

4.4 CULTURAL RESOURCES

4.4.1 Setting

Cultural resources include prehistoric resources, historic resources, Native American resources, and paleontological resources. Prehistoric resources represent the remains of human occupation prior to European settlement. Historic resources represent remains after European settlement and may be part of a "built environment," including human-made structures used for habitation, work, recreation, education and religious worship, and may also be represented by houses, factories, office buildings, schools, churches, museums, hospitals, bridges and other structural remains. Native American resources include ethnographic elements pertaining to Native American issues and values. Paleontological resources are the fossilized remains of prehistoric plant and animal organisms, as well as the mineralized impressions (trace fossils) left as indirect evidence of the form and activity of such organisms. The following describes the County's existing regional ethnography, historical, archaeological, and paleontological resources.

a. Regional Ethnography and Ethnohistory. The southern portions of San Luis Obispo County are within the territory historically occupied by the Chumash (Gibson, 1990; Greenwood, 1978; Kroeber, 1953). The northern part of the County (from approximately Morro Bay north to the Monterey County line) is within the area historically occupied by the Salinan people. The archaeological record indicates that sedentary populations occupied the coastal regions of California more than 9,000 years ago. Native American society began to collapse soon after Spanish contact in 1769, primarily due to the introduction of epidemic European diseases and the consequent high mortality rate.

Several chronological frameworks have been developed for the Chumash region including Rogers (1929), Wallace (1955), Harrison (1964), Warren (1968), and King (1981). King has divided the prehistory of the Chumash region into three periods: Early (8000 to 3350 B.P.¹), Middle (3350 to 800 B.P.), and Late (800 to 150 B.P.). King's chronology is based on stylistic changes in beads and ornaments from burial assemblages. The artifact types, which indicate temporal affiliation, are seldom found in quantity outside of cemeteries, limiting the usefulness of the chronology for dating components at other kinds of sites. However, the chronology can be tied to absolute dates through radiocarbon methods. Dates for the beginning and end of each of King's periods are based on radiocarbon dates from burial assemblages (King, 1981).

King's Early Period (8,000 to 3,350 B.P.) begins with the peak of a warm, dry climatic period known as the Altithermal. The Chumash used large flake and core tools, milling stones, and hand stones during this time. Mortars and pestles, which indicate the pounding of acorns, were used after the peak of the Altithermal (Glassow, Wilcoxon, and Erlandson, 1988: 8). Evidence for the pursuit of sea mammals and broadening of diet is likely related to a population increase associated with the easing of Altithermal conditions (Glassow, Wilcoxon, and Erlandson, 1988). Evidence useful for reconstructing settlement patterns during the Early Period is extremely

¹ Before present time.



limited. Based on these limited data, King (1981) suggests that Early Period sites varied from locations along the Santa Barbara Channel on the crests of hills away from the ocean and knolls adjacent to sloughs. All Early Period sites investigated appear to be base camps, although temporary camps also likely existed.

During the Middle Period (3350 to 800 B.P.), increasing sedentism and emphasis on marine resources are indicated by the appearance of coastal villages occupied during a large part of the year. Circular shell fishhooks were added to the bone gorges and compound hooks used during the Early Period (Tartaglia, 1976). The plank canoe, which made ocean fishing and travel safer and more efficient, came into use about 1500 B.P. (Arnold, 1987: 7). Use of the plank canoe also promoted trade and exchange between the mainland and the Channel Islands. Contracting-stemmed and corner-notched dart points, used with spear throwers, indicate hunting of land animals. Increasing status differentiation is seen in differences in the amounts of beads and other ornaments associated with burials (Martz, 1987).

Full cultural development of the Chumash, one of the most economically and socially complex hunter-gatherer groups in North America (Arnold, 1987), occurred during the Late Period (800 to 150 B.P., or approximately AD 1200 to 1850). Marine fishing and trading constituted the principal economic pursuits. Differentiation in social status developed to a point at which village chiefs inherited their rank and probably controlled trade and redistribution. Only certain high-ranking lineages built and operated plank canoes. Trade and redistribution of goods from different environmental zones was facilitated by the use of shell bead "money," made almost exclusively on the Channel Islands where a specialized industry of producing microdrills (used to make shell beads) from local chert emerged (Arnold, 1987: 247). Coastal Chumash villages featured circular houses made of willow poles and thatch, with a hearth located in the center of the floor. Each village also contained a sweathouse, sacred council area, dance floor, and cemetery (Rogers, 1929).

During the Late Period, terrestrial animals were hunted with the bow and arrow (in addition to snares and traps), indicated by smaller projectile points weighing less than 3.5 grams (Fenenga, 1953). Acorns continued as a valuable food source, processed with stone mortars and pestles. As a storable food, acorns played an important role in increasing sedentism and developing social complexity (Johnson and Earle, 1987). Fashioned by specialists, shell ornaments and beads were used to reinforce status differences as well as provide a standard of exchange.

When the mission period began in 1769, the Chumash occupied coastal areas from Malibu Canyon to Morro Bay and inland areas as far as the western edge of the southern San Joaquin Valley (Grant, 1978a). The overall Chumash ethnolinguistic group included several dialectical subdivisions corresponding to territories around missions established by the Spanish, who assigned names to these groups. These subdivisions included the Ventureño near Mission San Buenaventura, the Barbareño near Mission Santa Barbara, the Ynezeño near Mission Santa Ynez, the Purismeño near Mission La Purísima, and the Obispeño near Mission San Luis Obispo. These missions were founded between 1772 and 1804. The Cuyama, Emigdiano, and Castaic Chumash lived further inland where no missions were built. Similarly, the Island Chumash inhabited the mission-less northern Channel Islands.



Prehistoric marriage patterns and post mission settlement patterns have also identified Salinan and Yokut people living in the northern portions of San Luis Obispo County (Gibson, 1998). The southern end of Cholame Valley is within the territory historically occupied by the Southern, or Migueleño, Salinan (as cited in Rivers, 2000). Their homeland extended north-south from slightly above present-day Bradley to just north of Paso Robles, and west to the coast near the Estero Bay. Migueleño territory lay in present-day Monterey and San Luis Obispo counties and included the western boundary of Kern County (as cited in Rivers, 2000).

Historic occupation in locations such as the Toro Creek Canyon by the Salinan people was documented by C. Hart Merriam in 1933 (Hester, 1978:503-04). Linguistically, the Salinan are subdivided into three major divisions, the Antoniaño, Migueleño, and the Playano (Hester 1978). There is a lack of archaeological and ethnohistoric data on the Salinan, when compared to information on the Chumash. According to the cited historical and archaeological evidence, the Salinan followed a hunting and gathering lifestyle based on the collection of plant foods, primarily acorns. Fishing and trade were also important components of the Salinan society. The Tulare Yokuks were the Salinans main trading partners, while limited trade was conducted with the Chumash to the south (Hester, 1978).

The Chumash and Salinan way of life was forever altered with Spanish colonization. As the Spanish compelled many Chumash and Salinan to live within the mission compounds, they were transformed from hunters and gatherers into agricultural laborers and exposed to European diseases to which they had no resistance. As a result of sickness and poor treatment, large numbers of Chumash and Salinan perished under the Spanish regime. By the end of the Mission Period in 1834, the Chumash and Salinan population had been decimated by disease and low birth rates. The native population at Mission San Luis Obispo, for example, plummeted from 919 individuals in 1803 to just 170 by 1838 (Greenwood, 1978: 521). Population loss as a result of disease and economic deprivation continued into the next century.

b. Historic Resources. The earliest Spanish explorers of the central California coastline included Juan Rodriguez Cabrillo in 1542, Pedro de Unamuno in 1587, Sebastian Rodriguez Cermeño in 1595, Sebastián Vizcaíno in 1602, and Gaspar de Portolá in 1769. Mission San Luis Obispo de Tolosa was founded by the Spanish in 1772, damaged by earthquake in 1830, and secularized by Mexico in 1834. The Mission San Miguel was founded on July 25, 1797. Almost two years earlier, the site was selected to close the gap between Mission San Antonio and Mission San Luis Obispo. The Potrero de San Luis Obispo and Cañada de los Osos land grants were made by Mexican Governor Alvarado in 1842, with the Pecho y Islay grant first given by Governor Micheltoarena in 1843 and again by Governor Pio Pico in 1845 (Avina, 1932: 70).

