

## 4.7 Cultural and Paleontological Resources

Information presented in this section was compiled from three documents prepared by Cultural Resource Management Services (CRMS): Phase I Archaeological & Paleontological Survey of the approximately 50-acre portion of Parcel No. 070-131-003 for the proposed Annexation Area for Hansen Quarry, San Luis Obispo County, California (Hannahs and Mills, 2011); CRMS Addendum Letter (Hannahs, 2013); Phase I Archaeological Survey of the approximately 61.5-acre portion of Parcels No. 070-131-018, 070-131-021, 070-131-022 & 070-131-037 for the Proposed Lower Reclamation Area For Hanson Quarry, San Luis Obispo County, California (Hannahs, 2014); and, Phase 1 Cultural Resources Sample Inventory of the Santa Margarita Quarry Expansion Project Letter Report (Haydu, 2014) prepared by Applied Earthworks.

The baseline used against which to compare potential impacts of the Santa Margarita Quarry Expansion Project was the current condition and quality of the cultural and paleontological resources. The existing mining operations are a vested mining right per Public Resources Code Section 2776; thus, the baseline conditions entail the existing mining operations and extant equipment used for mining purposes.

### Scoping Issues Addressed

During the Proposed Project's scoping period one comment letter regarding cultural and paleontological resources was received. This letter, dated July 1, 2013 was submitted to the County by the Native American Heritage Commission (NAHC) and provided recommendations for: contacting the appropriate Information Center for previously recorded cultural resources documented within the Proposed Project area; further coordination with the NAHC if additional cultural resources surveys or inventories are warranted; maintaining the confidentiality of the records upon which this analysis is based; and, the identification of appropriate mitigation measures for known potential and accidental discoveries of cultural resources per the requirements of CEQA. The letter additionally noted that a Sacred Lands File Check had been requested for the Proposed Project, and provided contact information for a Native American Consultation. These recommendations have been factored into this analysis. Please refer to EIR Section 4.7.4, Native American Consultation, for a summary of the consultation that has been completed for the Proposed Project and this EIR.

### 4.7.1 Existing Conditions

#### Cultural Resources Existing Conditions

This assessment considers three kinds of cultural resources, classified by their origins: prehistoric; ethnographic; and, historic. Resources associated with human occupation and uses of California prior to prolonged European contact are prehistoric resources. In California, the prehistoric period began over 12,000 years ago and extended through the eighteenth century until 1769, when the first Europeans settled in California. Ethnographic resources represent the heritage of a particular ethnic or cultural group, such as Native Americans, African, European, Latino, or Asian immigrants. Archaeological and architectural resources associated with Euro-American exploration and settlement of the area and the beginnings of a written historical record are historic period resources. The following prehistoric, ethnographic, and historic background provides the context for the evaluation of the California Register of Historic Resources (CRHR) eligibility of any identified cultural resources within the Study Area.

The Proposed Project area is approximately three miles northeast of the town of Santa Margarita, and includes the proposed expansion area where ground-disturbance would take place, totaling about 33 acres, and reclamation of the Proposed RPA area, which is equal to the entire quarry footprint, as expanded, totaling about 193.1 acres. The Cultural Resources study area is the Proposed Project footprint, plus an approximate one-half mile buffer surrounding it. The following discussion and culture-historical sequence primarily follows Jones et al. (2007).

### ***Prehistoric Background***

**Millingstone Period (Approximately 10,000-5500 cal BP<sup>1</sup>).** Until recently, archaeologists understood the pre-9000 cal BP period as a time of big game hunters (i.e., Paleoindians). However, only a few isolated fluted projectile points offer any evidence of this culture in the region (Dillon, 2002), the closest of which (CA-SLO-1429) was found near the town of Santa Margarita (Jones et al., 2007). Radiocarbon dates pre-dating the 9000 cal BP time period were reported at a number of sites with associated artifacts typical of the Millingstone Period (including those at Pismo Beach, Edna Valley, Morro Bay, and Nipomo Mesa), extending the Millingstone Period to 10,000 cal BP. This indicates that the seed processing adaptation characteristic of this period extends further back in time than previously thought (Jones et al., 2007; Moratto, 1984).

Characteristic assemblages of the Millingstone Period include an abundance of handstones and millingstones, as well as thick rectangular (“L-series”) *Olivella* beads and a lack of hunting gear (i.e., projectile points). Based on recovered tools and fauna, the collection and processing of seeds and shellfish were important early Holocene economic pursuits, with large terrestrial game and marine mammals contributing rather minimally to the diet (Jones et al., 2007; Moratto, 1984).

