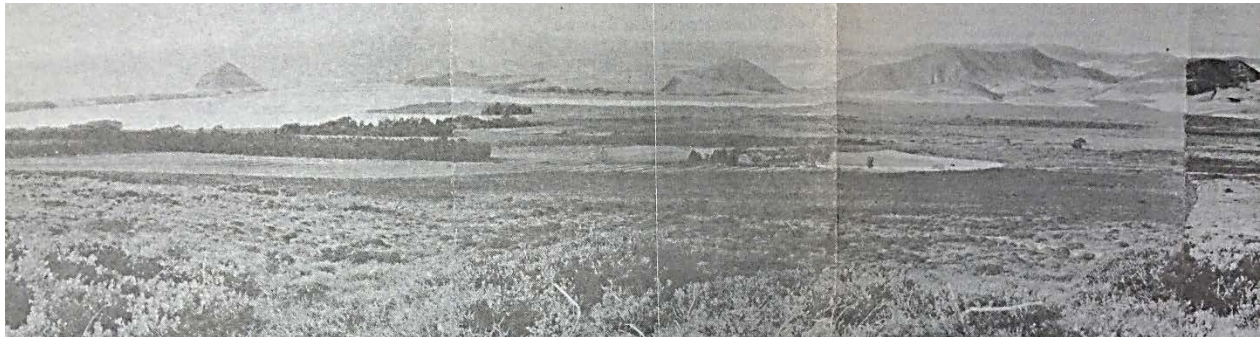


## 4.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

*The LOCP Area is richly endowed with Native American archaeological sites and historical buildings and structures. These resources are generally concentrated in discrete zones within the Plan area. Development of new housing, commercial, recreational, and infrastructure projects within these zones has the potential to impact significant properties. Although the LOCP recognizes the potential importance of the prehistoric and historic environment, it does not contain a robust policy framework to guide future development and mitigate potential impacts to these resources. Policies and development standards recommended in this section will help reduce potential impacts to less than significant levels in most cases.*

*A small percentage of the Plan area is also identified as a zone of high paleontological sensitivity. Recommended policies and standards will reduce any impacts on paleontological resources to less than significant levels.*

### 4.5.1 Setting



*An undeveloped Los Osos, looking towards Morro Rock, circa 1920. (Courtesy, History Center of San Luis Obispo)*

Cultural resources provide both tangible and intangible links with the historic and prehistoric past. They are valued as symbols of our shared history and group identity, as memorials to historical events and individuals, and for their scientific, aesthetic, and economic importance. Cultural resources include but are not limited to buildings and structures, archaeological and historical sites, historical landscapes, and traditional cultural properties. Such resources amplify the local population's sense of community, enhance perceptions and enjoyment of the community by residents and visitors, provide an important measure of the physical quality of life in the community, and are a critically important element of the tourist economy.

Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to understand the history of life on earth. Paleontological resources, or fossils, are the evidence of once-living organisms preserved in the rock record. They include both the fossilized remains of ancient plants and animals and the traces thereof (e.g., trackways, imprints, burrows, etc.). In general, fossils are considered to be greater than 5,000 years old (Middle Holocene) and are typically

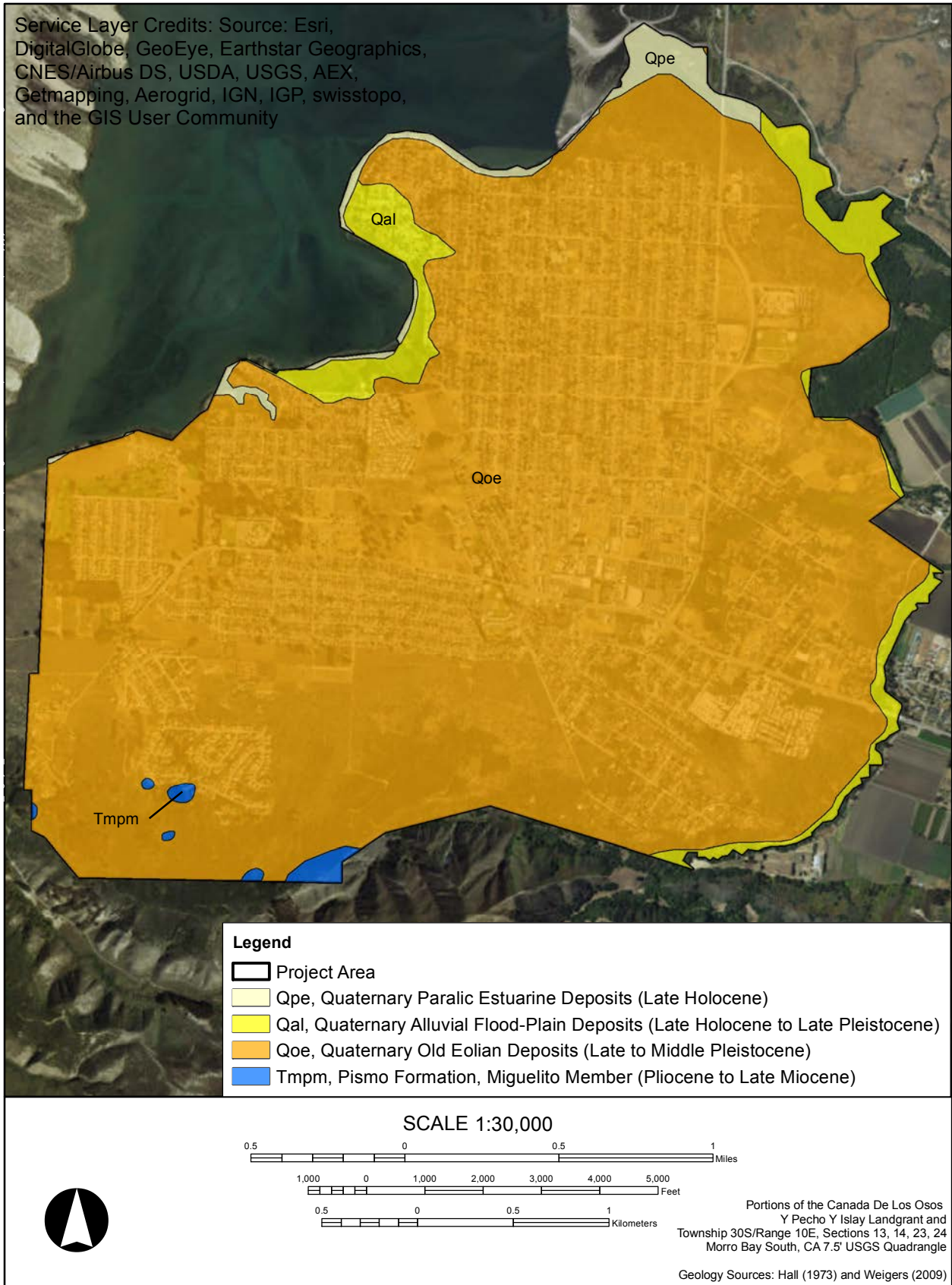
preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions (Society of Vertebrate Paleontology [SVP] 2010).

**a. Paleontological Setting.** The Project area is situated within the Coast Ranges geomorphic province of California. A geomorphic province is a region of unique topography and geology that is readily distinguished from other regions based on its landforms and diastrophic history. The Coast Ranges extend about 600 miles from the Oregon border south to the Santa Ynez River in Santa Barbara County. The width of the range averages 50 miles and is bounded to the west and east by the Pacific Ocean and the Great Valley geomorphic provinces, respectively. The Coast Ranges are characterized by numerous north-south-trending peaks and valleys that range in elevation from approximately 500 feet above mean sea level (amsl) to 7,581 feet amsl at the highest summit, and often exhibit a high degree of relief where the highlands intersect the Pacific Ocean shore. The Coast Ranges are subdivided into the northern and southern ranges near their midpoint at San Francisco Bay (Norris and Webb 1976). Dominant geologic features of the southern Coast Ranges within the vicinity of the Project area include the San Luis Range and the Irish Hills; the northwest-trending Los Osos Fault Zone; and Morro Rock and the Nine Sisters, a series of Miocene volcanic peaks (Lettis and Hall 1994; Lettis et al. 1994; Surdham and Stanley 1984).

The basement rocks of the Coast Ranges include the Jurassic to Cretaceous Franciscan Assemblage, which consists of more than 55,000 feet of greywacke, greenstone, bluestone, metasedimentary rocks, and ophiolite sequences. The Franciscan rocks were primarily derived from erosion of a volcanic arc, subsequent deposition in a deep marine environment, and later accretion onto the continental margin of North America during the subduction of the Farallon Plate (Schemmann et al. 2008; Wakabayashi and Moores 1988). During the Mesozoic and into the Cenozoic, the present-day Coast Ranges were covered by marine waters, resulting in the thick accumulation of forearc marine and nonmarine shale, sandstone, and conglomerate on the Franciscan basement rock (Bartow and Nilsen, 1990). Later, these deposits were unconformably overlain by Paleocene to Pliocene marine continental shelf sedimentary rocks, including the fossiliferous rocks of the Miocene Monterey and Pismo formations (Barron 1989; Graymer et al. 1996). During the Late Miocene to the Late Pliocene, an orogenic (i.e., mountain-building) episode occurred in the vicinity of the present-day Coast Ranges, resulting in their uplift above sea level. Subsequently, from the Late Pliocene to Pleistocene, extensive deposits of terrestrial material, including alluvial fans and fluvial sediments, were deposited in the southern Coast Ranges (Norris and Webb 1976). Tectonic activity, faulting, and eustatic (global) events related to Pleistocene climate change continued to occur during the Quaternary Period, resulting in further uplift, deformation, and sea level fluctuations along the Coast Ranges (Jefferson et al. 1992).

The Los Osos Community Plan area is underlain by marine and terrestrial sedimentary deposits including the Late Miocene to Pliocene Pismo Formation (Tpm), Quaternary paralic (estuarine) deposits (Qpe), alluvial flood-plain sediments (Qal), and old eolian deposits (Qoe). The area is mapped at a scale of 1:24,000 by Hall (1973) and Weigers (2009). A general description of the underlying geology is provided below and depicted in **Figure 4.5-1**.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



**Figure 4.5-1 Geologic units underlying the Project area.**

Pismo Formation. The Pliocene to Late Miocene Pismo Formation is exposed in the southern Plan area where it unconformably overlies the Miocene Monterey Formation (Hall 1973). The Pismo Formation was first described by Fairbanks (1904) for thick diatomaceous earth beds near Pismo Beach, and was redescribed by Hall (1973). The Pismo Formation is restricted to the Pismo Basin (Morro Bay-San Luis Obispo-Pismo Beach area) and may be as much as 3,000 feet thick in some locations (National Geologic Map Database [NGMDB] 2016; Surdham and Stanley 1984). Previous researchers have attributed the Pismo deposits to the Monterey Formation; however, based on lithologic characteristics of the unit and structural features within the nearby Pismo Syncline, Keller (1992) determined that the Pismo Formation should not be included in the Monterey Formation (Hall 2007). The Pismo Formation is composed of siliceous marine shale, diatomaceous shale, thickly bedded sandstone, and conglomerate deposits, and is subdivided into five members by Hall (1973): the basal Edna and Miguelito members (Miocene and Pliocene age) and the unconformably overlying Gragg, Belleview, and Squire members (Pliocene age) (NGMDB 2016). The Miguelito member is exposed in the Plan area and is composed of siliceous and diatomaceous shale, siltstone, and friable sandstone. The shale and siltstone are brown to light tan, locally bituminous, moderately resistant, well-bedded (average thickness 10 centimeters), with dolomitic siltstone lenses and local tuffaceous deposits near the base (Hall 1973). The shale and siltstone grade laterally into the sandstone, which is locally conglomeratic near the base of the Miguelito member.

