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# LIST OF ATTACHMENTS

Attachment 4.5-A: Cultural Resources Technical Report—CONFIDENTIAL

# 4 - ENVIRONMENTAL IMPACT ASSESSMENT

#### 4.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less-Than- Significant Impact with Mitigation	Less-Than- Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?			V	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?			<b>T</b>	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			<b>T</b>	
d) Disturb any human remains, including those interred outside of formal cemeteries?			V	

#### 4.5.0 Introduction

This section describes the cultural and paleontological resources identified within the Sierra Pacific Power Company (SPPCo) 625 and 650 Line Upgrade Project (project) area, and identifies potential impacts that could result from its construction or operation and maintenance. Cultural resources can include archaeological sites, sacred sites, traditional cultural properties, rock art, rock piles or cairns, cemeteries or burial grounds, historic buildings, and features of the historic built environment. Paleontological resources, or fossils, are the remains of ancient plants and animals that can provide scientifically significant information about the history of life on earth. Cultural resources identified within the project area include historic-era structural remains, roads, railroad grades, telegraph lines, refuse deposits and a historic-era cemetery; and Native American flake scatters and habitation sites. While no paleontological resources have been found in the project area, SPPCo will implement applicant-proposed measures (APMs) to reduce potential impacts that may result from an unanticipated discovery of paleontological resources during construction. With the implementation of the APMs, potential impacts to cultural and paleontological resources that may result from the project will be reduced to the less-than-significant level.

## 4.5.1 Methodology

#### **Cultural Resources**

The cultural resources study for the proposed project included archival research, consultation with the Native American community, and field inventory and site recordation for the proposed installation, rebuilding, or removal of four transmission lines, the upgrading, modification, and/or decommissioning of six substations and switching stations, and the construction or

improvement of approximately 5.1 miles of access routes. The records searches and fieldwork were conducted in several stages, as new maps and information were provided by SPPCo.

## Prefield Research and Consultation

On August 24, 2007, Far Western archaeological technician Lindsay Hartman conducted a records search of the project corridor (including a 0.25-mile buffer) at the North Central Information Center of the California Historical Resources Information System, housed at California State University (CSU) Sacramento. Ms. Hartman examined listings in the National Register of Historic Places (NRHP) and current updates (Directory of Determinations of Eligibility, California Office of Historic Preservation, Volumes I and II, 1990; the Historic Property Data File, Office of Historic Preservation current computer list); California Inventory of Historic Resources (1976 and updates); California Historical Landmarks (1990 and updates); California Points of Historical Interest (May 1992 and updates); and miscellaneous cultural studies conducted previously within the records search area. She also copied site records for all previously documented resources in or adjacent to the current project corridor for use by the Far Western survey crew.

On August 28, 2007, Ms. Hartman visited the Sacramento office of the United States (U.S.) Army Corps of Engineers (USACE) to view their cultural resources maps and files for wetlands under their jurisdiction in the Martis Valley area. She made copies of all relevant maps and records for use during Far Western's field survey.

On October 29, 2009, Far Western archaeologist Melinda Pacheco Patrick conducted a supplemental records search at the North Central Information Center of the California Historical Resources Information System (CHRIS) housed at CSU Sacramento to cover ancillary surveys of access routes and staging areas identified after the completion of the original surveys. Ms. Patrick reviewed previous inventories, excavations, and other cultural studies in the ancillary survey area and 0.25-mile buffer; hand-plotted previously recorded sites and studies onto digitized versions of the updated project maps; and made copies of site records for use during field recordation. The new records search data were hand-digitized onto U.S. Geographic Service (USGS) 7.5' topographic quadrangles and combined with the data generated from the initial records search. Ms. Patrick also briefly reviewed GLO plats and other historical maps, the Caltrans Bridge Inventory, the National Register of Historic Places listings, the Directory of Historic Properties, and the California Inventory of Historic Places. Her records search identified 34 previous cultural resources studies within the ancillary survey area or buffer, roughly half of which were more than 15 years old. Patrick also identified 36 previously recorded cultural resources in the new records search corridor, including 27 sites and nine isolated finds.

In 2007, Far Western contacted the U.S. Forest Service (USFS) Heritage Resources Managers for the Tahoe National Forest (TNF) and the Lake Tahoe Basin Management Unit (LTBMU). Carrie Smith was consulted regarding the TNF. Ms. Smith stated that because so little of the TNF is located within the project area, a records search was not necessary. Michael Weichman with the USFS LTBMU was also consulted. Mr. Weichman provided copies of all previous cultural resources studies for the area and provided the location of recorded sites within the LTBMU jurisdiction.

Additional archival research was conducted to gather background information on specific resources. This research included phone and email correspondence with archaeologists Denise Jaffke of the California Department of Parks and Recreation, regarding sites in Burton Creek State Park; Richard Perry of the USACE in Sacramento, regarding sites in Martis Valley; and Dr. Susan Lindström, Consulting Archaeologist, regarding the Tahoe City community dump and the Tahoe Tavern dump. The results of these investigations are presented in the Cultural Resources Technical Report (Waechter et al. 2010); this document is not available for public review.

#### Native American Consultation

In September 2007, Far Western consulted with the California Native American Heritage Commission and the Washoe Tribe of Nevada and California about the project. The Commission responded with a list of contacts among the Native American community, however, the contacts were appropriate for western Placer County (traditional Maidu territory), while the project is in the core territory of the Washoe.

The then-Washoe Tribal Heritage Resources Officer, Lynda Shoshone, responded with a phone call to discuss the project details. At that time, she had no specific information to offer about the study corridor. Far Western will provide a copy of the final Cultural Resources Technical Report to the current THPO, Mr. Darrell Cruz.