After California joined the United States, the ranchos continued to be used to raise cattle until 1863-1864, when severe drought depleted the cattle supply and they were replaced by sheep. With the coming of the American Period, San Luis Obispo County was established as one of the original counties into which the new state of California was divided in 1850, but the present boundaries were not finalized until the Historical Survey Commission recommended more detailed codification of County boundary laws in 1919 (Coy, 1973: 233-237).

As land transportation improved in the 1870s, Chinese labor under the direction of Ah Louis and others constructed county roads north over the Cuesta Grade and south to Los Olivos.



Captain Harford began construction of the Pacific Coast Railway in 1872, eventually running a line from his wharf to the city of San Luis Obispo. From there, it continued south to Arroyo Grande and the communities of Los Berros, Nipomo, Central City (now known as Santa Maria), Los Alamos, and Los Olivos. The success of the Pacific Coast Railway and rumors of the coming of the Southern Pacific Railroad sparked a land boom in the 1880s, at which point the Southern Pacific Railroad pushed a standard gauge railroad south from San Jose. Several towns, including Templeton and Santa Margarita, were established during the North County land boom spurred by the railroad. After a five-year delay, the railroad came to the city of San Luis Obispo in 1894.

First noted as a Spanish-Mexican pueblo in 1845 (Angel, 1883: 129), the City of San Luis Obispo was formally laid out in 1850 (Bright, 1998: 134; Gudde, 1998: 340). A stage line between San Francisco and San Diego included regular stops in San Luis Obispo from the 1850s through the early 1880s (Newmark, 1984: 153, 496). By 1869, dairying had become an important part of the local economy, headed primarily by the Swiss and Swiss-Italian farmers. The number of local dairies decreased substantially with the Depression in the 1930s, and the industry never recovered fully.

By the 1940s, bean and grain crops were the primary source of income around San Luis Obispo, and agricultural development has successfully expanded into the present (Roper et al 1997). The railroads became increasingly important as agricultural crops from the area were freighted overseas during World War I. Roadways were initiated by the dairy industry, and the first county road was completed in 1870. The road extended from San Luis Obispo to San Simeon and was built by the Chinese laborers provided by Ah Louis, a local Chinese businessman.

A 540-foot-long wharf was first built here in 1873 by John Harford. Steamships would arrive several times a week at Port Harford (today's Port San Luis), where they would load and unload cargo and passengers. A narrow-gauge railway ran two trains a day to the pier. Port Harford was renamed Port San Luis and became an important oil-shipping port. It served the pipelines from the Santa Maria oil fields from 1907 on, and those from Union Oil's Taft-Coalinga fields from 1913 on.

California Polytechnic State University (Cal Poly) was established in 1903 as a vocational school on 281 acres. By 1982 the university had obtained more than 6,000 acres. In 1927, the National Guard founded Camp Merriam on 2,000 acres that were converted to the U.S. Army infantry and artillery training camp known as Camp San Luis between 1940 and 1941.

Historic development of the City of San Luis Obispo resulted in the establishment of many businesses, buildings, structures, and features. Population size increased dramatically over time, and between 1891 and 1944 the city grew from 3,500 people to 16,000 people. Perhaps the most visible growth occurred at the end of World War II when military installations established in response to the war artificially inflated the local economy. Many of those soldiers returned permanently to San Luis Obispo after the war (Kreiger 1988:102-104). San Luis Obispo and the surrounding communities have experienced growth spurts since the 1970s to the present.

The National Register of Historic Places lists 34 historically-recognized locations within San Luis Obispo County (refer to Table 4.4-1). National Register properties are distinguished by having been documented and evaluated according to uniform standards. None of these resources are located within the project area.



Table 4.4-1: National Register of Historic Places in SLO County

Resource Name	Address	Community	Listed
<i>Administration Building, Atascadero Colony</i>	<i>6500 Palma Avenue</i>	<i>Atascadero</i>	<i>1977</i>
<i>Angel, Myron, House</i>	<i>714 Buchon Street</i>	<i>San Luis Obispo</i>	<i>1982</i>
<i>Archeological Site 4 SLO 834</i>	<i>Address Restricted</i>	<i>Atascadero</i>	<i>1982</i>
<i>Archeological Site 4SLO187</i>	<i>Address Restricted</i>	<i>San Simeon</i>	<i>1980</i>
<i>Arroyo Grande IOOF Hall</i>	<i>128 Bridge Street</i>	<i>Arroyo Grande</i>	<i>1991</i>
<i>Atascadero Printery</i>	<i>6351 Olmeda</i>	<i>Atascadero</i>	<i>2004</i>
<i>Bank of Italy</i>	<i>1245 Park Street</i>	<i>Paso Robles</i>	<i>1998</i>
<i>Brewster-Dutra House</i>	<i>1803 Vine Street</i>	<i>Paso Robles</i>	<i>1982</i>
<i>Caledonia Adobe</i>	<i>0.5 miles south of 10th Street</i>	<i>San Miguel</i>	<i>1971</i>
<i>Caliente Mountain Aircraft Lookout Tower</i>	<i>Northwest of New Cuyama</i>	<i>New Cuyama</i>	<i>1975</i>
<i>Call--Booth House</i>	<i>1315 Vine Street</i>	<i>Paso Robles</i>	<i>1988</i>
<i>Carrizo Plain Rock Art Discontiguous District</i>	<i>Address Restricted</i>	<i>California Valley</i>	<i>2001</i>
<i>Corral de Piedra</i>	<i>South of San Luis Obispo on Price Canyon Road</i>	<i>San Luis Obispo</i>	<i>1978</i>
<i>Dana Adobe</i>	<i>South end of Oak Glen Avenue</i>	<i>Nipomo</i>	<i>1971</i>
<i>Eight Mile House</i>	<i>Off U.S. 101 on Stagecoach Road</i>	<i>Santa Margarita</i>	<i>1995</i>
<i>Guthrie House</i>	<i>Burton and Center Streets</i>	<i>Cambria</i>	<i>1980</i>
<i>Hearst San Simeon Estate</i>	<i>3 miles northeast of San Simeon</i>	<i>San Simeon</i>	<i>1972</i>
<i>Jack, Robert, House</i>	<i>536 Marsh Street</i>	<i>San Luis Obispo</i>	<i>1992</i>
<i>Lincoln School</i>	<i>9000 Chimney Rock Road</i>	<i>Paso Robles</i>	<i>2001</i>
<i>Mission San Miguel</i>	<i>U.S. 101</i>	<i>San Miguel</i>	<i>1971</i>
<i>Old Santa Rosa Catholic Church and Cemetery</i>	<i>Main Street</i>	<i>Cambria</i>	<i>1982</i>
<i>Pacific Coast Railway Company Grain Warehouse</i>	<i>65 Higuera Street</i>	<i>San Luis Obispo</i>	<i>1988</i>
<i>Piedras Blancas Light Station</i>	<i>Highway 1 on Point Piedras Blancas</i>	<i>San Simeon</i>	<i>1991</i>
<i>Port San Luis Site</i>	<i>Address Restricted</i>	<i>San Luis Obispo</i>	<i>1978</i>
<i>Powerhouse, The</i>	<i>Jct. of South Perimeter Road and Cuesta Avenue</i>	<i>San Luis Obispo</i>	<i>1993</i>
<i>Price, John, House</i>	<i>Highland Drive off Price Canyon Road</i>	<i>Pismo Beach</i>	<i>1988</i>
<i>Rancheria Del Buchon</i>	<i>Address Restricted</i>	<i>Edna</i>	<i>1978</i>
<i>Rancho Canada de los Osos y Pecho y Islay</i>	<i>Address Restricted</i>	<i>San Luis Obispo</i>	<i>1975</i>
<i>Robles, Paso, Carnegie Library</i>	<i>City Park, 800 12th Street</i>	<i>Paso Robles</i>	<i>1998</i>
<i>San Luis Obispo Carnegie Library</i>	<i>696 Monterey Street</i>	<i>San Luis Obispo</i>	<i>1995</i>
<i>San Luis Obispo Light Station</i>	<i>Unknown</i>	<i>San Luis Obispo</i>	<i>1973</i>
<i>San Luis Obispo Light Station</i>	<i>Point San Luis</i>	<i>Avila Beach</i>	<i>1991</i>
<i>Southern Pacific Railroad Depot</i>	<i>1300 Mission Street</i>	<i>San Miguel</i>	<i>1978</i>
<i>Tribune--Republic Building</i>	<i>1763 Santa Barbara Street</i>	<i>San Luis Obispo</i>	<i>1993</i>