**Early Period (5500-2600 cal BP).** The introduction of mortar-pestle technology and an increase in the occurrence of side-notched projectile points mark the Early Period on the Central California coast. This adaptive shift in the Santa Barbara area is attributed to various different events such as: population replacement; the intrusion of new people into the area from outside regions such as Alaska, Eastern California, or the Channel Islands; and technological shifts. Evidence for Early Period occupation in the San Luis Obispo County region includes bowl mortars and groundstone (for use in processing acorns) and resource storage. This technological shift allowed the establishment of permanent villages in a variety of estuary settings along the coast. As a result, populations became more confined and the importation of obsidian and other trading increased in importance (Jones et al., 2007; Moratto, 1984).

**Middle Period (2600-1000 cal BP).** Temporally diagnostic artifacts from the Middle Period include contracting-stemmed and concave base projectile points, various *Olivella* bead types, as well as *Haliotis* shell disk ornaments, perforated disks, rings with incised edges, and plain and flat-ended rings. Bone tools and ornaments are relatively abundant and include needles, pins, awls, strigils, whistles, spatulas, gorge hooks, and antler tines. Generally, mortars and pestles occur more frequently than handstones and millingstones. Few adaptive changes occurred during the Middle Period in the San Luis Obispo County area. Instead, many of the subsistence-settlement trends set in motion during the Early Period continued forward into the Middle Period, including an increased use of mortars and pestles (and presumably acorns), a more intensified harvest of small schooling fish and sea otters, and a decreased dependence on shellfish (Jones et al., 2007; Moratto, 1984).

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<sup>1</sup> cal BP refers to “calibrated years before the present” which occurs when raw radiocarbon dating is compared to samples independently dated by other methods, such as dendrochronology (dating on the basis of tree growth rings) and stratigraphy (dating on the basis of sediment layers in mud or sedimentary rock).

**Middle/Late Transition (1000-700 cal BP).** The Middle/Late Transition Period along the Central Coast region is represented by contracting-stemmed and double side-notched projectile points, curved shell fishhooks, and a variety of *Olivella* shell bead types. Archaeological sites dating to this interval are quite rare. Unlike the Santa Barbara Channel where settlement density was high, evidence for archaeological materials along the San Luis Obispo coast declined during the Middle/Late Transition, and may reflect more dispersed settlement patterns. Exchange networks for obsidian appear to have collapsed. Jones et al. (1999) suggest many of these changes were probably related to the Medieval Climatic Anomaly, which were warm periods of drought during the Middle/Late Transition that created severe environmental degradation in the Central Coast region (Jones et al., 2007; Moratto, 1984).

**Late Period (700 cal BP to Historic Period).** Late Period artifact forms continuing from the previous phase include hopper mortars, handstones, millingstones, circular shell fishhooks, and *Olivella* bead types. New forms include arrow projectile points (Desert side-notched and Canaliño [Cottonwood]), chipped stone drills, and E1 and E2 *Olivella* beads, clamshell disk beads, *Haliotis* disk beads, and small serpentine disk beads. Many researchers argue that Late Period economies maintained a terrestrial orientation, which focused on the storage and consumption of acorns and black-tailed deer. Within the last decade, however, excavations of small seasonal encampments along the Big Sur coast indicate the occupants utilized the marine environment intensively (Jones et al., 2007; Moratto, 1984).

### ***Ethnographic Background***

Ethnohistoric and ethnographic sources suggest a northern branch of the Chumash tribe, the Obispeño, and a southern branch of the Salinan tribe, the Migueleño Salinan, occupied the Santa Margarita region (Hester, 1978; Kroeber, 1976). The exact historical boundary of these two groups is not definitively established and is a subject of ongoing research. The currently accepted boundaries of the Chumash tribe as a whole extend from the San Luis Obispo County area, as far north as Estero Bay, south down the coast to Malibu Canyon including the Channel Islands, and inland as far east as the western San Joaquin Valley. The Salinan Indians were located primarily along the Salinas River and its tributaries. Their traditional territory likely stretched from the area around the headwaters of the Salinas River north to Soledad, and the coastal area west of this region, and inland to the eastern side Central Coast Mountain Range on the western edge of the San Joaquin Valley (Grant, 1978; Hester, 1978; Kroeber, 1976).

