3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES
3.7 CULTURAL RESOURCES

This section discusses cultural and paleontological resources within the proposed project's Area of Potential Effect (APE), addressing existing conditions, applicable regulations, and the potential for significant impacts associated with the project. The APE for purposes of analyzing potential impacts on cultural and paleontological resources consists of the 5.85 acre project site. In order to avoid confusion with archaeological sites, in this section the project site will be referred to as the "project area." This discussion is based on an archival records search conducted at the Eastern Information Center, Department of Anthropology, University of California, Riverside (CHRIS-EIC), Native American Heritage Commission (NAHC) consultation, and archaeological field survey. A technical report prepared by PCR Services Corporation is provided in Appendix _ of this document.

Cultural resources include prehistoric resources, Native American resources, and historical-period resources. Prehistoric resources are physical properties resulting from human activities that predate written records and are generally identified as isolated finds or sites. Prehistoric resources can include village sites, temporary camps, lithic (stone tool) scatters, roasting pits/hearths, milling features, rock features, and burials.

Native American resources are sites, areas, and materials important to Native Americans for religious, spiritual, or traditional reasons. These resources may include villages, burials, rock art, rock features, or spring locations. Fundamental to Native American religions is the belief in the sacred character of physical places, such as mountain peaks, springs, or burials. Traditional rituals may also prescribe the use of particular native plants, animals, or minerals that may be found in certain locations. Developments that may affect sacred areas, their accessibility, or the availability of materials used in traditional practices are considered when identifying these resources.

Historic resources consist of physical properties, structures, or built items resulting from human activities after the time of written records. In North America, the historical-period is generally considered to be equivalent to the time period since European contact, beginning in a.d. 1492. Historic resources can include archaeological remains and architectural structures. Historic archaeological site types include town sites, homesteads, agricultural or ranching features, mining-related features, refuse concentrations, and features or artifacts associated with early military use of the land. Historic architectural resources can include houses, cabins, barns, lighthouses, early military structures, and local structures, such as missions, post offices, and meeting halls.

Paleontology is a branch of geology that studies the life forms of the past, especially prehistoric life forms, through the study of plant and animal fossils. Paleontological resources represent a limited, non-renewable, and impact-sensitive scientific and educational resource. As defined in this section, paleontological resources are the fossilized remains or traces of multi-cellular invertebrate and vertebrate animals and multi-cellular plants, including their imprints from a previous geologic period. Fossil remains such as bones, teeth, shells, and leaves are found in the geologic deposits (rock formations) where they were originally buried. Paleontological resources include not only the actual fossil remains, but also the collecting localities, and the geologic formations containing those localities.

The Initial Study for the project area determined that no historical structures or paleontological resources would be impacted by the proposed project actions. Therefore, the following sections cover the regulatory framework, methods, and findings pertaining to archaeological and Native American cultural resources.

3.7.1 REGULATORY FRAMEWORK

Numerous laws and regulations require federal, State, and local agencies to consider the effects a project may have on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Historic Preservation Act (NHPA) of 1966, as amended; the California Environmental Quality Act (CEQA); and the California Register of Historical Resources, Public Resources Code (PRC) 5024, are the primary federal and State laws governing and affecting preservation of cultural resources of national, State, regional, and local significance. The applicable regulations are discussed below.

a. Federal Level

First authorized by the Historic Sites Act of 1935, the National Register of Historic Places (National Register) was established by the NHPA of 1966, as "an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment."[54] The National Register recognizes both historical-period and prehistoric archaeological properties that are significant at the national, state, and local levels. In the context of this project, which does not involve any historical-period structures, the following National Register criteria are given as the basis for evaluating archaeological resources.

[54] *Code of Federal Regulations (CFR), 36 Section 60.2.*

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria:[55]

1. Are associated with events that have made a significant contribution to the broad patterns of our history;

2. Are associated with the lives of persons significant in our past;

3. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

4. Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least fifty years old to be eligible for National Register listing.[56]

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance."[57] The National Register recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.[58] The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

b. State Level

The State implements the NHPA through its statewide comprehensive cultural resources surveys and preservation programs. The California Office of Historic Preservation (OHP), as an

[55] *U.S. Department of the Interior, National Park Service, National Register Bulletin: How to Apply the National Register Criteria for Evaluation (Washington, DC: National Park Service, 1995).*

[56] *Exceptional Significance as defined by National Register Criteria Consideration G: Properties That Have Achieved Significance Within the Past Fifty Years. National Register Bulletin: How to Apply the National Register Criteria for Evaluation (Washington, DC: National Park Service, 1995).*

[57] *National Register Bulletin 15, p. 44.*

[58] *Ibid.*

office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdictions.