Numerous fossils have been recovered from vertebrate localities within the Pismo Formation in San Luis Obispo County, including specimens of seal, sea cow, whale, shark, horse, and bird. The Pismo Formation has also produced an invertebrate fauna and flora that includes clam, snail, sea urchin, and Ficus tree (Hall et al. 1966). The University of California Museum of Paleontology (UCMP) online database (2016) records a vertebrate locality within the Miguelito member approximately 10 miles southeast of the Plan area. The Miguelito locality yielded fossil teeth of *Isurus planus* (extinct mako shark) and *Desmostylus* sp. (extinct herbivorous mammal), recovered from an unknown depth.

Quaternary Deposits. Quaternary deposits of Late Pleistocene to Holocene age are exposed along Morro Bay and within the Los Osos Valley in the Plan area. Late Holocene paralic (estuarine) deposits (Qpe) are mapped along the coast of Morro Bay, and consist of salt marsh and tidal flat sediments of unconsolidated fine-grained sand and clay. Late Holocene to Late Pleistocene alluvial flood-plain deposits (Qal) are present along the eastern and western border of the Plan area near active and recently active floodplains; these deposits consist of unconsolidated sand, silt, and clay-bearing alluvium.

Most of the Plan area is underlain by Late to Middle Pleistocene old eolian deposits (Qoe). The old eolian deposits are old stabilized dunes dissected by Los Osos Creek and composed of moderately consolidated, well-sorted, white to brown, wind-blown sand capped with moderately to well-developed soil. The majority of these Quaternary sediments have been disturbed at the surface due to previous residential, business, agricultural, and industrial development in the Los Osos Community Plan Area.

Several vertebrate specimens have been recovered within Quaternary deposits in the vicinity of the Plan area. Jefferson et al. (1992) indicate that several vertebrate localities have been recorded in Quaternary marine terrace and near-shore alluvial deposits from the Morro Bay, Irish Hills, Point San Luis, and City of San Luis Obispo areas. These have yielded specimens of fish, whale, dolphin, sea cow, camel, bison, horse, mastodon, and rodent; however, these localities were identified in alluvial deposits, while most of the Plan area is underlain by eolian sediments which typically accumulate in depositional environments that are not generally favorable for fossil preservation.

**b. Cultural Setting—Regional Prehistory.** The prehistory of the Central Coast, including Los Osos, spans the entire Holocene and extends back into the late Pleistocene. Archaeological studies of the Central Coast began in earnest in the early 20<sup>th</sup> century. Early systematic studies conducted by Rogers (1929) and Olson (1930) sought to develop a regional chronology based upon artifact typology. These early studies sought to define broad patterns of technological and subsistence changes along the Central Coast, dividing prehistory into three periods. Since then the patterns have been further refined by numerous researchers (Arnold 1992; Erlandson 1991, 1994; Glassow 1996; Jones et al. 2007; King 1990; Lebow and Moratto 2005; Spanne 1975). This artifact-derived chronological sequence divides Central Coast prehistory into six different periods, as summarized below. For more detailed information on local prehistory and archaeology, refer to Jones et al. (2015).

Paleoindian/Paleocoastal Period (pre-8000 cal B.C.). The Paleoindian Period represents the earliest identified human occupation of North America, extending back more than 10,000 years to the terminal Pleistocene (Erlandson 1994, 2009). Moratto (1984) proposed that early sites along this portion of the California coast display a distinctively maritime cultural adaptation, which has been termed the Paleocoastal Tradition. This period is represented by at least two archaeological sites near Los Osos. Investigations by Greenwood (1972) at CA-SLO-2 produced two radiocarbon dates that fall within the terminal Pleistocene/early Holocene transition. A comparable occupation was found in the lowermost strata excavated at CA-SLO-585, which presents a trans-Holocene sequence comparable to that found at CA-SLO-2 (Jones et al. 2009).

Early Holocene (8000–3500 cal B.C.). More conclusive evidence of human occupation has been found at sites dating to the early Holocene, between 8000 and 5000 B.C. A growing number of Early Holocene components have been identified, most located in coastal or pericoastal settings. Two such components, at CA-SLO-2 (Diablo Canyon) and CA-SLO-1797 (the Cross Creek Site), are radiocarbon dated between 8300 and 6500 B.C., providing the earliest evidence for the widespread California Milling Stone adaptive pattern (Greenwood 1972; Jones et al. 2008). The appearance of well-developed shell middens, numerous milling implements, and fishing tools after 6500 B.C. suggest more intensive and settled human occupation of the area during the later portions of the period. Early Holocene faunal assemblages from sites along the Pecho Coast, south of Los Osos, suggest a heavy reliance on deer, marine birds, fish, and shellfish (Jones et al. 2008, 2009). The procurement of large terrestrial game by Pecho Coast populations is inconsistent with optimal foraging models developed for the Early Holocene (McGuire and Hildebrand 1994, 2005), which predict a subsistence regime focused on small ubiquitous species such as rabbits. Jones et al. (2008) suggest that throughout the Early Holocene, the inhabitants of the Pecho Coast had access to consistently reliable deer populations in the adjacent Irish Hills. This finding suggests regional variability in subsistence regimes during the Early Holocene that may relate to local environmental conditions.

Early Period (3500–600 cal B.C.). An important adaptive transition occurred along the Central Coast around 3500 B.C. (Jones et al. 2007; Price et al. 2012). Technological changes marking the transition into the Early Period include an abundance of large projectile points (Jones et al. 2007:138). Mortars and pestles were introduced and gradually replaced manos and milling slabs as the primary plant processing tools, indicating expansion of the subsistence base to include acorn (Glassow and Wilcoxon 1988). Shell beads and obsidian indicate that trade between regions expanded (Jones et al. 1994). Site occupants appear more settled with more limited mobility, and they increasingly used sites for resource procurement activities such as hunting, fishing, and plant material processing (Jones et al. 1994:62; Jones and Waugh 1995:132). The greater diversity of site types during this period reflects an increasing number of short-term occupations near labor-intensive resources. Trade and exchange also increased in importance as population mobility decreased, as evidenced by exotic shell beads and obsidian materials in midden deposits (Jones et al. 1994).

Middle Period (600 cal B.C.–cal A.D. 1000). Prehistoric technology and economy became markedly more complex after 600 B.C. Artifact assemblages from Middle Period sites contain shell fishhooks and other fishing gear, saucer-type *Olivella* beads, and contracting-stemmed projectile points, while square-stemmed and large side-notched variants disappeared (Rogers 1929). The use of mortars and pestles also increased. Additionally, expansion of trade is evident in the increased quantity of obsidian, beads, and sea otter bones (Farquhar et al. 2011:15; Jones and Waugh 1995:121). Circular shell fishhooks, which facilitated an increase in exploitation of fishes, appeared for the first time (Glassow and Wilcoxon 1988). The appearance of small leaf-shaped projectile points toward the end of the period is evidence for the arrival of bow and arrow technology (Jones et al. 2007:139).

In the Plan area, settlement patterns during the Middle Period were similar to those during the prior period. Sites were occupied on an extended basis but not as permanent settlements. These residential bases functioned in conjunction with smaller short-term occupations at specialized resource processing areas. One Middle Period site has been conclusively identified within the LOCP area, though many other sites likely date from this period (Jones et al. 2015). CA-SLO-14 is a complex habitation site with dense shell midden deposits and one identified burial.

Middle-Late Transition (cal A.D. 1000–1250). The Middle-Late Transitional Period represents a rapid change in artifact assemblages as large numbers of arrow points appeared and most stemmed points disappeared (Jones et al. 2007:139). Hopper mortars also made their first entry in the archaeological record (Farquhar et al. 2011:16). Social complexity became more noticeable during the transition, as craft specialization and social ranking developed (Arnold 1992). These changes may have been caused by an environmental shift that increased sea and air temperatures, resulting in decreased precipitation and overexploitation of resources (Arnold 1992; Graumlich 1993; Kennett et al. 1997; Pisis 1978; Stine 1990).

At the same time, some evidence points to population decline and interregional trade collapse. Jones et al. (1994) hypothesized that coastal areas were abandoned at this time in response to environmental perturbation resulting in warmer temperatures and changes in available resources (see also Jones 1995); however, a recent analysis of radiocarbon dates from Pecho Coast sites (Price and Jones 2013) calls this suggestion into question. Specifically, their analysis indicates several sites along the Pecho Coast, including CA-SLO-2 and CA-SLO-7, may have been occupied during the Middle-Late Transition. Generally, settled year-round occupation of the coast is likely to have persisted in highly favored locales such as south-facing embayments, ecotones where multiple environments converged, locations where sea surface temperatures were not elevated, and other favored settings (cf. Coddling and Jones 2006; Schinsing et al. 2016). In the interior, however, marine resources appear to have been largely dropped from the diet and instead people relied more on terrestrial resources such as small mammals and acorns (Farquhar et al. 2011:16).

Late Period (cal A.D. 1250–1769). Populations on the Central Coast expanded during the Late Period (Glassow 1996; Farquhar et al. 2011:17). More sites were occupied during this period than ever before (Jones et al. 2007:143). Artifact assemblages from the Late Period contain an abundance of arrow points, small bead drills, bedrock mortars, hopper mortars, and a variety of bead types (Price 2005). More shell and stone beads appeared in the Late Period and became a more standardized and common form of exchange (Jones et al. 2007:140, 145). The use of handstones and milling slabs continued during this period, but pestles and mortars occurred in greater proportions (Jones and Waugh 1995:121).

**c. Chumash Cultural Setting.** The Community Plan area lies in the ethnographic territory of the Chumash, one of the most populous and socially complex native groups in California. The Chumash homeland encompasses the coastal and inland areas from Malibu Canyon north some 250 miles to the

area around Paso Robles. The territorial boundary with their northern neighbors, the Salinans, is uncertain. The Chumash spoke at least six related languages, each corresponding to a regionally based group. The Northern (Obispeño) Chumash occupied San Luis Obispo County from the Santa Maria River watershed north to the Paso Robles region (Milliken and Johnson 2005). The Plan area contains at least one named Chumash village location, although it has not been linked to a specific archaeological site (Gibson 1983; Milliken and Johnson 2003, 2005; Jones et al. 2015).

The Northern Chumash appeared to have had lower population densities and greater seasonal mobility than their southern neighbors (Landberg 1965). Villages located north of Point Conception numbered approximately 100-200 individuals, in contrast to the 500-1,000 individuals that inhabited settlements along the Santa Barbara Channel (Glassow 1990:2-5). Subsistence focused on acorns and stored food during the winter, and tubers, grass seeds, and bulbs during the spring. Fish provided a high-quality food source in the late summer and early fall, while hunting was best in spring, summer and fall (Landberg 1965:102-114). Triangular side-notched points or leaf-shaped points with rounded bases were typically fashioned from chert or occasionally from imported obsidian (Grant 1978:515). Milling implements (e.g., mortars and pestles) were made from sandstone, and cooking vessels as well as artistic objects were produced from steatite. Asphaltum served as a natural caulk to seal baskets and other containers.

Chumash social organization was remarkably complex, with society stratified into three general levels: the elites, craft specialists, and commoners. Among the elites, the political leader of the village was the chief or *wot* (Gibson 1991:48). Leadership was hereditary, although the legitimacy of the chief required approval of the members of the village. The influence of some chiefs extended over several villages, indicating a simple chiefdom level of social organization (Arnold 1992; Johnson 1988; Parker 2005). The chief was assisted in his duties by a ceremonial leader or *paxa*, who presided over rites and other religious events (Gibson 1991:57). In addition, dances and ceremonies were performed by a powerful elite cult organization whose members were referred to as *'antap* (Blackburn 1975).