Source: *National Register of Historic Places*, accessed 14 July 2009
Italics indicate sites within city limits

In addition to those properties identified in the National Register of Historic Places, the State Office of Historic Preservation designates California Historical Landmarks throughout the State. Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. San Luis Obispo County contains several State-designated historical landmark sites, listed below in Table 4.4-2. Two of these sites, Rancho Nipomo and Santa Margarita Asistencia, are located within the project area (refer to Figure 4.4-1).



Table 4.4-2: State Office of Historic Preservation Historical Places in SLO County

Resource Name	Address	Community
Administration and Veteran’s Memorial Building	6500 Palma Avenue	Atascadero
Ah Louis Store	800 Palm Street at Chorro Street	San Luis Obispo
Dallidet Adobe	1309 Toro Street at Pacific Street	San Luis Obispo
Estrella Adobe Church	Airport Road, 2.5 miles north of Hwy 46	Paso Robles
Hearst San Simeon State Historical Monument	Hearst San Simeon State Historical Monument	San Simeon
Mission San Luis Obispo	Monterey Street between Chorro and Broad St.	San Luis Obispo
Mission San Miguel Arcángel	Southwest corner of Mission St. and SLO Rd.	San Miguel
Morro Rock	Embarcadero Road, 0.4 miles NW of Morro Bay	Morro Bay
Rancho Nipomo (Cpt. William O. Dana Rancho) *	6715 Oakglen Avenue	Nipomo
Rios-Caledonia Adobe	700 Mission Street	San Miguel
Santa Margarita Asistencia *	Rancho Santa Margarita Hay Barn	Santa Margarita
The Sebastian Store	San Simeon Road	San Simeon
Twentieth Century Folk Art Environments	Nitt Witt Ridge, 881 Hillcrest Drive	Cambria Pines
<i>Source: State Office of Historic Preservation Italics indicate sites within city limits</i>		
Bold * indicates sites within project area		

The County Land Use Element and area plans also guide and regulate the identification, registration, protection, and preservation of significant historic resources. The Land Use Element protects cultural resources through use of combining designations (i.e. zoning overlays), specifically the Historic Site (H) designation for areas of unique historical significance. These combining designations are subject to special standards in the Inland and Coastal Land Use Ordinances. Nine sites with “H” designations are located within the project area (refer to Figure 4.4-1).

c. Archaeological Resources. There are thousands of recorded archaeological sites located throughout the County, especially near major watercourses, ridgelines, canyon mouths, and coastal areas. The vast majority are located within the County’s Coastal Zone. Although the official Land Use Element (LUE) maps delineating urban Archaeologically Sensitive Areas in the Coastal Zone have been valuable in triggering archaeological site review for the majority of planned urban development in those areas, they are not all inclusive of archaeological resources within coastal and inland urban areas.

Figure 4.4-1 shows the general locations of sites in the county and project area where archaeological investigations have been conducted in the past. Disclosure of specific information on archaeological sites is inappropriate for EIRs. Locations of sites are kept confidential in order to prevent vandalism, artifact hunting, and trespassing. The Central Coastal Information Center, operated under the State Office of Historic Preservation, provides site location data and/or the exact contents of surveyed sites only to qualified archaeologists, who are then prohibited from disclosing this information to the public. California Government Code Section 6254.10 exempts archaeological site information from the California Public Records Act, which requires that public records be open to public inspection.

d. Paleontological Resources. Paleontological resources are the fossilized remains of prehistoric plant and animal organisms, as well as the mineralized impressions (trace fossils) left as indirect evidence of the form and activity of such organisms. Under state and federal law, paleontological resources are considered to be nonrenewable resources.



Paleontologic sensitivity is the potential for a geologic unit to produce scientifically significant fossils, as determined by rock type, past history of the rock unit in producing fossil materials, and fossil sites that are recorded in the unit. A paleontologic sensitivity rating is derived from fossil data from the entire geologic unit, not just from a specific survey area. However, it does not measure the significance of individual fossils present within the County, because it is impossible to accurately predict what individual fossils may be discovered. The significance of an individual fossil can only be determined after it is found and evaluated.

A three-fold classification of sensitivity, labeled as high, low and indeterminate, is used in California and recommended by the Society of Vertebrate Paleontology, as follows:

- High Sensitivity – Indicates fossils are currently observed on-site, localities are recorded within the project area and/or the unit has a history of producing numerous significant fossil remains.
- Low Sensitivity – Indicates significant fossils are not likely to be found because of random fossil distribution pattern, extreme youth of the rock unit and/or the method of rock formation, such as alteration by heat and pressure.
- Indeterminate Sensitivity – Unknown or undetermined status indicates that the rock unit either has not been sufficiently studied or lacks good exposures to warrant a definitive rating. This rating is treated initially as having a high sensitivity or potential. After study or monitoring, the unit may fall into one of the other categories.

Other professionals expand the previous classification to include up to three additional ratings of very high, moderate and no sensitivity, as follows:

- No Sensitivity – Some paleontologists use this for crystalline rock units such as igneous rocks, where the rock forms from molten magma, which would preclude fossil preservation.
- Moderate Sensitivity – Applied by some to geologic units that have a history of producing meager fossil collections.
- Very High Sensitivity – May be warranted for a project that contains very well known and scientifically important localities. Another example would be if a known fossil bone bed is present or is predicted to be present.

Paleontological resources are generally found in sedimentary rock units in which the boundaries of a sedimentary rock unit define the limits of paleontologic sensitivity in a given region. In a sense, volcanic ash eruptions into a lake or ocean basin also constitute sedimentary rock units that may contain fossil material. Most fossil material is found where bedrock is exposed on the surface, typically in mountainous terrain or in areas where erosion has removed the soil or regolith surface. As a result, paleontological sites are normally discovered in cliffs, ledges, steep gullies, or along wave-cut terraces where vertical rock sections are exposed. Fossil material may be exposed by a trench, ditch, or channel caused by construction. Regional geologic papers usually present numerous invertebrate fossil sites especially in marine rocks. Some invertebrate fossil sites are more productive than others. It is the richness of invertebrate fossils in marine rocks that makes a particular invertebrate fossil discovery of less critical concern and significance. Vertebrate fossil sites are usually found in non-marine or continental deposits. Occasionally vertebrate marine fossils such as whale, porpoise, seal, or sea lion can be