(1) California Register of Historical Resources

The California Register of Historical Resources (California Register) is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."[59] The criteria for eligibility for the California Register are based upon National Register criteria.[60] Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register of Historic Places.[61]

To be eligible for the California Register of Historical Resources, a prehistoric or historical-period property must be significant at the local, state, and/or federal level under one or more of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

[59] *California Public Resources Code § 5024.1(a).*

[60] *Ibid, § 5024.1(b).*

[61] *Ibid, § 5024.1(d).*

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register of Historic Places and those formally Determined Eligible for the National Register of Historic Places.
- California Registered Historical Landmarks from No. 770 onward.
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5.[62]
- Individual historical resources.
- Historical resources contributing to historic districts.
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

(2) California Environmental Quality Act

The CEQA is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a proposed project would have a significant effect on archaeological resources**.** CEQA is codified at Public Resources Code sec. 21000 et seq. As defined in Section 21083.2 of CEQA a "unique" archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.

[62] *Those properties identified as eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, and/or a local jurisdiction register.*

- 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.

In addition, the *State CEQA Guidelines* recognize that certain historical resources may also have significance. The Guidelines recognize that a historical resource includes: (1) a resource in the California Register of Historical Resources; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) 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 by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the *State CEQA Guidelines* apply. If an archaeological site does not meet the criteria for a historical resource contained in the *State CEQA Guidelines*, then the site is to be treated in accordance with the provisions of CEQA Section 21083, which is a unique archaeological resource. The *State CEQA Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (*State CEQA Guidelines* Section 15064.5(c)(4)).

(3) SB 18

Senate Bill 18, hereafter referred to as SB 18, is State legislation enacted for the purpose of establishing meaningful consultation between California Native American tribal governments and California local governments at the earliest possible point in local government land use planning. The objective of the consultation is to identify and allow careful consideration of important Native American places, including archaeological, cultural, spiritual, and ceremonial places, in the planning process at the government-to-government level. The circumstances and timeframes of consultation are as follows:

- Prior to the adoption or any amendment of a city or county's general plan, proposed on or after March 1, 2005, the city or county shall conduct consultations with California Native American tribes that are on the contact lists maintained by the Native American Heritage Commission [NAHC] for the purpose of preserving or

mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code that are located within the city or county's jurisdiction. Tribes have 90 days from the date they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code §65352.3).

- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45 day comment period (Government Code §65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.

- Local governments must send notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code §65092).

The locations and characteristics of the Native American places considered during the SB 18 consultation process are protected, as follows:

- Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Section 65040.2, the city or county shall protect the confidentiality of information concerning the specific identity, location, character, and use of those places, features, and objects (Government Code §65352.3 (b)).

The SB 18 consultation process is considered complete when the proposed plan amendment is adopted. However, if sensitive Native American places will be affected by the plan amendments, consultation may continue in order to ensure protection or management of those places.

b. Local Level

Cultural resources within the jurisdiction of the Town of Mammoth Lakes are subject to documentation and subsequent planning and preservation consideration.

(1) Town of Mammoth Lakes Adopted General Plan (1987)

The objectives of the cultural resource provisions of the Town's adopted General Plan (1987) are to conserve the historical and scientific qualities of the resources, which include

historical and archaeological resources, and to promote heritage tourism. Specific goals for management of cultural resources include the following directives:

1. To attempt to locate and record all known archaeologic and historic resources of Mammoth Lakes and the adjacent areas.

2. To preserve, interpret and, where feasible, make accessible to the public archaeologic and historic resources of Mammoth Lakes and adjacent areas.

3. To preserve archaeologic and historic sites for present and future scientific research and educational programs.

Policies in support of these goals include the following:

1. Comprehensive studies and inventories of the Mammoth Lakes area archaeologic and historic sites should be supported by the Town in coordination with the Southern Mono County Historic Society to identify undiscovered sites.

2. An archaeologic and historic site survey shall be conducted for environmental impact reports whenever a critical site(s) might exist within a project area and to the maximum practicable extent any discovered site shall be preserved or treated in accordance with the recommendations in the survey report.

3. The Town shall strive to ensure that historic and archaeologic sites are available to residents and visitors by: 1) establishing funding for historic and archaeologic preservation through state and federal grants, private trusts, and donations, 2) actively promoting the Town's cultural resources in cooperation with the Mammoth Lakes, Resort Association and Historic Society, and 3) encouraging the provision of publications about and tours of the sites.

4. Primary (1) archaeologic and historic sites should be protected through: 1) the adoption of an ordinance designed to protect primary sites and where necessary, provide for the purchase of significant sites, and 2) the obtaining of state and/or national register status where appropriate.

(2) The Town of Mammoth Lakes Draft General Plan (Update 2005)

L.U.3.a. The Town shall develop and maintain a cultural resources database that includes data regarding historic and archaeological resources within the Planning Area as that information is developed through project reviews or other archaeological/historical surveys. The database shall be used to ensure

the protection and preservation of historic and archaeological resources within the Planning Area.