Exchange within Chumash society was based on differences in resource availability and abundance among the geographic regions of each community. There is evidence that trade resulted in the movement of marine resources to the interior (Colten 1994; Hildebrandt 1999; Macko 1983), while goods such as acorns and deer flowed from inland groups to coastal and island groups (Gibson 1991:43). As early as 1000 B.P., the Chumash economy had developed a shell bead monetary system and craft specialists produced beads, headdresses, tobacco, nets, baskets, canoes, and other products (Gibson 1991:43). The exchange network extended outside Chumash territory; traders bartered beads, fish, and other local goods for steatite from the neighboring Gabrieliño Indians and obsidian from the eastern Sierra Nevada (Gibson 1991:44).

**d. Historical Setting.** There are few records of Spanish encounters with the Chumash north of Point Conception (Glassow 1990). The first non-indigenous inhabitants arrived in Los Osos in 1769, when Gaspar de Portolá traveled through the San Luis Obispo area on his way north to Monterey Bay. Padre



Juan Crespi recorded in his diary that the name given the area by the expedition's soldiers was *Llano de los Osos*, or "plain of the bears." Pedro Fages, Portolá's military commander in Alta California, established a colony in San Francisco in 1772. He led a military party into Los Osos Valley and hunted grizzly bear to obtain food to supply the mission and presidio in Monterey when their supply ships became delayed that summer; the valley then became known as *La Cañada de Los Osos*, or "The Valley of the Bears" (Sullivan 2006).

The Anglo-Mexican Period (A.D. 1834-1870). Private land ownership began with granting of ranchos during the Anglo-Mexican Period. Thirty-five land grants were awarded within San Luis Obispo County, including *Rancho Cañada de Los Osos*, which Governor Juan Bautista Alvarado granted in 1842 to Victor Linares, a retired soldier and *alcalde* in San Luis Obispo. Los Osos and the area to the east along Los Osos Valley Road and Los Osos Creek are located on the former land of this ranch.

Captain John Wilson, a Scottish shipmaster who came to California in 1826, and his business partner James Scott bought the rancho from Linares in 1844. In 1845, the rancho was combined with *Rancho Pecho y Islay* to the south, thus forming the 32,430-acre *Rancho Cañada de Los Osos y Pecho y Islay*. That same year, Governor Pio Pico granted to Wilson and Scott the 3,167 acre *Rancho Cañada del Chorro*, bordering *Rancho Cañada de Los Osos* on the north. During Wilson's lifetime, it appears that Los Osos Valley was used for pasturing his long-horned Spanish cattle, which were reported to number as many as 12,000 to 14,000 head, and a large herd of Spanish horses (County of San Luis Obispo 2009).

Captain Wilson married Ramona Carrillo de Pacheco, widow of Jose Antonio Romualdo Pacheco, at Mission Santa Barbara in 1837 (Angel 1883). Owner of the 48,800 acre *Rancho Suey*, along the coast in present day San Luis Obispo and Santa Barbara counties, Ramona was the mother of two boys by her first marriage: Mariano Pacheco and Romualdo Pacheco (b. 1831), the first native Californian to serve as Governor of the State of California in 1875. Captain Wilson and Ramona had four children of their own, born between 1837 and 1848. The Wilson family originally resided at *Rancho Suey*, but later moved to San Luis Obispo. In about 1845, Wilson established the family residence on *Rancho Cañada de Los Osos*, building an adobe and setting up his headquarters there. This adobe still stands northeast of the intersection of Los Osos Valley Road and Turri Road, about three miles from Los Osos (JRP 2008).

Captain John Wilson died in San Luis Obispo in 1861 at the age of 65 (Angel 1883:55). After his death, the family met with misfortune when all its cattle and horses were lost to starvation during the great drought of 1863-64. Loss of their cattle was the beginning and the cause of the family's financial troubles and they gradually sold their landed estate to pay off their debts. Land was inexpensive in the post-drought years, but Romualdo Pacheco persuaded sheep and wool growers and dairymen that the nutritious grasses would return; he invited them to bring their livestock into the region and acquire land on *Rancho Cañada de Los Oso*. Among those who listened were brothers Lew and Horatio Moore, sheepmen and capitalists who not only purchased 3,100 acres of the former Los Osos rancho in 1871, including Captain Wilson's old ranch house, but also helped establish the first bank and shipping wharfs

in the county. Dairymen, cheese- and butter-makers followed their lead and soon dairy enterprises spread into adjacent Los Osos Valley (JRP 2008).

By the early 1870s, the remainder of the Wilson-Pacheco family's substantial Los Osos Valley land holdings had been subdivided for sale into more than one hundred rural parcels ranging in size from about 200 to more than 600 acres. The former rancho was incrementally sold off, primarily to cattle ranchers and dairy farmers, many of whom were Swiss-Italian or Portuguese immigrants; their small farms were scattered across the Los Osos Valley rural landscape by 1880. The first rural schoolhouse was constructed by the County in 1872 in Los Osos Valley to educate the children of these farm families (JRP 2008).

Development of Los Osos and Baywood Park. When dairy ranching developed along Los Osos Valley Road, a town was laid out in 1889 and named El Moro, which today is Baywood Park. In the 1880s, news reached San Luis Obispo County that the Southern Pacific Railroad was planning to build a coastal line that would connect the relatively isolated county to San Francisco and Los Angeles. The news prompted speculative land development, creating new towns in the hopes of capitalizing on the new rail line. El Moro was one such town. The developers anticipated that the railroad would bypass the Cuesta Grade and make its way along the coast. They built a handful of buildings on what is now Second Street in Baywood Park, and cleared land in the bay for a boat landing. Lots were surveyed, and a "hotel reserve" was staked off. The Southern Pacific did reach San Luis Obispo in 1894 but bypassed El Moro. The development failed, and the town remained virtually unused for another 30 years (Nicholson 1973).

Walter Redfield, a real estate agent for the Atascadero Colony, rediscovered and revived the subdivision in 1919. Three thousand 25' x 125' lots within the town were made available at \$1 apiece. Even though many investors considered the land unsuitable for agriculture or ranching because it was rough and overgrown with brush, he took options on all of the available lots and sought financing. His bid for a loan was turned down because, according to the bank, the area was "useless sagebrush land." Redfield disagreed, believing the area could be developed with small, residential parcels. He eventually raised the necessary funds on his own by advance selling 285 lots at \$10 each and gained control of the 3,000-lot subdivision (JRP 2008; Sullivan 2006).

Local author Joan Sullivan recounts that Redfield established a sales office in Los Angeles in the early 1920s and began selling parcels, and among his first customers was Richard Otto, who bought ten or twelve lots (Sullivan 2006). Redfield has been credited as the first significant real estate investor and agent to obtain lands from speculators—largely E.G. Lewis, the founder of Atascadero, who purchased land during the railroad development campaign—and then develop those lands to create Baywood Park. The wife of Richard Otto, the man who actually developed and named the village (ultimately obtaining 1000 acres) (Otto 1938), maintains that Redfield was just one of two major landowning entities that consisted of Redfield and a separate partnership of three regionally-local men, from whom Otto purchased the bulk of what today is known as Baywood Park. Further, she asserts that the railroad itself purchased and held most of the land from which Redfield and the partnership directly obtained their

landholding investments, and claims there is a map showing a subdivision proposed by the railroad itself to document her assertion. She credits Redfield with inspiring Otto by making the initial offering to him while he was seeking potential investment opportunities (Sullivan 2006).

Richard Stuart Otto was a prominent engineer from a wealthy New Jersey family who became well known for his work on the Norden Bombsight after World War I, as well as his more exotic exploits in foreign and domestic business and political affairs, including negotiations with a Chinese warlord and the management of author Upton Sinclair’s unsuccessful campaign for governor of California in 1934 (Otto 1938, Sullivan 2006). In 1921 and 1922 Otto obtained financial backing from his father to begin purchasing lots in El Moro. “Otto bought his first ten lots from Walter Redfield for \$165” (Sullivan 2006). He changed the name to Baywood Park and began developing it in 1924 (Otto 1938).

Rental cabins were located from 2<sup>nd</sup> Street west to the Bay along Santa Maria Avenue and could be rented by the day, week, or month; cottage homes were built along planned roads elsewhere. Customers were shown the tract office and other homes already constructed in the area along El Morro Avenue and back down Santa Maria as enticement and inspiration (**Figure 4.5-2**).



**Figure 4.5-2.** Cover of *Baywood Park Estates*, promotional piece by Richard Otto, circa 1930.

In addition to his contributions to the built environment, Otto is said to have grown Monterey pines for the community from seedlings and “... personally planted hundreds of evergreen trees, pines, and cypress that line the streets of Baywood Park today” (Sullivan 2006:14). Otto’s sales booklet claimed 20,000 were planted (Otto 1938)

The Baywood Park area, and particularly the Baywood commercial area centered around 2<sup>nd</sup> Street, El Moro Avenue, and Santa Ysabel Avenue, remains the most important part of the Plan area from the historic period. Richard Otto’s own home at 7<sup>th</sup> Street and El Moro does not remain; in 1983, developer Cyrus Saidi of Whittier razed the building over the objections of many residents (**Figure 4.5-3**), including “historical activists,” claiming “I lost money trying to satisfy them,” according to the San Luis Obispo Tribune (2014). Most other buildings in the Plan area originated after World War II, many in the 1960s, 1970s, and 1980s.





**Figure 4.5-3. Demolition of the Richard Otto house in 1983** (courtesy of the SLO Tribune)

**e. Inventory of Known Cultural and Paleontological Resources.**

Paleontological Localities. The UCMP on-line database revealed at least six vertebrate paleontological localities have been documented within San Luis Obispo County near the Plan area. All of these localities originated within the Pismo Formation. Records retrieved from the UCMP online database do not provide the exact location of recovered fossil specimens; only a rough description of the locality is given. The UCMP online database localities contain fossil specimen records for large marine and terrestrial mammals, bird, and shark (UCMP online database 2016). The University of California Museum of Paleontology and Paleobiology Database (PBDB) also revealed at least six additional vertebrate localities near the Plan area; however, these fossil localities were identified from within the Quaternary alluvial and near-shore marine terrace deposits described by Jefferson et al. (1992), not from the young alluvial deposits and eolian deposits that underlie the Plan area. The results of the museum records search are summarized below in **Table 4.5-1**.

<b>Table 4.5-1. Vertebrate Localities in the Vicinity of the Project Area</b>			
<b>Locality Number<sup>1</sup></b>	<b>Geologic Unit</b>	<b>Age</b>	<b>Taxa</b>
UCMP V6616	Pismo Formation (Squire Member)	Late Miocene to Pliocene	<i>Hydrodamalis cuestae</i> (extinct herbivorous marine mammal; Steller’s sea cow)
UCMP V70148	Pismo Formation (Squire Member)	Late Miocene to Pliocene	<i>Hydrodamalis cuestae</i> , <i>Equus</i> sp. (horse), Otariidae (sea cow), Odontoceti (toothed whale), <i>Gaviaconcinna</i> sp. (loon), Pinnipedia (seal), Mysticeti (whale), Artiodactyla (even-toed

**Section 4.5 – Cultural and Paleontological Resources**

			ungulate)
UCMP V73143	Pismo Formation (Miguelito Member)	Late Miocene to Pliocene	<i>Desmostylus</i> sp.
UCMP V74087	Pismo Formation (Squire Member)	Late Miocene to Pliocene	<i>Isurus planus</i>
UCMP V75025	Pismo Formation (Edna Member)	Late Miocene to Pliocene	Mysticeti
UCMP V99650	Pismo Formation (Edna Member)	Late Miocene to Pliocene	Cetacea
1 Source: UCMP online database (2016).			