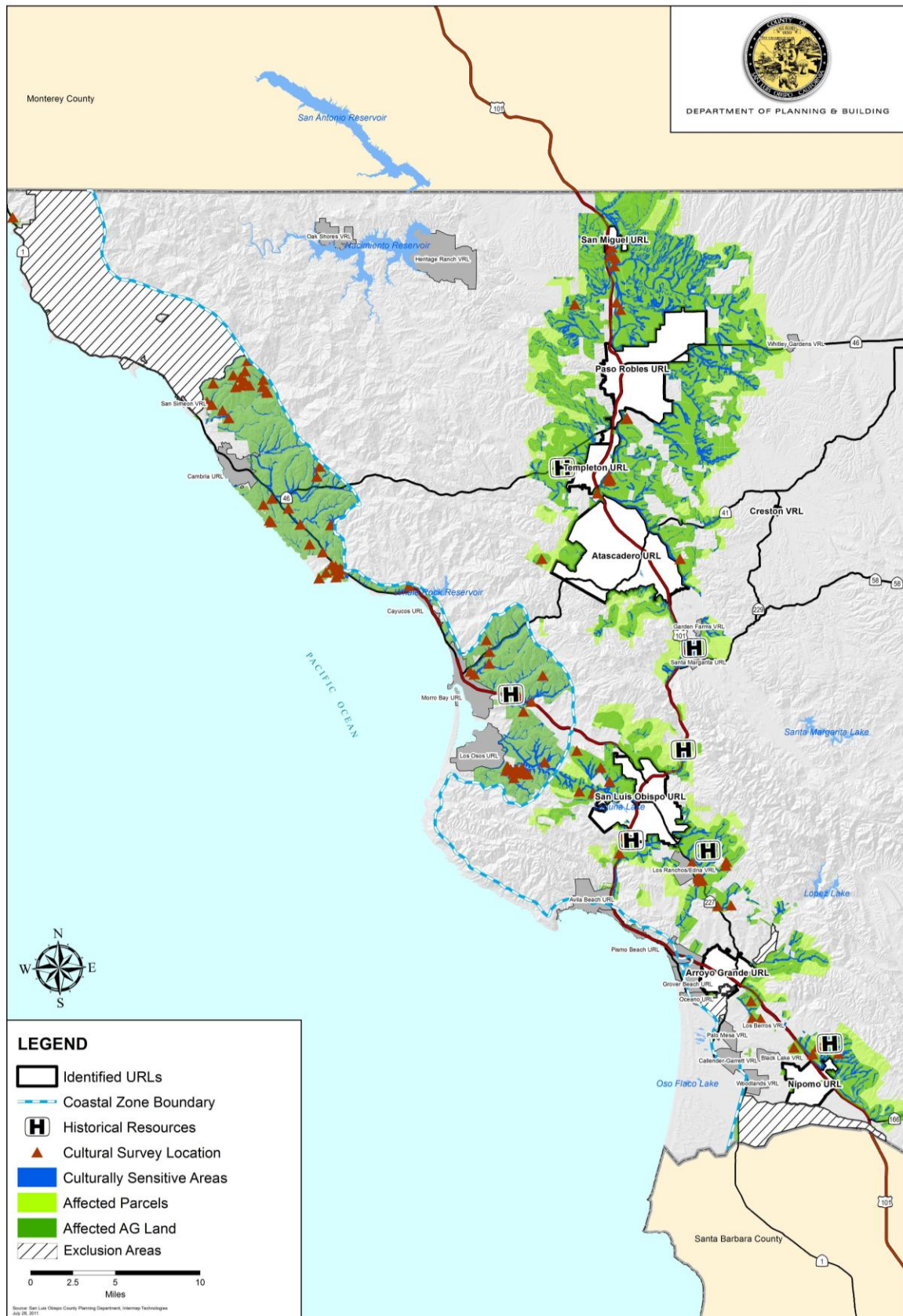


found in marine rock units such as the Miocene Monterey Formation and the Pliocene Siskyou Formations known to occur throughout Central and Southern California. Vertebrate fossils of continental material are usually rare, sporadic, and localized. Scattered vertebrate remains (mammoth, mastadon, horse, ground sloth, camel, and rodents) have been identified from the Pleistocene non-marine continental terrace deposits on Vandenberg Air Force Base to the south (Flarz, 2003). Presently none of these sites have been published in the literature but are known through fossil catalogues (Jefferson 2001, Revised).

The main potential fossil bearing units within the project area are the Plio-Pleistocene Paso Robles Formation and the Monterey Formation. The Paso Robles Formation consists of exposures of unconsolidated sands, gravels, and conglomerates deposited into lakes, streams, and alluvial fans below the eroding Santa Lucia and La Panza ranges near Paso Robles (Galehouse, 1967). Different portions of this formation are known to produce fossils of marine mollusks, barnacles, echinoderms, brachiopods, a large walrus-like pinniped, coastal redwoods, giant tortoises, and various mammals. The Monterey formation is also known for its rich fossil assemblage of marine fossils ranging from plankton to extinct marine mammals.



Figure 4.4-1: Cultural Resources and Sensitivity Overlay



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e. Regulatory Framework.

California Register of Historical Resources (CRHR). “The California Register is an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state’s historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from substantial adverse change” (Public Resources Code Section 5024.1(a)). The CRHR is overseen and administered by the State Historical Resources Commission. The criteria for listing resources on the CRHR are based on those developed by the National Park Service for listing on the National Register of Historic Places with modifications in order to include a broader range of resources which better reflect the history of California. A resource is considered historically significant if 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 and the United States.*
- *Is associated with the lives of persons important to the nation or to California’s 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.*
- *It has yielded, or may be likely to yield, information important to the prehistory or history of the State and the Nation.*

California Public Resources Code. Section 5097.9 of the California Public Resources Code stipulates that it is contrary to the free expression and exercise of Native American religion to interfere with or cause severe irreparable damage to any Native American cemetery, place of worship, religious or ceremonial site, or sacred shrine.

Section 5097.5 of the California Public Resources Code (PRC) prohibits excavation or removal of any “vertebrate paleontological site or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands.” PRC 30244 requires reasonable mitigation of adverse impacts to paleontological resources from development on public land. Penal Code Section 623 spells out regulations for the protection of caves, including their natural, cultural, and paleontological contents. It specifies that no “material” (including all or any part of any paleontological item) will be removed from any natural geologically formed cavity or cave.

State Health and Safety Code. If human remains are discovered or exposed during construction, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then contact the most likely descendent of the deceased Native American, who will serve as a consultant on how to proceed with the remains (i.e. avoid or rebury).

San Luis Obispo County Standards. The County has a vital interest in preserving its many older buildings, and prehistoric and historic sites, which not only represent the heritage of San Luis Obispo County, but also help define the character of the region today.



The Historic Site (H) combining designation is applied to recognize the importance of archeological sites and historic sites, structures and areas important to local, state, or national history. These standards are intended to protect archeological resources, historic structures and sites by requiring new uses and alterations to existing uses to be designed with consideration for preserving and protecting these resources. An (H) combining designation is applied to both archeological resources (historic and prehistoric) and to identify historic structures, landmarks, and districts.

In the event archaeological resources are unearthed or discovered during any construction activities, the following standards apply:

- Construction activities shall cease, and the County Environmental Coordinator shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may be accomplished in accordance with State and federal law.
- In the event archaeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the County Coroner is to be notified in addition to the Environmental Coordinator so proper disposition may be accomplished. If the remains are determined to be Native American, then the County Coroner must notify the Native American Heritage Commission within 24 hours.

The Coastal Zone Land Use Ordinance (Section 23.07.104) identifies Archaeologically Sensitive Area (AS) combining designations within the County Coastal Zone. These areas are defined as follows:

- Any parcel within a rural area which is identified on the rural parcel number list prepared by the California Archaeological Site Survey Office on file with the County Planning Department.
- Any parcel within an urban or village area which is located within an archaeologically sensitive area as delineated by the official maps (Part II) of the Land Use Element.
- Any other parcel containing a known archaeological site recorded by the California Archaeological Site Survey Office.