3.7.2 AFFECTED ENVIRONMENT

The affected environment in the case of cultural resources is the physical remains of past human occupation. Current evidence indicates that humans began to live in western North America by approximately 13,000 years ago. Because of this great temporal span, and the potential uniqueness of archaeological materials, which are the traces of past human behavior, the effects of a project on the cultural resource environment can be large, even if the geographic extent of the project is relatively small. The following summary of human prehistory and history in the region surrounding the project area is given to provide a context for evaluating the potential effects of the proposed project on project area cultural resources.

a. Paleoindian Period (ca. 13,000 to 7,000 years before present [YBP])

The first people in California may have been among the first people in North America. Recent research at the Monte Verde site in Chile has demonstrated human presence in the Americas by approximately 12,500 years ago, and challenged the established model of initial overland migration from Siberia through western Canada into the Great Plains at the end of the last Ice Age. Initial migration down the western coast of North America, including coastal California, now appears to be a more likely scenario (Surovell 2000). One of the earliest radiocarbon dates from North America come from the Arlington Springs Woman site on Santa Rosa Island, in southern California. The human remains from this site have been dated to approximately 13,000 YBP (Dr. John Johnson, personal communication, May 12, 2005).

The rate of movement from the coast to inland California locations such as the Eagle Lodge project area is not known (see Rockman 2003), but may have been relatively rapid. Many early California sites, characterized as Late Paleoindian/Early Archaic period, are located near pluvial desert valley lakes formed by glacial meltwaters that are now evaporated or much reduced in size (Moratto 1984). Lakeshore occupation sites often include artifacts such as large projectile points (e.g., Lake Mohave), flaked stone debitage, and fire-affected rock concentrations.

Lifeways during the Paleoindian Period were characterized by highly mobile hunting and gathering. Prey included megafauna such as mammoth and technology included a distinctive flaked stone toolkit that has been identified across much of North America and into Central America. The megafauna went extinct during a warming trend that began approximately 10,000 years ago, and both the extinction and climatic change (which included warmer temperatures in desert valleys and reduced precipitation in mountain areas) were factors in widespread cultural

change. Lifeways continued to be organized around hunting and gathering, but the resource base expanded and used a wider range of plant and game resources. Technological traditions also became more localized. This constellation of characteristics has been given the name "Archaic" and it was the most enduring of cultural adaptations to the North American environment.

b. Early Archaic (7,000-4,000 YBP)

The Early Archaic in the Mammoth Lakes region is known as the Little Lake Phase, dating from ca. 7,500 to 3,150 YBP. Between 7,500 and 5,500 YBP the period is not as well defined for the rest of the Western Great Basin. The climate in the middle Holocene was generally hot and dry. During this time, people used base camps adjacent to rivers, and used temporary task-based camps at higher altitudes on a seasonal basis. These lithic scatters higher than 6,000 feet above mean sea level are thought to be hunting camps. Diagnostic tools of the Early Archaic include Pinto and Little Lake series projectile points. The Early Archaic economy was still organized around hunting of large game.

c. Middle Archaic (4,000-1,500 YBP)

Bettinger and Taylor (1974) refer to the Middle Archaic as the Newberry Phase (3,150-1,350 YBP) in the southern section of the Eastern Sierra Front. The Middle Archaic is characterized by a transition from the Early Archaic emphasis based on hunting to a more diversified subsistence base that included the exploitation of plant and small animal resources. Grinding stones appear in the archaeological record for the first time in the region. This is consistent with the archaeological remains recovered from Mammoth Creek Cave and Hot Creek Shelters. Large bifaces were fashioned to export raw material. Diagnostic artifact types include Elko and Humboldt series dart points. Site types include quarries, multipurpose camps located in upland valleys, and seed camps located near springs and creeks. Base camps contained features such as pithouses, storage areas, and burials. Seasonal camps were often reoccupied year after year. Kobari and others (1980) suggest that high altitude resources were also exploited as hunting camps were located at high elevations, such as the Casa Diablo and Long Valley Caldera.

d. Late Archaic (1,500-400 YBP)

The Late Archaic in the region is subdivided into the Haiwee Phase (1,350 to 650 YBP) and the Marana Phase (650 YBP to EuroAmerican contact). During this time, a wide range of resources and ecozones were exploited. There was an increased emphasis on plant resources, and small game hunting replaced large game hunting. There were many technological changes during the Late Archaic. For example, the bow and arrow replaced the atlatl and darts. Diagnostic artifacts include Rose Spring, Eastgate, and Desert Side-Notched projectile points

and brownware ceramics (after 900 YBP). Rosegate projectile points are characteristic of the Haiwee Phase, while small Desert Side-Notched and Cottonwood arrow points, and brownware ceramics define the Marana. Steatite disk beads are also common. Obsidian trade was thought to be east-west from Mono Lake and Long Valley Caldera over the Sierra Nevada. As the climate again oscillated to a warmer and drier regime, the area also experienced significant human population increase. With the shift to dryer conditions came a shift to piñon exploitation. Higher elevations continued to be exploited at this time (Bettinger 1977). After 750 YBP, wild crop irrigation and lowland base camps were common. Food processing implements such as flat slab schist milling stones, milling slicks, and bedrock mortars were first used extensively during the Late Archaic. The Marana Phase sites are thought to represent Owens Valley Paiute pre-contact sites, as the Owens Valley Paiute were the occupants of the region at the time of contact.

e. Ethnographic Context

The following ethnographic summary of the Owens Valley Paiute is derived in part from the Cultural Resources section of Revised Draft Program Environmental Impact Report for the Town of Mammoth Lakes General Plan Update (Town of Mammoth Lakes 2005). In addition, Sven Liljeblad and Catherine S. Fowler (1986) provide a comprehensive synthesis of the Owens Valley Paiute.

