

## 4.9 CULTURAL AND PALEONTOLOGICAL RESOURCES

### 4.9.1 INTRODUCTION

This section addresses the potential for the Amoruso Ranch Specific Plan (ARSP or Proposed Project) to impact cultural and paleontological resources. Cultural resources include sites, artifacts, and features associated with human activities and can date to the historic or prehistoric period. Prehistoric resources are those associated with Native American activities and pre-date European contact. Historic resources can be structures, features, or artifacts that post-date European arrival in the region. Paleontological resources are subsurface plant and animal fossils from the Pleistocene era or older.

The information presented in this section is derived from three cultural resource surveys, a paleontological assessment, and a historical resource evaluation. The studies conducted for the Proposed Project include:

- ECORP Consulting, Inc. *Cultural Resources Survey Report, Amoruso Property, Placer County, California*, December 2008 (Revised February 2013; ECORP, 2008b)
- Past Forward, Inc. Letter report: *Buildings and Structures at 5101 Sunset Boulevard West, Roseville, CA 95747*, March 2011 (Pas Forward, 2011)
- ECORP Consulting, Inc. *Addendum to Cultural Resources Inventory for the Amoruso Ranch Project Area, Placer County, California*, April 2011 (ECORP, 2011d)
- PaleoResource Consultants and F & F GeoResource Associates, Inc. *Amoruso Ranch Specific Plan Paleontological Resource Impact Assessment*, July 2014 (Paleo Resource, 2014)
- ECORP Consulting, Inc. *Cultural Resources Survey Report for the Al Johnson Wildlife Area Improvements Area, Placer County, California*, September 2014 (ECORP, 2014f)

Non-confidential portions of the documents listed above are available for review during normal business hours (Monday through Friday 8 a.m. to 5 p.m.) at:

**City of Roseville Permit Center**  
311 Vernon Street  
Roseville, CA 95678

In response to the Notice of Preparation (NOP; **Appendix C**), the City did not receive any comments pertaining to cultural resources. Refer to **Appendix C** of this EIR to view the comments received on the Proposed Project in response to the NOP.

### 4.9.2 ENVIRONMENTAL SETTING

The majority of the project site is undeveloped and was historically used for agricultural or grazing activities. The following prehistoric, ethnographic, historic, and paleontological setting sections summarize the ECORP (2008b) survey report.

## Prehistoric Setting

**Paleo-Indian Period (10,000–8,500 B.C.).** The earliest occupants of California are believed to have subsisted by hunting big game including Pleistocene megafauna such as mammoths and giant sloths. Although tools for grinding foodstuffs are occasionally found on sites dating to this period, archaeological evidence indicates that the gathering of plant material may have been only a small part of their subsistence strategy. Evidence for this wide-ranging, highly nomadic lifestyle has been found all over the West, from sites in what are today deserts, but were then inland lakes with resource-rich marshlands. Few sites from this period have been found in California.

**Early Archaic Period (8,500–4,000 B.C.).** With the end of the Pleistocene, the climate began a warming and drying trend that lasted for several thousand years. The pluvial lakes that had covered large areas of the Great Basin began to dry up, and megafauna went extinct. People adapted to these changes by shifting their foraging emphasis away from hunting and increasing their use of plant resources, as evidenced by a marked increase in stone tools (manos and metates) designed to grind plants and seeds found on sites. This, combined with a greater reliance on local stone sources, suggests that groups began to focus on smaller territories, moving seasonally to take advantage of various resources as they became available.

**Middle Archaic Period (4,000–2,000 B.C.).** Another major change in subsistence came in the Middle Archaic Period when acorns were adopted as a staple food. With this staple, an increase in group size and population densities occurred. Sedentism (permanently remaining in one place) increased and trade networks grew, bringing in goods from a wide-range of sources. Subsistence strategies expanded, and included hunting a variety of game animals, fishing, and gathering numerous types of wild plants.

**Late Archaic Period (2,000 B.C.–A.D. 500).** An increase in the number of archaeological sites dating to this period suggests an increase in population, which may be linked to adoption of the acorn as a reliable food resource. People moved into environmental zones that had previously been used only marginally, such as the middle and high Sierra. Increasingly complex social and political organizations and networks evolve in this period.

**Emergent Period (A.D. 500–1769).** Bow and arrow technology were introduced, leading to increased hunting efficiency. Another major shift in technology at this time is the movement away from portable manos and metates towards the increased use of bedrock mortars and milling stations. The increasing complexity of societies continues to be seen in archaeological sites dating to this period, as does the widening of trade networks, development of food storage and redistribution systems, and the increasing intricacy of ceremonial and funerary patterns. During this period, Europeans began exploration of California, culminating with the establishment of Spanish missions and presidios along the coast.

## Ethnographic Setting

Ethnographically, the project site is in the southwestern portion of the territory occupied by the Penutian-speaking Nisenan. Their territory included the drainages of the Yuba, Bear, and American rivers, as well as the lower Feather River. The Sacramento River bounded the territory on the west, and in the east the territory extended nearly to Lake Tahoe. The Nisenan language has three main dialects: Northern Hill,

Southern Hill, and Valley Nisenan. The Valley Nisenan lived along the Sacramento River, establishing large villages with populations of several hundred people each. Between there and the foothills, the grassy plains were largely unsettled, used mainly as a foraging ground by both valley and hill groups.

Politically, the Nisenan were divided into tribelets, made up of a primary village and a series of outlying hamlets, presided over by a hereditary chief. Villages typically included family dwellings, acorn granaries, a sweathouse, and a dance house.