**Archaeological Sites.** The Los Osos Urban Reserve Area is richly endowed with properties of archaeological significance from both the prehistoric and historic periods. A substantial body of prior archaeological and historical research has been carried out in the Plan area. Much of that work was associated with the design and construction of the Los Osos Wastewater Project. Extensive records searches were conducted at the Central Coast Information Center of the California Historical Resources Information System (CHRIS) in connection with to the Wastewater Project; subsequently, the County sponsored field surveys, testing and data recovery excavations, and construction monitoring. Those records and the reports on those investigations have provided the primary data sources for this analysis.

Forty-nine prehistoric archaeological sites have been identified within the Plan area boundary (Jones and Mikkelsen 2008; Jones et al. 2010). Eight of these are identified as habitation sites, three of which contain human remains. Other sites include 15 shell middens, 11 shell and flake scatters, six shell scatters, eight lithic scatters, and one prehistoric quarry. All but eight of these sites are clustered along the edges of the bay and around Los Osos Creek and Eto Lake in the interior, defining a zone of highest archaeological sensitivity within the Plan area (Figure 4.5-4). Only three sites have identified historic period components. These consist of two 19<sup>th</sup> century homesteads and one historic shell scatter.

Of the 49 identified sites, nine have been evaluated formally for significance and are considered eligible for listing on the National Register of Historic Places (NRHP); they are therefore considered historical resources for the purposes of CEQA. One site is not eligible for listing on the NRHP and one site is identified as a non-contributing element of a larger resource. The remaining 38 sites have not been evaluated formally for listing on the NRHP or other registers.

**Tribal Cultural Resources.** The County contacted the Native American Heritage Commission (NAHC) on June 8, 2015, requesting a tribal consultation list for the proposed Los Osos Community Plan General Plan/Local Coastal Plan Amendment project per the requirements of SB 18. On June 24, 2015, the NAHC responded to the County’s request and provided the following list of tribes with traditional lands or cultural places within the boundaries of the project: *yak tit’u tit’u yak tilhini* – Northern Chumash Tribe (Mona Olivas Tucker, Chairwoman); Northern Chumash Tribal Council (Fred Collins, Tribal Administrator); and Salinan Tribe of Monterey and San Luis Obispo Counties (Patti Dunton, Tribal Administrator). On July 6, 2015, the County invited (by letter) all three tribes to participate in consultation. None of the tribes responded to the invitation.

Historic Built Environment. The Los Osos Valley School District was created in 1872 and its Schoolhouse is the most prominent surviving historic-era resource in Los Osos. Originally located at the corner of Los Osos Valley Road and Turri Road, the schoolhouse was used until 1958; between 1973 and 1974 it was moved to the Community Park along Los Osos Valley Road (JRP 2008, Sullivan 1993). It is now identified as a San Luis Obispo County Historic Landmark.

Most of the few other intact historic buildings and structures in the Plan area exist in just one neighborhood: the commercial and multi-family-zoned district along 2<sup>nd</sup> Street, El Moro Avenue, and Santa Ysabel Avenue in Baywood Park. Most of Richard Otto’s pre-War vacation cottages and cabins have disappeared, replaced by a variety of vernacular vacation, retirement, and single-family houses built primarily during the 1960s, ‘70s, and ‘80s. A handful of early residences and commercial buildings remain in good condition and readily express the historic character of the 1920s through 1960s. These include Otto’s original Baywood Tract office and model home at 674 El Moro Avenue, a one-story, clapboarded, side-gabled cottage with a full-width attached front porch and a mirror-matching wing running parallel at the rear; an intact Otto-era residence at 670 Santa Ysabel Avenue that is an excellent example of the original, simple side-gabled style of the first (circa 1920s) Otto-era cottages; a probable 1930s-era property at the Los Osos Valley Nursery; and several others. While a thorough architectural survey was not conducted and individual buildings or structures were not evaluated formally, **Table 4.5-2** lists several potentially significant buildings in the Plan area.

Other precincts within the Plan area, such as the southwestern hillsides and other developments south of Los Osos Valley Road, include representative samples of larger and more recent architecture. A windshield survey of selected streets suggests that dozens of home builders and architects, along with home owners themselves, have contributed to the types, scales, and styles of residences in the town; the styles of commercial buildings are equally scattered and varied. Modern examples from 1950 to 1970 include tract-type one-story ranch styles and split levels, but also a few examples of higher styles such as Mid-Century Modern. The shingled, shed-roofed, clear-storied architectural style became popular in the late 1960s and 1970s due to the work of architects such as Robert Venturi and Charles Moore (McAlester 2013). Now that examples of residential architecture from these eras have reached or are nearing the 50-year age mark, it is important that they be assessed on their own merit as possible higher-style, architect-designed properties in Los Osos and Baywood Park.

Finally, notable agricultural landscapes in the Plan area include the Tonini Ranch, Branin Property, Giacomazzi Ranch, and Los Osos Memorial Park (cemetery). JRP (2008) examined these properties and determined they all were greater than 50 years old could potentially qualify as significant historical resources.

**Table 4.5-2. Selected Potentially Significant Historic-Era Buildings and Landscapes<sup>1</sup>**

Property Name	Location	Approximate Construction Date	Comment
Los Osos Valley School	Los Osos Community Park	1874	County Historic Landmark
Early Tract Office	674 El Moro Ave.	1925	
Surviving Cottage	670 Santa Ysabel	1925	
Cabin Motor Court	1266 Second St.	1925	
Baywood Market	1293 Second Street	1940	
Baywood Lounge	1301 Second Street	1940	
Lodge Restaurant	1346 Second St.	1955	
Tonini Ranch	3517 Turri Road	1900 – 1950s	Previously found significant
Branin Ranch	Turri Road	1930	Previously found significant
Giacomazzi Ranch	2198 Los Osos Valley Rd.	1930	Previously found significant
Memorial Park (cemetery)	2260 Los Osos Valley Rd.	1962	Previously found significant

<sup>1</sup>Based on windshield survey and background research; historic architectural surveys were not conducted.

**f. Regulatory Setting.** Cultural and paleontological resources are considered nonrenewable scientific resources because once destroyed, they cannot be replaced. Cultural resources also have associative values because of the tangible and intangible links they provide between living people and the historic and prehistoric past. As such, cultural and paleontological resources are afforded protection under state and local laws and regulations, as summarized below.

State. The following discussion summarizes the key state regulations that relate to cultural resource issues.

**California Environmental Quality Act**

Section 15064.5 of the *CEQA Guidelines* states that a resource shall be considered “historically significant” if it meets one of the criteria for listing in the California Register of Historical Resources (CRHR) (Pub. Res. Code §§5024.1, Title 14 CCR, Section 4852). A resource may qualify for CRHR listing if it:

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



Cultural resources meeting one or more of these criteria are defined as “historical resources” under CEQA (Office of Historic Preservation 2000). Resources included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code [PRC]), or identified as significant in an historical resources survey (meeting the criteria in Section 5024.1(g) of the PRC), also are considered “historical resources” for the purposes of CEQA.

If a property is not listed in the CRHR or determined eligible for listing, not included in a local register of historical resources, or identified in an historical survey, a lead agency may still determine that the property is an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

Significant paleontological resources are defined as identifiable vertebrate fossils or uncommon invertebrate, plant, and trace fossils that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, or biochronological data (SVP 2010). These data are important because they are used to examine evolutionary relationships, provide insight on the development of and interaction between biological communities, establish time scales for geologic studies, and for many other scientific purposes (Scott and Springer 2003; SVP 2010).

In Section V(c) of Appendix G of the CEQA Guidelines, the “Environmental Checklist Form,” the question is posed: “Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature” (Association of Environmental Professionals 2015). To determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged). Therefore, identification of adverse impacts to paleontological resources is mandated by CEQA.

Codes Governing Human Remains. Section 15064.5 of the CEQA Guidelines also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. The disposition of human remains is governed by Section 7050.5 of the California Health and Safety Code and Sections 5097.94 and 5097.98 of the PRC, and falls within the jurisdiction of the Native American Heritage Commission (NAHC). If human remains are discovered, the County Coroner must be notified within 48 hours and there should be no further disturbance to the site where the remains were found. If the remains are determined by the coroner to be Native American, the coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to Section 5097.98, will immediately notify those persons it believes to be most likely descended from the deceased Native Americans so they can inspect the burial site and make recommendations for treatment or disposal.

### ***California Public Resources Code***

California Public Resources Code (PRC) Section 5097.5 affirms that no person shall willingly or knowingly excavate, remove, or otherwise destroy an archaeological or vertebrate paleontological site or feature without the express permission of the overseeing public land agency. It further states that reasonable mitigation shall be required for any development that would adversely impact archaeological or paleontological resources (PRC 30244). These regulations apply to projects located on land owned by or under the jurisdiction of the state or city, county, district, or other public agency (California Office of Historic Preservation 2005).

### ***Assembly Bill 52 (AB52)***

California Assembly Bill 52 (AB52) amended Section 5097.94 of CEQA and added eight new sections to the Public Resource Code relating to Native Americans. It was passed and signed into law in 2014 and took effect on July 1, 2015. The law established a new category of resource called **tribal cultural resources** (PRC §21074) and established a process for consulting with Native American tribes and groups regarding those resources. Tribal cultural resources are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and is either listed on or eligible for the California Register of Historical Resources or a local historic register, or if the lead agency chooses to treat the resource as a tribal cultural resource. The bill specifies that any project that may affect or cause a substantial adverse change in the significance of a tribal cultural resource would require a lead agency to “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” According to the legislative intent for AB 52, “tribes may have knowledge about land and cultural resources that should be included in the environmental analysis for projects that may have a significant impact on those resources.” The consultation process must be completed before a CEQA document can be certified. Native American tribes to be included in the process are identified through consultation with the Native American Heritage Commission (PRC §21080.3.1).

Assembly Bill 52 established that “A 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” (PRC §21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC §21084.3).

### ***Senate Bill 18 (SB18)***

Passed in 2004, Senate Bill 18 (SB18) requires cities and counties to consult with Native American tribes to help protect traditional tribal cultural places through the land use planning process. Traditional tribal cultural places are defined in PRC §5097.9 and §5097.993 to include sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines, or any historic, cultural, or sacred site that is listed on or eligible for the California Register, including any historic or prehistoric ruins, burial grounds, or archaeological site.

Unlike AB52, SB18 is not an amendment to, or otherwise associated with, the CEQA. Instead, SB18 requires cities and counties to consult with Native American tribes early during broad land use planning efforts on both public and private lands, prior to site- and project-specific land use decisions. Simply put, SB18 applies to general plan adoption or amendments and to specific plan adoption or amendments (Governor’s Office of Planning and Research 2005). Most cities and counties have developed protocols for Native American consultation under SB18 and have incorporated the requirement into their permit processing procedures.

Under SB18, cities and counties must notify the appropriate Native American tribe(s) of intended adoption or amendments to general plans or specific plans, and offer the opportunity for the tribe(s) to consult regarding traditional tribal cultural places within the proposed plan area. Consultation is intended to encourage preservation and protection of traditional tribal cultural places by developing treatment and management plans that might include incorporating the cultural places into designated open spaces (Governor’s Office of Planning and Research 2005:15).

Local. County regulations pertaining to cultural resources issues are described below.