Traditionally, groups of Owens Valley Paiute have occupied an area from the Town to approximately 60 miles to the east and 100 miles to the south. A ten to 15 mile-wide band of land immediately north-northeast of the Town was jointly used by Owens Valley Paiute and Northern Paiute groups from Mono Lake. This territory includes all of Owens Valley, Round Valley, Long Valley, Fish Lake Valley, and Deep Springs Valley. While both Paiute groups speak Western Numic languages, the Northern Paiute speak Northern Paiute and the Owens Valley Paiute speak Owens Valley Paiute (Nancy Peterson Walter 2005). Other neighboring groups, on the west side of the Sierra Nevada (the Monache) and south of the Town on both flanks of the mountains (Monache and Owens Valley Paiute) speak other dialects of Mono and share many cultural bonds.

The Owens Valley Paiute occupied the Owens Valley on a year-round basis with many semi-sedentary settlements located on major rivers and streams along the west side of the valley. Closer to the Town, in both Long Valley and in the Mammoth Basin, the pre-contact and historic use of the area by the Owens Valley Native American groups has been vaguely documented. However, according to Wally Woolfenden, the ethnographic notes of F.S. Hules and F.J. Essene from the 1930s, and oral interviews of local people from the 1970s clearly document the year-round occupation of Long Valley by the Long Valley Paiute (a subgroup of the Owens Valley Paiute), during the 1800s and 1900s. Jeff Burton cites the work of Emma Lou Davis, Matthew Hall, E.W. Gifford, and Helen Doyle in suggesting that Long Valley included an indigenous population of Northern Paiute in historic times, and provided resources and refuge on an

occasional basis to Northern Paiute from Mono Lake, to Monache and Miwok from the west side of the Sierra, and to surrounding Mono-speaking groups of Paiute from Benton, Round Valley, and Owens Valley.

In contrast to the Owens Valley Paiute, the Long Valley Paiute were very mobile in historic times, constantly moving in search of food resources and often gathering resources beyond Long Valley. Their movements included frequent trips over the Sierra crest, through Mammoth Pass, in order to collect acorns and to fish and hunt in the San Joaquin River drainage, and area within North Fork Mono Territory.

In the vicinity of Mammoth Lakes, Mammoth Mountain is reported by Julian Steward as being a scared place as it stands on the border between the Monache (western Mono) and the Owens Valley Paiute (eastern Mono), and is considered to be the place of origin in all Mono-speakers' traditional myths. The actual locations of human origin there are marked by particular geographic features. Elsewhere in Mammoth Basin, ethnographic use by Long Valley Paiute and others is assumed to be seasonal rather than year round.

Extensive trading with their neighbors was done by Owens Valley Paiute groups in order to acquire additional foods as well as ornaments, money, and other commodities. Owens Valley Paiute traded salt, piñon pine nuts, seeds, obsidian, sinew-backed bows, rabbit skin blankets, deerskins, moccasins, mountain sheepskin, fox skin leggings, balls of tobacco, baskets, basketry water bottles waterproofed with pitch, wooden hot rock lifters, and red and white pigments, in exchange for shell money (e.g., disc beads, tubular clam beads, and more recently, glass beads), acorns and acorn meal, finely-constructed Yokuts baskets, cane for arrows, manzanita berries, squaw berries, and elderberries from the Monache. The Mono Paiute traded salt, piñon pine nuts, piagi (i.e., Pandora moth larvae), brine fly larvae, rabbit skin blankets, baskets, pumice stones, and red and white pigments to the Sierra Miwok, in exchange for shell money, acorns, baskets, arrows, a fungus used in paints, manzanita berries, elderberries, and squaw berries.

In Owens Valley, the population was sedentary, with year-round occupation in permanent villages and short-term visits to temporary camps for resource procurement. Leadership was hereditary, and headmen were responsible for organizing communal work projects and festivals that may have served to redistribute resource surpluses as well as to fulfill other social functions. As for the other groups using Long Valley, the Monache and the Southern Sierra Miwok groups were probably similar in their social organization to the Owens Valley Paiute, with at least some hereditary rulers and semi-permanent villages. Some researchers have postulated that any indigenous Long Valley groups that may have existed would have followed a pattern closer to that of the Mono Lake Paiute (and other Great Basin groups) than that of Owens Valley Paiute, due to similarities in environmental constraints. However, Long Valley residents may have been closely tied to the Owens Valley Paiute through kinship and trade.