Subsistence activities centered on the gathering of acorns, seeds, and other plant resources. The hunting of animals such as deer and rabbits, and fishing were also an important part of normal subsistence activities. Large predators, such as mountain lions were hunted for their meat and skins, and bears were hunted ceremonially. Although acorns were a staple of the Nisenan diet, they also harvested roots like wild onion and “Indian potato,” which were eaten raw, steamed, baked, or dried and processed into flour cakes to be stored for winter use. Deer hunting often took the form of communal drives, involving several villages, with killing done by the best marksmen from each village. Snares, deadfalls, and decoys were used as well. Fish were caught by using a variety of methods including use of hooks, harpoons, nets, weirs, traps, poisoning, and by hand.

The Spanish arrived on the central California coast in 1769 and, by 1808, Gabriel Moraga had crossed Nisenan territory. In 1833, an epidemic—most likely malaria—raged through the Sacramento Valley, killing an estimated 75 percent of the native population. The discovery of gold in 1848 at Sutter’s Mill, near the Nisenan village of Koloma (now Coloma) on the South Fork of the American River, drew thousands of miners into the area, and led to widespread killing and the virtual destruction of traditional Nisenan culture.

### Historic Setting

Colonization of California began with the Gaspar de Portolá expedition, exploring the California coast from San Diego to the Monterey Bay Area in 1769. As a result of this expedition, Spanish missions to convert the native population, presidios (forts), and pueblos (towns) were established. The missions and presidios were intended to exert Spanish control over the territory. After Mexico became independent from Spain in 1821, what is now California became the Mexican province of Alta California with its capital at Monterey. The Mexican government closed the missions in the 1830s and former mission lands, as well as previously unoccupied areas, were granted to retired soldiers and other Mexican citizens for use as ranchos.

Mexico maintained control over California—as well as portions of many other territories which are now part of the American West and Midwest—until the period of the Mexican-American War (Mexican War) which began in 1846 and ended in 1848. The American period began with the signing of the Treaty of Guadalupe Hidalgo, which ended the Mexican War and ceded possession of the California territory to the United States. Rapid population increase occasioned by the Gold Rush of 1849 spurred California’s admission as a formal state to the United States in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but usually with more restricted boundaries, which were surveyed by the U.S. Surveyor General’s office.

Placer County (County) formed in 1851 from parts of Sutter and Yuba Counties. The principal economic activity in much of the County at that time was placer mining, hence the name. However, gold deposits were absent in the alluvial valley portion of the western County, and ranching (cattle and sheep) and agriculture (wheat cultivation) were the principal economic activities in those areas. The Proposed Project vicinity has been used primarily for agricultural production since it was first settled. Expansive grasslands made cattle ranching and wheat farming profitable even with only seasonal rains. Demand for beef accelerated with the onset of the Gold Rush and increasing settlement and, more recently, rice farming has become a primary agricultural activity.

A growing network of roads and railroads, spurred by the need to get from Sacramento to the gold diggings, led to increased development in the region as well. Lincoln, Folsom, Marysville, and Roseville were all early depots established by the Central Pacific Railroad. On April 25, 1864, the Central Pacific Railroad was completed from Sacramento to Roseville and soon trains were traveling to and from Sacramento on a daily basis.

Roseville served as a supply and shipping point for the local farmers and ranchers. Between 1906 and 1909, Roseville became one of the fastest-growing towns in the area when the Southern Pacific Railroad repair facilities and roundhouse, originally located in Rocklin, were moved to Roseville, and by the 1920s, Roseville had one of the largest freight yards west of the Mississippi River. During the early to mid-1900s, the town remained an important railroad depot; however, the depot was closed in 1972, once Interstate 80 was completed, and other means of transportation had become common. Although Roseville was strongly affected by the decline in railroad transportation, the town has continued to grow due to the introduction of many industrial headquarters and the proximity to Sacramento.

### ***The Amoruso Family***

Angelina and Thomas Amoruso, Italian immigrants living in Massachusetts, began visiting California in the 1940s and, in 1942, moved to Sacramento. Angelina purchased a house in downtown Sacramento and soon purchased orchards in several counties, as well as a chicken ranch.

In 1952, Angelina bought property in Placer County from Leslie Albert Butler, including the project site. From 1952 to 1964, the property was leased to John Mourier, Sr., who used the land to grow winter wheat and oats. In 1964, Angelina's son Peter took over the property and began using it for cattle ranching. Angelina and Peter managed the family's property until 1980, when Angelina passed away and Peter took over the family's holdings. Peter remained interested in real estate and ranching until 2006, when he, too, passed away.

### **Paleontological Setting**

The eastern margin of the Central Valley is a nearly continuous series of coalescing alluvial fans, which form a continuous belt between the uplands of the Sierra Nevada and the nearly flat surface of the Central Valley floor (PaleoResource, 2014). These deposits formed primarily during the Plio-Pleistocene by the streams that drained the adjacent uplands of the Sierra Nevada. The alluvial deposits accumulated on Central Valley alluvial fans consist of medium- to fine-grained sediment eroded from Tertiary and older volcanic, plutonic, and metamorphic rocks in the mountains to the east. The gravel,

sand, and silt that compose these alluvial fans have in the past produced significant fossils, primarily large land mammals, such as mammoths, mastodons, camels, bison, and horses.

### **Resource Identification Efforts**

#### ***Archaeological Records Search***

The North Central Information Center (NCIC) completed a cultural resources records search in 2008 for the Proposed Project site, and in 2014 for the adjacent Al Johnson Wildlife Area. In each case, the standard resources were consulted, including:

- Historic Property Data File for Placer County;
- The National Register Information System website;
- California Historical Landmarks;
- California Points of Historical Interest;
- Directory of Properties in the Historical Resources Inventory;
- Caltrans Local and State Bridge Surveys (Caltrans, 2014); and
- Commonly consulted texts such as Historic Spots in California (Kyle, 2002).