This section of the Coastal Zone Land Use Ordinance also outlines procedures and requirements to apply to development within archaeologically sensitive areas.

The San Luis Obispo Local Coastal Program and the Coastal Act (Section 30244) requires that where development would adversely impact archeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

In addition to the County standards listed above, the treatment of cultural resources is also governed by the County General Plan, in particular the recently adopted Conservation and Open Space Element update (COSE). The COSE is to identify and protect areas, sites, and buildings having architectural, historical, Native American, or cultural significance. It reaffirms that these important places contribute to the vitality and diversity of the county and help to



maintain a sense of place. The following goals outline how the COSE guides cultural resource policy:

- The County will have a strong, positive community image that honors our history and cultural diversity;
- The County will promote public awareness and support for the preservation of cultural resources in order to maintain the county's uniqueness and promote economic vitality;
- The county's historical resources will be preserved and protected; and
- The county's known and potential Native American, archaeological, and paleontological resources will be preserved and protected.

COSE Policy CR 4.6 (Resource-Based Sensitivity) states that the County will protect archaeological resources near streams, springs and water sources, rock outcrops, and significant ridge-tops, as these are often indicators of the presence of cultural resources. One implementation strategy for this policy, CR 4.6.1 (Resource-Based Surveys), indicates that the County will require a preliminary site survey to determine the likelihood of resources with all development subject to a discretionary permit that is proposed within: 1) 100 feet of the bank of a creek or spring or; 2) 300 feet of a creek where the slope of that area is less than 10 percent. Based on these criteria, Figure 4.4-1 identifies "culturally sensitive" locations within the project area.

Senate Bill 18 (SB 18) Tribal Consultation. California Government Code §65352.3 (adopted pursuant to the requirements of SB 18) requires local governments to contact, refer plans to, and consult with tribal organizations prior to making a decision to adopt or amend a general or specific plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction, and are identified, upon request, by the Native American Heritage Commission (NAHC). As noted in the California Office of Planning and Research's Tribal Consultation Guidelines (2005), "The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

On June 30, 2009, the County of San Luis Obispo sent letters to local tribal representatives and organizations identified by the NAHC as eligible to consult with local governments pursuant to California Government Code §65352.3 (adopted pursuant to the requirements of SB 18). The County received one request for consultation from the Northern Chumash Tribal Council.

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds. To satisfy CEQA requirements, conclusions are made regarding the significance of each identified impact that would result from the proposed Agricultural Cluster Subdivision Program. Appropriate criteria have been identified and used to make these significance conclusions. The following significance criteria for cultural resources were derived from the San Luis Obispo County Environmental Checklist, previous environmental analyses and from the CEQA Guidelines (Appendix G, Environmental Checklist Form, Section IX). Impacts resulting from implementation of the proposed program would be considered significant and would require mitigation if the project would:



- *Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5. Refer to Impact CR-1, below.*
- *Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. Refer to Impact CR-2, below.*
- *Disturb any human remains, including those interred outside of formal cemeteries. Refer to Impact CR-2, below.*
- *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Refer to Impact CR-3, below.*

Historical and Archaeological Resources. According to the State CEQA Guidelines, a resource shall generally be considered “historically significant” if the resource meets the criteria for listing on the California Register of Historic Resources (supra). The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1. Under the provision of the State CEQA guidelines, many archeological resources are considered historic resources and are provided the same level of protection as discussed herein.

Under CEQA, an impact to an historical resource is considered significant if the impact lessens the integrity of the qualities of the property that qualify it for the California Register. If the proposed project may cause damage to a significant historical resource, the project may have a significant effect on the environment. Section 15064.5 of the CEQA Guidelines pertains to the determination of the significance of impacts to archaeological and historic resources. Direct impacts may occur by:

- (1) *Physically damaging, destroying, or altering all or part of the resource.*
- (2) *Altering characteristics of the surrounding environment that contribute to the resource’s significance.*
- (3) *Neglecting the resource to the extent that it deteriorates or is destroyed. Indirect impacts primarily result from the effects of project-induced population growth. Such growth can result in increased construction as well as increased recreational activities that can disturb or destroy cultural resources.*
- (4) *The incidental discovery of cultural resources without proper notification.*

Indirect impacts result primarily from the effects of project-induced population growth. Such growth can result in increased construction as well as increased recreational activities that can disturb or destroy cultural resources.

CEQA provides guidelines for mitigating impacts to historical or archaeological resources in Section 15126.4. Preservation in place is the preferred manner of mitigating impacts (14 CCR 15126.4(b)(3)). Preservation in place may be accomplished by planning construction to avoid the resource, incorporating sites within parks or open space, covering archaeological sites with chemically stable and culturally sterile fill, or deeding the site into a permanent conservation easement. For buildings and structures, maintenance, repair, restoration, preservation,



conservation, or reconstruction consistent with the *Secretary of Interior's Standards and Guidelines for the Treatment of Historic Properties* is considered mitigation of impacts to a less than significant level (14 CCR 15126.4(b)(1)). Documentation of an historical resource, however, will not mitigate the effects of demolition to a less than significant level (14 CCR 15126.4(b)(2)). When data recovery excavation of an archaeological site is the only feasible mitigation, a detailed data recovery plan must be prepared and adopted prior to any excavation.

Paleontological Resources. Significant paleontological resources are fossils or assemblages of fossils that are unique, unusual, rare, uncommon, diagnostically or stratigraphically important, and/or add to an existing body of knowledge in specific areas stratigraphically, taxonomically, or regionally. Significant resources include fossil remains of large to very small aquatic and terrestrial vertebrates, remains of plants and animals not previously represented in certain portions of the stratigraphic sequence, and assemblages of fossils that might aid stratigraphic correlations, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, paleoclimatology, and the relationships of aquatic and terrestrial species. Vertebrate fossils, some invertebrate fossils, and some suites of plant fossils may be classified as significant paleontological resources.

The discovery of a vertebrate fossil locality is of greater significance than that of an invertebrate fossil locality, especially if it contains a microvertebrate assemblage. The recognition of new vertebrate fossil locations could provide important information on the geographical range of the vertebrates, their age, evolutionary characteristics, the type of environment, and other important scientific research questions. Vertebrate fossils are almost always significant because they occur so rarely. Each additional vertebrate fossil provides considerable scientific information. Invertebrate fossils and plant fossils tend to be more abundant than vertebrate fossils. These fossils generally are ranked lower in significance than vertebrates unless they are in short supply, are age-diagnostic, or their paleoenvironmental framework is unique. Thus, geological rock units having the potential to contain vertebrate fossils are considered the most sensitive.

b. Project Impacts and Mitigation Measures.

Impact CR-1 The proposed Agricultural Cluster Subdivision Program would modify the County's current development standards, leading to a potential change in development patterns and a change in physical impacts to identified or unrecognized historic resources. Compared to the existing ordinance, the program would reduce the potential for development to impact historic resources. Impacts compared to the existing ordinance would therefore be Class III, *less than significant*. However, compared to existing conditions, the program would allow new residential development in rural/agricultural areas, potentially impacting historic resources. Impacts compared to existing conditions would therefore be Class II, *significant but mitigable*.



Compared to Development Potential under the Existing Ordinance

When compared to development potential under the existing ordinance, the proposed amendments would reduce the number of residential cluster parcels that could potentially be created in the county from 4,582 to 418, a 91 percent reduction. The program would also introduce the Agricultural Cluster Subdivision Program into the Coastal Zone; however, the Coastal version of the program would only authorize the reconfiguration of existing underlying lots into residential cluster lots, essentially replacing current lot line adjustment procedures with more restrictive agricultural clustering standards.

