual effects. Avoidance is recommended for all potentially eligible sites. If avoidance is not possible, further testing and formal evaluations for NRHP eligibility should be conducted for each resource. Formal evaluations would include further documentation and inventory, and boundary delineation through testing.

Table 3.10-9 Summary of Effects - Cultural Resources.

	Alternative A No Action	Echanis Wind Energy Project	Alternative B			Alternative C – North Route (Preferred Alternative)
			West Route (Proposed Action)	S. Diamond Lane Route Option	Hog Wallow Route Option	
Architectural/Historic al Resources	No Action would have no adverse effects on NRHP eligible architectural/historic al resources	Since no survey and inventory of architectural/historic al resources was conducted in this APE, no NRHP eligible architectural/historic al resources were identified and no project effects were determined.	No NRHP eligible architectural/historic al resources were identified in the West Route	No temporary or permanent adverse effects to NRHP eligible architectural/historic al resources.	<u>No temporary or permanent adverse effects to NRHP eligible architectural/historic al resources. One NRHP eligible architectural/historic al resource was identified in the Hog Wallow Route Option. There would be permanent or long-term effects to the NRHP eligible historic site through direct disturbance and/or indirect visual effects. Avoidance is recommended for all potentially eligible sites. If avoidance is not possible, further documentation and formal evaluations for NRHP eligibility should be conducted for each resource. Formal evaluations would include further documentation and inventory, and boundary delineation.</u>	No temporary or permanent adverse effects to NRHP eligible architectural/historic al resources.

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