Other references examined include DataQuick Property Searches, historic General Land Office land patent records, historic U.S. Geological Survey (USGS) topographic maps and historic aerial photos taken in 1947, 1958, 1966, 1984, 1988, 1998 and 2010. No structures were depicted on any of these maps until two stock ponds showed up on the 1981 revised version of the 1967 USGS Pleasant Grove topographic quadrangle, indicating a construction date between 1967 and 1981 (ECORP, 2008b; 2014f).

Five previous archaeological surveys have been conducted within 0.5 mile of the project site, but none included the current Proposed Project footprint.

#### ***Previously Recorded Resources***

The record search results included an isolated mano (a hand-held seed or plant grinding tool) found within the project site and three historical resources found outside the project site within a 0.5 mile radius. These historical resources included a lambing barn, a sheep-shearing barn, and the Fiddyment Ranch Complex (CA-PLA-970). When ECORP submitted its original 2008 cultural resources report (revised in 2013), the three historic-period properties had been evaluated as 6Y, “determined ineligible” for the National Register of Historic Places (NRHP) by consensus through the Section 106 process. However, in June 2009, the Fiddyment Ranch Complex, which consists of historic buildings, ranch features, and surrounding fields, was nominated to the NRHP and was listed on the NRHP in July 2010.

#### ***Cultural Resources Surveys***

The following areas were surveyed for cultural resources: 674 acres within the project site boundaries (not including the 20-acre Urban Reserve parcel, because no development is proposed at this time and the landowner is not a project participant), an approximately 1-acre area within the adjacent right-of-way of Sunset Boulevard West, and a 17.2-acre area within the Al Johnson Wildlife Area proposed for drainage improvements. The original project footprint was surveyed from January 14–January 18, 2008 by archaeologists using parallel transects spaced approximately 10 to 15 meters apart. No

archaeological resources were identified, but the survey team noted several pieces of farm equipment, most of which were still in use and post-dated 1973 (ECORP, 2008b). The ECORP team tried to find, but could not relocate, the isolated prehistoric mano that had been previously recorded within the Proposed Project footprint.

A supplemental survey was conducted in February 2011 after the project site was enlarged (ECORP, 2011d). No archaeological sites were identified; however, a ranch complex dating to 1954 was noted. The complex included a residence, barns, corral, and farming equipment. The ranch was formally recorded by Past Forward, Inc. (2011) and evaluated as not eligible for listing on the NRHP or the California Register of Historical Resources (CRHR).

In 2014, ECORP undertook a cultural resources survey of the 17.2-acre Al Johnson Wildlife Area to the west of the project site (ECORP, 2014f); no cultural resources were identified.

### ***Paleontological Records Search***

Geological maps and reports were reviewed which included the bedrock and surficial geology of the project site, and aerial photographs were examined to aid in determining the distribution of distinctive sediment and soil types. A literature review and an archival search at the University of California, Museum of Paleontology were also completed (PaleoResource, 2014).

In the site vicinity, sediments composing the coalesced American River-Pleasant Grove Creek alluvial fan have been divided into four stratigraphic units, the Laguna Formation, the Turlock Lake Formation, the Riverbank Formation, and the Modesto Formation. Each of these stratigraphic units has yielded fossil remains at localities within the Central Valley (PaleoResource, 2014). Within the project site, the Riverbank formation has been found overlying the Turlock Lake formation.

### ***Paleontological Resources Survey***

A field survey for paleontological resources on December 1, 2011 documented the presence of sediments suitable for containing fossil remains and the presence of any previously unrecorded fossil sites. Previously unknown fossil localities were found immediately south of the project site in sediments identical to those observed within the project site. These fossils consisted of burrows (also known as ichnofossils) and fossil plant fragments found in Turlock Lake Formation exposures along University Creek along the southern border of the project site. These fossil discoveries suggest a high potential for additional similar fossil remains to be located within areas of the project site that contain the Turlock Lake Formation. Because the Turlock Lake Formation has produced significant fossils in the past, this stratigraphic unit is judged to have a high potential for significant paleontological resources. No Riverbank Formation fossils were noted, although they have been identified in the project region.

## **4.9.3 REGULATORY SETTING**

Cultural resources are buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. Several laws and regulations at the state level govern archaeological and historic resources deemed to have scientific, historic, or cultural value. The pertinent regulatory framework, as it applies to the Proposed Project, is summarized below.

### Federal

#### *Historical Resources*

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into consideration the potential effects of proposed undertakings on cultural resources listed on or determined potentially eligible for inclusion in the NRHP, and to allow the Advisory Council on Historic Preservation the opportunity to comment on the proposed undertaking. The regulations implementing Section 106 are promulgated by the Secretary of the Interior, as codified in Code of Federal Regulations (CFR) Title 36, Part 800 (36 CFR Part 800).

The NHPA authorizes the Secretary of the Interior to maintain and expand a National Register of districts, sites, buildings, structures, and objects of significance in American history, architecture, archaeology, engineering, and culture. A property may be eligible for listing in the NRHP if it meets criteria for evaluation as defined in 36 CFR 60.4, as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and:

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

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP.

All properties change over time; therefore, it is not necessary for a property to retain all its historic physical features or characteristics in order to be eligible for listing on the NRHP. The property must, however, retain enough integrity to enable it to convey its historic identity; in other words, to be recognizable to a historical contemporary.

While most historic buildings and many historic archaeological properties are significant because of their association with important events, people, or styles (criteria A, B, and C), the significance of most prehistoric and historic-period archaeological properties is usually assessed under criterion D. This criterion stresses the importance of the information contained within an archaeological site, rather than its intrinsic value as a surviving example of a type or its historical association with an important person or event.

#### *Paleontological Resources*

Paleontological resources are classified as non-renewable scientific resources and are protected by several federal and state statutes, most notably by the 1906 Federal Antiquities Act (PL 59-209; 16

United States Code 431 et seq.; 34 Stat. 225), which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal lands. Because the Proposed Project does not include any federal lands, this statute does not apply.