## Field Survey and Site Recordation

The project Area of Potential Effect (APE) varied between the project components. The existing 625 Line APE was surveyed using a 90-foot-wide corridor centered on the current transmission line alignment. The survey corridors for the new 625 Line and the 650 Line were also 90 feet wide for the straight segments of the line, but increased to a 300-foot-diameter area where the conductor pulling sites are proposed. An area measuring 500 feet wide by approximately 5,000 feet long was surveyed to accommodate the realignment of a portion of the 650 Line from the west side of State Route (SR) 267 to the east side. The Northstar Tap was surveyed using a 90-foot-wide corridor centered on the existing transmission line. The six staging areas were surveyed in blocks measuring an average of 600 feet by 600 feet.

Archival research indicated that approximately one-sixth of the survey corridor had already been completely inventoried for cultural resources. Those areas were not resurveyed for this study, but any sites that had been recorded during the earlier surveys were revisited and their site records were updated, as necessary. Where previous surveys were old, outdated, or incomplete, the areas were resurveyed. The records searches also identified 13 previously documented cultural resources within or immediately adjacent to the project corridor, with the highest concentration in Martis Valley and at Lake Tahoe. Each of these locations was visited by Far Western during the 2007 and 2008 field surveys.

Far Western's fieldwork began with a "flag-and-run" survey, where crew members located archaeological sites, plotted them on field aerial photos, recorded the location with a Global Positioning System (GPS) unit, and put up flagging to mark the location. The survey was conducted by two, two-person crews consisting of a field director or crew chief working with a single archaeological technician. Each crew member walked a 15-meter-wide transect on either side of the proposed centerline. The majority of the project area is located within a mixed conifer

environment and is covered with a thick layer of duff. In the level areas, crew members periodically cleared the duff to increase visibility.

In September of 2009, Far Western returned to survey newly identified staging areas and access routes. Methods used for the ancillary surveys were essentially the same as those used for the 2007-2008 surveys previously described. Surveyed areas included one new access route to be constructed, existing routes to be improved, one new staging area, and pivot points that lay outside the original survey corridor. Portions of the survey corridor that fell on private property with blocked access (fences, signs) were not surveyed. These areas were encountered between SR 267 and the North Truckee Switching Station along the 132/650 Line Double-Circuit, which primarily fell within an industrial portion of the Town of Truckee.

Existing access roads consisted primarily of two-track or bladed USFS roads that will be upgraded to accommodate construction vehicles. Far Western surveyed these routes with a crew of three archaeologists, one walking the road centerlines and one walking parallel to the road on either side; transects were 50 feet (15 meters) apart, for a total survey corridor width of 100 feet. The proposed new access road was not staked or flagged on the ground; the crew surveyed a 100-foot-wide corridor in the location shown on maps provided by SPPCo.

Pivot points/pull sites along the corridor were surveyed in 65-foot (20-meter) transects, covering an area 300 feet in diameter at each point. A proposed new staging area at Sawmill Flat was also surveyed. The crew walked parallel transects spaced 65 feet (20 meters) apart, covering a total area 250 feet by 500 feet. The staging area appeared to have been capped with fill that was held in place with fiber rolls.

Visibility over the new survey locations ranged from fair to poor. Most of the surface was obscured by thick duff and vegetation, and the crew took care to examine cut banks, road shoulders, rodent backdirt, and any other exposed areas. Another 11 resources were documented in the ancillary survey areas.

Once the entire project area was surveyed, the crew returned to record the identified resources. Sites and isolates were recorded using Department of Parks and Recreation site forms (DPR 523 series). Prehistoric sites were recorded by first pin-flagging all artifacts to define site boundaries. Once the boundaries were defined, a detailed site map was created with the aid of a GPS device. All formal tools were measured and analyzed according to current lithic analysis criteria (e.g., bifaces were described following the five-stage model). A representative sample of debitage (greater than 10 percent) was subjected to analysis that included noting the presence of cortex as well as assigning the flakes to functional types (e.g., biface thinning versus core reduction).

Linear sites (roads, flumes, and skid trails) were recorded with a GPS unit by mapping the length of the resource where it falls within the study area, measuring the resource width, noting unique construction techniques (if any), and recording any associated features.

In total, the 2007-2009 Far Western surveys identified, revisited, and/or recorded 44 cultural resources in the project APE, as shown in Table 4.5-1: Cultural Resources in the Project Area.

**Table 4.5-1: Cultural Resources in the Project Area** 

Trinomial (CA-PLA-)	Primary No. (P-31-)	Forest Service No. (FS 05-)	Field No.	Description
Existing 625 Lin	e		•	•
	3680		DS-03	Historic-era Road
	3681		DS-19	Historic-era Ditch
	3694		DS-21	Historic-era Road
	3695		DS-23	Historic-era Road
	3696		DS-24	Historic-era Road
	3697		ES-02	Historic-era Road
	3698		ES-03	Historic-era Road
New 625 Line				
7	0133			Native American Flake Scatter
	1940			Historic-era Trail
	1945			Telephone line Associated with Bear Trap Guard Station
	3679	19-735	Mount Watson Road	Historic-era Road and Associated Refuse Deposits
	3691		AA-1	Historic-era Road
	3682		AA-2	Historic-era Road
	3683		AA-3	Historic-era Road
	3699		AA-4	Historic-era Road
	3700		AA-5	Historic-era Road
	3684		JG-1	Historic-era Road
	3685		JG-2	Historic-era Road
2331	3689		JG-3	Historic-era Refuse Deposit
	3686		Old Loop Trail	Historic-era Trail
650 Line				
6	0132			Native American Village Site
490	0616/0617			Native American Flake Scatter

Trinomial (CA-PLA-)	Primary No. (P-31-)	Forest Service No. (FS 05-)	Field No.	Description
487/H and 2329/H	3688		DS-02	Native American Flake Scatter, Chinese and other Historic-era Artifacts, Remains of Charcoal Kiln
	3678	19-775		Historic-era Road and Associated Refuse Deposits
2328	3687		TS	Native American Flake Scatter
2330	3352		ES-05	Historic-era Refuse Deposit
	3690		EI-01	Isolated Basalt Flake
	3692		NT-1	Historic-era Road
0272/H	0398	17-57-02		Native American Habitation Site/Historic-era Refuse Deposit
Northstar Tap/F	old			
	2591			Historic-era Road and Railroad Grade
	2592			Historic-era Road and Railroad Grade
	2593			Historic-era Road and Telegraph Line
Staging Area – J	oerger Road			
2332	3693		NT-2	Native American Flake Scatter
Staging Area – F	Kings Beach			
	3393	19-772		Historic-era Road and Associated Refuse Deposits
Switching Statio	n – Kings Beach			
2336Н	3822		Temp 8	Historic-era Structural Remains and Refuse Deposits
	3824		Temp 10	Historic-era Structure Pad and Collapsed Structure, Scattered Refuse
	3817		IHRD-1	Isolated Historic-era Refuse Deposit