### ***General Plan Conservation and Open Space Element***

Cultural and paleontological resources are discussed in the Conservation and Open Space Element of the County General Plan (County of San Luis Obispo 2010), which declares County policy to preserve and protect known and potential Native American, archaeological, historical, and paleontological resources. Open Space and Conservation Element policies CR 4.1 through 4.5 specifically address the treatment of Native American, archaeological, and paleontological resources and set forth implementation policies which require resource inventories and assessments to identify significant paleontological, archaeological, and cultural properties and, in consultation with Native American representatives, protect and preserve such resources from the effects of development.

### ***Coastal Zone Land Use Ordinance***

The County Coastal Zone Land Use Ordinance (CZLUO) includes requirements for the protection of known cultural resources and for the implementation of mitigation measures to minimize potential impacts to known and unknown resources. In addition to General Plan and ordinance requirements, Coastal Plan Policies include policies for the protection of cultural resources consistent with the requirements of the California Coastal Act (PRC Section 30000, et seq.)

The CZLUO uses combining designations (i.e. zoning overlays), specifically the Historic Site (herein after referred to as “H”) designation, for areas of archaeological and/or historical significance. These combining designations are subject to special standards in the CZLUO. The Local Coastal Program also includes policies and standards to protect archaeological and paleontological resources. CZLUO sections 23.04.200 and 23.04.07 establish standards for review and design for development applications in archaeologically sensitive areas.

***23.04.200 - Protection of Archaeological Resources Not Within the Archaeologically Sensitive Areas Combining Designation:*** All development applications that propose development that is not located within the Archaeologically Sensitive Areas combining designation and that meets the following location criteria shall be subject to the standards for the Archaeologically Sensitive Areas Combining Designation in Chapter 23.07: development that is either within 100 feet of the bank of a coastal stream (as defined in the Coastal Zone Land Use Ordinance), or development that is within 300 feet of such stream where the slope of the site is less than 10 percent.

**23.07.104 - Archaeologically Sensitive Areas:** *To protect and preserve archaeological resources, the following procedures and requirements apply to development within areas of the coastal zone identified as archaeologically sensitive.*

a. **Archaeologically sensitive areas.** *The following areas are defined as archaeologically sensitive:*

(1) *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.*

(2) *Any parcel within an urban or village area which is located within an archaeologically sensitive area as delineated by the official maps (Part III) of the Land Use Element.*

(3) *Any other parcel containing a known archaeological site recorded by the California Archaeological Site Survey Office.*

b. **Preliminary site survey required.** *Before issuance of a land use or construction permit for development within an archaeologically sensitive area, a preliminary site survey shall be required. The survey shall be conducted by a qualified archaeologist knowledgeable in local Native American culture and approved by the Environmental Coordinator. The County will provide pertinent project information to the Native American tribe(s).*

c. **When a mitigation plan is required.** *If the preliminary site survey determines that proposed development may have significant effects on existing, known or suspected archaeological resources, a plan for mitigation shall be prepared by a qualified archaeologist. The County will provide pertinent project information to the Native American tribe(s) as appropriate. The purpose of the plan is to protect the resource. The plan may recommend the need for further study, subsurface testing, monitoring during construction activities, project redesign, or other actions to mitigate the impacts on the resource. Highest priority shall be given to avoiding disturbance of sensitive resources. Lower priority mitigation measures may include use of fill to cap the sensitive resources. As a last resort, the review authority may permit excavation and recovery of those resources. The mitigation plan shall be submitted to and approved by the Environmental Coordinator, and considered in the evaluation of the development request by the Review Authority.*

d. **Archeological resources discovery.** *In the event archeological resources are unearthed or discovered during any construction activities, the standards of Section 23.05.140 of this title shall apply. Construction activities shall not commence until a mitigation plan, prepared by a qualified professional archaeologist reviewed and approved by the Environmental Coordinator, is completed and implemented. The County will provide pertinent project information to the affected Native American tribe(s) and consider comments prior to approval of the mitigation plan. The mitigation plan shall include measures to avoid the resources to the maximum degree feasible and shall provide mitigation for unavoidable*

*impacts. A report verifying that the approved mitigation plan has been completed shall be submitted to the Environmental Coordinator prior to occupancy or final inspection, whichever occurs first. [Amended 1995, Ord. 2715; Amended 2004, Ord. 3048]*

CZLUO Sections 23.07.100-23.07.104 require protection of historical and archaeological resources. The required findings are given as follows:

*A land use permit within a Historic (H) combining designation shall be approved only where the review authority first makes all the following findings:*

- 1. Historic structures, landmarks, and districts. Where an H combining designation is applied to identify historic structures, landmarks, or districts, project approval shall require the following findings:*
  - i. The height, bulk, location, structural materials, landscaping, and other aspects of the proposed use will not obstruct public views of the historic structure or its immediate setting;*
  - ii. Any proposed alteration or removal of structural elements, or clearing of landscaping or natural vegetation features will not damage or destroy the character of significant historical features or settings;*
  - iii. Any proposed remodeling or demolition is unavoidable because it is not structurally or economically feasible to restore or retain existing structures or features.*

Although not specified in the Coastal Zone Land Use Ordinance, the review authority makes the following findings for land use permits within an Archaeologically Sensitive Area combining designation:

- i. The site design and development as finally proposed incorporates adequate measures to ensure the archaeological resources will be acceptably and adequately protected; or*
- ii. Where site design and development proposals cannot feasibly be changed, and intrusion into or disturbance of historic or prehistoric archaeological resources will result, that construction will use appropriate methods to protect the integrity of the site, including possible relocation of graves and artifacts.*

### ***Estero Area Plan***

One objective of the LOCP is to preserve and protect important historical resources and the historic character and rural architectural style of the community. The Estero Area Plan notes that combining designations may be applied to archaeologically sensitive areas, but none are so identified in that plan. The LOCP applies the combining designation “Archaeologically Sensitive Area (AS)” to most of the Urban Services area, and requires development applicants to conduct archaeological inventories prior to project approval. This combining designation identifies areas of the community known for the potential to contain cultural resources. Applicants of development proposals in these areas are required to obtain

a records check and a surface search prior to approval. Standards to protect resources are described in the LCP Policy Document and in Section 23.07.104 of the Coastal Zone Land Use Ordinance.

Additionally, the Los Osos Urban Area Standards apply the following archaeological requirements to a small group of parcels east of South Bay Boulevard and south of El Moro Avenue:

*m. Archaeological Resources. At the time of land use permit application, the applicant shall provide sub-surface testing conducted by a qualified archaeologist in order to determine the significance and possible mitigation measures for the resources on the project site. The applicant shall implement the recommendations of the archaeologist as determined appropriate by the Environmental Coordinator.*

### ***Proposed Los Osos Community Plan***

The proposed LOCP is not yet part of the existing regulatory framework. It will become part of the regulatory framework when adopted. Applicable policies, programs and standards included in the proposed LOCP are evaluated in the following Impact Analysis, to the extent they would adequately guide future development, and thus mitigate potential programmatic impacts related to this issue.

The LOCP includes proposed standards that relate to the evaluation of projects within designated Archaeological Sensitive Areas (ASA). These standards address permit and processing requirements, requirements related to the preparation of required Archaeological Resource Reports, requirements for Phase I and II archaeological resource evaluations, monitoring requirements, CEQA determinations and required findings, development standards, consultation with Native American Tribal Groups, and procedures related to the possible discovery of human remains. In general, these standards are intended to provide the mitigation framework for future projects within the LOCP area. These proposed standards are included as Appendix F to this EIR.

## **4.5.2 Impact Analysis**

**a. Methodology and Significance Thresholds.** This analysis evaluates programmatic impacts associated with the Los Osos Community Plan. Programmatic impacts include buildout of the Plan area, proposed land use and zoning changes, policy changes, and programs proposed as part of the Plan. Project-specific analysis would still be needed for any individual future projects proposed under the amended programs or policies. Pursuant to CEQA Guidelines Section 15183, additional CEQA review is not required for projects that are consistent with the community plan or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project-specific effects which are peculiar to the project or its site. Refer to Section 4.5.2(d) for conditions under which future development in the study area would require additional CEQA review, pursuant to Section 15183.

### ***Paleontological Resources***

Methodology. Direct impacts on paleontological resources may result from activities related to construction, while indirect impacts could result from the normal ongoing operation and maintenance of facilities and infrastructure constructed within the Plan area. The potential for significant impacts on fossil resources is controlled by two factors: (1) the depth and lateral extent of disturbance of fossiliferous bedrock and/or surficial sediments; and (2) the depth and lateral extent of occurrence of fossiliferous bedrock and/or surficial sediments beneath the surface. Ground disturbance has the potential to adversely affect fossils that may occur on or underneath the surface in areas containing paleontologically sensitive geologic units. Examples of activities that could directly disturb or destroy paleontological resources include grading, excavation, drilling, or any other activity that disturbs the surface or subsurface geologic formations. Indirect disturbances or destruction of paleontological resources may result from increased erosion due to site clearance and preparation, or from inadvertent damage or outright vandalism to exposed resource components due to improved accessibility. Without mitigation, these fossils, as well as the paleontological data they could provide if properly salvaged and documented, could be destroyed or damaged, rendering them permanently unavailable for future scientific research.

Mitigation strategies could include surveys by qualified paleontologists to collect significant surface fossils, transfer them to a public museum, and identify locations of fossil localities in the nearby area which have the potential to yield additional fossils as erosion occurs. Protective fencing or other barriers may also be built around known paleontological sites.

To ascertain whether or not the Plan area has the potential to contain significant fossil resources at the surface or subsurface, Applied EarthWorks, Inc. reviewed relevant scientific literature and geologic mapping to define the geology and stratigraphy of the area. To delineate the boundaries of an area of paleontological sensitivity, the extent of the entire geologic unit was considered because paleontological sensitivity is not limited to surface exposures of fossil material. For this Project, as described above in Section 4.5.1a, the geologic units underlying the Plan area were identified using the *Geologic Map of the Morro Bay South and Port San Luis Quadrangles, San Luis Obispo County, California* (Hall 1973) and the *Geologic Map of the Morro Bay South Quadrangle, San Luis Obispo County, California: A Digital Database* (Wiegiers 2009). In addition, Applied EarthWorks consulted museum collections records maintained by the PBDB for the purposes of determining whether any museum fossil localities occur within or adjacent to the Project area and ascertaining the abundance and taxonomic diversity of fossils within each identified geologic stratum.

Absent specific agency guidelines, most professional paleontologists in California adhere to guidelines set forth by the Society for Vertebrate Paleontology (SVP) in “Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources” (SVP 2010). These guidelines establish detailed protocols for the assessment of the paleontological resource potential (i.e., “sensitivity”) of a project area and outline measures to follow in order to mitigate adverse impacts to known or unknown fossil resources during project development. Using baseline information gathered during a

paleontological resource assessment, the paleontological resource potential of the geologic unit(s) (or members thereof) underlying a project area can be assigned to one of four categories defined by SVP (2010). These categories include high, undetermined, low, and no paleontological sensitivity and are listed below in **Table 4.5-3** and are displayed graphically in **Figure 4.5-5**.