### State

#### ***Historical, Archaeological, and Tribal Cultural Resources and Human Remains***

##### ***California Environmental Quality Act (CEQA)***

Under the California Environmental Quality Act (CEQA), public agencies must consider the effects of their actions on both “historical resources” and “unique archaeological resources.” Pursuant to Public Resources Code (PRC) section 21084.1, a “project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” “Historical resource” is a term of art with a defined statutory meaning. (See PRC section 21084.1 and CEQA Guidelines, section 15064.5, subdivisions [a] and [b]; see also PRC sections 5020.1[i] and [k], 5024.) The term includes (1) any resource listed in or determined to be eligible for listing in the CRHR, (2) any resources listed in a local register of historical resources, and (3) any object, building, structure site, area, place, record or manuscript that the lead agency determines to be historically significant. The fact that a resource is not listed or determined to be eligible for listing does not preclude the lead agency from determining that the resource may be an historical resource. (*Id.*).

CEQA also provides for the protection of *unique archaeological resources*. PRC Section 21083.2 defines unique archaeological resource as 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 one or more of the following criteria:

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

If it a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to preserve these resources in place or to otherwise leave them in an undisturbed state, pursuant to PRC Section 21083.2 (b). If the lead agency determines that the project may have a significant effect on unique archaeological resources, an environmental impact report shall address the issue of those resources. To the extent that unique archaeological resources cannot be left undisturbed, mitigation measures are required (Section 21083.2 [c]). The project applicant shall provide a guarantee to the lead agency to pay one-half the estimated cost of mitigating the significant effects of the Proposed Project on unique archaeological resources. Excavation as mitigation is restricted to those parts of the unique archaeological resource that would be damaged or destroyed by the Proposed Project. Excavation as mitigation is not required for a unique archaeological resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource.



A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. The significance of an historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR;
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

CEQA Guidelines Section 15126.4 (b) establishes the framework for mitigation measures applied as a result of impacts to historical resources. The Section addresses certain circumstances under which an impact may be found not significant, lists the methods by which preservation in place may be accomplished, and defines the parameters under which data recovery as mitigation may be undertaken. Section 15126.4 (b)(3) states that public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archeological nature, and that preservation in place is the preferred manner of mitigating impacts to archaeological sites.

Preservation in place measures could potentially include the following:

- Planning construction to avoid archaeological sites;
- Incorporation of sites within parks, greenspace, or other open space;
- Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site; or
- Deeding the site into a permanent conservation easement.

Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of the historical resource will be conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, a project's impact on the historical resource shall generally be considered mitigated to a less-than-significant level. However, in some circumstances, documentation of an historical resource, by way of historic narrative, photographs, or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur.

The CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources. Pursuant to Section 15064.5, subdivision (f), these provisions should include:

...an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.

### ***California Register of Historical Resources***

PRC Section 5024.1 authorizes the establishment of the CRHR; identified cultural resources must be evaluated against CRHR criteria. The CRHR includes resources listed in or formally determined eligible for listing in the NRHP, as well as some California State Landmarks and Points of Historical Interest. In order to be determined eligible for listing in the CRHR, a property must be significant at the local, state, or national level under one or more of the four significance criteria, modeled on the NRHP. In order to be determined eligible for listing in the CRHR, a property must be historically or archeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and:

- It is associated with events or patterns of events that have made a significant contribution to the broad patterns of the history and cultural heritage of California;
- It is associated with the lives of persons important in our past;
- It 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; and/or
- It has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, a significant property must also retain integrity. Properties eligible for listing in the CRHR must retain enough of their historic character to convey the reason(s) for their significance. Integrity is judged in relation to location, design, setting, materials, workmanship, feeling, and association.

### ***Senate Bill (SB) 18***

Senate Bill (SB) 18 (Government Code sections 65352.3, 65352.4) requires that, prior to the adoption or amendment of a general plan proposed on or after March 1, 2005, a city or county must consult with Native American tribes with respect to the possible preservation of, or the mitigation of impacts to, specified Native American places, features, and objects located within that jurisdiction.

### ***Assembly Bill (AB) 52***

On September 25, 2014, Governor Edmund G. Brown, Jr., signed Assembly Bill (AB) No. 52 into law. The new law expands CEQA to provide that any public or private "project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." The law applies to any project that has a NOP, a notice of negative

declaration, or mitigated negative declaration filed on or after July 1, 2015. More specifically, the law creates a new category of resources in CEQA called “tribal cultural resources” and seeks to engage the expertise of Native American tribes in the protection and preservation of those resources. To fulfill that purpose, the new law requires the lead agency to consult with a local Native American tribe as part of the environmental review process.

During consultation, the parties may discuss possible mitigation measures to avoid or lessen the impact on tribal cultural resources.

Because the NOP for the Proposed Project was issued on December 6, 2013, more than a year prior to the effective July 1, 2015 date specified in the law, the procedural requirements of AB 52 do not apply to the Proposed Project. However, the City intends to comply with the spirit and intent of the law through consultation with Native American tribes conducted in accordance with SB 18.

### **Health and Safety Code**

California law protects Native American burials, skeletal remains and associated grave goods regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains (Section 7050.5 of the Health and Safety Code and PRC 5097.9). When human remains are discovered, the protocol to be followed is specified in California Health and Safety Code, which states:

*In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the PRC.*

State CEQA Guidelines Section 15064.5, subdivision (e), requires that excavation activities stop whenever human remains are uncovered and that the county coroner is called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

### **California SB 297 (1982)**

This law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction; and establishes the

NAHC to resolve disputes regarding the disposition of such remains. It has been incorporated into Section 15064.5 (e) of the State CEQA Guidelines.

