4.0 ENVIRONMENTAL IMPACT ANALYSIS
D. CULTURAL RESOURCES

INTRODUCTION

This section assesses potential impacts on archaeological, historical, and paleontological resources that could occur with development projected under the Town of Mammoth Lakes Parks Trails System Master Plan (TSMP) and the Sherwin Area Recreation Plan (SHARP). These Plans propose potential improvements to the system of recreational trails, multi-use paths (MUPs), and on-street bike paths within the Town's Municipal Boundary, including the Urban Growth Boundary (UGB) and sections of the Inyo National Forest. The analysis is based on the *Cultural Resources Assessment for the Parks and Recreation Master Plan, Trail System Master Plan, and the Sherwin Area Recreation Plan, Town of Mammoth Lakes, Mono County, California* (PCR, July 2011), which is contained in Appendix F of this Draft EIR.

The evaluation of cultural and paleontological resources is intended to identify potential impacts to cultural resources and to develop mitigation measures to avoid, reduce, or mitigate potential impacts to cultural resources for the purpose of complying with the National Environmental Policy Act (NEPA), the regulations implementing Section 106 of the National Historic Preservation Act (Section 106 of the NHPA), the California Environmental Quality Act (CEQA) and the Town's General Plan. With the exception of the SHARP Priority Projects, the recommendations and projects included in the PRMP, TSMP, and SHARP are conceptual in nature and are therefore evaluated by PCR at a program-level. The program-level analysis recognizes that subsequent more focused environmental review would occur as future project-specific development proposals are initiated under the Plans.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

Numerous laws and regulations require federal, state, and local agencies to consider the effects of a Proposed Project on cultural resources. These laws and regulations establish 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 NHPA of 1966, as amended, CEQA, and the California Register of Historical Resources (California Register), Public Resources Code (PRC) 5024, are the primary federal and state laws governing and affecting preservation of historic resources of national, state, regional, and local significance. Other relevant regulations at the local level include the Town's General Plan. A description of the applicable laws and regulations is provided in the following paragraphs.

(1) Federal Level

(a) Section 106 of the National Historic Preservation Act of 1966 (Section 106)

Compliance with Section 106 requires a sequence of steps, often referred to as the "Section 106 process." The steps include (1) identification of the area that will be affected by the proposed undertaking ("area of potential effect" [APE]); (2) identification of historic or archaeological properties; (3) evaluation of the eligibility of the properties for listing on the National Register of Historic Places; (4) determination of the

level of effect of the undertaking on eligible properties; and (5) consultation with concerned parties and agreement in the form of a Memoranda of Agreement (MOA) on avoidance, minimization, or mitigation of adverse effects on eligible properties. These steps are described in more detail, as follows:

As defined in the NHPA (36 CFR 800.16(d)), an APE "is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist. The area of potential effect is influenced by the scale and nature of the undertaking and may be different for different kinds of effects caused by the undertaking." Federal agencies define the cultural resources APE in consultation with the State SHPO. The APE may or may not match the footprint of the project area.

Identification of historic or archaeological properties is done by means of pedestrian survey and research in appropriate historical and archaeological archives. The Secretary of the Interior has set out guidelines for qualifications for archaeologists and historians responsible for identifying, evaluating, recording, and providing treatment for historical and archaeological resources (36 CFR 61). These guidelines are updated and published by the National Park Service (NPS 1983).

Evaluation of archaeological and historical property significance follows the significance criteria of the National Register of Historic Places (National Register). The National Register was established by the NHPA in 1966 to serve as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." (36 CFR § 60.2). The National Register recognizes properties that are significant at the national, state and local levels. Guidelines for nomination require that significant resources exhibit aspects of important themes in American history, architecture, archaeology, engineering, and culture and possess integrity of location, design, setting, materials, workmanship, feeling, and association and that;

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 possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or

d. that have yielded or may be likely to yield, information important to history or prehistory

The criteria for eligibility to the National Register will provide the basis for evaluation and subsequent management of cultural resources in the Study Area.

In addition to meeting the Criteria for Evaluation, a property must have integrity. "Integrity is the ability of a property to convey its significance."[1] According to *National Register Bulletin 15 (NRB)*, the National Register

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

recognizes seven aspects or qualities that, in various combinations, define integrity: location, design, setting, materials, workmanship, feeling, and association. In assessing a property's integrity, the National Register criteria recognize that properties change over time, therefore, it is not necessary for a property to retain all its historic physical features or characteristics. The property must retain, however, the essential physical features that enable it to convey its historic identity.[2]

Adverse effects occur when an undertaking may directly or indirectly alter characteristics of a historic property that qualify it for inclusion in the National Register. Examples of adverse effects include physical destruction or damage; alteration not consistent with the Secretary of the Interior's Standards; relocation of a property; change of use or physical features of a property's setting; visual, atmospheric, or audible intrusions; neglect resulting in deterioration; or transfer, lease, or sale of a property out of Federal ownership or control without adequate protections (36 CFR 800.5(a)). Effects of the proposed undertaking on eligible properties are determined by analysis and agreement between consulting professional archaeologists, the State Historic Preservation Office (SHPO), and other concerned parties.

The California SHPO, the Office of Historic Preservation (OHP), established by the NHPA to implement historic preservation management at the state level, is mandated to review National Register nominations, maintain data on historic properties that have been identified but not yet nominated, and consult with Federal agencies during Section 106 review. Concurrence of the OHP on site evaluations and recommendations with respect to National Register eligibility and project effects will be required.

MOAs on avoidance, minimization, or mitigation of adverse effects on eligible properties are developed through the course of the project by consulting archaeologists, SHPO, and other parties concerned with the preservation and disposition of cultural resources, including Native American groups with affiliation to the project site.

(b) Paleontological Resources Preservation Act (PRPA)[3]

On March 30, 2009, the Paleontological Resources Preservation Act (PRPA) became law when President Barack Obama signed the Omnibus Public Land Management Act (OPLMA) of 2009, Public Law 111-011. P.L. 111-011, Title VI, Subtitle D on Paleontological Resources Preservation (OPLMA-PRP) (123 Stat. 1172; 16 U.S.C. 470aaa) requires the Secretaries of the Interior and Agriculture to manage and protect paleontological resources on Federal land using scientific principles and expertise. The OPLMA-PRP includes specific provisions addressing management of these resources by the Bureau of Land Management (BLM), the National Park Service (NPS), the Bureau of Reclamation (BOR), the Fish and Wildlife Service (FWS), and the U.S. Forest Service (USFS) of the Department of Agriculture.

The OPLMA-PRP affirms the authority for many of the policies the Federal land managing agencies already have in place for the management of paleontological resources such as issuing permits for collecting paleontological resources, curation of paleontological resources, and confidentiality of locality data. The

[2] *"A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character. Because feeling and association depend on individual perceptions, their retention alone is never sufficient to support eligibility of a property for the National Register." Ibid, 15, p. 46.*

[3] *Discussion adapted from http://www.blm.gov*

statute establishes new criminal and civil penalties for fossil theft and vandalism on Federal lands. The OPLMA-PRP only applies to Federal lands and does not affect private lands. It provides authority for the protection of paleontological resources on Federal lands including criminal and civil penalties for fossil theft and vandalism.

Consistent with existing policy, the OPLMA-PRP also includes provisions allowing for casual or hobby collecting of common invertebrate and plant fossils without a permit on Federal lands managed by the BLM, the BOR, and the U.S. Forest Service, under certain conditions. Casual collecting is not allowed within the National Parks or other lands managed by the National Park Service. As directed by the Act, the Federal agencies will begin developing regulations, establishing public awareness and education programs, and inventorying and monitoring federal lands.

(2) State Level

(a) California Register of Historical Resources

The California Office of Historic Preservation (OHP), as an 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.