Long Valley offered a variety of food resources during snow-free months. In the spring, Tui chub, speckled dace, and Owens sucker may have been dished from creeks, while roots, wild onions and greens along creeks and meadows might have replenished dwindling winter stores. Small game, deer, and antelope could have been hunted nearby. In the summer, grass seeds may have been collected from meadows and drier upland areas. Fall subsistence activities of both the Mono Lake and Owens Valley Paiute revolved around the collection of piñon. Piagi are another food resource available every two years in the Jeffery pine forests. Piagi were collected as they descended the Jeffery pine trees during mid to late summer. Nancy Peterson Walter, a local ethnologist, has extensive knowledge of the Owens Valley Paiute exploitation of piagi (Fowler and Walter 1985). Also, there are several recorded archaeological sites in the region that are associated with piagi exploitation (Weaver and Basgall 1986).

Much of the trade and travel likely occurred during the summer months, when the high Sierra passes were free of deep snow. Inter- and intra-regional trade may have had extensive ramifications for subsistence and settlement systems of the Owens Valley and Long Valley areas. It is proposed that an elaborate exchange system might account for the relatively complex sociopolitical organization of the Owens Valley Paiute.

f. Environmental Context

As described above, human occupation of the region surrounding the project area has a time depth of approximately 10,000 years. The environment 10,000 years ago was at the end stages of the last Ice Age. Therefore, all sediments younger than the glacial period have the potential to contain traces of human activity, that is- cultural resources.

Investigations at archaeological site CA-MNO-1529, located northeast of the project area, identified three artifact-bearing strata overlying cemented glacial deposits. These strata included a thin (3-5 centimeters) upper humus/loam layer, derived from decomposition of organic duff and roots, a thicker (30-60 centimeter) sandy loam layer, and an unsorted loose glacial till-gravel layer that measured 30-50 centimeters or thicker (bottom not reached in some excavations). The sandy loam layer had the highest artifact content and largest artifact size. It was described as a colluvial layer of “medium brown, unbedded deposit of sand to silt-size particles intermixed with volcanic ash/pumice gravels and obsidian blast” (Basgall 1984:10). Similar artifact-bearing strata have been identified at nearby sites CA-MNO-529, located east of the project area, and sites CA-MNO-714 and CA-MNO-561, located in the Long Valley-Mammoth Mountain region to the west of the project area. Artifact density and size was lower in the loose glacial till-gravel layer than in the sandy layer and both decreased with depth. These characteristics suggest that some of the artifacts in this layer may be “drift and have been introduced into the layer from the sandy layer through natural processes such as movement of ground water and freeze-thaw action. No artifacts were identified in the cemented glacial deposits.

Results of the geotechnical study for the proposed action indicate that deposits comparable to the artifact–bearing sandy loam colluvial and unconsolidated glacial till deposit layers identified at site CA-MNO-1529 are present at depth in the project area. Coring determined that the upper four feet of sediment below the modern ground surface of the project area consists of undocumented fill (i.e., introduced sediments). This fill overlies a combination of alluvium, which is similar to the description of the sandy loam layer provided by Basgall (1984:10-16), and glacial till deposits. The alluvial layer is approximately 6 feet deep in the project area. Variable glacial deposits underlie the alluvial layer to the base of the test boring holes.

3.7.3 ENVIRONMENTAL CONSEQUENCES

a. CEQA Significance Criteria

In accordance with Appendix G of the *CEQA Guidelines* the project would have a significant effect if it would:

- Cause a substantial adverse change in the significance of a historical resource [inclusive of archaeological resources] which is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historic Resources, or a local register of historic resources.

- Cause a substantial adverse change in the significance of a unique archaeological resources (i.e., an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it contains information needed to answer important scientific research questions, has a special and particular quality such as being the oldest or best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person).

(1) Native American Resources

Project impacts on Native American resources would be considered significant if the project would:

- Result in physical demolition, destruction, relocation, or alteration of an important Native American Resource or its immediate surroundings such that its significance would be materially impaired. A resource is "materially impaired" if those physical characteristics that convey its religious, spiritual or traditional significance are

demolished or materially altered. Native American resources include but are not necessarily limited to villages, burials, rock art, rock features, or spring locations.

- Disturb any human remains, including those interred outside of formal cemeteries.

b. Methodology

The methods described in the following section were used to investigate archaeological and Native American cultural resources in the project area. They included a cultural resources record search, Native America consultation, and an archaeological pedestrian survey.

(1) Cultural Resource Records Search

The primary cultural resource record search was conducted at the California Historical Resources Information System Eastern Information Center located at the Department of Anthropology, University of California, Riverside (CHRIS-EIC) on September 20, 2005, by CHRIS-EIC personnel. This records search included an examination of previous survey coverage and reports, historic maps, and known cultural resources within a half-mile radius of the project site. Other sources that were reviewed included the California Points of Historical Interest (PHI), the California Historical Landmarks (CHL), the California Register of Historic Places (California Register), the National Register of Historic Places (National Register), and the California State Historic Resources Inventory (HRI). PCR personnel also contacted the United States Forest Service (USFS) (Inyo National Forest) regarding any cultural resource studies or recorded cultural resources within the project area.