### ***Paleontological and Geological Resources***

CEQA Guidelines Appendix G requires consideration of unique paleontological resources and unique geological features. Other state requirements for paleontological resource management are found in PRC Chapter 1.7, Section 5097.5, Archaeological, Paleontological, and Historical Sites. This statute specifies that state agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources, and that unauthorized removal of paleontological remains is a misdemeanor.

No state or local agencies have specific jurisdiction over paleontological resources. No state or local agency requires a paleontological collecting permit to allow for the recovery of fossil remains discovered because of construction-related earth moving on state or private land in a project site.

### **City of Roseville**

The City currently does not have a historic preservation ordinance nor does it have a citywide historic resources inventory. Significant cultural resources are shown on Figure V-4 in the City's General Plan.

The General Plan includes goals and policies for the preservation of cultural resources.

- Goal 1**            Strengthen Roseville's unique identity through the protection of its archaeological, historic, and cultural resources.
  
- Policy 1**            When items of historical, cultural, or archaeological significance are discovered within the City, a qualified archeologist or historian shall be called to evaluate the find and to recommend proper action.
  
- Policy 2**            When feasible, incorporate significant archaeological sites into open space areas.
  
- Policy 3**            Subject to approval by the appropriate federal, state, local agencies, and Native American Most Likely Descendant, artifacts that are discovered and subsequently determined to be "removable" should be offered for dedication to the Maidu Interpretive Center.
  
- Policy 5**            Establish standards for the designation, improvement, and protection of buildings landmarks and sites of cultural and historic character.

### **Professional Paleontological Standards**

The Society of Vertebrate Paleontology (1991, 1996, 2010), a national scientific organization of professional vertebrate paleontologists, has established standard guidelines that outline acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring

and mitigation, data and fossil recovery, sampling procedures, specimen preparation, analysis, and curation. Most practicing professional paleontologists in the nation adhere to the Society of Vertebrate Paleontology assessment, mitigation, and monitoring requirements, as specifically spelled out in its guidelines.

### 4.9.4 IMPACTS

#### Method of Analysis

##### *Records Search and Literature Review*

A records search was conducted at the NCIC of the California Historical Resources Information System on January 10, 2008 (NCIC Search No. PLA-08-06). The NCIC, an affiliate of the State of California Office of Historic Preservation, is the official state repository of archaeological and historic records and reports for a six-county area that includes Placer County.

The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the project site, and whether previously documented prehistoric or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area. Sources reviewed include: Historic Property Data File for Placer County (Office of Historic Preservation, 2008 and updates); the NRHP - Listed properties (Office of Historic Preservation, 2007 and updates); California Historical Landmarks (Office of Historic Preservation, 1996 and updates); California Points of Historical Interest (Office of Historic Preservation, 1992 and updates); Gold Districts of California (Clark, 1963 and updates); California Gold Camps (Gudde, 1975); 1500 California Place Names (Gudde, 1969); 1500 California Place Names (Bright, 1998); A Field Guide to American Houses (McAlester, 2000); Directory of Properties in the Historical Resources Inventory (1999); Caltrans Local Bridge Survey (Caltrans, 1989 and updates); Caltrans State Bridge Survey (Caltrans, 1987 and updates); and Historic Spots in California (Kyle, 2002).

The records search revealed that five cultural resource investigations have been conducted within 0.5-mile radius of the project site. The search also revealed one previously recorded isolate located within the project site and three previously recorded cultural resources located within a 0.5-mile radius of the Area of Potential Effects (APE).

Based on the results of the pre-field archival research and literature review, and in consideration of the depositional environment of the project site, ECORP identified the project site as being moderately sensitive for prehistoric and historic cultural resources.

##### *Native American Consultation*

Consultation with Native American Tribes was conducted for the Proposed Project in accordance with Section 106 of the NHPA and SB 18 (Government Code Section 65352.3). Prior to the initiation of fieldwork, ECORP initiated consultation by notifying the NAHC on January 10, 2008. The NAHC was asked to search their Sacred Lands Inventory File and to submit a list of local Native American contacts that may have information regarding the project site. The NAHC responded on January 14, 2008 with the results of the sacred lands file and Native American contacts. The record search failed to identify known sacred Native American sites within or adjacent to the project site. However, the NAHC provided a list of

four Native American individuals and organizations that potentially have knowledge of the project site. The individuals and organizations identified by the NAHC were sent letters on January 15, 2008 to request information on unrecorded cultural resources that may exist within the current project site, and to inquire about any concerns regarding sacred sites or traditional cultural properties in the vicinity that might be affected by the Proposed Project. Each individual was subsequently telephoned on January 22, 2008 and January 24, 2008 to ensure that the materials had been received and to further solicit comments. Rose Enos requested that she only be contacted if human remains were found. Two detailed telephone messages were left for Jessica Tavares and the Tribal Preservation Committee of the United Auburn Indian Community (UAIC). On February 4, 2008, Yolanda Chavez of the UAIC contacted ECORP to express a desire to see the wetland preserve restricted from public access to avoid damage. On March 6, 2008, a letter from the UAIC was received. The contact information for Christopher Suehead provided by the NAHC was incorrect and he could not be reached. No additional responses were received by ECORP as of December 2008.

As described above, SB 18 requires that prior to adopting an amendment to the general plan, the City must consult with Native American tribes with respect to the possible preservation of, or the mitigation of impacts to, Native American places, features, and objects. In accordance with SB 18, the City sent a letter to the chairperson of UAIC requesting that the Tribe advise the City of its interest in consulting on the Proposed Project. The City's consultation letter is included in **Appendix Q**. As of February 2016, no response has been received.

### ***Field Survey***

On January 14 through 18, 2008 the entire project site was subjected to an intensive pedestrian survey under the guidance of the Secretary of the Interiors Standard's for the Identification of Historic Properties (National Park Service, 1983) using 10 to 15 meter transects. At that time, the ground surface was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

Any cultural resource that contained at least three artifacts in a ten square meter area or consisted of one or more features was considered a site. Any indications of cultural presence in the project site that failed to meet the definition of a site were recorded as isolates or were noted on a location map. All cultural resources encountered during the survey were to be recorded using Department of Parks and Recreation (523) forms approved by the California Office of Historic Preservation.