<b>Table 4.5-3. SVP Paleontological Resource Sensitivity Categories</b>	
<b>Resource Sensitivity<sup>1</sup></b>	<b>Criteria for Establishing Sensitivity</b>
High	Geologic units that have proven to yield vertebrate or significant invertebrate, plant, or trace fossils in the past or are likely to contain new vertebrate materials, traces, or trackways. Also may include rock units that contain datable organic remains older than late Holocene (e.g., animal nests or middens).
Undetermined	In some cases, available literature on a particular geologic unit will be scarce and a determination of whether or not it is fossiliferous or potentially fossiliferous will be difficult to make. Under these circumstances, further study is needed to determine the unit’s paleontological resource potential (e.g., field survey or monitoring).
Low	Rocks units that have yielded few fossils in the past, based upon review of available literature and museum collections records. Also includes geologic units that yield fossils only on rare occasion and under unusual circumstances.
No	Rock units that are formed under or exposed to immense heat and pressure, such as high-grade metamorphic rocks and plutonic igneous rocks.
<i>1 Source: SVP (2010).</i>	

**Significance Thresholds.** The loss of any identifiable fossil that could yield information important to prehistory, or that embodies the distinctive characteristics of a type of organism, environment, period of time, or geographic region, would be a significant environmental impact. Negative impacts on paleontological resources primarily concern their potential destruction and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. Disturbance of potentially fossiliferous bedrock or surficial sediments could result in the destruction of paleontological resources and subsequent loss of information (significant impact). At the project-specific level, impacts can be mitigated to below a significant level through the implementation of paleontological mitigation.

***Archaeological and Historical Resources***

**Methodology.** For cultural resources, impact assessment is based on a comparison of known site locations with the placement of potential ground disturbing activities that could remove, relocate, damage, or destroy the physical evidence of past cultural activities. If such ground disturbance overlaps recorded site locations, then a direct impact may occur. Historical buildings and structures may be directly impacted if the nearby setting and context is modified substantially, even if the building or structure itself is not physically affected. Indirect impacts may occur if activities occur near, but not directly on, known cultural resources.



The Los Osos Community Plan area is richly endowed with archaeological and historical sites, and although the entire area has not been inspected, surveys, excavations, and construction monitoring for the Los Osos Wastewater Project and other efforts have produced a reliable inventory of cultural resources whose distribution across the landscape is representative (Jones and Mikkelsen 2008; Jones et al. 2015). For this study, Applied EarthWorks, Inc. digitized County-provided hard-copy maps showing the locations of the known sites and performed a GIS-based impact analysis. The accuracy of the analysis is dependent on the accuracy of the original map data. AEC did not conduct field surveys or verify the locations of recorded archaeological sites.

A primary focus of this analysis was the definition of landscape zones where archaeological and historical sites are most likely to occur based on the distribution of known resources (highest sensitivity), and comparable zones where such resources are less likely to occur. Applied EarthWorks found that most prehistoric archaeological sites are concentrated in discrete locations along the edges of the bay and around Los Osos Creek, Eto Lake, and other select environmental settings. The findings define three zones of increasing sensitivity based on the density of known sites within those areas; these zones are shown on **Figure 4.5-4**. The County refined its AS (Archaeologically Sensitive Area) and H (Historic) combining designations based on these findings. To facilitate development planning and management of cultural resources, the boundary of the revised AS area has been drawn to follow existing roads and parcel lines to the greatest extent feasible.

Significance Thresholds. The significance of a historical resource, and consequently the significance of any impacts, is determined by whether or not that resource meets the significance criteria outlined in the CEQA Guidelines. A project is judged to have a significant effect on the environment if it may cause a substantial adverse change in the characteristics of a historical resource that convey its significance or justify its eligibility for inclusion in the CRHR or a local register, either through demolition, destruction, relocation, alteration, or other means (CEQA Guidelines, §15064.5(b)). 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; or*
4. *The incidental discovery of cultural resources without proper notification.*

Removal, demolition, or alteration of historical resources can directly impact their significance by destroying the historic fabric of an archaeological site, structure, or historic district. Direct impacts can be assessed by identifying the types and locations of proposed development, determining the exact locations of cultural resources within the project area, assessing the significance of the resources that may be affected, and determining the appropriate mitigation.

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. Due to their nature, indirect impacts are much harder to assess and quantify.

The CEQA Guidelines provide principles for mitigating impacts to historical resources in Section 15126.4. According to the Guidelines, public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature. The following factors shall be considered for a project involving such an archaeological site:

- (A) Preservation in place (avoidance) is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.
- (B) Preservation in place may be accomplished by, but is not limited to, 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.
  - Deeding the site into a permanent conservation easement.
- (C) When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code.
- (D) Data recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource, provided that the determination is documented and that the studies are deposited with the California Historical Resources Regional Information Center.

Typically, such measures will reduce impacts on archaeological resources to less-than-significant levels. In 2011, the California Fifth District Court of Appeals decided in *Madera Oversight Coalition, Inc. vs. County of Madera* (199 Cal. App. 4th 48) that “feasible preservation in place must be adopted to

mitigate impacts to historical resources of an archaeological nature unless the lead agency determines that another form of mitigation is available and provides superior mitigation of the impacts.” Further, the court stated that an EIR should include the justification for not adopting “preservation in place” as mitigation.

For historic buildings and structures, maintenance, repair, stabilization, restoration, preservation, conservation, or reconstruction in a manner consistent with the Secretary of the Interior’s Standards and Guidelines (Weeks and Grimmer 1995) generally will constitute mitigation of impacts to a less-than-significant level. Documentation of historic buildings and structures, including documentation to the standards of the Historic American Buildings Survey or Historic American Engineering Record (HABS/HAER), may lessen impacts but will not reduce them to less-than-significant levels.

The Secretary of the Interior’s Standards for the Treatment of Historic Properties (36 CFR 68) defines four options for the treatment of historic buildings: 1) preservation, 2) rehabilitation, 3) restoration, and 4) reconstruction. Generally:

1. Preservation involves the application of measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment [Weeks and Grimmer 1995:17].
2. Rehabilitation entails making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values [Weeks and Grimmer 1995:62].
3. Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period [Weeks and Grimmer 1995:118].
4. Reconstruction involves new construction to recreate the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location [Weeks and Grimmer 1995:166].

The Secretary’s Standards are not prescriptive, but instead provide general guidelines and are intended to be flexible and adaptable to specific project conditions, including aspects of adaptive use, functionality, and accessibility. The goal is to balance continuity and change and retain historic building fabric to the maximum extent feasible. The National Park Service has compiled a series of bulletins to provide guidance on specific historic preservation topics.

**b. Impacts and Mitigation Measures.**

Archaeological and Historical Resources.

***Threshold: Would the Community Plan cause a substantial adverse change in the characteristics of an archaeological resource that convey its significance or justify its eligibility for inclusion in the CRHR or a local register?***

**Impact CR-1 Development under the Community Plan could directly or indirectly impact significant prehistoric or historic archaeological sites (Class II impact; less than significant with mitigation).**

Existing data from the Los Osos Wastewater Project and other sources identify 49 prehistoric archaeological sites within the Plan area. Of these, 9 have been evaluated formally for significance and are considered eligible for listing on the NRHP; they are therefore considered historical resources for the purposes of CEQA. One site is not eligible for listing on the NRHP and one site is identified as a non-contributing element of a larger resource. The remaining 38 sites have not been evaluated formally for listing on the NRHP or other registers; however, many of these resources are likely to qualify if evaluated.

Implementation of the Community Plan Update would result in urban development through the growth horizon period (through 2035). Development under the LOCP could result in an additional 1,861 residential units and up to 364,000 square feet of commercial space within the Plan Area during the 20-year plan horizon (by 2035). Grading, excavation, utility trenching, and other ground disturbance associated with construction of homes and commercial buildings, along with the infrastructure necessary to support them, may produce significant impacts on archaeological sites through damage to or destruction of significant properties, or by diminishing the integrity of the context and setting of such properties. Trails and trail corridors, coastal access improvements, and other amenities are also planned. Some of these developments may be located within the zone of high or moderate archaeological sensitivity, and thus have the potential to impact significant archaeological resources. If not designed carefully to avoid known and potential site locations, installation of circulation networks, parks, coastal access points, sidewalks and gutters, and other community amenities also could produce significant impacts by diminishing the integrity of archaeological deposits.

The density and distribution of the 49 known prehistoric archaeological sites within the Plan area was used to define the three zones of sensitivity shown in **Figure 4.5-4**. Most of these sites are concentrated along the edges of Morro Bay, extending into the interior along Los Osos Creek, around Eto Lake, and in similar settings. The impacts described above are most likely to occur in the high sensitivity zone; impacts are less likely to occur in the moderate sensitivity zone and unlikely in the low sensitivity zone.

Proposed LOCP Policies to Address Potential Impacts. As currently proposed, the LOCP does not include policies beyond those in the State and County’s existing regulatory framework to address potential impacts associated with future development within the area. Although regulations included in the California Public Resources Code, consultation in accordance with AB 52 and SB 18, implementation of the County’s Estero Area Plan and requirements under the Coastal Zone LUO, would reduce potential programmatic impacts to a large extent, impacts would still remain without modification to the LOCP. Such impacts are considered **Class II, significant, but mitigable.**

Mitigation Measures. In addition to the policy framework discussed above, the following mitigation measures are required to reduce Impact CR-1 to a less than significant level.

**CR-1(a) Cultural Resource Management Policy.** The following language shall be added as a subsection to Community Plan Policies Section 2.5.5, Environmental Resources:

*CR-1: Effectively manage significant archaeological and historical resources in and around the community of Los Osos.*

*A. Identify the locations of sensitive archaeological and historical sites prior to any proposed development, and preserve them in place and avoid damaging impacts whenever feasible.*

*B. Evaluate site significance and mitigate unavoidable impacts on archaeological sites using current professional standards and best management practices, in consultation with Native American tribal representatives and other affected communities of interest.*

*C. Encourage acquisition, preservation, and management of sensitive archaeological and historical sites. Allow passive recreation where compatible with resource protection. After acquisition, change the Land Use categories of these areas to Open Space.*

**CR-1(b) Archaeologically Sensitive Area Combining Designation.** The County shall refine its current Archaeologically Sensitive (AS) Area combining designation so it shall apply only to the areas of high and moderate sensitivity within the Plan area, per **Figure 4.5-4**. Individual project applicants shall consult with the County to determine whether their projects fall within the AS zone. If so, the County shall require a field inspection by a Registered Professional Archaeologist to determine the locations of archaeological resources vis-à-vis the proposed development.

**CR-1(c) Community Plan Archaeological Resource Guidelines and Standards.** The following Planning Area Standards shall be added to Section 7.3 of LOCP, Communitywide Standards:

***Archaeological and Historical Resource Surveys.*** For any proposed development in areas of high and moderate archaeological sensitivity within the Plan area, per **Figure 4.5-4**, the County shall require a field inspection by a Registered Professional Archaeologist to determine the locations of archaeological resources vis-à-vis the proposed development. If archaeological resources are present, the County shall assist the applicant in designing a project that allows the archaeological resource to be preserved in place if feasible. Project applicants shall demonstrate that methods proposed for construction within the AS Area can successfully avoid impacts to known or suspected archaeological resources.

For development outside of the AS area, or if archaeological resources are not identified during a survey, the County may require archaeological surveys or monitoring during construction to ensure that unidentified resources are not inadvertently damaged by development. If archaeological or historical sites are discovered outside of the AS area, the standards and guidelines described below shall apply.

***Siting of Public Amenities and New Development.*** New residential and commercial development shall be sited to avoid archaeological and historical resources to the greatest extent feasible. Avoidance means that ground disturbance for new development does not overlap the boundaries of identified archaeological and historical sites. In circumstances where complete avoidance is not feasible, applicants shall demonstrate that construction methods will not create direct or indirect impacts on archaeological remains.