**Chumash.** The Chumash maintained geographic boundaries between various sub-groups within the tribe. Linguistic differences were also evident along these geographic boundaries. The Obispeño Chumash spoke a dialect distinct from their Central Chumash neighbors, and their name is derived from the Spanish mission established near their territory, San Luis Obispo de Tolosa. The Chumash lived on the coast, taking advantage of marine resources. The Obispeño did not use the redwood plank canoe constructed by their Santa Barbara Chumash neighbors, but built tule/balsa rafts which were better able to handle the rougher seas the Obispeño encountered in the unsheltered coastal seas. They exploited tidal pools and shallow waters with the use of traps, poles, nets, and their hands. Eventually they employed shell hooks and lines. They were hunters and gathers of inland resources as well, including acorns, rabbits, deer, and various wild seeds and grasses. Acorns were stored in large granaries, and prepared using flat or shallow milling stones. Other subsistence items included Chumash projectile points, small, triangular points with concave bases; globular stone bowls; straight-walled ceramic vessels with flared sides; cordage bags; flat basketry trays; and wooden grinding troughs. Shell beads and ornaments were prevalent, and were often used to decorate stone vessels, bone beads, arrow shaft straighteners, and stone tablets.

The Obispeño material items also included single, paired, or multiple whistles constructed of wood or bone; charmstones or plummet; quartz crystals; and, incised stone tablets. The Obispeño frequently traded with their Yokuts neighbors to the east, providing asphalt, abalone, clam, limpets, and periwinkle shells, and receiving pottery and obsidian (Grant, 1978; Greenwood, 1978; Kroeber, 1976).

The Obispeño Chumash were primarily coastal dwellers. Life for the Obispeño changed drastically when the Spanish established missions and forced them to convert to Catholicism. Language, culture, and lives were lost because of this European influence. When the Europeans arrived in the 18th century the new arrivals did not notice dense settlements like those closer to Santa Barbara, but more, smaller settlements with fewer people. This appears to be corroborated by the Spanish mission records which indicate that six villages in the Santa Barbara Chumash area contributed close to 1,000 neophytes to the mission there, with the San Luis Obispo mission only having 59 converts from the largest Obispeño settlement in the area. The records from the San Luis Obispo mission indicate that there were at least three Obispeño villages in the Santa Margarita area:

- *Cheptu* - SLO Death Register #238 – in the place of Chetpu, near Santa Margarita – 35 baptisms, few from 1775-1785 about 3/4 from 1793-1803. Rancheria noted in 1791 by Martinez at La Laguna two leagues north of Rancheria Santa Margarita (Hannahs and Mills, 2011).
- *Chotnegle* – SLO Baptism Register #1627 – in the Rancheria named Santa Margarita, alias Chotnegle. Rancheria at Santa Margarita, 5 trails noted in 1791 by Martinez. 35 baptisms mostly between 1791 and 1806 (Hannahs and Mills, 2011).
- *Topomo* – SLO Baptism Register #147 in the Rancheria of Topomo alias of Santa Margarita. Two baptisms in 1776 (Gibson, 1995 cited in Hannahs and Mills, 2011).

Mortuary practices by the Obispeño entailed cemeteries within villages, with bodies interred in a seated posture, flexed on the back or on the side. Grave goods found with burials include shell beads and ornaments, whistles, bone tubes, whole shells, slabs of stone or whale bone, lumps of pigment, and various utilitarian objects (Greenwood, 1978).

**Salinan.** The ethnohistoric and ethnographic record of the Salinan tribe is limited, and most of the information is derived from studies by Mason (1912) and Harrington (1942). The Salinan language is a subgroup of the Hokan language stock, and consists of two distinct dialects; Antoniaño spoken by people in the north, and Migueleño spoken by people in the south. Subsistence focused on processing acorns, as well as wild oats, sage seeds, berries, mescal, and wild fruits, and hunting rabbits, bear and deer. Items used by the Salinan included: baskets constructed by the coiling and twining techniques; projectile points; scrapers; choppers; bowl mortars; pestles; metates; basket mortars; stone bowls; notched pebbles used as net sinkers; arrowshaft straighteners; serpentine and steatite ornaments; and, various tools fashioned from bone and shell, such as awls, fishhooks, and wedges (Hester, 1978; Kroeber, 1976).