### **Thresholds of Significance**

An impact to cultural resources is considered significant if implementation of the Proposed Project would:

- Cause a substantial adverse change in the significance of a historic resource pursuant to CEQA *Guidelines* Section 15064.5;

- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA *Guidelines* Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

CEQA *Guidelines* Section 15064.5 defines “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

**Impacts Found to Be Less Than Significant in the Initial Study**

As described within the Initial Study included as **Appendix B**, the Proposed Project will not impact unique geologic features. Therefore, this item is not discussed further in this analysis.

**Impacts**

IMPACT 4.9-1	CAUSE AN ADVERSE CHANGE TO HISTORICAL OR ARCHAEOLOGICAL RESOURCES
<b>Applicable Policies and Regulations</b>	Sections 15064.5 and 15126.4(b)(3) of the CEQA Guidelines; Department of Interior Standards and Guidelines for Archaeology and Historic Preservation CEQA Sections 21803.2 (b)-(f)
<b>Significance with Policies and Regulations</b>	Less Than Significant – ARSP Development Area Potentially Significant – Urban Reserve Parcel
<b>Mitigation Measures</b>	MM 4.9-1 Conduct Archaeological Survey of UR Parcel
<b>Significance After Mitigation</b>	Less than Significant

There are no resources listed on or eligible for listing on the CRHR or the NRHP within the 674-acre area of the project site proposed for development, adjacent Sunset Boulevard West right-of-way, or 17.2-acre Al Johnson Wildlife Area. The ranch complex located within the project site is more than 50 years old but after the evaluation process was completed, the complex was found to be ineligible for either the California or National registers. The Proposed Project will result in demolition of these structures; however, they do not qualify as historical resources under CEQA or historic properties under NHPA, and so their removal would result in impacts that are **less than significant**.

There are no known structures or previously recorded historic or archaeological resources within the 20-acre Urban Reserve parcel; however, this area has not been subject to a cultural resources survey because no development is proposed at this time. Development of the Urban Reserve parcel with a single residential unit consistent with allowable uses under the proposed general plan designation could impact historic or archaeological resources. This is considered a potentially **significant** impact. **Mitigation Measure 4.9-1** requires that appropriate studies be conducted prior to issuance of building permits for construction within the Urban Reserve parcel, and that if any prehistoric or historical

resources are found, that they be evaluated for significance and avoided, preserved, or recorded as appropriate. This mitigation measure would reduce this impact to a **less-than-significant** level.

<b>IMPACT 4.9-2</b>	<b>DISTURB, DAMAGE, OR DESTROY UNIDENTIFIED SUBSURFACE ARCHAEOLOGICAL OR HISTORICAL RESOURCES OR HUMAN REMAINS DURING PROJECT CONSTRUCTION</b>
<b>Applicable Policies and Regulations</b>	Sections 15064.5 and 15126.4(b)(3) of the CEQA Guidelines; California Health and Safety Code section 7050.5
<b>Significance with Policies and Regulations</b>	Potentially Significant
<b>Mitigation Measures</b>	MM 4.9-2 Cease Work and Consult with Qualified Archaeologist
<b>Significance After Mitigation</b>	Less than Significant

The only cultural resource identified within the project site is an isolated mano, a prehistoric hand-held grinding tool found during site surveys conducted in 2000. This artifact could not be located during cultural resource surveys of the project site performed in 2008, however (ECORP, 2008b). Historic use of part of the project site as a ranch indicates that there is potential for buried historical resources as well; historical archaeological deposits uncovered during construction would not necessarily be associated with the ranch and would need to be evaluated for their connection to previous use of the project site as a ranch.

The presence of a water source, University Creek, along the southern portion of the Proposed Project, and the previously located mano indicate some sensitivity for prehistoric resources. Buried prehistoric resources or human remains could be encountered during grading, excavation, and or construction as well. If such resources are encountered during construction either on-site or within the off-site improvements areas, they could be damaged, destroyed, or removed, resulting in a loss of integrity or other criteria that could make them eligible to the CRHR or the NRHP. This is considered a potentially **significant** impact.

If evidence of historic or prehistoric artifacts or sites or human remains is uncovered during project development, **Mitigation Measure 4.9-2** requires that all work cease within 100 feet of the find so that artifacts or remains are not further damaged by equipment. **Mitigation Measure 4.9-2** reduces impacts to unknown cultural resources that qualify as historical resources, unique archaeological resources, historic properties, or human remains by requiring avoidance where feasible, or appropriate study, handling, and recordation of such resources. **Mitigation Measure 4.9-2** also outlines the procedures established in the California Health and Safety Code for human remains. Adherence to these measures would reduce potential impacts to these resources or human remains to a **less-than-significant** level.



<b>IMPACT 4.9-3</b>	<b>DISTURB, DAMAGE OR DESTROY AS-YET UNKNOWN UNIQUE PALEONTOLOGICAL RESOURCES DURING PROJECT CONSTRUCTION</b>
<b>Applicable Policies and Regulations</b>	The Society of Vertebrate Paleontology Guidelines
<b>Significance with Policies and Regulations</b>	Potentially Significant
<b>Mitigation Measures</b>	MM 4.9-3 Monitor for Paleontological Resources, Cease Work and Consult with Qualified Paleontologist
<b>Significance After Mitigation</b>	Less than Significant

In areas where geological formations are not exposed, paleontological resources are typically not visible but may be present. Much of the project site is capped by two feet of plow-disturbed soils. Below this plow zone, the project site is underlain by a one-foot- to six-foot-thick stratum of Turlock Lake and/or Riverbank formation sediments, either of which could include fossil resources.