In addition to reducing development potential, the proposed program would strengthen existing ordinance standards intended to minimize site disturbance. For example, the program would require residential cluster parcels to be physically contiguous to each other in a single cluster area (or two areas, if environmental conditions warrant) which allows the natural and undeveloped areas of the property to remain intact, as opposed to the layout that would and has occurred under the existing agricultural cluster ordinance which fragments the open space. Consequently, the proposed amendments would reduce the potential for grading and site development to impact identified or unrecognized historic resources. Compared to the existing ordinance, the program would therefore result in a Class III, *less than significant*, impact.

Compared to Existing Conditions

The National Register of Historic Places lists 34 historically-recognized locations within San Luis Obispo County (refer to Table 4.4-1). The majority of these sites are located in urban areas of the county, including ten sites in San Luis Obispo, five sites in Paso Robles, three sites in Atascadero, one site in Arroyo Grande and one site in Pismo Beach. Fourteen of these sites are located in unincorporated areas of the county. None are within the project area.

In addition to those properties identified in the National Register of Historic Places, the State Office of Historic Preservation designates California Historical Landmarks throughout the State. San Luis Obispo County contains 13 State-designated historical landmark sites [refer to Section 4.4.1(b)]. Six of these sites are located in urban areas, including three in San Luis Obispo, one in Paso Robles, one in Morro Bay and one in Atascadero. The remaining sites are located in unincorporated areas of the county. Two of these sites, Rancho Nipomo and Santa Margarita Asistencia, are located within the project area (refer to Figure 4.4-1).

Compared to existing conditions, the proposed Agricultural Cluster Subdivision Program would allow for the development of up to 418 new single family residences in agricultural areas within five miles of the URLs of Arroyo Grande, Atascadero, San Luis Obispo, San Miguel, Nipomo, Templeton, and Paso Robles. Based on a minimum lot size of 2.5 acres and a maximum lot size of 5 acres, the proposed program could result in the disturbance of between 1,045 and 2,090 acres of undeveloped land (less than one percent of the 261,851 acre project area) for construction, grading, and site preparation activities.

The Agricultural Cluster Subdivision Program would also allow for the reconfiguration of legally established underlying lots in eligible areas of the Coastal Zone (rural North Coast and Estero planning areas, excluding Hearst Ranch) to accommodate residential development. To



date, 320 legal underlying lots have been identified in these areas. However, since many of these lots could already be developed in their current configuration with fewer restrictions than would be required under the proposed amendments, only a small percentage of the eligible lots would be likely to participate in the program. Nonetheless, any future reconfiguration would result in ground disturbance activities that could have an impact on identified or unrecognized historic resources.

Development resulting from the proposed Agricultural Cluster Subdivision Program could impact identified or unrecognized historic resources within the project area either through direct impacts to the resources themselves or impacts to their immediate surroundings (e.g., changing historic context, etc.). Impacts to the immediate surroundings may result from individual development that alters a historic structure or the unique character and context of the physical environment. Mitigation measures are available to reduce these impacts to less than significant levels. Impacts would therefore be Class II, *significant but mitigable*.

Mitigation Measures. As required by Land Use Ordinance Section 22.14.080 and Coastal Zone Land Use Ordinance Sections 23.07.100 through 23.07.102, the County shall protect historic structures and sites by requiring new uses and alterations to existing uses to be designed with consideration for preserving and protecting these resources. This includes requiring minimum parcel sizes, identifying the required findings for approval, and implementing design requirements for those areas within a historic combining designation. Compliance with the Land Use Ordinance would partially reduce impacts. In addition, the following mitigation is required:

CR-1(a) Historical Resource Survey. During environmental review for future agricultural cluster subdivision projects processed under the proposed ordinance amendments, the County shall require an historical resource survey, conducted by a qualified professional (archaeologist, historian or historic architect as appropriate based on the resource) approved by the Environmental Coordinator, that assesses the potential impacts of all ground disturbing activities (e.g. access roads, driveways, residences, utility trenches) on those parcels that:

- Are located within an Historic combining designation;
- Contain a designated historic site;
- Are located in an area of known historic resources; or,
- Contain structures greater than 50 years old.

Should the historical resource survey identify significant resources, the mitigation measures recommended by the qualified professional shall be implemented by the project applicant. These measures shall be consistent with the Secretary of the Interior's Standards and could include, but not necessarily be limited to:

- Avoidance of significant historical resources;
- Graphic documentation (photographs, drawings, etc.);
- Prohibition of demolition of buildings and structures; and/or
- Restoration, stabilization, repair, and reconstruction.



Residual Impacts. When compared to development potential under the existing ordinance, impacts would be Class III, *less than significant*. When compared to existing conditions, impacts would be Class II, *significant but mitigable*.

Impact CR-2 The proposed Agricultural Cluster Subdivision Program would modify the County's current development standards, leading to a potential change in development patterns and a change in physical impacts to identified and previously unidentified pre-historic archeological resources. Compared to the existing ordinance, the program would reduce the potential for development to impact pre-historic archaeological resources. Impacts compared to the existing ordinance would therefore be Class III, *less than significant*. However, compared to existing conditions, the program would allow new residential development in rural/agricultural areas, potentially impacting archaeological resources. Impacts compared to existing conditions would therefore be Class II, *significant but mitigable*.

Compared to Development Potential under the Existing Ordinance

As described under Impact CR-1, the proposed program would reduce agricultural cluster development potential by 91 percent (from 4,582 to 418 units) in the Inland portion of the county, and would replace existing ordinance provisions for lot line adjustments with more restrictive clustering standards in the Coastal Zone. These amendments would substantially reduce the amount of undeveloped land that could be disturbed due to grading and site development activities associated with new agricultural cluster subdivisions.

In addition to reducing development potential, the proposed program would strengthen existing ordinance standards intended to minimize site disturbance. For example, the program would require residential cluster parcels to be physically contiguous to each other in a single cluster area (or two areas, if environmental conditions warrant) which allows the natural and undeveloped areas of the property to remain intact, as opposed to the layout that would and has occurred under the existing agricultural cluster ordinance which fragments the open space. Consequently, the proposed amendments would reduce the potential for grading and site development to impact identified or unrecognized archaeological resources. Compared to the existing ordinance, the program would therefore result in a Class III, *less than significant*, impact.

Compared to Existing Conditions

As described under Impact CR-1, the proposed amendments could result in the disturbance of between 1,045 and 2,090 acres of undeveloped land (less than one percent of the 261,851 acre project area) for construction, grading, and site preparation activities in the Inland portion of the county, as well as additional site disturbance in undeveloped areas of the Coastal Zone. Given the presence of recorded archaeological sites and the long record of prehistoric and historic settlement in San Luis Obispo County, development of affected parcels in accordance with the proposed program could disturb known resources. This could result in exposing resources to potential vandalism, or causing them to be displaced from their original context and integrity. Construction and grading activities may affect archaeological resources.



Examples of activities that could substantially alter the integrity and significant qualities of archaeological resources include, but are not limited to: collection of artifacts from the archaeological sites; unauthorized excavation or looting of sites; erosion and other damage resulting from non-motorized or motorized vehicle use (horses, bicycles, dirt bikes, etc.); illicit trash dumping; and vandalism. Such effects are considered significant but mitigable environmental impacts.

San Luis Obispo County contains over 2,000 archaeological sites which are registered with the Central Coast Information Center. Many of which are likely to be located within the project area. In addition, the project area contains many locations that could be considered archaeologically sensitive due to their geologic attributes, and therefore have the potential to contain archeological resources (refer to Figure 4.4-1).

Sites are typically found in areas conducive to past settlement, including flat terraces, near creeks, or in open areas adjacent to resources that may be useful to human settlement. The proposed amendments would affect undeveloped rural properties with a wide variety of topography and physical features typically associated with pre-historic occupation. Therefore, the likelihood of direct physical impacts to identified and previously unidentified pre-historic archeological resources would be potentially significant. Mitigation measures are available to reduce these impacts to less than significant levels. Impacts would therefore be Class II, *significant but mitigable*.