Trinomial (CA-PLA-)	Primary No. (P-31-)	Forest Service No. (FS 05-)	Field No.	Description
	3818		IHRD-2	Isolated Historic-era Refuse Deposit
Line 132				
	29-2835			Truckee Catholic Cemetery (1870s-1980s)
	29-1129			Old Truckee Community Dump (1870s-1920)
Access Roads - 7	Γahoe City Vicinit	y		
	3819		Temp 1-5	Tahoe City Community Dump
	3820		Temp 6	Depression-era Dump Site associated with Jackpine Road
	3821		Temp 7	Depression-era Dump Site associated with Jackpine Road
	3823		Temp 9	Historic-era Road Segment and Refuse Dump

## **Paleontological Resources**

Records on the paleontological resources in the Lake Tahoe and Sierra Nevada region from the University of California Museum of Paleontology, Nevada Bureau of Mining and Geology, California Department of Conservation, and Sierra Nevada College were reviewed to obtain information on the existing paleontological resources in the project area. Geologic maps were also reviewed to determine the likelihood of the geologic formations having documented paleontological resources. In addition, a map of the various project components was submitted to the University of California, Berkeley, Museum of Paleontology for a records search on vertebrate fossils in the project vicinity.

## 4.5.2 Existing Conditions

## **Regulatory Background**

#### **Federal**

National Historic Preservation Act

The National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their undertakings on historic properties. Historic properties are cultural resources (archaeological sites, historic built environment features, or Native American sites) that are listed on or determined to be eligible for listing on the NRHP. The governing regulation, Section 106, 36 Code of Federal Regulations (CFR) Part 800, requires the project lead federal agency to consult with the State Historic Preservation Officer. The criteria used to determine the significance of an impact to archaeological or cultural resources are based on Section 800.5(a)(1) and (a)(2) of the NHPA.

Under federal regulations, effects must be considered on any cultural resource that meets the eligibility criteria for the (National Register). Eligible properties are those which "(a) are associated with events that have made a significant contribution to the broad patterns of our history; or (b) that are associated with the lives of persons significant in our past; or (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction; or (d) that have yielded, or may be likely to yield, information important in prehistory or history" (36 CFR 60.4). Typically, historic-era properties are evaluated under each of these criteria, while prehistoric properties are evaluated under Criterion D only. In practice, unevaluated resources are usually treated as potentially significant.

The NHPA defines an adverse effect to an eligible resource as any of the following:

- Physical destruction, damage, or alteration, including moving the property from its historic location
- Isolation from or alteration of the setting
- Introduction of intrusive elements
- Neglect leading to deterioration or destruction
- Transfer, sale, or lease from federal ownership

In addition to archaeological and architectural resources, the NHPA defines Traditional Cultural Properties as those which are eligible for the NRHP because of their "association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community" (National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties). Examples of traditional cultural properties are as follows:

- A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world
- A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents
- An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices
- A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice
- A location where a community has traditionally carried out economic, artistic or other cultural practices important in maintaining its historic identity

#### American Indian Religious Freedom Act of 1978

The American Indian Religious Freedom Act establishes a federal policy of respect for, and protection of, Native American religious practices. It also has provisions that allow limited access to Native American religious sites.

## Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) provides for the repatriation of certain items from the federal government and certain museums to the native groups to which they once belonged. The Act defines "cultural items," "sacred objects," and "objects of cultural patrimony," and establishes a means for determining ownership of these items. However, the provisions for repatriation only apply to items found on federal lands.

#### Executive Orders 13007 and 13084

Executive Order 13007 requires federal agencies with land management responsibilities to allow access and use of Indian sacred sites on public lands and to avoid adversely affecting these sites. Executive Order 13084 reaffirms the government-to-government relationship between the federal government and recognized Indian tribes, and requires federal agencies to establish procedures for consultation with tribes. These executive orders only apply to projects that include federal undertakings.

## Archaeological Resources Protection Act

The Archaeological Resources Protection Act (ARPA) of 1979 applies to projects that are located on public lands and Indian lands. The purpose of this act is "the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of

archaeological resources and data which were obtained before the date of the enactment of this Act."

#### Antiquities Act

The Antiquities Act of 1906 (16 USC 431-433), is an act that gives the President of the U.S. the authority to restrict the use of particular public land owned by the federal government by executive order in order to protect historic and prehistoric sites. The Act was intended to allow the President to set aside certain valuable public natural areas as parks, and conservation land as National Monuments.

#### Executive Order 11593

Executive Order 11593 requires federal agencies to administer cultural properties under their control and direct their policies, plans, and programs in such a way that federally owned sites, structures, and objects of historical, architectural, or archeological significance are preserved. To achieve this goal, federal agencies are required to locate, inventory, and nominate to the NRHP, all properties under their jurisdiction or control that appear to qualify for listing.

#### State

## California Register of Historical Resources

The California Register of Historical Resources (CRHR) is a public listing of specific properties to be "protected from substantial adverse change." Any resource eligible for listing in the CRHR must also be considered under the California Environmental Quality Act (CEQA), described in this section under California Public Resources Code (PRC) section 21000, *et seq.* and California Code of Regulations (CCR), title 14, section 15000, *et seq.* 

An "historical resource" is defined as: "A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Public Resource Code SS 5024.1, Title 14 CCR, Section 4850 et seq.)"; or "A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code"; or "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (CEQA Title 14; Chapter 3; Article 5; Section 15064.5).