Created by Assembly Bill 2881, which was signed into law on September 27, 1992, the 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."[4] The criteria for eligibility for the California Register are based upon National Register criteria.[5] 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.[6]

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

a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

b. Is associated with the lives of persons important in our past;

c. 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

d. Has yielded, or may be likely to yield, information important in prehistory or history.

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4 *California Public Resources Code § 5024.1(a).*

5 *California Public Resources Code § 5024.1(b).*

6 *California Public Resources Code § 5024.1(d).*

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.

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 and those formally Determined Eligible for the National Register.
- 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.[7]
- 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.

(b) California Environmental Quality Act

Archaeological Resources

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 (PRC Sections 21000 *et seq*.). As defined in Section 21083.2 of the PRC 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.
- 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.

[7] *Those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register.*

In addition, CEQA Guidelines section 15064.5 broadens the approach to CEQA by using the term "historical resource" instead of "unique archaeological resource." The CEQA Guidelines recognize that certain historical resources may also have significance. The CEQA 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 the PRC and section 15064.5 of the CEQA Guidelines apply. If an archaeological site does not meet the criteria for a historical resource contained in the CEQA Guidelines, then the site is to be treated in accordance with the provisions of PRC section 21083, which is a unique archaeological resource. The 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. (CEQA Guidelines §15064.5(c)(4)).

Paleontological Resources

Paleontological resources are also afforded protection under CEQA. Appendix G (part V) of the CEQA Guidelines provides guidance relative to significant impacts on paleontological resources, which states, "a project will normally result in a significant impact on the environment if it will …disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study." Section 5097.5 of the PRC specifies that any unauthorized removal of paleontological remains on state lands is a misdemeanor. Further, the California Penal Code Section 622.5 sets the penalties for damage or removal of paleontological resources.

(3) Local Level

(a) Town of Mammoth Lakes General Plan

Cultural resources within the jurisdiction of the Town are subject to documentation and subsequent planning and preservation consideration. The *Arts, Culture, Heritage and Natural History* element of the Town's General Plan mentions the following goals and policies:

A.3. **GOAL**: Encourage public art and cultural expression throughout the community.

- A.3.A. **Policy**: Support continued development of the historic Hayden Cabin museum site.
- A.3.B. **Policy**: Encourage development of arts, culture, and heritage facilities and venues.
  - A.3.B.1. **Action**: Encourage artists' residences connected to galleries.
  - A.3.B.2. **Action**: Maintain a strategic public art, cultural, and heritage plan.
- A.3.C. **Policy**: Support local history and heritage education in the community.
  - A.3.C.1. **Action**: Support and promote programs and events celebrating local history and diversity.

- A.3.D. **Policy**: Be stewards of the cultural, historical and archeological resources in and adjacent to town.
- A.3.E. **Policy**: Allow the adaptive use of historic buildings.

A.3.E.1. **Action**: Develop and maintain a cultural resources database of historic and archaeological resources within the Planning Area.

b. Existing Conditions

(1) Prehistoric context

In terms of environmental change and recognized cultural developments, prehistory is most easily discussed and understood chronologically. Table 1, *Chronology of the High Sierra and Eastern Slopes*, of the Cultural Resources Assessment contained in Appendix F of this Draft EIR, provides the detailed chronologies of the prehistory of the western Great Basin including the eastern slope of the Sierra Nevada. According to Table 1, regional phases begin with the Pre-Archaic Phase 12,000 to 7,500 years ago and continue through the Early Archaic Phase (7,500 to 4,000 years ago), the Middle Archaic Phase (7,500 to 4,000 years ago), and the Late-Archaic Phase 1,500 to 400 years ago.

(a) Pre-Archaic (ca. 12,000-7,500 Years Before Present [YBP])

Little is known of Paleo-Indian peoples in inland southern California, and the cultural history of this period follows that of North America in general. Recent discoveries in the Americas have challenged the theory that the first Americans migrated from Siberia, following a route from the Bering Strait into Canada and the Northwest Coast some time after the Wisconsin Ice Sheet receded (ca. 14,000 YBP), and before the Bering Land Bridge was submerged (ca. 12,000 YBP). A coastal migration route somewhat before that time is also possible. The timing, manner, and location of this crossing are a matter of debate among archaeologists, but the initial migration probably occurred as the Laurentide Ice Sheet melted along the Alaskan Coast and interior Yukon. The earliest radiocarbon dates from the Paleo-Indian Period in North America come from the Arlington Springs Woman site on Santa Rosa Island. These human remains date to approximately 13,000 YBP (Johnson, et al. 2002). Other early Paleo-Indian sites include the Monte Verde Creek site in Chile (Meltzer, et al. 1997) and the controversial Meadowcroft Rockshelter in Pennsylvania. Both sites have early levels dated roughly at 12,000 YBP. Life during the Paleo-Indian Period was 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. They likely used some plant foods, but the Paleo-Indian toolkit recovered archaeologically does not include many tools that can be identified as designed specifically for plant processing.

The rate of movement from the coast to inland California locations such as the Mammoth Lakes region 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.

The megafauna that appear to have been the focus of Paleo-Indian life 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. Subsistence and social practices continued to be organized around hunting and gathering, but the resource base was expanded to include a wider range of plant and game resources. Technological traditions also became more localized and included tools specifically for the processing of plants and other materials. 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 Period (ca. 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 Period (ca. 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. Elko and Humboldt series dart points were common. 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 (ca. 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. It was during the Late Archaic that flat slab schist milling stones, milling slicks, and bedrock

mortars apparently first appeared. 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 (1983), 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 are said to have been highly mobile in historic times, constantly moving in search of food resources and often utilizing resources beyond Long Valley. This movement 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. Such trips sometimes occurred in winter, at which time moccasins and snowshoes were worn for snow travel.

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.

Owens Valley Paiute groups traded extensively with their neighbors in order to acquire additional foods as well as ornaments, money, and other commodities. Items traded included 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's 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.

(2) Historic context[8]

The historic context developed below presents important themes associated within the historical development of Mammoth Lakes, California, where the proposed project is located. Research indicates the property is associated with the following historical themes: the Explorers, Early Ranching, Mining and Settlement (1829-1880); Gold Discovery and Boom (1870-1900); Transportation (1877 – 1940); Early Development of Recreation (1900-1950); and Post World War II Tourism (1945 – 1960).

[8] *Adapted from J.F Burton, Further Investigations of the Snowcreek Archaeology Site, Mammoth Lakes, California, Trans-Sierran Archaeological Research to Trans-Sierran Archaeology No. 21, July 1992 and C.L Furnis, An archaeological Reconnaissance Report for the Lake Mary Road Bike Route, Mammoth Lakes, Mono County, California, Final Report, December 18, 2001.*

(a) The Explorers, Early Ranching, Mining, and Settlement (1829 – 1880)

The first Euro American contact with Owens Valley, eastern California and western Nevada, is thought to have occurred when the English fur trapper Peter Skene Ogden of the Hudson's Bay Company who wandered into Owens Valley thinking he reached the Great Salt Lake en-route to the Colorado River in 1829 to 1830.[9] Four years later, the first documents explorer of the eastern Sierra is Joseph Walker who crossed the Sierra Nevada at Walker Pass, then proceeded north through Owens Valley, then over to Benton Hot Springs, and east into present day Nevada. In the 1840s and 1850s, various emigrant guides and U.S. military personnel passed through the region, but few said it was an inviting place to settle. Their reports of the eastern Sierra front probably saved the area from settlement, which began in earnest in the early 1860s.

Ranching began in Owens Valley Paiute in 1861 as a way of supplying food to the early mining camps in Inyo and Mono counties. European-American settlement soon supplanted most Paiute settlements, with conflict and concomitant forced removal of most Owens Valley Paiute to Fort Tejon, California, by the United States troops. It was not until the late 1870s that permanent settlement took place at Mammoth Lakes, though a few individuals had combed the area in search of the Lost Cement Mine in the summer of 1861.