Mitigation Measures. As required by Coastal Zone Land Use Ordinance Section 23.07.104 (Protection of Archaeological Resources), the County shall protect and preserve archaeological resources within areas of the Coastal Zone identified as archaeologically sensitive (AS designation). This includes conducting preliminary site surveys, and requiring mitigation plans (if applicable). In addition, as required by Title 19 (Section 19.02.070) and Title 22 (Section 22.10.040) of the County Code, the County shall require that in the event that archaeological resources are unearthed or discovered during any construction activities, the following standards apply:

- a. Construction activities shall cease, and the Environmental Coordinator and Department of Planning and Building shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may be accomplished in accordance with state and federal law; and
- b. In the event archaeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the County Coroner is to be notified in addition to the Department of Planning and Building and the Environmental Coordinator so that proper disposition may be accomplished.

Compliance with the Coastal Zone Land Use Ordinance and the San Luis Obispo County Code would partially reduce impacts. In addition, the following mitigation is required:

- CR-2(a) Archaeological Surface Survey.** During environmental review for future agricultural cluster subdivision projects processed under the proposed ordinance amendments, the County shall require an archaeological surface survey, conducted by a qualified archaeologist approved by the



Environmental Coordinator, that assesses the potential impacts of all ground disturbing activities (e.g. access roads, driveways, residences, utility trenches) on those parcels that:

- Are located within an Archaeological Sensitive Area (AS) combining designation;
- Contain known archaeological sites, as recorded by the Central Coast Information Center at UC Santa Barbara;
- Are located in an area identified by the County of San Luis Obispo Planning and Building Department as archaeologically sensitive (e.g. Nipomo, Santa Margarita, Salinas River area); or,
- Contain physical features on-site that may indicate the presence of archeological resources (e.g. springs, creeks, rock outcrops).

Should the archaeological surface survey identify significant resources, the applicant shall avoid the resource if feasible. Should avoidance be infeasible, the following mitigation measure shall be required:

CR-2(b)

Data Recovery Excavation. If avoidance of an archaeological site(s) is not possible, data recovery excavation shall be completed prior to issuance of grading permits. A data recovery plan shall be submitted by a qualified archaeologist for review by the County Environmental Coordinator. Data recovery shall be funded by the applicant, shall be performed by a County-qualified archaeologist, and shall be carried out in accordance with a research design consistent with the requirements of the California Office of Historic Preservation Planning Bulletin 5, *Guidelines for Archaeological Research Design*. At a minimum, data recovery shall include:

- Mapping of site boundaries and the distribution of surface remains;
- Surface collection of artifacts;
- Excavation of a sample of the cultural deposit to characterize the nature of the site and retrieve a representative sample of artifacts and other remains within the proposed impact area;
- Monitoring of excavations at Native American sites by a tribal representative;
- Technical studies and analysis of the recovered sample, including radiocarbon dating, typological and technical analysis of tools and debris, identification and analysis of preserved faunal and floral remains, and other studies appropriate to the research questions outlined in the research design;
- Cataloguing and curation of all artifacts and records detailing the results of the investigations at a County-approved curation facility;
- Submission of a final technical report detailing the results of the investigations; and
- Preparation of an interpretive report suitable for distribution to the general public.



CR-2(c) Archaeological Resource Construction Monitoring. At the commencement of construction on sites that have been identified as having the potential to support cultural resources based on mitigation measure CR-1(a), a qualified archaeologist shall prepare an archaeological monitoring plan for the review and approval of the County. The monitoring plan shall include involvement of a Native American representative and shall include:

- Demonstration of an understanding of all applicable State and County regulations, policies and standards in regards to archaeological resources;
- An orientation for construction workers to describe site avoidance requirements, the possibility of exposing unexpected archaeological resources, and the steps to be taken if such a find is encountered;
- Monitoring of earth moving activities within native soil;
- Provisions for the event that archaeological remains are encountered during construction including halting all work in the vicinity of the find until such time as the find is evaluated by a qualified archaeologist and appropriate mitigation, if necessary, is implemented;
- Provisions for curation and preservation of any discovered resources, and
- Provisions for a follow up report summarizing the results of the monitoring activities and any necessary mitigation.

Residual Impacts. When compared to development potential under the existing ordinance, impacts would be Class III, *less than significant*. When compared to existing conditions, impacts would be Class II, *significant but mitigable*.

Impact CR-3 The proposed Agricultural Cluster Subdivision Program would modify current development standards, leading to physical impacts. If development occurs in fossil-bearing strata, significant fossil materials could be damaged or destroyed. Compared to the existing ordinance, the program would reduce the potential for development to impact paleontological resources. Impacts compared to the existing ordinance would therefore be Class III, *less than significant*. However, compared to existing conditions, the program would allow new residential development in rural/agricultural areas, potentially impacting paleontological resources. Impacts compared to existing conditions would therefore be Class II, *significant but mitigable*.

Compared to Development Potential under the Existing Ordinance

As described under Impact CR-1, the proposed program would reduce agricultural cluster development potential by 91 percent (from 4,582 to 418 units) in the Inland portion of the county, and would replace existing ordinance provisions for lot line adjustments with more



restrictive clustering standards in the Coastal Zone. These amendments would substantially reduce the amount of undeveloped land that could be disturbed due to grading and site development activities associated with new agricultural cluster subdivisions.

In addition to reducing development potential, the proposed program would strengthen existing ordinance standards intended to minimize site disturbance. For example, the program would require residential cluster parcels to be physically contiguous to each other in a single cluster area (or two areas, if environmental conditions warrant) which allows the natural and undeveloped areas of the property to remain intact, as opposed to the layout that would and has occurred under the existing agricultural cluster ordinance which fragments the open space. Consequently, the proposed amendments would reduce the potential for grading and site development to impact identified or unrecognized paleontological resources. Compared to the existing ordinance, the program would therefore result in a Class III, *less than significant*, impact.

Compared to Existing Conditions

Paleontological resources are the fossilized remains of prehistoric plant and animal organisms, as well as the mineralized impressions (trace fossils) left as indirect evidence of the form and activity of such organisms. Paleontologic sensitivity is the potential for a geologic unit to produce scientifically significant fossils, as determined by rock type, past history of the rock unit in producing fossil materials, and fossil sites that are recorded in the unit. Geological strata with both high and unknown sensitivity to produce significant fossils occur throughout the county.

As described under Impact CR-1, the proposed amendments could result in the disturbance of between 1,045 and 2,090 acres of undeveloped land (less than one percent of the 261,851 acre project area) for construction, grading, and site preparation activities in the Inland portion of the county, as well as additional site disturbance in undeveloped areas of the Coastal Zone. Given that fossil-bearing strata are known to occur in San Luis Obispo County, there is potential for development in accordance with the proposed program to damage or destroy fossil material. Since the proposed program may result in ground disturbance, and given that geological strata with both high and unknown sensitivity to produce significant fossils are known to occur in rural and agricultural areas of the county, implementation of the proposed program could impact these areas. High-sensitivity areas have the potential to yield vertebrate fossils and also may produce invertebrate materials that could provide new and important taxonomic, phylogenetic, and/or stratigraphic data. Any vertebrate fossils disturbed in areas where sensitivity is currently unknown would also be a significant impact. Mitigation measures are available to reduce these impacts to less than significant levels. Impacts would therefore be Class II, *significant but mitigatable*.