A cultural resource may qualify as an "historical resource" and may be listed in the California Register if it meets one or more of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.
- It is associated with the lives of persons important to local, California, or national history
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic value

• It has yielded or has the potential to yield information that is important in the prehistory or history of the local area, California, or the nation

Automatic listings include properties that are listed in the NRHP, determined eligible either by the Keeper of the NRHP or through a consensus determination on a project review, or that are State Historical Landmarks from number 770 onward. In addition, Points of Historical Interest nominated from January 1998 onward are to be jointly listed as Points of Historical Interest and in the CRHR. Landmarks prior to number 770 and Points of Historical Interest that were nominated prior to 1998 may be listed through an action of the State Historical Resources Commission.

Resources listed in a local historic register or deemed significant in a historical resources survey, as provided under PRC Section 5024.1(g), are presumed to be historically or culturally significant unless the preponderance of evidence demonstrates that they are not. A resource that is not listed on or determined to be ineligible for listing on the CRHR, not included in a local register of historical resources, or not deemed significant in a historical resources survey may, nonetheless, be historically significant (PRC Section 21084.1 and Section 21098.1).

Native American Graves Protection and Repatriation Act (2001), California Health and Safety Code

Broad provisions for the protection of Native American cultural resources are contained in the California Health and Safety Code (H&SC), Division 7, Part 2, Chapter 5 (Sections 8010 through 8030), including the NAGPRA. The NAGPRA established a state policy to ensure that California Native American human remains and cultural items are treated with respect and dignity. The NAGPRA also provides the mechanism for disclosure and return of human remains and cultural items held by publicly funded agencies and museums in California. Likewise, the NAGPRA outlines the process that California Native American tribes who are not recognized by the federal government may file claims for human remains and cultural items held in agencies or museums.

California Public Resources Code

## **Cultural Resources**

Under Section 21083.2 of the CEQA, a "unique" archaeological resource is an object, artifact, or site that can be clearly shown to meet any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
- Has a special and particular quality such as being the oldest of its type, or the best available example of its type
- Is directly associated with a scientifically recognized important prehistoric or historic event or person

Several provisions of the PRC govern archaeological finds in terms of human remains, or any other related object of archaeological or historical interest or value. Procedures are detailed under PRC Section 5097.9 through 5097.996 for actions to be taken whenever Native American

remains are discovered. Furthermore, Section 7050.5 of the California H&SC states that any person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the PRC. Any person removing any human remains without authority of law or written permission of the person or persons having the right to control the remains under PRC Section 7100 has committed a public offense that is punishable by imprisonment.

## Paleontological Resources

Paleontological resources are limited, non-renewable resources of scientific, cultural, and educational value that are protected under the CEQA (PRC 21000 et seq.). CEQA and PRC Section 5097, *et seq.* govern the preservation and protection of these resources (California Codes 2009).

## California Health and Safety Code

The disposition of Native American burials is governed by Section 7050.5 of the California H&SC and Sections 5097.94 and 5097.98 of the PRC, and falls within the jurisdiction of the California Native American Heritage Commission.

## **Prehistory Overview**

## Paleoenvironment and Prehistory

This summary incorporates data from various paleoclimatic and archaeological studies of the Tahoe Sierra and adjoining western Great Basin. Most notable among these are various reports and syntheses by Jonathon Davis, Robert Elston, Donald Grayson, Susan Lindström, and Peter Wigand. More recent archaeological investigations at Bagley Valley (Ataman et al. 2001), Squaw Valley (Bloomer and Lindström 2006a, 2006b), South Lake Tahoe (Martin 1998), and Truckee (Lindström et al. 2007; McGuire et al. 2006) also contribute to the discussion presented here.

The Latest Pleistocene/Early Holocene (~12,500-8000 BP)

## Deglaciation and warming; first evidence of human use of the Tahoe Sierra

This period is generally agreed to be the time of earliest human occupation in northeastern California and northwestern Nevada. After this time, there was fairly rapid deglaciation as solar radiation increased and temperatures began to rise. In the Lake Tahoe Basin, alpine vegetation was gone by 10,000 BP (Elston et al. 1977:8), perhaps giving way to an environment more hospitable to humans. Recent excavations at the Alder Hill prehistoric basalt quarry recovered four Great Basin Stemmed points, several obsidian hydration readings between 6.4 and 7.4 microns (Bodie Hills), and a radiocarbon date of 8990 cal BP on which the artifacts were deposited. These findings clearly prove that the Alder Hill quarry was used during the early Holocene. The growing evidence for early Holocene use of the Tahoe Sierra seems to indicate that perhaps "early human use of the area was more substantial than previously realized" (1998:iv). In the Alder Hill report, McGuire (McGuire et al. 2006:95) hypothesizes that early Holocene populations in the Tahoe region "were not the low-density foragers they are presumed

to have been," but may have moved for part of the year into the Tahoe Sierra and other "marginal" habitats because "more-productive" lowland areas were becoming too crowded.

The Middle Holocene (~8000-5500 BP)

# <u>Increased warming and drying; Lake Tahoe and the Truckee River shrink; apparent decrease in human population</u>

The available climate data indicate that this was the driest time of the entire Holocene epoch. Evidence from tree rings, varve deposits, drowned shorelines, sediment cores, and pollen studies indicates that the period from about 7,500 to about 4,500 years ago was significantly warmer and drier than any time before or since. In places like Sierra Valley, north of Truckee, valley-floor marshes probably dried up, and conifer forests of fir, hemlock, and other cool/mesic species most likely retreated up-slope, to be replaced at middle elevations by warm/xeric species such as ponderosa pine, Jeffrey pine, and incense cedar. There is substantial evidence that Lake Tahoe shrank during the middle Holocene, reducing or perhaps even eliminating flows into the Truckee River. Any dramatic change in lake levels in Tahoe must have had equally dramatic effects on flows in the upper Truckee River, including the project study area.