(b) Gold Discovery and Boom (1870 – 1900)

A gold mining claim, the Alpha, was staked on the slope of Mineral Hill (now called Red Mountain) in June 1877, initiating the establishment of the Lake Mining District.[10] Shorty after other claims followed and in 1878 most of these claims were purchased by a group of San Francisco investors who formed the Mammoth Mining Company. The mining district included the Mammoth Mining Company headquarters, mill, a small settlement, and mines were established approximately 0.5 mile north of the mines at Mill City, remnants of which are located within the project site. In the late 1870s, four camps were established near the mining activity with a fluctuating population of a thousand. The four camps were Mineral Park, located about one-mile north of Mineral Hill in a meadow, Mill City, located about 0.5 mile north of Mineral Hill, the largest camp, Mammoth City, located at the foot of Mineral Hill, and finally, Pine City, located west of the mines and approximately 1,500 feet north of Lake Mary.

A sawmill built at Mineral Park provided most of the industry for the camp, though a brewery, saloons, stores, hotel, stable, boardinghouse, and toll house represented other commercial endeavors, in addition to some 12 or so cabin residences. Mammoth City reportedly had 400 or 500 residents in 1880, while the smaller Pine City (also called Lake City) boasted a population of 17 persons in the same year, which included one engineer, one grocer, one toll road operator, one laborer, two miners, three blacksmiths, and four housewives. Both communities were within the project area. An unknown number of Paiute were said to have participated in mining and settlement at the Mammoth area in the 1870s and 1880s.

Although surrounded by lakes, the mining camps and the mill were situated so that they required water to be transported to them by means of ditches and flumes. In 1878, one covered flume was constructed from the north end of Twin Lakes to Mill City, the Bodle Ditch, while a second flume and diversion works were erected bringing water for domestic use to Pine City and to Mammoth City, farther up the road. Fragments of the

[9] *Peter Matranga, The Sherwin Project: A Cultural Resources Inventory and Assessment Mammoth Lakes, Mono County, California, Research Archeology, Project No. MO/I-2007(P), July 2007, 24.*

[10] *USDA Forest Service: Heritage Resource Site Record, Hayden Cabin (CA-MNO-2760-H), 1993, 1.*

Bodle Ditch are located within the project area. Presumably, the ditches continued in use until the mining camps were abandoned, mostly by the early 1880s.

The Lake Mining District boom was short-lived. By 1880, the Mammoth Mining Company folded, along with the surrounding mining camps;[11] and Mammoth City burned down the same year. Only a few people lingered on in the area thereafter. Other mines a few miles south of Pine City operated through the 1880s, while renewed attempts at working the Mammoth Mine on Red Mountain took place in the 1890s. Because these mines were abandoned in the late 19th century and left to deteriorate, few historic structures or associated mine features are extant.

(c) Transportation (1877 – 1940)

In order to move people, animals, food, equipment, and supplies in and out of the area, roads were needed; however, roads did not exist in the area prior to 1877. There were established Paiute trails over the Sierra, to the east, north, and south along the valleys; however, these trails could not support wagons and stagecoaches. Fortunately, the mining towns established in the 1860s already had links to the outside world. Roads were soon constructed to Benton (east) and to Bodie (north), since each town already had connections with Carson City, and indirectly with Reno, and the transcontinental railroad. Jim Sherwin constructed a toll road south from Mammoth City to Round Valley in the late 1870s that connected to a road he constructed from Bishop Creek to Round Valley in the early 1870s, providing the Lake District with access to railroads, markets and larger population centers through the Mojave Desert.

Forging links to the west was another matter. This required a route directly over the crest of the Sierra Nevada, traversing elevations of over 9,000 feet through Mammoth Pass. The result was the Fresno Flats Road which became a toll trail west of Lake Mary. J.S. French located and developed the 54-mile long trail and led saddle trains over the mountains to Fresno Flats (now Oakhurst) and back twice a week. This service and trail enabled miners and other goods from the San Joaquin Valley of California to directly travel to Mammoth City and the other camps. Beef cattle were moved over this trail, providing fresh meat for the Mammoth mountain-dwellers. According to Adele Reed, the Fresno Flats Trail was still in use in the 1930s, serving prospectors, sheepherders, USFS personnel, and Native Americans.[12]

(d) Early Development of Recreation (1900 – 1950)

At the turn of the century the community moved out of the lakes basin, where the failed mines were located, to Old Mammoth. The local economy once dependent upon mining, shifted towards tourism. A topographic map from 1913 demonstrates the population shift. Old Mammoth in 1913 was comprised of seven buildings located adjacent to an early road network. As the population grew, hotels, sawmills, stores, and barns were established.

Charles F. Wildasinn and his family built the first resort, the Wildasinn Hotel, around the turn-of-the-century, located between Mammoth Creek and Windy Flat meadow and located within the project area.[13] Later he added a small store. In 1918, Charles Summers established Mammoth Camp and constructed a hotel,

[11] *USDA Forest Service: Heritage Resource Site Recor, Hayden Cabin (CA-MNO-2760-H), 1993, 1.*

[12] *Adele Reed, Old Mammoth, Palo Alto, Ca: Genny Smith Books, 1982.*

[13] *USDA Forest Service: Heritage Resource Site Recor, Hayden Cabin (CA-MNO-2760-H), 1993, 1.*

boardinghouse, barn, and corrals. Later in 1923, a garage was constructed at Mammoth Camp, signifying the era of the automobile. In the early 1920s, a greater number of summer residents came to the area to camp and fish. Small cabins were built, as well as a post office. Unfortunately in 1927 a fire destroyed most of Mammoth Camp.

In 1908, The Home Lumber Company purchased and moved the Wildasinn Sawmill from the north side of Mammoth Creek to the vicinity of the present-day Shady Rest Campground and located within the project area.[14] The mill is depicted on the 1913 topographic map with the notation of "sawmill" and a scatter of seven buildings. The mill operated intermittently from 1908 to 1920. In 1920, interest in the mill was purchased by Fred and Arthur Hess and renamed the Hess Lumber Company. Under the new owners the mill operated from until 1930. In 1926 the mill was burned and rebuilt. After the death of Fred Hess in 1930, the mill and equipment was dismantled and moved to Bishop, California and the adjacent area has recently undergone development.

(e) Automobile Transportation, Tourism and Infrastructure (1917-1945)

In 1917, the first Ranger Station for the Mammoth Ranger District was established in the Inyo National Forest located along the road to the Lakes Basin (Old Mammoth Road) in Mammoth Meadow.[15] The site of the first ranger station is depicted on the Topographic map from 1914, in the Antelope Valley to the east of Mammoth. The Ranger station was located in one of three recreational residence tracts, created as part of the Forest Service effort to attract campers, hunters, and fisherman to the National Forrest. The Ranger station began to issue 99 year permits to build summer cabins in the 1920s. Nearly 100 cabins were constructed before World War II.[16]

After 1920, several resorts and campgrounds were established around the lakes and hundreds of small family cabins were built. One such cabin was the Hayden Cabin, constructed by the civil engineer Walter Emmett Hayden constructed between 1927 and 1938, as a summer residence. In 1925, the first rented tent houses were erected at Lake Mary, followed a few years later by the Crystal Trap Lodge situated at the south end of Lake Mary. In 1923, the Wildyrie resort was developed at Lake Mary, and around this same time, the Tamarack Lodge housed fishermen at Twin Lakes. Support and related services followed, including packers, guides, ice-harvesting, dairies, gas stations, restaurants, bakeries, and more.

After World War I, the transportation infrastructure was improved and the region experienced increasingly intense development and seasonal recreational use. Old Mammoth Road, which had served as the main thoroughfare since 1877, needed substantial improvement to support and attract additional tourism. The construction of Lake Mary Road in 1920 opened up the Lakes Basin to automobile traffic, and State Highway 203 was constructed in 1937. Branching off from Highway 395 near Casa Diablo, SR 203 was constructed north of the old road and made the Mammoth area more accessible to summer tourists. Most of the community, along with businesses, migrated to the new highway and built the town of new Mammoth, the present town of Mammoth Lakes, at the intersection of Old Mammoth Road and SR 203. The 1914 topographic map as revised in 1934 demonstrates the shift in population.