(2) Native American Consultation

A Sacred Lands Search for the Eagle Lodge project area was requested by PCR from the Native American Heritage Commission (NAHC) in Sacramento on September 15, 2005. The NAHC replied with an updated list of individuals and organizations that might have knowledge of sacred lands in the area in February 2006. PCR sent letters describing the proposed project to the persons on the list requesting input on February 16, 2006. An SB 18 consultation list was requested from the NAHC on March 20, 2006.

c. Archaeological Pedestrian Survey

Fieldwork for the cultural resources investigation consisted of intensive pedestrian surface survey of the project area. The survey was conducted by PCR on September 23, 2005. At the time of survey, the project boundary had only been approximately defined by the Town of Mammoth Lakes and the USFS. The PCR archaeologist surveyed within the approximate

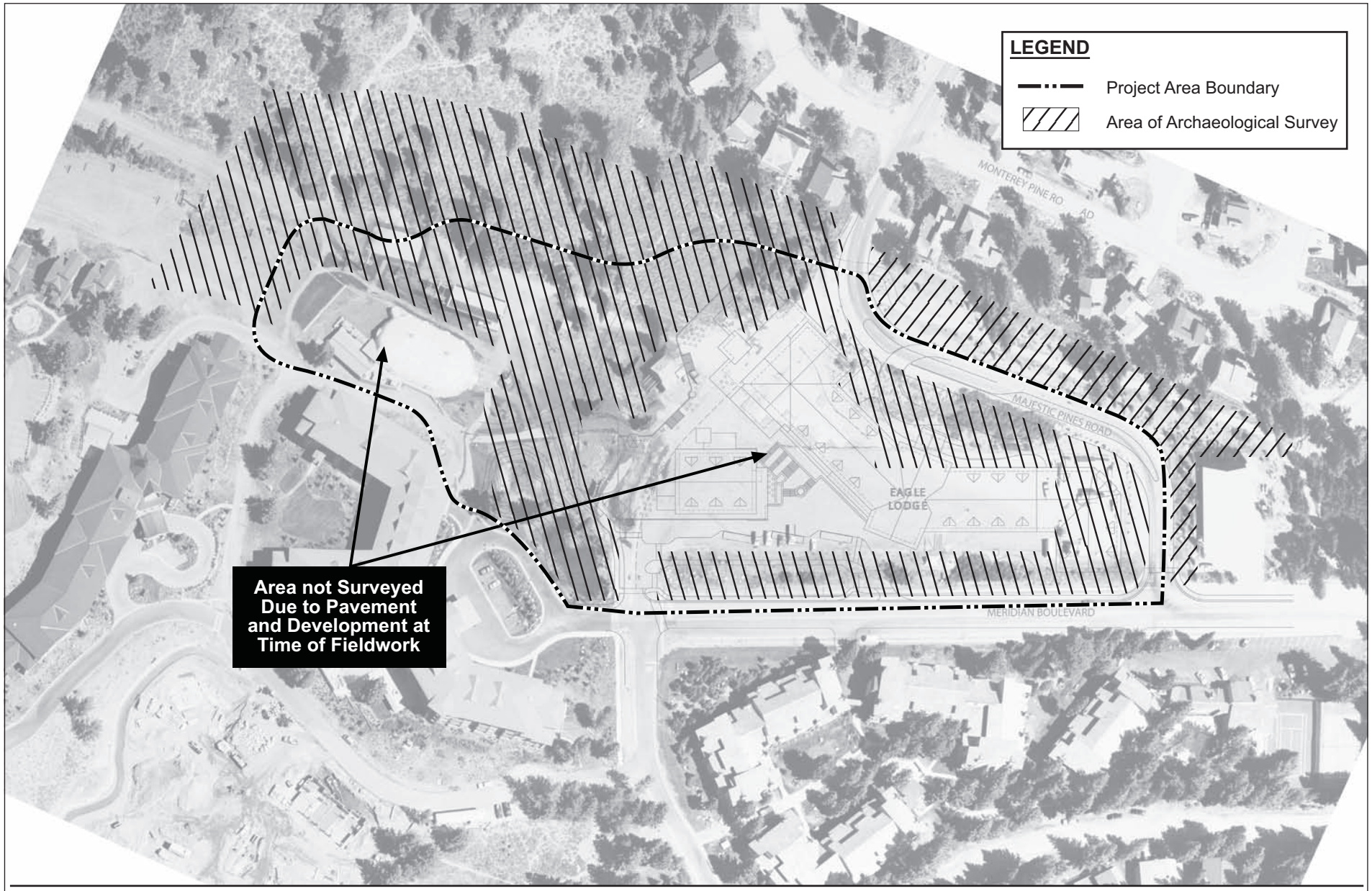
project site boundary and beyond the current western project site boundary in the vicinity of the Chair 15 ski lift. The area surveyed in relation to the current project boundary is shown in Figure 20 on page 300.