There was also a dramatic reduction in archaeological remains for this period, probably as a result of declining resources. The evidence for significant shifts in seasonal precipitation during this period has led archaeologists to conclude that this may have been the time of greatest ecological change, and most difficult human adjustment to that change, in the last 18,000 years."

The "Early" Late Holocene (5500-2000 BP)

### End of the mid-Holocene droughts; rapid rise in Lake Tahoe and the Truckee River

After 5,500 years ago, the extreme drought of the middle Holocene came to an end. Data for the late Holocene documents the expansion of forests and woodlands, a rise in the regional water table, and a re-expansion of lakes and marshes. In the Sierra Nevada, increased effective moisture at this time caused subalpine conifer forests to expand, and cooler conditions led to a down-slope retreat of whitebark pine (*Pinus albicaulis*), mountain hemlock (*Tsuga mertensiana*), red and white firs (*Abies magnifica* and *Abies concolor*), and incense cedar (*Calocedrus decurrens*); this is the time when the modern Sierra forests developed (Woolfenden 1996). There was a rapid rise in water levels at Lake Tahoe and in the Truckee River; the rising lake drowned trees that had begun to encroach on its shores, covering them so quickly that they had no time to decay (Benson et al. 2002; Lindström 1990, 1992).

This environmental recovery is echoed in the archaeological record across California and the western Great Basin by a "tremendous increase" in the number of sites and the diversity of habitats where they are found (Grayson 1993:256). There is evidence of "a marked increase in [cultural] complexity and elaboration" beginning around 4,000 years ago, with larger and more formal house structures, craft specialization, stylistic variety in projectile points, richness and variety of perishable items such as textiles, and evidence of trans-Sierra trade.

The "Middle" Late Holocene (2000-1000 BP)

General warming and drying trend; drop in winter precipitation; bow and arrow appear in the region

The "good times" of the Middle Archaic period began to wane after about 2,000 years ago. Pollen data suggests a warming and drying trend in the western Great Basin, and a drop in winter precipitation, after about 2,000 years ago (Davis 1982; Mehringer 1987; Wigand and Nowak 1992). The archaeological record for this period in the Tahoe Sierra and the adjoining western Great Basin shows dramatic technological changes, as well. The bow and arrow, represented by smaller, more gracile projectile points, largely replaced the dart and spear, and at the same time, hunters began to use finer-grained toolstones like chert and obsidian more commonly than basalt—although basalt continued to be used, undoubtedly because it was so abundant and easily acquired. People expanded into previously under-used habitats, presumably in search of new sources of food. This trend continued into the latest prehistoric period.

The Late Archaic and the Medieval Climatic Anomaly (post-1000 BP)

Great climatic instability; periods of severe and prolonged drought; Numic speakers arrive

At around a thousand years ago, much of the west entered a period of frequent and dramatic fluctuations in both temperature and cycles of precipitation, with prolonged and severe droughts interrupted by short episodes of increased effective moisture (Briffa et al. 1992; Graumlich 1993; Graumlich and Lloyd 1996; Stine 1990, 1994). Archaeologists have noted that this period coincided with major, documented shifts in human survival strategies in many areas of California and the Great Basin (see also Moratto et al. 1978; Waechter and Andolina 2005). The two prolonged droughts came at a time, they point out, when human population in these regions was at an all-time high. The increase in population, coupled with extremely dry, warm conditions, would have severely depleted the food resources in a given area and caused people to begin exploiting foods they had previously ignored. "The abrupt, intense [climatic] fluctuations between AD 800 and 1350 [1150-600 BP] may have contributed to significant resource stress among many California hunter-gatherers" (Jones 2003:7).

## Washoe Ethnography

The Washoe regard all "prehistoric" remains and sites within the Lake Tahoe Basin as associated with their own history. In support of this contention, they point to the traditions of their neighbors (the northern Paiute, California Indians, and non-Indian Americans), which include stories about migrations and movement, whereas theirs do not (Rucks 1996:6). The project area falls within core Washoe territory, with primary use by the northern Washoe or *Wel mel ti*. Washoe contacts stated that Washoe from Reno and Carson City camped "all summer" at Watson Creek, on the northwest shore of the lake. Besides fishing, the Washoe hunted ground squirrels and woodchucks, and gathered several kinds of seeds. They also collected mushrooms, locusts, and a kind of berry called *k'ila'tsim*. A camp was located on a small hill in Tahoe City; it has since been destroyed by the construction of SR 89. A 1984 map produced by the Tahoe Regional Planning Agency also shows a "campsite" above the Tahoe City Golf Course. A Washoe trail was also noted that led from Martis Valley, over the divide, to Lake Tahoe in the Tahoe Vista area. This route may have roughly followed the alignment of the U.S. Forest Service (USFS)16N63 (USFS Site 05-19-733).

Members of the Washoe Tribe have been interviewed in recent years in order to better understand traditional resources of interest available on Lake Tahoe's north shore, including plant collecting areas, camping locations, and labor associations with resort areas. In general, consultants confirmed the accepted tradition of use of the north shore quadrant primarily by northern Washoe, while others used the area for gathering berries and other plants and hunting deer. The north shore was considered to be particularly good for deer hunting, while Mt. Rose was considered to be a particularly important plant gathering location with several ancestral sites. The Gatekeepers Museum site in Tahoe City was an important locale where Lake Tahoe was honored as the source of the Truckee River and Pyramid Lake. Here, the Washoe paid respect and gave thanks for Lake Tahoe's waters, acknowledging the importance of outflow of the lake to nourish the desert "and all those people below." Elders continue to pray for renewal of the lake at this location.

After Euro-American "encroachment" (the legal term the federal government used to describe the process by which the Washoe gradually lost their territory), beginning around 1848, the Washoe continued to trek to the lake to harvest plant resources, fish, and work as domestic laborers and game guides for resorts. Today, the Washoe Tribe has developed a Comprehensive Land Use Plan (Washoe Tribal Council 1994) that includes goals of reestablishing a presence within the Lake Tahoe Basin and revitalizing Washoe heritage and cultural knowledge. In concert with Washoe goals, the USFS, as part of ecosystem management (U.S. Department of Agriculture [USDA] 1995a, 1995b), and in order to address federal responsibilities to tribal sovereign governments (USDA 1995c), has engendered interest in the identification of anthropogenic landscapes resulting from Washoe land-management practices. Plans include the reintroduction of traditional plant gathering practices by Washoe people and the collection of oral histories relevant to land use, resource use and management, diet, social and economic history, organization, and beliefs (Rucks 1996:3).