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[14] *Evaluation of Significance: Archaeological Reconnaissance Form. Home Lumber Company Sawmill (CA-Mno-622). Mammoth County Park Expansion/Hazard Reduction. 1975.*

[15] *USDA Forest Service: Heritage Resource Site Record, Hayden Cabin (CA-MNO-2760-H), 1993, 2.*

[16] *USDA Forest Service: Heritage Resource Site Record, Hayden Cabin (CA-MNO-2760-H), 1993, 1.*

The Mammoth Ranger station relocated to the near the new highway in 1938, and two houses for rangers were also constructed.[17] During this time the Civilian Conservation Corps (CCC), was building roads and campgrounds at the Lakes Basin, Convict Lake, and near camp headquarters at Shady Rest.

(f) Post World War II Tourism (1945 - 1960)

After the end of World War II, the Mammoth area was Southern California's most popular destinations for winter and summer sports and leisure. Winter skiing became a new major attraction at Mammoth in the 1940s, bringing enthusiasts and additional, specialized developments to the area from that time forward to the present. The 1953 Topographic map demonstrates the rapid growth of the Mammoth Lakes area. There are higher concentrations of buildings around the road networks of Old Mammoth and Mammoth Lakes in comparison to older topographic maps.

2. ENVIRONMENTAL IMPACTS

a. Methodology

(1) Cultural Resources Records Search

In the preparation of the cultural resources assessment, PCR utilized information from a previous records search conducted by LSA Associates, Inc. (LSA) for the TSMP and completed a supplemental in-house records search on April 4, 2011. The latter record search was conducted by PCR archaeologist, Mr. Matthew Gonzalez, at the CHRIS-EIC at the University of California, Riverside and focused on the SHARP Priority Projects since these project footprints have been finalized. The latter records searches included a review of recorded historical resources and archaeological sites within the Project and surrounding vicinity as well as a review of cultural resource reports and historic topographic maps on file. The purpose of the record search is to determine whether or not there are previously recorded archaeological or historical resources within the Project that require evaluation and treatment. The results also provide a basis for assessing the sensitivity of the Project for additional and buried cultural resources. Finally, the Inyo National Forest provided PCR with additional information regarding previously recorded resources and cultural resource surveys in the SHARP and TSMP areas.

The results of PCR's cultural resources records search through the CHRIS-EIC revealed that numerous archaeological resources are located within or in the immediate vicinity of the SHARP Priority Projects. These resources are summarized in **Table 4.D-1**, *Cultural Resources Located Within or in the Immediate Vicinity of the SHARP and TSMP.* According to previous records searches conducted by LSA, additional resources are located in the TSMP that are summarized in the **Table 4.D-2**, *Cultural Resources Located Within or In the Immediate Vicinity of the TSMP*. The resources include historic period resources such as buildings/cabins, refuse deposits, irrigation ditches, mining pits, foundations and other associated features that date to the late 19th century and early 20th century. The prehistoric period resources primarily consist of obsidian lithic scatters, although some midden and bedrock milling features have been identified. The density of both historic and prehistoric period resources is higher along the banks of Mammoth Creek and surrounding environs while the density of previously recorded resources is lower in the more elevated portions of the Project.

[17] *Adele Reed, Old Mammoth, Palo Alto, Ca: Genny Smith Books, 1982.*

Table 4.D-1

Cultural Resources Located Within or In the Immediate Vicinity of the SHARP and TSMP

Site Designation	Description	Project
CA-MNO-3H	Old Mammoth town site – historic structures and associated historic features and artifacts; prehistoric village site containing lithic scatters, midden, bedrock milling features. flaked tools, manos, metates, etc.	TSMP MUP 4-5
CA-MNO-561/52-043	Obsidian lithic scatter (prehistoric)	SHARP No. 6 (Summer)
CA-MNO-770	Sparse obsidian lithic scatter (prehistoric)	TSMP MUP 4-5
CA-MNO-871	Sparse obsidian lithic scatter (prehistoric)	SHARP No. 7 (Summer)
CA-MNO-893	Irrigation feature: Bodle Ditch (c. 1878) (historic)	SHARP No. 7 (Summer)
CA-MNO-907	Lithic scatter (prehistoric)	TSMP MUP 4-5
CA-MNO-2683	Sparse obsidian lithic scatter (prehistoric)	SHARP No. 6 (Summer)
CA-MNO-2760H	Hayden Cabin (historic)	SHARP No. 6 (Summer)
CA-MNO-2810	Sparse obsidian lithic scatter (prehistoric)	SHARP No. 7 (Summer)
CA-MNO-3793	Possible mining prospect pit (historic)	SHARP No. 5B-s (Summer)
CA-MNO-4197	Earthen irrigation ditch and metal pipeline (c. 1880 – 1914)	TSMP MUP 4-5
CA-MNO-3795	(Not Available)	SHARP No. 5B-s (Summer)
CA-MNO-4542/P-26-4915/52-2172	"Mammoth City Site" - 20+ historic structure pads, historic refuse scatters, prehistoric lithic scatters (c. late 19th century)	SHARP No. 5B-n (Summer)
CA-MNO-4642	(Not Available)	SHARP No. 6 (Summer)
52-011*	(Not Available)	TSMP MUP – Shady Rest Loop
52-035*	(Not Available)	SHARP No. 7 (Summer)
51-276*	(Not Available)	TSMP – Knolls North Route
51-305*	(Not Available)	TSMP – Overlook Trail/Shady Rest-West
51-306*	(Not Available)	TSMP – Shady Rest East Loop/Nature Walk
52-011*	(Not Available)	TSMP MUP (Shady Rest Area)
52-035*	(Not Available)	SHARP No. 7 (Summer)
52-866*	(Not Available)	SHARP No. 7 (Summer)
52-972*	(Not Available)	TSMP MUP – College Parkway Connector
52-2181*	(Not Available)	TSMP – Shady Rest-West
(Not Available)	Historic Fresno Flats Trail*	TSMP MUP – Lake Mary Rd. Bik Path

**Information provided by the Inyo National Forest*

Source: PCR Services Corporation, CHRIS-EIC, Inyo National Forest

Table 4.D-2

Cultural Resources Located Within or In the Immediate Vicinity of the TSMP

Site Designation	Description	Project
P-26-5009	Isolated flake (prehistoric)	Knolls – South Route (MUP)
CA-MNO-3H	Old Mammoth town site – historic structures and associated historic features and artifacts; prehistoric village site containing lithic scatters, midden, bedrock milling features. flaked tools, manos, metates, etc.	Potential Boardwalk
CA-MNO-888	Lithic scatter with multiple projectile point fragments, scrapers, and debitage (prehistoric)	Shady Rest East Loop (MUP)
CA-MNO-906	Lithic scatter (prehistoric)	Mammoth Creek Trail (MUP)
CA-MNO-907	Lithic scatter (prehistoric)	Mammoth Creek Trail (MUP)
CA-MNO-1655	Sparse lithic scatter (prehistoric)	203 South Connector (MUP)
CA-MNO-3454	Lithic scatter (prehistoric)	Knolls – North Route (SST)
CA-MNO-4197H	Earthen irrigation ditch and metal pipeline (c. 1880 – 1914)	Potential Boardwalk

Source: LSA Associates, Inc., CHRIS-EIC

Record search results indicate that there are several previously recorded historic resources within the Project.