During the paleontological survey for the Proposed Project in 2011, ichnofossils and fossilized plant fragments were identified in Turlock Lake Formation sediments along University Creek. These fossil discoveries suggest a high potential for additional similar fossil remains to be impacted by project construction.

If exposed, fossils in these formations could be damaged or destroyed during site preparation, similar to archaeological resources. If such resources are encountered during construction either on-site or within the off-site improvements areas, they could be damaged, destroyed, or removed, resulting in a loss of data potential. This is considered a potentially **significant** impact.

Unlike some archaeological resources, which can be identified readily, paleontological resources may not be recognized except by a qualified paleontologist, necessitating a program of worker training and construction monitoring. If evidence of paleontological resources is uncovered during project development, **Mitigation Measure 4.9-3** requires that all work cease within 100 feet of the find so that fossils are not further damaged by equipment. **Mitigation Measure 4.9-3** reduces impacts to unique paleontological resources as defined by CEQA. Adherence to these measures would reduce the potential impacts to these resources to a **less-than-significant** level.

<b>IMPACT 4.9-4</b>	<b>DAMAGE OR DESTROY HISTORICAL, ARCHAEOLOGICAL, PREHISTORIC, OR UNIQUE PALEONTOLOGICAL RESOURCES DURING CONSTRUCTION OF OFF-SITE INFRASTRUCTURE</b>
<b>Applicable Policies and Regulations</b>	CEQA Sections 21803.2 (b) – (f) Section 15064.5 of the CEQA Guidelines
<b>Significance with Policies and Regulations</b>	Potentially Significant
<b>Mitigation Measures</b>	MM 4.9-4 Conduct Appropriate Off-Site Studies
<b>Significance After Mitigation</b>	Less than Significant

Development of the Proposed Project would require infrastructure improvements outside of the project site, such as extension of water, wastewater, recycled water, natural gas lines, power lines, and roadway extensions (Westbrook Boulevard). In most cases, offsite infrastructure would be located within existing or planned roadway rights-of-way, and the potential for cultural resources to occur would have been addressed during the planning of those roads, but there may be exceptions.

Although overall infrastructure needs and general off-site infrastructure locations have been identified for the Proposed Project, the precise alignments and design of off-site improvements cannot be determined at the Plan-level phase of development. Project-level plans will be developed in the future, as overall development in the project site progresses and the need for the infrastructure arises. In some cases, the off-site infrastructure alignment or designs may deviate from the general alignments or designs, which had been examined at the Plan-level phase of development. This can occur due to new information, changes in circumstances, or other issues. For instance, a well site may be selected during the Plan-level evaluation of a project, but the subsequent data gathered from a monitoring well on the location may result in the finding that the location is unsuitable. Thus, the locations of future off-site infrastructure improvements may not coincide with the precise areas that were previously evaluated, or may be proposed in areas that were not planned for development, or in areas not otherwise subject to environmental review.

Because the precise alignments and design of the off-site improvements have yet to be determined—and cannot be determined at the Plan-level phase of analysis—additional cultural resource surveys may need to be completed for small areas of land. Therefore, this analysis assumes that historic resources (both subsurface and buildings), prehistoric resources (primarily sub-surface), and/or paleontological resources could be located within areas that would be disturbed during construction of off-site infrastructure. If encountered during grading, excavation, and construction, such resources could be damaged, destroyed, or removed, resulting in a direct loss and/or loss of integrity. This is a potentially **significant** impact.

**Mitigation Measure 4.9-4** requires that appropriate studies be conducted prior to construction of off-site infrastructure, and if any historical resources, unique archaeological resources, paleontological resources, or prehistoric resources are found that they be evaluated for significance, and avoided, preserved, and/or

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recorded as appropriate. This is consistent with Section 15064.5 of the CEQA Guidelines for determining significance and PRC section 21803 (b)-(f) regarding preservation and recording. In addition, **Mitigation Measures 4.9-2** and **4.9-3** would ensure that work will cease if cultural or paleontological resources are discovered during construction, until such resources can be evaluated and treated as warranted by their significance. These mitigation measures would reduce this impact to a **less-than-significant** level.

IMPACT 4.9-5	CUMULATIVE IMPACTS TO CULTURAL AND PALEONTOLOGICAL RESOURCES
<b>Applicable Policies and Regulations</b>	Sections 15064.5 and 15126.4(b)(3) of the CEQA Guidelines; Department of Interior Standards and Guidelines for Archaeology and Historic Preservation CEQA Sections 21803.2 (b)-(f) The Society of Vertebrate Paleontology Guidelines
<b>Significance with Policies and Regulations</b>	Potentially Significant
<b>Mitigation Measures</b>	MM 4.9-1 Conduct Archeological Survey within Urban Reserve Parcel MM 4.9-2 Cease Work and Consult with Qualified Archaeologist MM 4.9-3 Monitor for Paleontological Resources, Cease Work and Consult with Qualified Paleontologist MM 4.9-4 Conduct Appropriate Off-Site Studies
<b>Significance After Mitigation</b>	Less than Significant

The cumulative geographic context for the evaluation of potential cumulative impacts to cultural resources consists of the City of Roseville and western Placer County. Cultural and paleontological resources have been recorded near the project site, and project construction could result in the damage or destruction of as-yet unknown cultural or paleontological resources. This is considered a potentially **significant** cumulative impact.

Numerous state and federal laws, regulations, and statutes seek to protect cultural and paleontological resources. These would apply to development within and outside the City. In addition, the City's General Plan provides local policies that safeguard cultural resources from unnecessary impacts. These policies include inventory and evaluation processes and require consultation with qualified archaeologists in the event that previously undiscovered cultural materials are encountered.