#### Non-Native History

Historic-period land use in the project vicinity included mining, transportation (roads and railroads), logging, Basque sheepherding, recreation, and residential development. A few key points about each of these uses are presented in this section, as a context for considering the historic-era resources in the project corridor.

#### Mining

In the summer of 1863, a number of quartz ledges were discovered in Martis Valley. Within a few days of this discovery, several hundred miners flocked to the area, which became known as Martis Valley's "Red, White and Blue Mining District." This bonanza was short-lived; however, the mining fiasco brought, in its aftermath, a significant influx of people into the area. The discoveries near Martis Valley stimulated the search for silver in every direction, although explorations along Lake Tahoe's north and east shores were largely sporadic and unproductive. These mining events ushered in the settlement of Lake Tahoe's north and west shores, as the disenchanted miners shifted their attentions to the Lake Tahoe Basin.

## **Transportation**

The non-native history of the Tahoe/Truckee region is in large part about the movement of people, goods, and services into and through the basins, and this history can be read graphically on the maps depicting the following routes of transport.

#### SR 267 Corridor

In August 1869, construction began on a new wagon road between Truckee and Lake Tahoe (Scott 1957:319). This turnpike, known as Truckee-Hot Springs Road, commenced from Truckee's transcontinental railroad stop and traveled eastward across the river into Martis Valley, following the present-day route of SR 267. At Middle Martis Creek, the Truckee-Tahoe shortcut intersected with what would later become the Richardson Brothers' sawmill spur. In 1874, a new wagon road was pushed through to Tahoe City by way of Observatory Point. These upgrades within the SR 267 corridor were undertaken simultaneously with improvements along present SR 28 (along Tahoe's north shore) and on SR 27/431 (over Mt. Rose). The paving of SR 267 between Truckee and Kings Beach in 1963 dramatically increased access to the North Tahoe area.

## Griff Creek Watershed (SR 267 at Kings Beach)

Segments of Tahoe National Forest Road 16N87, along with sections of 16N98 and 16N99, may have been incorporated into the original road system over Brockway Summit, connecting the Truckee and Tahoe basins. While most of these roads are probably twentieth-century creations, it is possible that selected segments were once incorporated into the old cut-off bypassing Stateline Point. This road was a shortcut that bypassed the point by going north of Stateline Ridge, thus shortening the distance between Kings Beach (Pine Grove Station) and Incline Village (Incline Mill).

## Tahoe City to Bear Trap Corridor

USFS Roads 16N51 (recorded as Site #05-19-731) and 16N71 (recorded as Site #05-19-734), accessing Tahoe City and Bear Trap Cabin, appear on maps at least as early as 1921; however, refuse deposits along 16N71 dating from the turn of the twentieth century indicate that this corridor was used prior to 1921. Whether or not these roads formed an extension of the historic Bear Trap-Truckee Trail is not known. Fairway Drive, the lower extension of 16N51 and 16N71, is reported to have been a good wagon road that extended up Bunker Drive to Antone Meadows.

## SR 89 Corridor/Truckee River Canyon

Originally part of the Placer County Emigrant Road, this road provided the earliest and most primary access to Lake Tahoe's north shore, beginning in 1852.

## Logging and Lumbering

Although the history of lumbering in and around the Lake Tahoe Basin took place within the larger history of the Comstock Lode, the onset of lumbering on the California side of Lake Tahoe's north shore was largely coincident with the building of the Central Pacific Railroad and the subsequent opening of new wood markets along its route. During the 1860s and until around the turn of the twentieth century, demands for large saw logs and cordwood-targeted pine species

for the production of timber for the mines and the railroad. The expansion beyond sawmilling into such facilities as planing mills, box factories, and sash and door establishments meant that self-sufficient communities like Truckee grew up where the larger mills were situated.

By the turn of the twentieth century, lands in the Tahoe/Truckee basins were largely stripped of pine, but fir and other species remained. With the introduction of paper mills, stands were reentered to harvest fir for use as pulpwood. By the 1950s, the offspring of pines cut in the 1800s were now mature enough for harvest. Stands were re-entered into harvest, and lumber harvest continued on a reduced scale through the 1970s. By the 1980s, the forests around Lake Tahoe were more valuable for recreational uses rather than for timber resources, and so the large-scale logging that occurred elsewhere in the northern Sierra was curtailed here.

## Basque Sheepherding

Growing populations in the logging camps and mining communities created an inflated demand for meat and dairy products and encouraged Basque immigration to the American West (Douglass and Bilbao 1975:407). During the 1850s, more than 500,000 sheep crossed Nevada on their way to California markets. During the early 1870s, itinerant sheep bands were being moved into the high Sierra. As a mutually profitable arrangement between ranchers and Basque sheepherders, the latter retained a percentage of the flock as payment. The Basque immigrants developed a reputation as excellent sheepherders. This, combined with the fact that sheepherding was often unappealing to non-Basques due to the physical hardships and isolation, made the Basque herders indispensable to the sheep industry of the American West.

# Recreation and Residential Development

For four prosperous decades between the 1860s and 1890s, settlements followed the pattern dictated by lumbering; towns mushroomed quickly in virtually every locality where mills began sawing. A handful of lumbering centers, including Truckee, Incline Village, Kings Beach, and Tahoe City built a future primarily on tourism; these communities survived and continued to prosper, initiating a trend towards increased urbanization and year-round residency (Wilson 1992:48).