There are two California Points of Historical Interest:

- Old Mammoth City, P15 (Registration date 3/29/1967) (State Parks Historic Inventory CA MNO 003; CRHR Status Code 7L: designated prior to January 1998-needs reevaluation using current standards)
- Sherwin's Grade Toll Road, P28 (Primary# 26-003061, Registration date 3/29/1967) (State Parks Historic Inventory MNO 016; CRHR Status Code 7L: designated prior to January 1998-needs reevaluation using current standards)

There is one property listed on the California Register:

- Hayden Cabin, P13 (Primary# 26-003728, registration date 7/14/1993)

The following resources have been evaluated previously and were found ineligible for listing on the National Register: Ranger Station (FS 05-03-52-961), CCC Camp (CA-MNO-623), and the Sawmill (site of the former Home Lumber Company)(CA-MNO-622). However, the previous surveys were conducted over ten years ago by archaeologists rather than qualified historians/architectural historians. It is recommended these resources be reevaluated since they are within the area of potential impact for the proposed Project.

According to the Inyo National Forest, two resources (52-035 and 52-866) are located in the vicinity of the SHARP No. 7 (Summer) project. It is possible that these resources are CA-MNO-871, -893, or -2810. [18] The

[18] *Further consultation with the Inyo National Forest is warranted to verify this conclusion.*

Inyo National Forest has also indicated that four resources (51-276, -305, -306, and 52-2181) are located within the trail corridors of proposed recreational trails in the Shady Rest area. The USFS also indicates that three additional resources (Historic Fresno Flats Trail, 52-011, and 52-592) are located within the TSMP near- and long-term MUPs.

In addition to providing information regarding previously recorded resources, the Inyo National Forest has summarized the survey coverage of the TSMP and SHARP project areas. According to the Inyo National

Forest, many of the project areas potentially affected by the TSMP and several portions of the SHARP areas have been previously surveyed. While detailed information on the extent and date of these surveys has not been provided by the USFS at this time, the available information concerning these surveys is outlined below.

Specifically, in regard to components of the TSMP; all of the Mammoth Mountain Trail, Paper Route Lakes Trails, Knolls Loop Trails, Lake Mary Road Bike Path, College Park Connector, Shady Rest Loop, Mammoth Creek Trail have been surveyed and it appears the Inyo National Forest would not require updated surveys for these areas unless a cultural resource is located within the APE. In that case, an additional site visit to confirm existing conditions and to evaluate the resource's eligibility would be required. If warranted, an impact analysis would be performed and appropriate mitigation would be recommended. These projects include the Lake Mary Road Bike Path (Historic Fresno Flats Trail), College Parkway Connector (52-972), and Shady Rest Loop (52-11). Other components of the TSMP that have been partially surveyed include sites in the vicinity of the TSMP Recreation Trails in the Shady Rest area (51-276, 51-305, 51-306, 52-2181), 203 South Connector/Hospital Industrial Park Access, Mammoth Creek MCWD Access, and Mammoth Creek Park. Additional surveys would be required for segments of these trails that have not been surveyed or in areas where a resource has been previously recorded to confirm existing conditions, conduct an impact analysis, and recommend appropriate mitigation.

According to the Inyo National Forest, portions of the SHARP have also been previously surveyed. These areas include portions of SHARP No. 5B-n, No. 6, No. 7, and No. 15. SHARP No. 5B-s has not been surveyed while the Panorama Dome Area has been completely surveyed. No information is provided for the other SHARP project components. As discussed above, additional surveys will be required for segments of these trails that have not been surveyed or in areas where a resource has been previously recorded to confirm existing conditions, evaluate their eligibility, conduct an impact analysis, and recommend appropriate mitigation.

The current location (or resource boundaries), condition, and contents of the resources (listed in Tables 2, 3, and 4 of the Cultural Resources Assessment, contained in Appendix F of this Draft EIR) would need to be field-verified by means of a pedestrian field survey. Because many years that have passed since the resources were initially recorded and the lack of accurate GPS receivers (and inadequate mapping standards) at that time, it is possible that some resources may no longer exist or may not be located where they were originally mapped. New surveys will also be required to identify if any previously unknown resources are located within the Project Area.

Because of the limited scope of the cultural resources records search, additional record searches at the CHRIS-EIC (if necessary) and the Inyo National Forest field office (in Bishop, CA) are recommended to identify previously recorded cultural resources within the Project. Additional consultation with Inyo

National Forest is also required from the Inyo National Forest regarding the location, condition, and content of the previously recorded resources and the previous survey studies that have been referenced in the Cultural Resources Assessment.

(2) Additional Methods for Historical Resources

The historical resources investigation included records searches and review of local histories to determine: (i) if known historical resources have previously been recorded within a half-mile radius of the Project; (ii) if the Project area has been systematically surveyed by historians prior to the initiation of the study; and/or (iii) whether there is other information that would indicate whether or not the area of the Project area is historically sensitive or may pose indirect impacts to adjacent historic resources. PCR consulted the National Register, California Register, California Historic Resources Inventory (HRI), California Points of Historical Interest (PHI), and California Historical Landmarks (CHL) to determine previously identified historical resources within a half-mile radius of the Project.

(3) Paleontological Resources Records Search

The paleontological resources records search consisted of an examination of geologic maps and paleontological locality records. In addition, the UCMP online database was accessed to determine if known vertebrate fossil localities are present inside or in the vicinity of the Project. Results of the record search indicate whether or not there are previously recorded paleontological resources within the Project that require evaluation and treatment. The results also provide a basis for assessing the sensitivity of the Project for additional and buried paleontological resources.

The paleontological records search through the UCMP online database determined that there are no known vertebrate, invertebrate, plant, microfossil, or other fossil localities that have been previously identified within the Project or the surrounding vicinity. The closest vertebrate fossil locality in the database is located more than 30 miles to the north. Initial consultation of collection records and geologic maps indicated that the Town area has no history of fossil resources, largely because the terrain was glaciated and is dominated by igneous and metamorphic rocks which are not conducive to retaining paleontological resources.

(4) Sacred Lands File Search and Native American Consultation

On August 25, 2010, Mr. Garcia commissioned a SLF records search of the SHARP Priority Projects through the California Native American Heritage Commission (NAHC) and conducted follow-up consultation with Native American groups and/or individuals identified by the NAHC as having affiliation with the Project vicinity. Each Native American group and/or individual listed was sent a project notification letter and map and was asked to convey any knowledge regarding prehistoric or Native American resources (archaeological sites, sacred lands, or artifacts) located within the SHARP Priority Projects or surrounding vicinity. The letter included information such as Project area location and a brief description of the proposed Project. Results of the SLF search and follow-up consultation will provide information as to the nature and location of additional prehistoric or Native American resources to be incorporated in the impact analysis whose records may not be available at the CHRIS-EIC.

Results of the SLF search through the NAHC *did not* indicate any known Native American cultural resources from the NAHC archives within the SHARP Priority Projects or within a half-mile radius. Pursuant to NAHC suggested procedure and in compliance with Section 106, follow-up letters were sent via certified mail on

November 30, 2010 to the seven (7) Native American individuals and organizations identified by the NAHC as being affiliated with the vicinity of the Project area to request any additional information or concerns they may have about Native American cultural resources that may be affected by the proposed Project. PCR has return receipts on file from each of the seven Native American contacts which confirms receipt of the submitted letters.

As of June 29, 2011, PCR has received no responses from the Native American community. PCR will keep the Lead Agencies informed with this ongoing Native American consultation. The NAHC SLF records search results letter, the Native American contact list, and other Native American consultation documentation is provided in Appendix A of the Cultural Resources Assessment contained in Appendix F of this Draft EIR.

b. Thresholds of Significance

Appendix G of the CEQA Guidelines contains the Initial Study Environmental Checklist form used during preparation of the project Initial Study, which is contained in Appendix A of this EIR. The Initial Study Environmental Checklist includes questions relating to cultural resources. The Initial Study Environmental Checklist questions relating to cultural resources have been utilized as the thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

Threshold 1: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5) (refer to Impact Statement 4.D-1).

Threshold 2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 (refer to Impact Statement 4.D-2).

Threshold 3: Directly or indirectly destroy a unique paleontological resource or site or unique geological feature (refer to Impact Statement 4.D-3).