Trade was important for the Salinan, especially trade with the Yokuts from the Tulare Lake region in the San Joaquin Valley. Typical traded items included shell beads and unworked shell which the Salinan exchanged for salt, obsidian, seeds, lake fish, and tanned animal hides. These two groups were on such good terms that the Yokuts permitted the Salinan to exploit resources in their territories, and the Salinan returned the favor. Some trade with the Chumash occurred, but it appears that the relationship between them was strained and hostile.

Salinan settlements were on both the coast, possibly on the shore or beach, and inland along the banks of creeks and rivers. Houses were small, round, dome-shaped structures, some of which were large enough to house a dozen people. Houses were sometimes located on opposite sides of the river, which

may indicate that the Salinan participated in a moiety system. There were huts specially constructed for women to give birth (Hester, 1978). Kroeber (1976) mentions a Salinan village in close proximity to Santa Margarita, *Trolole*, but the exact location of this place is not known.

### **Paleontological Resources Existing Conditions**

Fossils are nonrenewable paleontological resources that are afforded protection by federal, State, and local environmental laws and regulations. The Paleontological Resources study area includes the Proposed Project footprint and encompasses those geologic formations nearby and adjacent to the proposed expansion area. The following paleontological background, based on the information provided in Hannahs and Mills (2011), provides the context for the analysis of the paleontological sensitivity of the surrounding geologic formations and the potential for significant paleontological resources to be extant in these formations.

Paleontological sensitivity is a qualitative evaluation by a professional paleontologist of geological units based on their potential to yield scientifically significant fossils. The paleontological sensitivity of a geologic unit is determined by background literature research, records review, and field survey. The analysis of paleontological sensitivity used for this assessment follows standard guidelines (Society of Vertebrate Paleontology [SVP] and Bureau of Land Management [BLM]) and uses the following four sensitivity categories:

- **High:** Areas underlain by geologic units that are likely to yield vertebrate fossils, plant megafossils, or scientifically important invertebrate fossils.
- **Moderate:** Areas underlain by geologic units that may yield scientifically significant fossils, but for which there are no direct records for fossil resources.
- **Undetermined:** Areas underlain by geologic units for which little information regarding paleontological resources is available, although the nature of the unit (e.g., fine-grained sediments deposited in a low-energy setting) is conducive to fossil preservation.
- **Low:** Areas underlain by geologic units that are not known to yield fossils. This includes agricultural soils where disturbance would have compromised the stratigraphic integrity of any fossil material that survived mechanical damage, and weathered soil horizons where chemical leaching destroys fossil material.

#### ***Cretaceous-aged (Igneous) Granite***

The Cretaceous-aged Granite formation underlies the entirety of the Proposed Project area, and is the oldest formation found within it (approximately 60 to 120 million years old). The thickness of this granite formation is unknown, and although it dates to the Cretaceous, granite and decomposed granite soils do not contain sensitive paleontological resources.

The area west of the Proposed Project area consists of Upper and Middle Miocene-aged Sedimentary deposits and alluvial Pleistocene deposits.

#### ***Lower Miocene Vaqueros Formation***

The area to the northwest and southwest of the Proposed Project area consists of the Lower Miocene Vaqueros Formation, composed primarily of sandstone, and is approximately 24 to 28 million years old. The thickness of this sandstone formation is unknown. This is a fossil bearing formation, and known fossils primarily include near-shore marine organisms. Therefore, the paleontological sensitivity of this formation is high.

### ***Middle Miocene Monterey Formation***

The Middle Miocene Monterey Formation lies directly above the Lower Miocene Vaqueros Formation, and this widespread, approximately 15-million year old formation, consists primarily of shale, 200 to 1400 feet thick. This is a fossil bearing formation, and known fossils include microfossils such as Foraminifera, Ostracoda, and nanoplankton (Finger et al., 1990). Therefore, the paleontological sensitivity of this formation is high.

### ***Upper Miocene Santa Margarita Formation***

The Upper Miocene Santa Margarita Formation lies directly above the Middle Miocene Monterey Formation; this approximately 11 to 5-million year old marine formation consists of coarse light gray, arkosic sandstone, including conglomerate, siliceous mudstone and porcelanite, shell lenses, and some diatomite. This is a fossil bearing formation, and *Ostrea titan* characterizes the known fossils from this formation (Durham and Addicott, 1964). Therefore, the paleontological sensitivity of this formation is high.