By the turn of the twentieth century, agriculture and lumbering had greatly diminished in economic importance, as the land used for these activities became more valuable for residential, commercial, and recreational purposes. Growth was further escalated with the entrance of automobiles into the Lake Tahoe Basin around 1910 and the establishment of a statewide network of engineered and major routes through the montane regions during the 1930s. After the 1960 Winter Olympics were held in Squaw Valley, an irreversible trend was established in the demand for year-round residency.

## **Known Cultural Resources in the Project Area**

The 2008 field survey identified 11 previously recorded sites that coincide with the project area. These sites are identified in Table 4.5-1: Cultural Resources in the Project Area. The survey crew also found and documented 21 previously unrecorded sites or features and a single isolated artifact. The vast majority of these newly recorded cultural resources are linear features (i.e.,

roads, trails, a ditch), and most extend well beyond the project APE; only the segments within the survey corridor were recorded for this study.

The 2009 ancillary survey identified the remains of the Tahoe City community dump, documented the historic Truckee Catholic Cemetery, and recorded another five locations with historic-era archaeological remains.

Constructed in the 1950's, the majority of the original poles and equipment along the 625 and 650 Lines have been replaced over the years as a result of damage from normal weathering, unstable soils, or fire. As a result, the 625 Line or 650 Line are not likely to qualify as historical resources.

## **Known Paleontological Resources in the Project Area**

In accordance with California Public Utilities Commission (CPUC) regulations, this section presents general background and project-specific information on the paleontological resources of the region within the project area. Information regarding the geomorphic province and geological specifics of the project area are discussed in Section 4.6 Geology and Soils.

Based on the literature review and records search, there are no documented paleontological resources within the vicinity of the transmission line corridor, substation/switching station locations, or other ancillary project areas. However, several studies have been conducted in the Lake Tahoe and northern Sierra region which have documented Eocene "Auriferous Gravels" and overlying rhyolitic ash-flow tufts known as paleovalleys. It is not expected that these paleovalleys are in the vicinity of the project area; however, documented petrified wood scatter, opalized wood, and other paleoflora may be found in the region. No known (documented) fossils have been identified in the project area; however, there are documented theropod fossils and other marine fossils in the Lake Tahoe region.

## **4.5.3** Impacts

#### Significance Criteria

#### Cultural Resources

Under 36 CFR 800.5, "An adverse effect [i.e., a significant impact] is found when an undertaking may 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." The statute goes on to identify examples of such adverse effects, including "introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features."

The CEQA equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment (PRC Section 21084.1). Under the CEQA Guidelines, impacts on cultural resources may be considered significant if a project would result in any of the following:

- A substantial adverse change in the significance of a historical resource as defined in Guidelines Section 15064.5
- A substantial adverse change in the significance of an archaeological resource pursuant to Guidelines Section 15064.5
- Directly or indirectly destroying a unique paleontological resource or site or unique geologic feature
- Disturbing any human remains, including those interred outside of formal cemeteries

To summarize, under each of these criteria, a significant impact is defined as destruction, damage, alteration, or neglect to an eligible or potentially eligible cultural resource. Only those elements of a resource which contribute to its eligibility need to be considered; effects to non-contributing elements are less than significant. These regulatory guidelines are used to determine levels of significance for potential impacts to cultural resources as a result of the project.

## Paleontological Resources

Assessments of the scientific significance of these remains are based on whether they can provide data on the taxonomy and phylogeny of ancient organisms, the paleoecology and nature of paleoenvironments in the geologic past, or the stratigraphy and age of geologic units. Per the CEQA, impacts to paleontological resources will be considered significant if the project directly or indirectly destroys a unique paleontological resource or site, or unique geologic feature. Because fossils are the remains of prehistoric animal and plant life, they are considered to be non-renewable.

#### **Ouestion 4.5a – Substantial Adverse Changes to Historic Properties/Historical Resources**

"Historic properties" include cultural resources that have been determined eligible to the NRHP (under 36 CFR 60.4); those determined eligible to the CRHR (under CEQA) are referred to as "historical resources." Construction activities that have the highest potential to directly impact historic properties/historical resources in the project area include excavation associated with pole removal and installation, placement of anchors, grading for access roads and work sites, and any other activities involving ground disturbance.

## Construction - Less-than-Significant Impact

No eligible historical resources or historic properties were encountered within the APE for the existing 625 Line, new 625 Line, Northstar Tap, the 132 Line/650 Line Double-Circuit, or the substations and switching stations. One National Register-eligible property—archaeological site CA-PLA-6—is located within the APE for the 650 Line. The project has the potential to disturb the site by grading, excavation, and other ground disturbing activities. If this site cannot be avoided, SPPCo will implement APM-CUL-01 listed in Section 4.5.4 Applicant-Proposed Measures, including the implementation of a data recovery plan for the portions of the site that

will be impacted by construction. As a result of these measures, the impact will be less than significant.

## Operation and Maintenance - No Impact

Existing operation and maintenance activities are not anticipated to change after project construction; therefore, the potential to affect resources after construction will not change. Further, no impacts to historic properties or resources are anticipated during future operation and maintenance of the transmission lines, as these activities will occur in areas that were already disturbed by construction. As a result, no impact is anticipated.

## Question 4.5b - Substantial Adverse Changes to Archaeological Resources

Unevaluated archaeological resources, including both prehistoric and historic-era resources, must be considered (and treated as) potentially eligible to the National Register and the California Register. Construction activities that have the highest potential to directly impact archaeological resources in the project area include excavation associated with installation of poles and anchors, grading for access roads and work sites, vegetation clearing and grading of staging areas, and any other activities involving ground disturbance. Where such impacts cannot be avoided through project redesign or other means, it will be necessary to evaluate each of the archaeological resources known to be present in the project APE, as shown in Table 4.5-1: Cultural Resources in the Project Area.