The exposed ground surface was inspected for prehistoric and historical-period artifacts and features. Due to the developed nature of much of the project area, less than half of the surface of the project area could be visually inspected. All unpaved portions of the project area were walked over in a pattern of transects spaced not more than 15 meters apart. These included the unpaved sections of Lot 1, Lots 5-7, and Lot 87, the landscaped medians that surround the parking lot, and the unpaved area between the parking lot and the Chair 15 ski lift. The landscaped medians contain large granite boulders; these boulders were examined for cultural features such as milling slicks and cupules. Photographs of the project site were taken and disturbances to the ground surface were noted.

(1) Cultural Resource Investigation Results

(a) Cultural Resource Records Searches

Record search information indicates that there has been a substantial amount of cultural resource activity in the vicinity of the project area, with at least 22 previous cultural resource studies within a one-mile radius of the project area that have identified at least 29 cultural resource properties. Only one previous survey has covered a portion of the project area, however, and no sites have been previously identified within the project boundaries. This previous survey, on record with the US Forest Service, was conducted in 1981 as part of the Camp High Sierra Land Exchange, and identified CA-MNO-1529, a prehistoric archaeological site with an obsidian flaked stone scatter and bedrock milling features (Taylor 1981), approximately 900 feet (275 m) outside of the current project boundaries upslope from Chair 15. CA-MNO-1529 was excavated by a University of California, Davis Field Class in Archaeology in 1982. Obsidian hydration dates suggest an occupation range that may have extended from the Little Lake Phase of the Early Archaic (7,000 to 3,150 years ago) to the Haiwee Phase of the Late Archaic (1,350 to 650 years ago), with intensification of occupation during the Haiwee



PCR

Scale not provided

Source: Gensler, 2006

Figure 20
Area Surveyed in Relation to the Project Boundary

Phase (Basgall 1984). Despite this level of work, the site has not been formally evaluated with respect to the National Register and California Register. An EA prepared for the current project in 1997 (USDA-FS 1997) stated that the current project area was completely surveyed in conjunction with the Camp High Sierra Land Exchange, and that all potentially significant cultural resources were mitigated.

(2) Native American Consultation

To date, none of the Native American groups contacted with regard to this project have identified any locations or areas of concern that will be affected by the proposed project. Five Native American organizations were identified by the NAHC as having affiliation with the project site. Letters describing the proposed development and a map of the project site were mailed to these organizations on April 20, 2006 via certified mail. These organizations, including concerned tribes and other parties, had 90 days from receipt of the letter to request consultation in the planning process. Follow-up phone calls to letter recipients were made in the final week of the 90-day comment period to confirm receipt of the letters and to provide a chance for final comment.

(3) Cultural Resources

No cultural resources were observed on the ground surface of the project area or on the boulders in the landscaped medians. Ground surface visibility in the unpaved areas was good (i.e., 50-75 percent visible). A scatter of obsidian flakes was observed northwest of the current project area boundary, approximately 82 feet (25 m) upslope from the Chair 15 ski lift. This flake scatter is likely part of archaeological site CA-MNO-1529 that has eroded down slope.

d. Environmental Consequences of the Proposed Action

The proposed action has the potential to disturb buried cultural resources in the project area. As described above, the geotechnical study for the project determined that the stratigraphy of the project area consist of an upper four feet of undocumented fill over a combination of alluvium and glacial till deposits. It is unlikely that there are archaeological deposits within the glacial fill, as these likely predate the human occupation of the Mammoth Lakes area. However, several factors suggest that there may be intact archaeological deposits in the alluvium or at the contact of the glacial deposits and the alluvium. Foremost, the alluvial deposit described by the geotechnical study is similar to the artifact-bearing alluvial unit excavated at nearby site CA-MNO-1529, described in Basgall (1984), and other sites in the region, as described above. Other contributing factors include the relative proximity of the project area to prehistoric routes through the Sierras, particularly in relation to the obsidian source at Casa Diablo approximately 22 miles to the east-southeast (Bettinger, Basgall, and Delacorte 1983), the number of sites in a

one-mile radius of the project area indicated by the cultural resources records search, and the location of the project area at the base of a hill which can be conducive to the burial and preservation of archaeological materials. Therefore, there is potential for subsurface cultural deposits in the project area. As discussed further below, monitoring is recommended for all ground-disturbing construction activities affecting the alluvial deposits and upper three feet of the glacial deposits related to the project in order reduce the impact of the proposed action on previously undiscovered cultural resources in the project area.

The proposed action would not affect cultural resources on the surface of the project area. The project area has been extensively disturbed by the construction of the parking lot, medians, and the landscape features. Due to the developed and disturbed nature of the project area, less than half of the total project area could be visually inspected (see Figure 20). No archaeological or other cultural resources were identified on the visible surfaces. The potential for cultural resources remaining below current development would be addressed by the monitoring recommended for potential subsurface resources. The current standard for archaeological monitoring is a team of two monitors, one qualified archaeologist and one Native American monitor. At present, there is no legal requirement in California to include a Native American monitor in a monitoring program. The NAHC recommends, however, that if a lead agency prefers not to include a Native American monitor, the lead agency notify or otherwise clear this decision with all of the Native American groups identified by the NAHC as having affiliation with the project area.