### ***Paso Robles Formation***

The Paso Robles formation lies directly west of the Proposed Project area and this approximately 5-million-year-old formation consists of Plio-Pleistocene-aged alluvial deposits, materials weathered from older formations. This is a fossil bearing formation, and is the most sensitive formation of all of the formation described above for the paleontological resources. Therefore, the paleontological sensitivity of this formation is high.

## **4.7.2 San Luis Obispo County Plans and Policies**

**Land Use Ordinance.** The County of San Luis Obispo's Land Use Ordinance, Title 22, Section 01010, identifies the protection and enhancement of significant natural, historic, archaeological, and scenic resources as a purpose of the County's General Plan. In addition, Section 22.10.040 of the Land Use Ordinance addresses property development and operating standards concerning the discovery of archaeological resources during construction activities. If archaeological finds are encountered, work is to halt in the vicinity of the discovery and the County's Department of Planning and Building, as well as a qualified archaeologist, are to be notified. Any recovered artifacts are to be treated in accordance with both State and federal laws and guidelines. Should human remains be discovered during construction activities the County's Department of Planning and Building and the County Coroner are to be contacted so that proper treatment and disposition are undertaken.

**Conservation and Open Space Element.** The County of San Luis Obispo Conservation and Open Space Element (COSE) outlines the County's goals, policies and implementation strategies for the conservation and protection of important natural resources while balancing the needs of the natural and built environments (County of San Luis Obispo, 2010). The COSE defines cultural resources as encompassing:

*[A]rchaeological, traditional, and built environment resources, including but not necessarily limited to buildings, structures, objects, districts, and sites. Cultural resources include sites of important events, traditional cultural places and sacred sites, and places associated with an important person. (Caltrans Standard Environmental Reference, Environmental Handbook, Volume I, Chapter 28: Cultural Resources.) Sites of important events, traditional cultural places, and sacred sites, or places associated with an important person may lack obvious physical characteristics.*

Under COSE Chapter 4 (Cultural Resources), Goal 2 (The County will promote awareness and support for the preservation of cultural resources in order to maintain the County's uniqueness and promote economic vitality), Policy CR2.1 (Community Participation), Implementation Strategy CR 2.1.3 establishes the County's commitment to protect sensitive cultural resources sites from vandalism and unauthorized collection of artifacts by educating staff, public officials, the public, and landowners about the importance of such sites. Further, Policy CR2.3 ("Living Resources"), Implementation Strategy CR 2.3.2 establishes the County's processes for coordination and consultation with the Native American community and other stakeholders to identify potentially significant cultural resources in the County and discuss issues relevant to the protection and preservation of those resources.

In addition to the above, Goals 3 (Historic Resources: The County's historical resources will be preserved and protected) and 4 (Archaeological Resources: The County's known and potential Native American, archaeological, and paleontological resources will be preserved and protected) of COSE Chapter 4 detail a suite of policies for the treatment of prehistoric, historic and paleontological resources, including the:

- Identification, protection, enhancement, perpetuation, and use of features that reflect the County's historical, architectural, Native American, archaeological, cultural, and aesthetic heritage (Policy CR 3.1, Historic Preservation);
- Protection of (1) archaeological sites that are culturally significant to Native Americans, even if they have lost their scientific or archaeological integrity through previous disturbance, (2) sites that have religious or spiritual value, even if no artifacts are present, and (3) sites that contain artifacts, which may have intrinsic value, even though their archaeological context has been disturbed (Policy CR 4.2, Protection of Native American Cultural Sites);
- Protection of archaeological and culturally sensitive sites from the effects of development by avoiding disturbance where feasible, and avoidance of archaeological resources as the primary method of protection (Policy CR 4.4, Development Activities and Archaeological Sites);
- Protection of paleontological resources from the effects of development by avoiding disturbance where feasible (Policy CR 4.5, Paleontological Resources);
- Protection of archaeological resources near streams, springs and water sources, rock outcrops, and significant ridgetops, as these are often indicators of the presence of cultural resources (Policy 4.6, Resources-Based Sensitivity).

As related to proposed development, the various implementation strategies associated with these policies require site-specific surveys and inventories to identify potentially significant cultural and paleontological resources and develop mitigation measures, as warranted, for their protection and preservation.

### **4.7.3 Regulatory Setting**

The following sections defining historical and paleontological resources describe the regulatory context within which cultural and paleontological resources are considered in under CEQA.