Threshold 4: Disturb any human remains, including those interred outside of formal cemeteries (refer to Impact Statement 4.D-4).

c. Project Features

(1) Trails System Master Plan (TSMP)

The proposed TSMP includes various recommendations intended to enhance the in-town network of multi-use paths, trails and bikeways and improved access to trails and backcountry experiences beyond the Town's UGB. The recommendations are intended to guide development of a comprehensive trail system within the Town. As previously noted, the February 2009 Draft TSMP incorporates the Soft Surface Trails Concept and Sherwin Area Trails Special Study: elements of both of these components of the Draft TSMP have since been the subject of additional planning through the SHARP process, and are described separately below.

(2) Sherwin Area Recreation Plan (SHARP)

The proposed SHARP recommends winter and summer projects regarding trails, public access, and recreation facilities for implementation in the Sherwins area. The SHARP identifies 31 summer and 19

winter projects. All of the trails identified within SHARP are located on National forest lands; some or all of the existing and proposed trails and facilities may remain or become official USFS system trails, others may be constructed, operated and maintained by the Town under Special Use Permit from Inyo National Forest, or under collaborative programs developed between the two agencies. Examples of existing trails include, but are not limited to, Mammoth Rock Trail, Panorama Dome Trail, and the Sherwin Lakes Trail. All trails and facilities proposed in this plan are subject to review under the National Environmental Policy Act and would require approval by the US Forest Service to move forward. At this time, only a select number of the proposals have been accepted by the US Forest Service for further environmental review and consideration. Additional proposals included in the SHARP document may or may not be considered by the US Forest Service as future projects.

(3) Priority Projects

As described above, most of the projects included in the TSMP and SHARP are conceptual; however, some projects are more fully developed and have a high priority for implementation in the short-term (i.e., next 1-5 years). These projects are considered "Priority Projects" by the Town.

(4) Management and Maintenance

Management and maintenance activities may include activities such as vegetation clearing, surface repair, and winter grooming or clearing of existing and proposed trails. It is generally assumed that trails, bike facilities and MUPs located within the UGB, and within Town rights-of-way on easements within private property would be managed and maintained by the Town of Mammoth Lakes, as would facilities operated by the Town under Special Use Permit from the Inyo National Forest. Details of which system components within National forest lands would be operated or managed by the Town, US Forest Service, or some other entity would be developed as specific projects move forward.

(5) Construction Activities

Since the construction season typically lasts approximately six months (May to October), it would be likely that most SHARP Priority Projects would take at least two years to complete, although short sections (e.g., MUPs 2-1 and 3-1) may be completed in a single season. Construction on at least some projects could begin as early as summer 2011, though ultimately would be contingent on funding. It is anticipated all of the Priority Projects would be built within 5 years, with some degree of overlap in terms of projects under concurrent construction.

For other trail components of the TSMP and SHARP plans, construction of individual projects would occur as funding and resources become available over time with the duration of construction dependent on individual project types.

d. Analysis of Project Impacts

Historical Resources

4.D-1 Project implementation would potentially impact historical resources within the Project Area. However, analysis has concluded that impacts to historic resources would be reduced to a less than significant level with implementation of the prescribed mitigation measures.

Most of the projects included in the TSMP and SHARP do not entail substantial improvements that could affect historical resources. Results of the records search indicated that there are two California Points of Historical Interest, Old Mammoth City and Sherwin's Grade Toll Road, and one property listed on the California Register, the Hayden Cabin. New construction within these areas must comply with the *Secretary of the Interior's Standards for Rehabilitation*. The Hayden Cabin Path (SHARP No. 6) is listed on the California Register. Project improvements within Mammoth Creek Park East for parking, signage and trail improvements are proposed in the vicinity of Hayden Cabin. If any improvements occur in proximity to Hayden Cabin, specifically if they involve new structures or notable changes in the setting and landscaping adjacent to the resource, there could be significant indirect impacts on Hayden Cabin as a historic resource. Also, in the event additions or rehabilitation to Hayden Cabin occurs in association with the Project, significant impacts could result unless the improvements comply with the *Secretary of the Interior's Standards for Rehabilitation*.

Construction of Bridge MUP 4-3 and Tunnel X2-18 have the potential to significantly impact structures and/or subsurface historic deposits associated with the Old Mammoth Town Site. The Old Mammoth City neighborhood along Old Mammoth Road has a high potential to contain historical resources over 45 years in age that may be located within the project area or vicinity of a proposed new park (Owen Street). Mitigation measures are provided to address potential direct or indirect impacts on these resources. Mitigation involves Project review by a qualified historic preservation consultant who satisfies the Secretary of the Interior's Professional Qualification Standards for History, Architectural History, or Architecture, pursuant to 36 CFR 61, and has at least 10 years experience in reviewing architectural plans for conformance to the Secretary's Standards and Guidelines. The objective of this review is to help ensure that Project design and construction is carried out in a manner consistent with the preservation consultant's recommendations to ensure that the project meets the Secretary of the Interior's Standards for rehabilitation. A project that conforms to the Secretary of the Interior's Standards is considered fully mitigated under CEQA.

The proposed bathroom improvement for a trailhead at Shady Rest Sawmill Cutoff Road has the potential to directly or indirectly impact the Ranger Station and contributing setting and/or CCC Camp administration buildings/campground and associated landscape features and setting. To reduce potential impacts the project should avoid historic resources and its design should be compatible with existing architecture. If determined necessary, properties over 45 years in age within the proposed project area and vicinity must be surveyed, evaluated, and recorded on DPR forms by a qualified architectural historian. Potential impacts to identified resources must be assessed and the proposed project must comply with the requirements set forth in Section 106 (36 CFR Part 800) of the National Historic Preservation Act of 1966 (NHPA), as amended.

If found eligible, any new construction, additions or rehabilitation to these resources or their contributing settings could result in significant impacts, unless they are designed to comply with the *Secretary of the Interior's Standards for Rehabilitation*. In the event eligible historic resources are demolished for

construction of the park, mitigation would include completion of a Historic American Building Survey report per State and Federal guidelines.

Mitigation involves Project review by a qualified historic preservation consultant who satisfies the Secretary of the Interior's Professional Qualification Standards for History, Architectural History, or Architecture, pursuant to 36 CFR 61, and has at least 10 years experience in reviewing architectural plans for conformance to the Secretary's Standards and Guidelines. The objective of this review is to help ensure that Project design and construction is carried out in a manner consistent with the preservation consultant's recommendations to ensure that the project meets the Secretary of the Interior's Standards for rehabilitation. A project that conforms to the Secretary of the Interior's Standards is considered fully mitigated under CEQA.

With the implementation of Mitigation Measures 4.D-1 and 4.D-2, impacts to historical resources would be reduced to a less than significant level.

Archaeological Resources

4.D-2 Project implementation has the potential to significantly impact archaeological resources in the Project Area. However, analysis has concluded that impacts to archaeological resources would be reduced to a less than significant level with implementation of the prescribed mitigation measures.

The proposed TSMP and SHARP improvements would generally entail limited ground disturbing activities, with the exception of a number of specific project features and types of facilities. For the most part, the proposed improvements involve the installation of signage and minor surface grading for multi-use paths (MUPs) and soft-surface trails (including installation of stormwater management features such as slope variations, water bars, etc.), with excavations of less than one foot. Similarly, relatively limited surface grading for parking lots, parks, and other improvements requiring low-intensity construction would also occur with shallow depths of excavation required. For a number of improvements, however, such as grade-separated crossings, restrooms, and larger structures at recreational nodes and portals (and associated utilities), deeper and more extensive ground disturbance would be required for construction. Where Multi-Use Path segments traverse steep slopes, more extensive grading and excavation may be needed to bring the a trail facility to a suitable grade for its designated users.