Mitigation Measures. Implementation of the following mitigation measures would reduce impacts on paleontological resources to less than significant levels:

- CR-3(a) Paleontological Surface Survey.** During environmental review for future agricultural cluster subdivision projects processed under the proposed ordinance amendments, the County shall require a paleontological surface survey, conducted by a qualified paleontologist



approved by the Environmental Coordinator, that assesses the potential impacts of all ground disturbing activities (e.g. access roads, driveways, residences, utility trenches) on those parcels that are located within an area:

- Overlying a geologic formation known to be paleontological sensitivity or fossil bearing;
- Containing known paleontological sites;
- Determined by the County of San Luis Obispo Planning and Building Department to be paleontologically sensitive; or,
- Containing physical features on-site that may indicate the presence of paleontological resources (as determined by rock type, past history of the rock unit in producing fossil materials, and fossil sites that are recorded in the unit).

Should the paleontological surface survey identify significant resources, the applicant shall avoid the resource if feasible. Should avoidance be infeasible, the following mitigation measure shall be required:

CR-3(b) Preparation of a Paleontological Resource Monitoring Plan. At the time of application for construction and/or grading permits, applicants for projects where paleontological sensitivity is moderate to very high, as determined by the paleontological surface survey, shall retain a qualified accredited paleontologist to prepare a Paleontological Resource Monitoring Plan based on the specific construction plans. The monitoring plan shall detail the procedures for monitoring construction in areas of high or unknown sensitivity, collecting fossil remains and relevant geographic and stratigraphic data, stabilizing and preserving recovered specimens, and cataloguing and curating the collection. The monitoring plan shall include provisions for collecting a representative sample of invertebrates prior to construction, documenting the site according to the standards developed by the National Research Council (1987), and assessing the potential of this site to contain significant vertebrate remains.

CR-3(c) Paleontological Monitoring. A qualified paleontological monitor shall observe any initial excavation, grading, or other ground disturbance which extends below the upper soil layers in *in situ* sedimentary rock where paleontological sensitivity is high. Paleontologists who monitor excavations must be qualified and experienced in salvaging fossils and authorized to temporarily divert equipment while removing fossils. They must be properly equipped with tools and supplies to allow for rapid removal and preparation of specimens, and trained in safe practices when working around construction equipment. If multiple pieces of heavy equipment are in use simultaneously at diverse locations during construction, each location may be monitored individually.



CR-3(d) Treatment of Paleontological Remains Discovered During Monitoring. If paleontological resources are found during excavations or other ground disturbance, work shall cease temporarily in the immediate area of the discovery. Ground disturbance may be redirected to another area so that the significance of the fossil find may be assessed. If an accredited paleontologist is not already on-site, a vertebrate paleontologist with regional experience will be contacted to inspect the excavation, assess the significance of the fossil find, recover any exposed fossils of significance, and recommend additional mitigation measures, if necessary.

A standard sample (3 to 12 cubic meters) of matrix from each site will be taken for identification of microvertebrates (rodents, birds, rabbits), especially when the potential for microvertebrates is high. The monitors also will determine whether the fossils are part of an archaeological deposit. If the fossils are found with cultural material, the site then will be considered an archaeological discovery and treated according to the procedures specified in CR-2(c) (Archaeological Resource Construction Monitoring).

Significant fossils found during construction shall be preserved by prompt removal whenever feasible. Due to the potential for rapid deterioration of exposed surface fossils, preservation by avoidance is not an appropriate measure. When a significant fossil cannot be removed immediately, stabilization is needed to prevent further deterioration prior to removal. The fossil location must be stabilized under the direction of a professional paleontologist.

At the time of collecting, each specimen or group of specimens will be clearly located and plotted on a USGS topographical quadrangle map. Field methods, other excavation activities, and working conditions during monitoring of the paleontological resources will be recorded in a field notebook or on a paleontological resources record or worksheet such as those developed by the National Research Council (1987).

Recovered specimens will be stabilized and prepared for identification. Sedimentary matrix with microfossils will be screen washed and sorted to identify the contained fossils. Removal of excess matrix during preparation reduces long-term storage requirements. Competent qualified specialists will classify individual specimens to the lowest identifiable taxon, typically to genus, species, and element. Batch identification and batch numbering (e.g., "mammal, 25 specimens") should be avoided.

Paleontological specimens will be cataloged according to current professional standards, and a complete list of collected specimens must be prepared. A complete set of field notes, geologic maps, and stratigraphic sections must accompany the fossil collections.



All fossil remains recovered during construction and operation must be curated by a recognized, nonprofit paleontological specimen repository with a permanent curator, such as a museum or university. Specimens must be stored in a fashion that allows researchers to retrieve specific individual specimens in the future. In addition to the LACM and UCMP, qualified research facilities include California State Polytechnic University, San Luis Obispo; the Santa Barbara Museum of Natural History; or Santa Barbara City College.

The project paleontologist will complete a final report summarizing findings, describing important fossil localities (vertebrate, megainvertebrate, or plant) discovered in the project area, and explaining any mitigation measures taken. The report will include a summary of the field and laboratory methods, site geology and stratigraphy, an itemized inventory of recovered specimens, faunal lists, and site records. The report also should discuss the importance of the recovered fossil materials. The reports will be prepared by a professional paleontologist and distributed to the appropriate agencies, museums, colleges, or universities.

Residual Impacts. When compared to development potential under the existing ordinance, impacts would be Class III, *less than significant*. When compared to existing conditions, impacts would be Class II, *significant but mitigable*.

c. Cumulative Impacts. This section describes the cumulative impacts of the proposed Agricultural Cluster Subdivision Program compared to development potential under both the existing ordinance and existing conditions. The geographic scope for the cultural resources cumulative analysis includes agricultural and rural areas within five miles of the identified URLs and eligible areas of the Coastal Zone (the rural North Coast and Estero planning areas, not including Hearst Ranch).

Compared to Development Potential under the Existing Ordinance

As described under Impact CR-1, the proposed program would reduce agricultural cluster development potential by 91 percent (from 4,582 to 418 units) in the Inland portion of the county, and would replace existing ordinance provisions for lot line adjustments with more restrictive clustering standards in the Coastal Zone. These amendments would substantially reduce the amount of undeveloped land that could be disturbed due to grading and site development activities associated with new agricultural cluster subdivisions. Cumulative impacts would therefore be Class III, *less than significant*, when compared to the existing ordinance.

Compared to Existing Conditions

Cumulative development throughout the greater San Luis Obispo County area would have the potential to disturb identified and unidentified cultural resources. For example, several cumulative projects listed in Table 3.3-1 are large agricultural cluster developments in



previously undeveloped areas that would have the potential to impact cultural resources. Two of these projects (Laetitia and Estrella River Vineyard) are major agricultural cluster subdivisions that are being processed under the existing agricultural cluster ordinance. The Laetitia proposal, located in the South County, involves over 100 acres of site disturbance, including grading and utility trenching, for the construction of 102 new single family residences on a property containing several known archaeological sites. The Estrella River Vineyard property does not contain known cultural resources; however, unidentified resources could be impacted during the grading and utility trenching activities for the construction of 18 new single family residences on this property.

The proposed Agricultural Cluster Subdivision Program could lead to between 1,045 and 2,090 acres of site disturbance for the construction of up to 418 new single family residences within five miles of the identified URLs in the Inland portion of the county and additional site disturbance resulting from the reconfiguration of existing underlying lots in the Coastal Zone. Construction, grading, and site preparation activities authorized under the proposed program could potentially impact known and unidentified historic, archaeological, and paleontological resources. When considered together with the effects of other current and future projects within five miles of the identified Inland URLs and eligible areas of the Coastal Zone, the proposed program's incremental effects on cultural resources would be cumulatively considerable. As discussed in Section 4.4.2(b) above, compliance with the identified mitigation measures and existing ordinance standards is foreseeable to reduce impacts to a less than significant level for subsequent projects processed under the proposed program. The project's incremental contribution to the impact would therefore be insignificant with the implementation of these mitigation measures, which include specific performance measures. Therefore, cumulative impacts would be considered Class II, *significant but mitigable*, when compared to existing baseline conditions.