## Construction - Less-than-Significant Impact

Table 4.5-1: Cultural Resources in the Project Area lists the 44 archaeological resources identified in the project area by location. One resource—site CA-PLA-6—has been evaluated as eligible to the National Register; another—an isolated basalt flake (P-31-3690)—by definition is not eligible and requires no further consideration. Because the other 42 resources remain unevaluated at this time, impacts to all 42 must be avoided during project activities; where avoidance is not feasible, the resources must be evaluated for their National Register eligibility. In these cases, SPPCo will implement APM-CUL-01, APM-CUL-02, and APM-CUL-03, including a detailed test excavation plan to evaluate the sites that will be impacted, and a data recovery plan for sites determined to be eligible, as outlined in Section 4.5.4 Applicant-Proposed Measures. If these measures are implemented, impacts to archaeological resources will be less than significant.

#### Operation and Maintenance - No Impact

As described in the response to Question 4.5a, no impacts to archaeological resources are anticipated during operation and maintenance of the project because these activities will occur in areas already disturbed by project construction.

## **Question 4.5c – Paleontological Resource Destruction**

## Construction - Less-than-Significant Impact

According to the literature review and records search, no documented paleontological resources have been identified within the project area. However, based on paleoflora field research for the Lake Tahoe region, there is the possibility that petrified wood and opalized wood scatter may be

present in the area. Additionally, known fossils may be present in the Lake Tahoe Basin and vicinity.

Due to the known presence of these resources in the region, there is the potential to expose and/or impact these resources during grading, and excavation activities. Potential impacts will be reduced to a less-than-significant level by the implementation APM-CUL-04 (discussed in Section 4.5.4 Applicant-Proposed Measures), which include temporarily halting work in the immediate area if paleontological resources are discovered and contacting a qualified paleontologist to evaluate the resources and make recommendations for proceeding with work in the area of the find.

## Operation and Maintenance - No Impact

Operation and maintenance activities associated with the project will be conducted in areas that were previously disturbed for construction. As a result, paleontological resources will not be encountered during this phase of the project and there will be no impact.

## Question 4.5d - Human Remains Disturbance - Less-than-Significant Impact

Human remains were not encountered during the most current cultural resources study and, given the shallow nature of the underlying bedrock in most of the project area, human remains are not likely to be unearthed during construction activities. However, the project is located near a historic cemetery—the Truckee Catholic Cemetery—at approximate milepost 0.4 of the 132/650 Line Double-Circuit. Should human remains be discovered outside of the historic cemetery boundary during construction, SPPCo will implement APM-CUL-05 to minimize any future disturbance to the grave(s) until appropriate notifications and consultations can be completed. As a result, the impact will be less than significant. No impacts to human remains are anticipated during future operation and maintenance of the transmission lines.

## 4.5.4 Applicant-Proposed Measures

The following APMs have been provided to reduce potential project impacts to the less-than-significant level:

- APM-CUL-01: If impacts to Site CA-PLA-6 cannot be avoided, a detailed data recovery plan that follows the Secretary of the Interior's standards and guidelines will be developed for the portions of the site that will be impacted by construction activities. The plan will be presented for review and comment to the State Historic Preservation Officer (SHPO) before implementation. Data recovery excavations will be sufficient to reduce impacts to a less-than-significant level. Work on USFS land will require an ARPA permit from the USFS. SPPCo will consult with the Washoe Tribe of Nevada and California prior to conducting any excavation work.
- APM-CUL-02: If impacts to unevaluated resources cannot be avoided, a detailed test excavation plan and research design that follows the Secretary of the Interior's standards and guidelines will be developed to evaluate the sites that will be impacted. The plan and research design will be presented to the SHPO for review and comment before implementation. If the sites are determined ineligible to the National Register or the

California Register (with concurrence from the SHPO), they will require no further consideration. If any of the resources are determined eligible to either registers (with concurrence from the SHPO), a detailed data recovery plan will be developed for those resources, and presented to the SHPO for review and comment. Data recovery excavations will be sufficient to reduce impacts to the resources to the less-than-significant level. Work on USFS land will require an ARPA permit from the USFS. SPPCo will consult with the Washoe Tribe of Nevada and California prior to conducting any excavation work.

- APM-CUL-03: If impacts to the linear historic-era resources cannot be avoided during project activities, they will be evaluated by a qualified historical archaeologist (under a Forest Service ARPA permit). If the sites are determined ineligible to the National Register or the California Register (with concurrence from the SHPO), they will require no further consideration. If any of the resources are determined eligible to either register (with concurrence from the SHPO), a detailed treatment plan will be developed for those resources, and presented to the SHPO for review and comment. Treatment will include additional archival research and/or field recordation.
- APM-CUL-04: If fossils or other paleontological resources are encountered during construction, all work will be halted within a 30-foot radius of the finding and a qualified paleontologist will be contacted to examine the find and evaluate its significance. If the find is deemed to have scientific value, the paleontologist and SPPCo will formulate a plan to either avoid impacts or to continue construction without disturbing the integrity of the find (e.g., by carefully excavating the material containing the resources under the direction of the paleontologist).
- APM-CUL-05: If human remains are discovered, all work within 50 feet of the discovery site will halt immediately. SPPCo will notify the County Coroner, as stipulated in Section 7050.5 of the California Health and Safety Code. The Coroner will determine whether the remains are Native American and, if so, will contact the Native American Heritage Commission by telephone within 24 hours. The Commission will follow the stipulations in Section 5097.98 of the California Public Resources Code, including notification of those persons it believes to be most likely descended from the deceased Native American. If the Commission is unable to identify a descendant, the descendant is unable to make a recommendation, or the landowner rejects the recommendation, the Commission will mediate any dispute between the parties. Where such mediation fails to provide measures acceptable to the landowner, the landowner shall reinter the human remains and associated funerary items with appropriate dignity on the property, in a location not subject to further subsurface disturbance.
- APM-CUL-06: Prior to any tree removal activities occurring outside of the 90-foot-wide cultural resources survey corridor (with the exception of previously surveyed staging areas and stringing sites), a cultural resources survey of the area will be performed by a professional archaeologist to ensure no known resources would be impacted. If cultural resources are discovered, they will be treated consistent with APM-CUL-02.

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ATTACHMENT 4.5-A	: CULTURAL RESOU	JRCES TECHNICAL	AREPORT—CON	FIDENTIAL

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