Recreational sites such as public trails and trail corridors, parks, and related developments also shall be sited and designed to avoid or minimize impacts to archaeological or historical resources. Trails should follow existing road and trail alignments and use existing bridges to the greatest extent feasible. Where this is not possible, prior to final trail alignment, proposed trail routes shall be surveyed for archaeological and historical sites and re-routed where necessary to avoid sensitive resources. Trailhead parking shall be sited and designed to avoid archaeological and historical sites.

Careful selection and planning of coastal access points must be a priority since they are all within the zone of highest archaeological sensitivity. These shall be

*sited and designed to avoid or minimize impacts to archaeological or historical resources to the greatest extent feasible.*

***Previously Evaluated Resources.*** *As discussed above, a small number of archaeological sites in the Plan area have been evaluated formally for significance, and others may be evaluated in the future pursuant to these Guidelines and Standards. If archaeological and historical surveys identify previously evaluated sites within a proposed development area, Project applicants shall consult with the County and the Tribes to identify methods to avoid impacts to the resource. Applicants shall demonstrate that methods proposed for construction can successfully avoid impacts. If complete avoidance is not feasible, a Registered Professional Archaeologist shall assess the integrity of remains within the specific project area and the nature of proposed development to determine whether significant impacts will occur as a result of development. Such assessment may require subsurface archaeological testing, which shall be carried out according to the standards and procedures in the following section.*

***Archaeological Testing and Impact Mitigation.*** *If previously unevaluated archaeological remains are identified and cannot be avoided through project redesign or otherwise preserved in place, or if previously evaluated sites must be sampled to assess integrity and potential impacts per the section above, the proponent shall fund a Phase 2 study to determine the significance of the resource and the extent of the impacts prior to issuance of any permit for development. The following requirements shall apply:*

- Phase 2 testing shall include mapping of surface artifacts, collection of functionally or temporally diagnostic tools and debris, and excavation of samples from within the site.*
- Cultural materials collected from the site shall be processed and analyzed in the laboratory according to standard archaeological procedures.*
- The age of the remains shall be determined using radiocarbon dating and other appropriate procedures; lithic artifacts, faunal remains, and other cultural materials shall be identified and analyzed according to current professional standards; any prior archaeological collections from the site shall be included in the comparative analysis.*
- The significance of the site and the extent of impacts shall be evaluated according to the criteria of the CRHR, and the cultural resource record shall be updated to reflect the results of the investigation; such results also shall be presented in a technical report following the standards of the California Office of Historic Preservation publication Archaeological*

*Resource Management Reports: Recommended Content and Format (<http://ohp.parks.ca.gov/pages/1054/files/armr.pdf>).*

- *Upon completion of the work, all artifacts, other cultural remains, records, photographs, and other documentation shall be curated at the San Luis Obispo County Archaeological Society or another facility approved by the County.*
- *All work shall be completed by a County-approved Registered Professional Archaeologist; a Chumash tribal representative shall monitor all excavation in Native American sites.*
- *All fieldwork, analysis, report production, and curation shall be fully funded by the applicant.*
- *For archaeological sites that are judged to be significant historical resources, the Phase 2 report shall offer mitigation recommendations as necessary and appropriate. All feasible mitigation recommendations shall be incorporated into any permit issued for development.*

***Archaeological Site Capping.*** *If complete avoidance of archaeological sites cannot be accomplished, a site may be buried under a layer of clean, culturally sterile, chemically neutral fill. Site capping is not a preferred alternative and should only be employed after the Applicant has demonstrated to the County that no other preservation options are feasible. In that case, fill shall be placed on the site beginning at the edge and working in toward the center, so that equipment used to deposit the fill drives across the site only on the fill material and not on the exposed cultural deposit. It is important to note here that capping may effect preservation in place but does not constitute avoidance of impacts to the site. To mitigate the residual impacts of capping, the following requirements shall apply:*

- *a data collection program shall be implemented prior to placement of the fill cap, including mapping of surface artifacts, collection of functionally or temporally diagnostic tools and debris, and excavation of samples from within the area to be filled as well as adjacent site areas for comparative purposes.*
- *Cultural materials collected from the site shall be processed and analyzed in an archaeological laboratory according to standard procedures.*
- *The age of the remains shall be determined using radiocarbon dating and other appropriate procedures; lithic artifacts, faunal remains, and other cultural materials shall be identified and analyzed according to*



*current professional standards; any prior archaeological collections from the site shall be included in the comparative analysis.*

- The significance of the site shall be evaluated according to the criteria of the CRHR [CEQA Guidelines Section 15064.5(a)(3)], and the cultural resource record shall be updated to reflect the results of the investigation; such results also shall be presented in a technical report following the standards of the California Office of Historic Preservation publication *Archaeological Resource Management Reports: Recommended Content and Format* (<http://ohp.parks.ca.gov/pages/1054/files/armr.pdf>).*
- Upon completion of the work, all artifacts, other cultural remains, records, photographs, and other documentation shall be curated at the San Luis Obispo County Archaeological Society or another facility approved by the County.*
- A County-approved Registered Professional Archaeologist shall conduct all work; a Chumash tribal representative shall monitor all excavation in Native American sites.*
- All fieldwork, analysis, report production, and curation shall be fully funded by the applicant.*

**Plan Requirements and Timing.** The Planning and Building Department shall add the recommended policies, guidelines, and standards LOCP prior to Plan adoption.

**Monitoring.** Planning and Building shall ensure that the above language is included in the LOCP prior to adopting the plan.

**Residual Impacts.** With proposed mitigation, impacts would be less than significant.

**Threshold:** *Would the Community Plan cause a substantial adverse change in the characteristics of an historical building or structure that convey its significance or justify its eligibility for inclusion in the CRHR or a local register?*

**Impact CR-2** Development under the Community Plan could directly or indirectly impact significant historic buildings, structures, or districts (Class II impact; less than significant with mitigation).

The Estero Area Plan includes a policy to “encourage conversion and renovation of historic or architecturally significant buildings” (Appendix D-9); however, except for a reference to handful of historic buildings and structures scattered throughout the document, that Plan includes no concrete policies to promote the identification or preservation of historical or archaeological sites. The Estero Area Plan applies the Historic Site Combining Designation to the Los Osos Schoolhouse, built in 1872 and moved to the site of the South Bay Community Park between 1973 and 1974. Similarly, the LOCP applies the H combining designation to the Schoolhouse.

Development within the historic neighborhood of Baywood Park and other older residential areas in the Plan area has the potential to impact significant historic buildings or structures. Demolition, conversion, renovation, remodeling, or other adaptive reuse could damage or destroy the historical fabric of the buildings or structures and their associated archaeological remains, diminishing the integrity of individual properties, the context and setting of neighboring properties, or the integrity of any potential historical district.

Proposed LOCP Policies to Address Potential Impacts. As currently proposed, the LOCP does not include policies beyond those in the State and County’s existing regulatory framework to address potential impacts associated with future development within the area. Although regulations included in the California Public Resources Code, implementation of the County’s Estero Area Plan and requirements under the Coastal Zone LUO, would reduce potential programmatic impacts to a large extent, impacts would still remain without modification to the LOCP. Such impacts are considered **Class II, significant, but mitigable**.

Mitigation Measures. The following mitigation measures would be required:

**CR-2(a)** The following language shall be added as a subsection to Community Plan Policies Section 2.5.5, Environmental Resources:

*CR-2: Effectively manage significant historical buildings, structures, and districts in and around the community of Los Osos.*

*A. Identify significant historical buildings and structures prior to any proposed development.*

*B. Identify and evaluate potential historic districts and develop a plan for their preservation and enhancement.*

*C. Encourage adaptive reuse that is compatible with resource protection. Follow the Secretary of the Interior’s Standards and Guidelines to ensure preservation,*

*rehabilitation, restoration, and/or reconstruction of significant buildings and structures.*

***Program CR-2.1: Historic Resource Inventory.** The County should conduct an inventory of historical resources within the Baywood Park neighborhood to determine whether the core area qualifies as a historic district, define the boundaries of any such district, and determine which resources contribute to its significance.*

***Program CR-2.2: Protection and Management of Historical Resources.** The County should work closely with property owners, other public agencies, and conservation organizations to protect and manage historical buildings, structures, and districts.*

**CR-2(b)**

**Community Plan Historical Resource Guidelines and Standards.** The following Planning Area Standards shall be added to Section 7.3 of LOCP, Communitywide Standards:

***Historical Resource Evaluation.** Prior to issuance of permits for demolition or development, the County shall ensure that buildings or structures erected prior to 1970 on the subject parcel or any adjoining parcel are documented according to professional standards and their historical significance is evaluated. No permits shall be issued for any demolition, development, or other activity that would adversely affect the integrity of an officially designated Historic Landmark, historical buildings or structures eligible for the CRHR, or identified historical districts.*

***Historical Resource Survey.** The County should work with the History Center of San Luis Obispo County, property owners, and other local stakeholders to conduct an inventory of historical resources within the Baywood Park neighborhood to document the historical significance of buildings and structures in the neighborhood, determine whether the core area qualifies as a historic district, define the boundaries of any such district, and determine which resources contribute to its significance. Such an inventory should be initiated within five years of adoption of the LOCP.*

***Secretary of Interior’ Standards and Guidelines.** Projects that that would adversely affect the integrity of an officially designated Historic Landmark, historical buildings or structures eligible for the CRHR, or identified historical district shall be designed to comply with the Secretary of Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. The applicant*

*shall retain a qualified professional architectural historian to conduct design review and ensure compliance with the Standards and Guidelines.*

**Plan Requirements and Timing.** The Planning and Building Department shall add the recommended policies, guidelines, and standards LOCP prior to Plan adoption.

**Monitoring.** Planning and Building shall ensure that the above language is included in the LOCP prior to adopting the plan.

Residual Impacts. With proposed mitigation, impacts would be less than significant.

**Threshold:** *Would the Community Plan cause a substantial adverse change in the characteristics of a Tribal Cultural Resource that convey its significance or justify its eligibility for inclusion in the CRHR?*

**Impact CR-3** Development under the Community Plan could directly or indirectly impact Native American Tribal Cultural Resources (Class I impact; significant and unavoidable).

AB52 defines Tribal Cultural Resources are “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” (PRC §21074.1). A tribal cultural resource must be on, or eligible for, the California Register of Historical Resources, or must be included in a local register of historical resources; however, this class of resources is separate from and more encompassing and comprehensive than archaeological sites or traditional cultural properties.

The Los Osos area is particularly rich in archaeologically resources. Site density and complexity are quite high in comparison with surrounding areas, particularly along the shore of the bay and in certain other zones. Although the entire Plan area has not been surveyed systematically, 49 Native American archaeological sites have been identified to date, and several are known to contain human remains. As a result, the area is particularly important to the Tribes, and the archaeological sites as well as other non-archaeological places may qualify as Tribal Cultural Resources. Plan buildout, rezoning, and related development may impact Native American Tribal Cultural Resources by diminishing the cultural character and integrity of the resource, limiting traditional uses of the area, permitting development on sacred sites, or breaching confidentiality.

Proposed LOCP Policies to Address Potential Impacts. As currently proposed, the LOCP does not include policies beyond those in the State and County’s existing regulatory framework to address potential impacts associated with future development within the area. Although regulations included in the California Public Resources Code, consultation in accordance with AB 52 and SB 18, implementation of the County’s Estero Area Plan and requirements under the Coastal Zone LUO, would reduce potential

programmatic impacts to a large extent, impacts would still remain without modification to the LOCP. Such impacts are considered **Class I, significant and unavoidable**.