Components of the Project that do not require excavation activities such as grading, trenching, or boring would result in no impacts to archaeological resources and therefore no additional analyses or mitigation is necessary. These projects would include areas where an existing trail or roadway will be utilized. Other Project components that include excavations into heavily disturbed soils or fill would also result in no impact to archaeological resources as resources have likely been displaced from previous disturbances and there is nearly no potential to encounter resources in fill soils.

However, all components of the Project that include excavations into native soils would require additional analyses to identify any potential archaeological impacts. The results of the cultural resources records search through the CHRIS-EIC revealed that there are multiple archaeological resources located within the Project and in the immediate vicinity. These findings confirm that the potential to impact archaeological resources (on the surface or buried) at Project components appears to be high if excavations are planned in native soil.

Before an adequate project-level impact analysis can be performed for these resources (or any other previously recorded resources within the project), the current location (or resource boundaries), condition, and contents of the resources shall be field-verified by means of a pedestrian field survey before site- and project-specific mitigation measures can be established to reduce, minimize, or avoid any impacts to these resources. New surveys will also be required to identify if any previously unknown resources are located within the Project. Furthermore, because of the many years that have passed since the resources were initially recorded and the lack of accurate GPS receivers (and inadequate mapping standards) at that time, it is possible that some resources may no longer exist or may not be located where they were originally mapped. This can only be confirmed with a current pedestrian field survey. Further consultation with the Inyo National Forest is also warranted regarding the resource information that was provided to PCR for the TSMP and SHARP. Therefore, these recommendations are included as Mitigation Measures 4.D-3 through 4.D-7 and are provided in the following section. These measures are recommended to reduce impacts to archaeological resources to a less than significant level.

The positive results of the records search indicate that the Project has a moderate to high potential to impact archaeological resources. Future archaeological sensitivity assessments will be performed on a project-by-project basis and will take into account previous land use/disturbances, project impacts (direct and indirect), and location of known resources in the vicinity.

Paleontological Resources

4.D-3 Project implementation would potentially impact paleontological resources in the Project Area. However, analysis has concluded that impacts to paleontological resources would be reduced to a less than significant level with implementation of the prescribed mitigation measure.

Results of a paleontological records search through the UCMP online database indicated that there are no recorded fossil localities within the Project or within the surrounding vicinity. The closest known vertebrate fossil locality is located more than 30 miles north of the Project. Initial consultation of collection records and geologic maps (Jennings 1977) indicate that the Mammoth Lakes area has no history of fossil resources largely because the terrain is dominated by igneous and metamorphic rocks which are not conducive to retaining paleontological resources. Pleistocene glacial deposits overlie the basement and volcanic rocks in the Project and throughout the Town. Results of previous geotechnical studies for projects within the Town indicate that the lower portions of the Town and the UGB are underlain by undocumented fill (in developed areas), quaternary younger alluvium, and quaternary Tioga Till (i.e., glacial till) (Sierra Geotechnical Services, Inc. 2005). Apart from glacial deposits, there are no sediments old enough to produce fossils inside or within the vicinity of the Project and it is unlikely that shallow excavations associated with the proposed Project will encounter these deposits. However, there is a low to moderate potential to encounter paleontological resources in glacial deposits within the proposed Project area. As such, Mitigation Measure 4.D-8, which would apply to all construction activities, is recommended. With the implementation of this mitigation measure, impacts to paleontological resources would be reduced to a less than significant level.

Human Remains

4.D-4 The Project could impacts older burial sites or human remains associated with archaeological sites. However, impacts would be reduced to less than significant levels with the implementation of mitigation measures related to archaeological resources.

According to record searches conducted through the CHRIS-EIC, no existing or former cemeteries (including Native American human remains) have been recorded within the TSMP and SHARP project areas or immediate vicinity. Furthermore, the SLF search through the NAHC did not indicate any known Native American cultural resources within the SHARP Priority Projects sites or within a half-mile radius of these sites. The NAHC results also noted, however, that the "absence of archaeological items is not evidence that it does not exist at the subsurface level." No existing or known burial sites or cemeteries are known to occur in the locations of TSMP and SHARP projects and, as such, impacts on human remains is not expected. If such resources are accidentally encountered during project implementation, Mitigation Measures 4.D-7, below, would reduce impacts to human remains to a less than significant level.

3. MITIGATION MEASURES

The mitigation measures listed below apply to all components of the Project including the TSMP and SHARP. PCR recommends these measures to identify and mitigate impacts to cultural resources. It is recommended that subsequent, more focused environmental review shall occur which may result in more specific mitigation.

Historical Resources

Mitigation Measure 4.D-1: The Old Mammoth City neighborhood and Sherwin's Grade Toll Road are both previously identified California Points of Historical Interest, and therefore, improvements on or adjacent to the points of interest that have the potential to directly impact these resources or their settings, must be designed to comply with the Secretary of the Interior's *Standards*. Likewise, the Ranger Station and/or CCC Camp administration buildings/campground in the vicinity of the Shady Rest Sawmill Cutoff Road, on USFS lands, are previously surveyed resources that require reevaluation by qualified surveyors, if determined necessary. Prior to designing or implementing projects in this area, the Town shall engage a qualified historic preservation consultant to review the proposed projects. A qualified architectural historian, historic architect, or historic preservation professional is someone who satisfies the Secretary of the Interior's Professional Qualification Standards for History, Architectural History, or Architecture, pursuant to 36 CFR 61, and has at least 10 years experience in reviewing architectural plans for conformance to the Secretary's Standards and Guidelines. The Town shall undertake and complete construction in a manner consistent with the preservation consultant's recommendations to ensure that the Project meets the *Secretary of the Interior's Standards for Rehabilitation*. The preservation consultant shall review the final construction drawings for conformance to the Secretary of the Interior's Standards and prepare a memo commenting on the final Project. A Project that conforms to the Secretary of the Interior's *Standards* is considered fully mitigated under CEQA. For projects on federal lands, upon completion of any report on findings, the State Historic

Preservation Officer shall be consulted to allow for Section 106 review and concurrence with the study findings.

Mitigation Measure 4.D-2: The Hayden Cabin is listed on the California Register and new adjacent construction, additions, or rehabilitation to the Hayden Cabin or its contributing property setting visible from the Hayden Cabin, other than surface trail or minor paving improvements, must comply with the Secretary of the Interior's *Standards*. Prior to designing or implementing such improvements in this area the Town shall engage a qualified historic preservation consultant to review the proposed Project. A qualified architectural historian, historic architect, or historic preservation professional is someone who satisfies the Secretary of the Interior's Professional Qualification Standards for History, Architectural History, or Architecture, pursuant to 36 CFR 61, and has at least 10 years experience in reviewing architectural plans for conformance to the Secretary's Standards and Guidelines. The Town shall undertake and complete construction in a manner consistent with the preservation consultant's recommendations to ensure that the Project meets the *Secretary of the Interior's Standards for Rehabilitation*. The preservation consultant shall review the final construction drawings for conformance to the Secretary of the Interior's *Standards* and prepare a memo commenting on the final Project. A Project that conforms to the Secretary of the Interior's Standards is considered fully mitigated under CEQA.

Archaeological Resources

For subsequent projects that require excavation activity (e.g., grading, trenching or boring) into native soil, the following mitigation measures are recommended:

Mitigation Measure 4.D-3: The Town shall conduct a Phase I Cultural Resources Assessment of the Project to identify any archaeological resources within the area of a proposed project component. The Area of Potential Effect (APE[19]) will be the focus of the analyses for projects located on federal lands per Section 106. The Phase I assessment shall include cultural resources records searches through the Eastern Information Center (as needed) and the Inyo National Forest Field Office, a Sacred Lands File search through the Native American Heritage Commission and follow-up Native American consultation, and a pedestrian survey of the Project area *(Note: Surveys may not be required in areas of the TSMP and SHARP that have already been surveyed unless resources were identified; such a determination should be made in consultation with the Inyo National Forest).* For projects on federal lands, upon completion of any report on findings, the State Historic Preservation Officer shall be consulted to allow for review and concurrence with the study findings.