#### **Defining Historical Resources**

The principal State regulations relating to preserving historic and archaeological properties are Public Resources Code Section 5020 *et seq.*, CEQA Sections 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5. The CEQA Statute and Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts to historical resources, which include all resources listed in or formally deter-

mined eligible for the National Register of Historic Places (NRHP), CRHR, or local registers. CEQA further defines a “historical resource” as a resource that meets any of the following criteria:

- A resource listed in, or determined eligible for listing in the NRHP or CRHR.
- A resource included in a local register of historic resource, as defined in Section 5020.1(k) of the Public Resources Code, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- A resource identified as significant (e.g., rated 1-5) in a historical resource survey meeting the requirements of Public Resources Code Section 5024.1(g) (Department of Parks and Recreation (DPR) Form 523), unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered “historically significant” if it meets the criteria for listing on the CRHR (State CEQA Guidelines Section 15064.5).

The CRHR is a listing of State resources that are considered significant within the context of California’s history, and includes all resources listed in or formally determined eligible for the NRHP. The CRHR is a State-wide program of similar scope to the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR. A historic resource must be significant at the local, State, or national level under one or more of the following criteria defined in the California Code of Regulations Title 14, Chapter 11.5, Section 4850:

1. It is associated with events or patterns of events that made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possess high artistic values; or
4. It has yielded, or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.

In practice, unevaluated resources usually are treated as potentially significant. In addition, cultural resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. The CRHR criteria are similar to NRHP criteria, and are tied to CEQA, as any resource that meets the above criteria as a historical resource.

Under Section 21083.2, a “unique” archaeological resource is an object, artifact, or site that is clearly shown to: (1) contain information needed to answer important scientific research questions, and that there is a demonstrable public interest in that information; or (2) have a special and particular quality, such as the oldest of its type or the best available example of its type; or (3) be directly associated with a scientifically recognized important prehistoric or historic event or person.

The State CEQA Guidelines require the identification of project effects on cultural resources (historic-era and prehistoric-era archaeological sites, buildings, and traditional cultural properties) as determined to be legally important. CEQA defines such resources as those eligible for listing in the CRHR using “Criteria for Evaluating the Significance of Historical Resources” (Assembly Bill 2881, signed into law on September 27, 1992).

CEQA also addresses the protection of historic and prehistoric human remains. These remains may consist of either historic-period burials or cemeteries, or Native American remains that occur as isolated features or in archaeological site contexts. Native American-sanctified cemeteries, places of worship, ceremonial and religious sites, or sacred shrines situated on public property must be protected from vandalism and damage under Public Resources Code 5097.9.

Public Resources Code Section 5097.98(b) and (e) requires a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the NAHC-identified Most Likely Descendants (MLD) to consider treatment options. It further enables those descendants, within 48 hours of notification by the NAHC, to inspect the discovery site and recommend to the landowner or the person responsible for the excavation the means to treat or dispose of the human remains and any associate grave goods with dignity. In the absence of a MLD or of a treatment acceptable to all parties, the landowner is required to re-inter the remains elsewhere on the property at a location that will not be subject to further disturbance. Public Resources Code Section 5097.99 establishes as a felony the acquisition, possession, sale, or dissection with malice or wantonness Native American remains or funerary artifacts. Finally, Public Resources Code Section 5097.991 establishes, as State policy, the repatriation of Native American remains and funerary artifacts.

### **Defining Paleontological Resources**

Paleontology is the study of life in past geologic times based on fossil plants and animals and including phylogeny,<sup>2</sup> their relationships to existing plants, animals, and environments, and the chronology of the Earth's history. A paleontological resource is a locality containing vertebrate, invertebrate, or plant fossils (i.e., fossil location, fossil bearing formation or a formation with the potential to bear fossils). Data provided by fossils also contribute to proper stratigraphic interpretations, paleoenvironmental and paleoclimatic reconstructions, and to understanding evolutionary processes. The importance of paleontological resources is therefore based on their scientific and educational value. The SVP identifies vertebrate fossils, their taphonomic and associated environmental data, and fossiliferous deposits as scientifically significant and nonrenewable paleontological resources.