A temporary dirt haul route and storage area that extends west of the project area toward the Pumpkin Ski Run is not anticipated to affect any cultural resources. The haul route would be confined to a pre-existing road in the vicinity of site CA-MNO-1529. Outside of the site vicinity, the haul route would follow the graded route of a pre-established ski run. The haul route-ski run route was surveyed pursuant to the 1997 Environmental Assessment conducted for the Mammoth Mountain Base VII Expansion and no sites were found on or in the near vicinity of the route.[63] Consultation with the USFS has indicated that activity planned for the haul route and storage area is not expected to result in notable ground disturbance and would not break previously undisturbed ground.

(1) Native American Resources

No areas containing human remains have been documented at the CHRIS-EIC in the project area or within a one-mile radius of the project area. If human remains are encountered unexpectedly during construction excavation and grading activities, State Health and Safety

[63] *LSA Associates, Inc. Mammoth Mountain Ski Area, Base VII Expansion Project, Environmental Assessment. February, 1997.*

Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the NAHC. The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who will then help determine what course of action should be taken in dealing with the remains.

Responses to date to the NAHC Sacred Lands Search indicate that there are no sensitive Native American cultural resources in the project area.

e. Mitigation Measures

The following mitigation measures are recommended to ensure that potential impacts to buried archaeological and Native American resources that may remain in the alluvial deposits or at the contact between the alluvial deposits and underlying glacial deposits are reduced to a less than significant level:

CUL-1: A qualified archaeological monitor shall be present during the ground-disturbing construction activities affecting the alluvial deposits and upper three feet of the glacial deposits in the project area. Due to the potential for subsurface cultural deposits, a culturally affiliated Native American monitor with experience in cultural resources also shall monitor these ground-disturbing activities. In the event that the lead agency determines that it will not include a Native American monitor in the archaeological monitoring process, this decision shall be sent in writing to an updated list of all Native American individuals and organizations identified by the NAHC as having affiliation with the project area. These individuals and organizations shall be provided with a comment period of not less than four weeks on this decision. If this course of action is taken, affiliated Native American groups shall also be notified if sensitive deposits or cultural materials are encountered. No monitor is required for construction-related activities in the lower glacial deposits.

If cultural resources are identified, the archaeologist shall be allowed to temporarily divert or redirect grading or excavation activities in the vicinity in order to make an evaluation of the find and determine appropriate treatment. Treatment will include the Town's goals of preservation where practicable and public interpretation of historic and archaeological resources. The archaeologist shall prepare a final report about the monitoring to be filed with the Project Applicant, Mono County, and the CHRIS-EIC, as required by the State Historic Preservation Officer (SHPO). The report shall include documentation and interpretation of resources recovered, if any. Interpretation will include evaluation of eligibility of the resources with

respect to the National Register and California Register. The report shall also include all specialists' reports as appendices. The lead agency shall designate repositories in the event that significant resources are recovered.

CUL-2: If human remains are encountered unexpectedly during construction excavation and grading activities, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the NAHC. The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who will then help determine what course of action should be taken in dealing with the remains.

f. Environmental Consequences of Alternative 1 – Development in Accordance with Existing Regulations Alternative

Alternative 1 proposes to remove the residential component of the project, raise the height of the commercial structure, and slightly increase the number of parking spaces. The footprint of this Alternative is anticipated to be somewhat smaller than the proposed project. As this Alternative would require excavation more than three feet below the present ground surface, previously undiscovered archaeological deposits may be encountered and disturbed. Mitigation Measures Cult-1 and Cult-2 are recommended for the footprint of Alternative 1 and any associated ground disturbance extending more than three feet below the present ground surface.

g. Environmental Consequences of Alternative 2 – Reduced Intensity Alternative

Alternative 2 proposes to lower the height of the commercial structures and consequently reduce commercial usage of the property. The footprint of this Alternative is anticipated to be somewhat smaller than the Proposed Action. As this Alternative would require excavation more than three feet below the present ground surface, previously undiscovered archaeological deposits may be encountered and disturbed. Mitigation Measures Cult-1 and Cult-2 are recommended for the footprint of Alternative 2 and any associated ground disturbance extending more than three feet below the present ground surface.

h. Environmental Consequences of Alternative 3 – Alternate Design Alternative

Alternative 3 proposes to vary the height and layout of the developed area from the design of the proposed project. The footprint of this Alternative would be the same as the Proposed Action. As this Alternative would require excavation more than three feet below the present ground surface, previously undiscovered archaeological deposits may be encountered

and disturbed. Mitigation Measures Cult-1 and Cult-2 are recommended for the footprint of Alternative 3 and any associated ground disturbance extending more than three feet below the present ground surface.

i. Environmental Consequences of Alternative 4 - No Action Alternative

No archaeological resources have been identified on the surface of the project area. If no actions are taken on the surface of the project area, no cultural resources would be disturbed. Because of the potential for subsurface cultural deposits demonstrated by excavations at nearby site CA-MNO-1529 (described above), monitoring is recommended for any future ground-disturbing activity on the project site that would extend to depths greater than three feet below the current ground surface.