Mitigation Measures. The following mitigation measures would be required:

**CR-3(a) Tribal Consultation Policy.** The following language shall be added as a subsection to Community Plan Policies Section 2.5.5, Environmental Resources:

*CR-3: Continue County engagement with Native American tribes to ensure effective consultation under AB 52 and SB18.*

*A. Identify Tribal Cultural Resources prior to any proposed development and develop a plan for their preservation.*

*B. Encourage acquisition, preservation, and management of Tribal Cultural Resources. Allow passive recreation where compatible with resource protection confidentiality. After acquisition, change the Land Use categories of these areas to Open Space.*

**CR-3(b) Community Plan Tribal Cultural Resource Guidelines and Standards.** The following Planning Area Standards shall be added to Section 7.3 of LOCP, Communitywide Standards:

**Government-to-Government Consultation.** Consistent with AB52 and SB18, the County shall continue its government-to-government consultations with local Tribal representatives to ensure that resources of concern to the Tribes are identified and taken into account in future development planning. Traditional cultural, historical, and spiritual properties of concern to the Tribes shall be protected and preserved to the maximum extent feasible. The County shall ensure the confidentiality of information regarding cultural, historical, and spiritual properties shared by the Tribes, and the County, Tribes, and community should work together to ensure appropriate Tribal access to such properties while still respecting the rights and privileges of private property owners.

**Plan Requirements and Timing.** The Planning and Building Department shall add the recommended policies, guidelines, and standards LOCP prior to Plan adoption.

**Monitoring.** Planning and Building shall ensure that the above language is included in the LOCP prior to adopting the plan.

Residual Impacts. With proposed mitigation, impacts would be reduced, but not to a less than significant level because the outcome of tribal consultations on individual projects is not known and cannot be determined at this time.

**Threshold:** *Would the Community Plan directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**Impact CR-4** Development under the Community Plan could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Class II impact; less than significant with mitigation).

Based on the review of local and regional geology and paleontology and the museum records search results, the geologic units underlying the Project area have a paleontological sensitivity ranging from low to high in accordance with the SVP (2010) guidelines. The Late Miocene to Pliocene Pismo Formation (Tpm) has yielded significant fossils in San Luis Obispo County. Therefore, the Pismo Formation deposits are assigned a high potential for buried paleontological resources. The Quaternary deposits (Qpe and Qal) are generally too young to contain fossilized remains and the Quaternary older eolian deposits (Qoe) are unlikely to contain fossil resources due to slow sedimentation rates typical of eolian sedimentary environments. Therefore, the Quaternary deposits have been assigned a low potential for buried paleontological resources. The paleontological sensitivity ratings of the geologic units underlying the Project area are depicted in **Figure 4.5-5**.

In areas of high sensitivity (approximately 17 acres underlain by the Late Miocene to Pliocene Pismo Formation), Project-related ground disturbance could result in adverse impacts to paleontological resources, including:

- Disturbance, damage, or destruction of a significant fossil
- Destruction of a unique geologic feature associated with a paleontological site
- Disturbance or destruction of a paleontological site, which results in the loss of scientific context of fossil remains

The amount of Project-related ground disturbance would likely be greatest for activities such as grading, excavation, trenching, and wide-diameter auguring. These activities would directly impact and disturb the geologic strata at depth and have a high potential to impact buried paleontological resources. Indirect impacts of the Project include increased exposure of paleontological resources and unlawful collecting of fossils as a result of increased access to the area.

Proposed LOCP Policies to Address Potential Impacts. As currently proposed, the LOCP does not include policies beyond those in the State and County's existing regulatory framework to address potential impacts associated with future development within the area. Although regulations included in

the California Public Resources Code, implementation of the County’s Estero Area Plan and requirements under the Coastal Zone LUO, would reduce potential programmatic impacts to a large extent, impacts would still remain without modification to the LOCP. Such impacts are considered **Class II, significant, but mitigable**.

Mitigation Measures. The following mitigation measures would be required:

**CR-4(a) Community Plan Paleontological Resource Guidelines and Standards.** The following Planning Area Standards shall be added to Section 7.3 of LOCP, Communitywide Standards:

***Paleontological Surveys.*** *If individual projects in areas of high paleontological sensitivity (i.e., the Pismo Formation; Figure 4.5-5) require grading, excavation, or trenching that would result in ground disturbance within previously undisturbed sediments, the following measures shall apply:*

- *the applicant shall retain a qualified professional paleontologist to perform a pre-construction paleontological survey to visually inspect the ground surface for exposed fossils or traces thereof and to further evaluate geologic exposures for their potential to contain preserved fossil material at the subsurface.*
- *The qualified Paleontologist shall have a Master’s Degree or equivalent work experience in paleontology, shall have knowledge of the local geology and paleontology, and shall be familiar with paleontological procedures and techniques.*
- *All fossil occurrences observed during the course of fieldwork shall be adequately documented and recorded during the survey. The data collected for each fossil occurrence shall include, at minimum, the following information: Universal Transverse Mercator (UTM) coordinates, approximate elevation, description of taxa, lithologic description, and stratigraphic context (if known). In addition, each locality shall be photographically documented with a digital camera.*
- *The paleontologist shall assess the significance of any identified fossil resources, and all significant or potentially significant fossils shall be collected at the time they are observed in the field.*
- *If the fossil discovery is too large to collect during the survey (e.g., a whale skeleton or bone bed) and requires a large-scale salvage effort, then it shall be documented immediately and the paleontologist shall consult with the County regarding a strategy for preservation or recovery.*

**Paleontological Monitoring.** *If a pre-construction survey identifies significant fossil resources, or if a qualified paleontologist determines the need for monitoring during construction, the following measures shall apply:*

- *a qualified paleontologist shall observe excavation, grading, and/or trenching.*
- *If a paleontological resource is discovered during monitoring, the paleontologist shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and collected if appropriate. The paleontologist shall notify the County within 24 hours of any such discovery, and the location shall be protected from further impact until the significance evaluation and any necessary recovery is completed. Work may not resume without approval of the paleontologist and County.*
- *All significant fossils collected shall be prepared for curation in a properly equipped paleontology laboratory. Preparation shall include the careful removal of excess matrix from fossil materials and stabilizing and repairing specimens, as necessary.*
- *Following laboratory work, all fossils specimens shall be identified to the lowest taxonomic level, cataloged, analyzed, and delivered to an accredited museum repository for permanent curation and storage.*
- *The paleontologist shall prepare a technical report describing the results of the paleontological mitigation efforts, including a summary of the field and laboratory methods, an overview of the project area geology and paleontology, a list of taxa recovered, an analysis of fossils recovered and their scientific significance, and recommendations. A copy of the report shall be submitted to the County and the designated museum repository. The cost of fossil recovery, analysis, and curation shall be the responsibility of the individual Project proponent.*

**Plan Requirements and Timing.** The Planning and Building Department shall add the recommended policies, guidelines, and standards LOCP prior to Plan adoption.

**Monitoring.** Planning and Building shall ensure that the above language is included in the LOCP prior to adopting the plan.

**Residual Impacts.** Adverse impacts to paleontological resources as the result of any individual Project would be less than significant with mitigation (Class II). Therefore, no residual impacts are anticipated as a result of development under the Community Plan.

**c. Cumulative Impacts.** Cumulative impacts on archaeological, historical, and paleontological resources would result from the increases in population, increased recreational use, and increased



development and construction (including in-fill development) throughout the Plan area. For these resources, the geographic extent of cumulative impacts encompasses a relatively broad area because the importance of any individual resource can only be judged in terms of its regional context and relationship to other resources. Thus, the significance of impacts on any given resource or group of resources must be examined in light of the integrity of the regional resource base. Because the number of cultural resources is finite, limited, and non-renewable, any assessment of cumulative impacts must take into consideration the impacts of the proposed project on resources within the project area; the extent to which those impacts degrade the integrity of the regional resource base; and impacts other projects may have on the regional resource base. If these effects, taken together, result in a collective degradation of the resource base, then those impacts are considered cumulatively considerable.

The regional resource base is defined geographically, ethnographically, and with reference to the specific relevant administrative and management units. The geographic scope of the cumulative impact analysis takes in a broad region encompassing the entire Estero Bay coastal zone, which is generally bounded by Point Buchon and Montaña de Oro State Park to the south, the Pacific Ocean to the west, the crest of the coast range to the east, and Point Estero to the north. The analysis also takes into consideration the cultural geography of the Obispeño Chumash people who occupied the region prehistorically, considering the integrity of the entire suite of resources that make up the cultural patrimony of this group. Finally, the cumulative impact analysis takes into account the resource base under the direct management and care of San Luis Obispo County.

The classes of resources found within the project area reflect the types of sites expected to be found within the broader geographic, cultural, and administrative region considered for the cumulative analysis. Trends that have led to degradation of the regional cultural resource base, and are expected to continue in the future, include continuing population growth and the concomitant demand for new housing and infrastructure; continuing and increasing recreational use of the regional landscape; continued ranching, agricultural, and industrial activities; and on-going transportation development and improvement.

Based on the current analysis, several prehistoric and historical sites in the Plan area may be adversely affected by the proposed project. Several of these sites are presumed to be significant resources, though most have not been evaluated formally. Although the extent of impacts to these sites may be minor relative to the nature and extent of the individual sites, and most impacts to individual sites can be mitigated to less than significant through application of the proposed mitigation measures, certain of these sites are not typical for the region and are unusually important scientifically and to the local Chumash tribes. When combined with other past, present, and future projects, particularly the Los Osos Wastewater Project, the overall loss of cultural resources and cumulative degradation of the regional resource base is significant and would not be mitigated to less than significant by application of the proposed mitigation measures. Preparation of regional cultural resources overviews and research designs, synthetic analysis and interpretation of cultural resources in regional perspective, and expanded public interpretation of resources would lessen the proposed project's contribution to

cumulative degradation of the regional resource base. However, there is no feasible additional mitigation to reduce the project’s contribution to cumulative effects on Native American Tribal Cultural Resources. As a result, cumulative impacts on archaeological and historical sites would be **Class I, significant and unavoidable**.

Based on the overall low paleontological potential of the Los Osos Community Plan area, the Project would have a low potential to combine with the paleontological impacts of other projects. Adverse impacts to paleontological resources as the result of development under the Los Osos Community Plan would be less than significant with mitigation. With the implementation of resource protection measures described herein, cumulative impacts on paleontological resources can be reduced or avoided. Therefore, the Project has a negligible potential for contribution to cumulative impacts to paleontological resources and the cumulative impacts of the Project on paleontological resources would be *less than significant*.

**d. Subsequent Environmental Review for Future Development Projects in the Community Plan Area.** Pursuant to CEQA Guidelines Section 15183, additional CEQA review is not required for projects that are consistent with the community plan or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project-specific effects which are peculiar to the project or its site. **Table 4.5-4** describes conditions under which future development in the study area would require additional CEQA review, pursuant to Section 15183.

<b>Table 4.5-4. Conditions Under Which Future Development in the Community Plan Area Would Require Additional CEQA Review</b>	
<b>Condition</b>	<b>Impact to Address</b>
<i>The future project is inconsistent with Local Coastal Plan or Community Plan policies, design guidelines, or communitywide standards.</i>	CR-1 through CR-4
<i>The future project would result in an impact on archaeological, historical, paleontological or tribal cultural resources peculiar to the project or parcel. An effect is not considered peculiar if uniformly applied development policies or standards previously adopted by the County would substantially mitigate the environmental effect.</i>	Impact that is peculiar to the project or parcel
<i>The future project would result in an impact or impacts not analyzed above, including off-site or cumulative effects.</i>	Impact other than CR-1 through CR-4
<i>The future project would result in an impact or impacts analyzed above, but at a higher level of severity as a result of substantial new information not known at the time the EIR was certified.</i>	Worsened CR-1 through CR-4, as applicable