The State CEQA Guidelines, as amended March 29, 1999, define procedures, types of activities, persons, and public agencies required to comply with CEQA. Under the State CEQA Guidelines Environmental Checklist (Appendix G, Section XIV, Part a) the following question is asked: *"Will the proposed project directly or indirectly destroy a significant paleontological resource or unique geologic feature?"*

#### **4.7.4 Native American Consultation**

The NAHC is the primary State agency responsible for identifying and cataloging Native American cultural resources, providing protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction, and preventing irreparable damage to designated sacred sites and interference with the expression of Native American religion on State or private lands. It also provides a legal means by which Native American descendants can make known their concerns regarding the need for sensitive treatment and disposition of Native American burials, skeletal remains, and items associated with Native American burials.

The NAHC maintains two databases to assist cultural resources specialists in identifying cultural resources of concern to California Native Americans, also referred to as ethnographic resources. The NAHC's Sacred Lands Database has records for places and objects that Native Americans consider sacred or otherwise

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<sup>2</sup> Phylogeny is the evolutionary development and history of a species or higher taxonomic grouping of organisms.

important, such as cemeteries and gathering places for traditional foods and materials. The NAHC Contacts Database contains the names and contact information for individuals, representing a group or themselves, who have expressed an interest in being contacted about development projects in a specified area.

The County sent a letter to the NAHC informing the Commission of the Proposed Project's NOP for a Draft EIR. The Commission responded on July 1, 2013 summarizing the responsibilities of an agency conducting the EIR process and the recommendations of the NAHC. The NAHC also responded with a list of 27 tribes and individuals to whom inquiries should be sent to identify additional cultural resources and any concerns the Native Americans may have about the Proposed Project. The letter from the NAHC indicates that a check of the Sacred Lands File was initiated; however, the results of this search were not included in the response. The Sacred Lands File only contains those resources that tribes are willing to publicly identify and cannot be considered a comprehensive list of places and objects that Native Americans consider sacred or otherwise important. In addition, the NAHC inventory search provides requesters with presence/absence, but not specific locations or sacred lands. It is expected that additional information concerning Native American resources will be gleaned through consultation with participating tribes.

On behalf of the County, Aspen Environmental Group sent emails and letters to the tribes and individuals listed on the NAHC contact list on September 12, 2013. A detailed summary table of the results of consultations with the individual Native American organizations on the NAHC contact list is included as Appendix D. Phone calls on October 9, 2013 were made to follow-up with those tribes and individuals from whom a response was not received.

A tribal site visit to the quarry, conducted on December 11, 2013, included representatives from the Salinan Tribe of Monterey and San Luis Obispo Counties, the yak tityu tityu Northern Chumash Tribe, and the Northern Chumash Tribal Council. Issues discussed at the meeting included activities associated with the Proposed Project, landownership of the various parcels associated with the quarry and proposed expansion area, the vested rights of the quarry, the results of the cultural resources survey, and nearby cultural resource sites. The concerns of the Native American representatives included requests that Native American monitors be present during both excavation of the proposed expansion area and final reclamation, a peer-review of the cultural resources technical report (and if additional survey is conducted as a result, to have a Native American representative present), and a landscape approach to analyzing cultural resources.

## **4.7.5 Environmental Impact Methodology**

### **Significance Criteria**

The following significance criteria for cultural and paleontological resources were derived from the County's Environmental Checklist and the State CEQA Guidelines. Impacts related to the Proposed Project would be considered significant and would require mitigation if they would:

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

Impacts are categorized per the significance classification system provided in EIR Section 4.1 (Environmental Analysis, Introduction, Impact Significance Classification Scheme).

**Approach to Impact Analysis**

This impact assessment considered the proposed expansion area entailing 33.22 acres and the lower Reclamation Area entailing 61.5 acres, in addition to buffer areas and a surrounding ridge. The total area surveyed for cultural and paleontological resources was approximately 111.5 acres (Hannahs and Mills, 2011; Hannahs, 2014). Approximate 91.5 acres of the Proposed RPA area have not been surveyed. The extent and presence of any significant historical resources in this 91.5-acre area are therefore unknown.