- If resources are identified during the Phase I assessment, then a Phase II assessment shall be required, as described in Mitigation Measure 4.D.-4

[19] *The Inyo National Forest has determined that the APE for the Project includes the Project footprint and a 15-meter buffer area extending from the trail centerline or any other ground-disturbing activity associated with the proposed Project on federal lands.*

- If no resources are identified as part of the assessment, no further analyses or mitigation shall be warranted, unless it can be determined that the project has a high potential to encounter buried archaeological or historical resources;

- If it determined that there is a moderate or high potential to encounter buried archaeological resources, appropriate mitigation shall be developed and implemented. Appropriate Mitigation may include, realignment of the trail to avoid the sensitive area, in which case no additional mitigation would be required. If avoidance is not possible, appropriate mitigation may include but not be limited to the following:

Archaeological Monitoring During Construction: A qualified archaeologist shall be retained by the Town and approved by the reviewing agencies prior to the commencement of the Project. The archaeologist shall monitor all ground-disturbing activities and excavations within the Project area. If archaeological resources are encountered during implementation of the Project, ground-disturbing activities shall temporarily be redirected from the vicinity of the find. 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 that may include the development and implementation of a testing/data recovery investigation or preservation in place. The archaeologist shall prepare a final report about the find to be filed with the Town and the CHRIS-EIC, as required by the California Office of Historic Preservation. The report shall include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the eligibility with respect to the California and National Registers. The Town, in consultation with the archaeologist, shall designate repositories to curate any material in the event that resources are recovered on Town property. If the resources are encountered on private land, the landowner shall determine appropriate curation in consultation with the archaeologist and Lead Agency. If archaeological resources are encountered on federal lands, ground-disturbing activities shall cease in the immediate vicinity of the find and the Inyo National Forest shall be contacted immediately. The Inyo National Forest shall provide direction as to the appropriate evaluation, treatment, and curation of the find.

Mitigation Measure 4.D-4: If resources are identified during the Phase I assessment, a Phase II Cultural Resources Assessment may be warranted if improvements or new public access is proposed in the vicinity of such resources, or if an alternate alignment is not selected. The Phase II assessment shall evaluate the resource(s) for listing in the California Register of Historical Resources (per CEQA) and the National Register of Historic Places (per Section 106). If enough data is obtained from the Phase I assessment to conduct a proper evaluation, a Phase II assessment may not be necessary. Methodologies for evaluating a resource can include, but are not limited to: subsurface archaeological excavations, additional background research, and coordination with interested individuals in the community.

Mitigation Measure 4.D-5: If, as a result of the Phase II assessment, resources are determined eligible for listing, potential impacts to the resources shall be analyzed and if impacts are significant and cannot be avoided, mitigation measures shall be developed and implemented to reduce impacts to the resources. If avoidance is not feasible, then Phase III Cultural Resources Assessments shall be implemented. Phase III assessments can include, but are not limited to: additional subsurface archaeological excavations (i.e., data

recovery) and/or archaeological monitoring during ground-disturbing activities. For projects on National Forest lands, coordination and concurrence with the Inyo National Forest and State Historic Preservation Officer regarding treatment or mitigation shall be required. The performance standard for this mitigation measure is to reduce potential impacts to archaeological resources to a less than significant level.

The following mitigation measures apply to all components of the Project:

Mitigation Measure 4.D-6: If archaeological resources are encountered during implementation of the Project, ground-disturbing activities should temporarily be redirected from the vicinity of the find. The Town shall immediately notify a qualified archaeologist of the find. The archaeologist should coordinate with the Town as to the immediate treatment of the find until a proper site visit and evaluation is made by the archaeologist. Treatment may include the implementation of an archaeological testing or salvage program. All archaeological resources recovered will be documented on California Department of Parks and Recreation Site Forms to be filed with the CHRIS-EIC. The archaeologist shall prepare a final report about the find to be filed with the Town and the CHRIS-EIC, as required by the California Office of Historic Preservation. The report shall include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the eligibility with respect to the California and National Registers. The Town, in consultation with the archaeologist, shall designate repositories to curate any material in the event that resources are recovered on Town property. If the resources are encountered on private land, the landowner shall determine appropriate curation in consultation with the archaeologist and Lead Agency. The archaeologist shall also determine the need for archaeological monitoring for any ground-disturbing activities in the area of the find thereafter. If archaeological resources are encountered on federal lands, ground-disturbing activities shall cease in the immediate vicinity of the find and the Inyo National Forest shall be contacted immediately. In such cases the Inyo National Forest shall provide direction as to the appropriate evaluation, treatment, and curation of the find.

Mitigation Measure 4.D-7: If human remains are encountered unexpectedly during construction excavation and grading activities, pursuant to California Health and Safety Code Section 7050.5, the Applicant shall halt ground-disturbing activities within the area of the human remains and notify the County Coroner. If the remains are determined to be of Native American descent, the coroner shall have 24 hours to notify the California Native American Heritage Commission (NAHC). The NAHC shall identify the person(s) thought to be the Most Likely Descendant of the deceased Native American, who shall have 48 hours from notification by the NAHC to inspect the site of the discovery of Native American remains and to recommend to the Applicant or landowner means for treating and disposition, with appropriate dignity, the human remains and any associated grave goods. The Applicant or landowner shall reinter the remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance. If the remains are determined to be of Native American descent and are located on federal lands, the coroner has 24 hours to notify the NAHC and the Inyo National Forest of the discovery. The Inyo National Forest shall take the appropriate steps to comply with the federal Native American Graves Protection and Repatriation Act (NAGPRA). NAGPRA stipulates that Native American remains and associated funerary objects belong to lineal descendants. If the descendants cannot be identified, then those remains and objects, along with unassociated funerary or sacred object and objects of cultural patrimony

belong to the tribe on whose lands the remains were found or the tribe having the closest relationship to them.

Paleontological Resources

The below mitigation measure applies to all components of the Project:

Mitigation Measure 4.D-8: If paleontological resources are encountered during implementation of the Project, ground-disturbing activities shall temporarily be redirected from the vicinity of the find. The Town shall immediately notify a qualified paleontologist of the find. The paleontologist shall coordinate with the Town as to the immediate treatment of the find until a proper site visit and evaluation is made by the paleontologist. Treatment may include the implementation of salvage excavations or preservation in place. The paleontologist shall prepare a final report on the find that shall include appropriate description of the fossils, treatment, and curation. A copy of the report shall be filed with the Town and an appropriate paleontological institution, and shall accompany any curated fossils. The paleontologist shall also determine the need for paleontological monitoring for any ground-disturbing activities in the area of the find thereafter. If paleontological resources are encountered on federal lands, ground-disturbing activities shall cease in the immediate vicinity of the find and the Inyo National Forest shall be contacted immediately. In such cases the Inyo National Forest shall provide direction as to the appropriate evaluation, treatment, and curation of the find.

4. CUMULATIVE IMPACTS

4.D-5 The project combined with cumulative projects may impact known or unknown cultural resources. However, project-by-project analysis of cultural resources impacts and compliance with applicable regulatory requirements would ensure that potentially significant cumulative impacts to cultural resources are reduced to a less than significant level.

Cumulative impacts refer to incremental effects of an individual project when viewed in connection with the effects of past projects, current projects, and probable future projects (Section 15130 of the *CEQA Guidelines*). Approximately 24 related projects, all but two of which are located within the UGB, have been identified for the cumulative impacts analysis. However, where applicable, related projects would be required to comply with federal and state regulations regarding cultural and paleontological resources. With the project-by-project evaluation of cultural and paleontological resources and respective implementation of required mitigation measures where indicated, cumulative impacts to cultural and paleontological resources would be less than significant.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

With the implementation of and adherence to the prescribed mitigation measures included herein, all potentially significant impacts would be reduced to a less than significant level.