**Mitigation Measures 4.9-1** and **4.9-4** would reduce the Proposed Project's contributions to cumulative cultural resources impacts by ensuring that appropriate surveys are conducted with the Urban Reserve and off-site improvement areas to identify cultural resources, and that cultural resources discovered during surveys are properly recorded and handled. **Mitigation Measure 4.9-2** would further reduce the Proposed Project contributions to cumulative cultural resources impacts by ensuring that unknown cultural resources or human remains discovered within the project site are avoided or properly recorded

and handled if discovered during construction. With mitigation, the Proposed Project's contribution to cumulative impacts to historic and archaeological resources would be **less than significant**.

**Mitigation Measure 4.9-3** would reduce the Proposed Project's contribution to cumulative paleontological resources impacts by ensuring that fossils discovered within the project site are avoided, recorded, or otherwise treated, if discovered during construction. With mitigation, the Proposed Project's contribution to cumulative impacts to paleontological resources would be **less than significant**.

#### 4.9.5 MITIGATION MEASURES

##### **MM 4.9-1 Conduct Archeological Survey within Urban Reserve Parcel (Impact 4.9-1)**

Development proposals for the Urban Reserve parcel shall identify known and/or potential archaeological sites, based on field surveys of the area proposed for development conducted by a qualified archaeologist. If significant resources or significant archaeological sites are present, the development proposal shall designate the area surrounding the site as open space and the site shall be completely avoided.

##### **MM 4.9-2(a) Cease Work and Consult with Qualified Archaeologist (Impact 4.9-2)**

Should any cultural resources, such as wells, foundations, or debris, or unusual amounts of bone, stone or shell, artifacts, burned or baked soils, charcoal, or human remains be encountered during subsurface excavation or construction activities, work shall be suspended within 100 feet of the discovery. The City shall be immediately notified. At that time, a qualified professional archaeologist shall assess the resource and provide recommendations for treatment if the resource appears to be potentially eligible for listing on the NRHP or CRHR. Possible management recommendations could include, but not be limited to, avoidance, construction monitoring, recordation, site testing, or data recovery excavations. The contractor shall implement any measures deemed feasible and necessary by City staff, in consultation with a qualified archaeologist, to avoid or minimize significant effects to the cultural resources prior to resumption of ground-disturbing activities.

##### **MM 4.9-2(b) Cease Work and Consult with Qualified Archaeologist (Impact 4.9-2)**

If human remains are uncovered during project construction, pursuant to PRC Section 5097.98 and Section 7050.5 of the California Health and Safety Code, the Placer County Coroner shall be notified immediately. California law recognizes the need to protect interred human remains, particularly Native American burials and items of cultural patrimony, from vandalism and inadvertent destruction. The procedures for the treatment of discovered human remains are contained in California Health and Safety Code §7050.5 and §7052 and California PRC §5097. If human remains are uncovered during ground-disturbing activities, all such activities within a 100-foot radius of the find shall be halted immediately and the City's designated representative shall be notified. The City shall immediately notify the Placer County coroner. The coroner is required to examine

all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). The City shall contact the Most Likely Descendent (MLD), as determined by the NAHC, regarding the remains. The MLD, in cooperation with the City and a qualified professional archaeologist shall develop a plan of action to avoid or minimize significant effects to the human remains prior to resumption of ground-disturbing activities.

### **MM 4.9-3 Monitor for Paleontological Resources, Cease Work and Consult with Qualified Paleontologist (Impact 4.9-3)**

The paleontological report prepared for the Proposed Project included identification of fossiliferous Turlock Lake and Riverbank formations within portions of the project site, beginning approximately two feet below ground surface and continuing up to eight feet below ground surface. Because fossil localities cannot be predicted without actually disturbing a rock unit, a qualified professional paleontologist (as defined by the Society of Vertebrate Paleontology 2010) shall be retained to provide awareness training for construction personnel involved in earth-moving activities. Construction personnel to be involved with earth-moving activities shall be informed that fossils could be discovered during excavation that these fossils are protected by laws, on the appearance of common fossils, and on proper notification procedures should fossils be discovered.

In addition, a qualified professional paleontologist shall monitor earth-moving during the initial project grading that impacts sediment greater than two feet (0.6 meters) in depth in areas with mapped Turlock Lake or Riverbank formation geologic units to observe the stratigraphy and any fossils exposed by excavation. This shall not be required in areas where sediments will be buried but not otherwise be disturbed. If no evidence of fossils is seen in the initial grading, a program of periodic spot checks of the deepest excavations or those judged most likely to disturb fossils shall be instituted until excavations have been completed. Should any evidence of paleontological resources (e.g., fossils) be encountered, work shall be suspended within 100 feet of the discovery, and the City shall be notified immediately. At that time, the paleontologist shall assess the resource and provide appropriate management recommendations. Recommendations shall include, but are not limited to, salvage and treatment as described by the Society of Vertebrate Paleontology (2010). This treatment shall include preparation, identification, determination of significance, and curation into a public museum.

### **MM 4.9-4 Conduct Appropriate Off-Site Studies (Impact 4.9-4)**

Prior to undertaking construction of off-site infrastructure, the City shall determine whether or not cultural resource surveys have been undertaken for any areas to be disturbed during construction. If surveys were conducted, the City shall document that any identified resources were treated as recommended in the studies. If no studies or

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surveys were conducted, the City shall ensure that a qualified archaeologist conducts the appropriate level of study. If significant resources or significant archaeological sites are present, they shall be avoided, as feasible. If avoidance of such resources is not feasible, recordation of the sites shall be required, along with treatment as is recommended by the archaeologist after consultation with State Historic Preservation Office (SHPO) and, if the find is prehistoric, NAHC. If unknown resources are encountered during construction, recommendations, including the possible management recommendations listed in **Mitigation Measures 4.9-2 and 4.9-3**, shall be implemented to ensure that the resources are avoided, protected, and/or recorded.