**Results of Cultural Resources Survey**

A records search of the Cultural Resources study area was conducted by the Central Coast Information Center at the University of California Santa Barbara and identified nine previously recorded archaeological sites and 15 cultural resource studies within one-quarter mile of the surveyed area. Tables 4.7-1 and 4.7-2 provide summaries of previous cultural resources studies and previously recorded cultural resources sites within one-quarter mile of the Proposed Project site, respectively

**Table 4.7-1. Prior Cultural Resource Studies Within a 0.25-Mile Radius**

CCIC Report No.	Author(s)	Year	Study	Size of Area Surveyed	Sites/Isolates Recorded	Proximity to Project Area
E-282	Hunter, M.	1971	An Archaeological Survey of Inland Salinan Sites In Santa Margarita Valley.	Unavailable	7	Adjacent
E-845a	Snethkamp, P.; Michaels, L ; Costello, J.	1989	Draft: Phase 1 Cultural Resources Survey for the Proposed California Coastal Aqueduct between Devils Den, Kern County and Mission Hills, Santa Barbara County (Volume I)	7,770,240	Unavailable	Adjacent
E-845b	Snethkamp, P.; Michaels, L ; Costello, J.	1989	Draft: Phase 1 Cultural Resources Survey for the Proposed California Coastal Aqueduct between Devils Den, Kern County and Mission Hills, Santa Barbara County (Volume II)	7,770,240	Unavailable	Adjacent
E-845c	State Water Resources	1991	Final: State Water Project, Coastal Branch, Phase II and Mission Hills Extension (Volume I)	7,770,240	Unavailable	Adjacent
E-845c	State Water Resources	1991	Final: State Water Project, Coastal Branch, Phase II and Mission Hills Extension (Volume II)	7,770,240	Unavailable	Adjacent
E-1023	Larson, D., and Coombs, G.	1987	A literature review, records search, and preliminary background study for the proposed coastal aqueduct, Kern, San Luis Obispo, and Santa Barbara Counties.	N/A	None	Adjacent
E-2035A	ERCE	1991	Draft San Luis Obispo Water Lines and Facilities Project Cultural Resources Report	Unavailable	7	Adjacent

**Table 4.7-1. Prior Cultural Resource Studies Within a 0.25-Mile Radius**

CCIC Report No.	Author(s)	Year	Study	Size of Area Surveyed	Sites/Isolates Recorded	Proximity to Project Area
E-2035B	ERCE	1991	Draft Environmental Impact Report State Water Project Coastal Branch (Phase II) Local Distribution Lines and Facilities	Unavailable	Unavailable	Adjacent
E-02389	Mckenna, Jeanette A. et al.	1993	A Cultural Resources Overview and Site Inventory for the Santa Margarita Ranch Project Area, Santa Margarita Ranch, San Luis Obispo County, California	Unavailable	17 sites	Adjacent
E-2917	Orlins, R.; Barter, E.; Rivers, B.; and Gibson, R	1994	Coastal Branch, Phase II State Water Project Cultural Resources Survey Reach 3 San Luis Obispo County, California 94296-0001	179,520 meters	6	Adjacent
E-2918	Orlins, R.; Barter, E.; Rivers, B.; and Gibson, R	1994	Coastal Branch, Phase II State Water Project Cultural Resources Survey Reach 3 San Luis Obispo County, California 94296-0001	179,520 meters	6	0.1 mile
E-2740	Lebow, C. et al. (Applied Earthworks)	2001	Final Report of Archaeological Investigations for Reaches 5 and 6, Coastal Branch Aqueduct, Phase II	24+ linear miles	Unavailable	0.1 mile
E-3364	Hine, Phillip	1995	Reach 4, Coastal Branch Phase II Notification of Archaeological Site Discovery	Unavailable	1	0.17 mile
E-3687	Johnson, R. F., and C. Blount	1998	Coastal Branch, Phase II, State Water Project, Cultural Resources, Compliance Monitoring Review Report for Reach 4 and Ancillary Areas	Unavailable	6	0.1 mile
E-4261	Flint, Sandra S., Nettles, Wendy M., Baloian, Mary, Price, Barry A.	2000	Archaeological Survey of Selected Portions of the Santa Margarita Ranch, San Luis Obispo County, California	4,000 acres	66 sites/ 67 isolates	Adjacent

**Table 4.7-2. Previously Recorded Sites Within a 0.25-Mile Radius**

Site No.	Description	Cultural/Temporal Affiliation	California Register Eligibility Status	In Project Area?
P-40-000599/ CA-SLO-0599	Bedrock mortar locality encompassing two outcrops, with shell fragments and a shell bead (Little Pico Creek II Period, 2600-1000 cal BP).	Prehistoric	Not Evaluated	No
P-40-000600/ CA-SLO-0600	Village site containing a dense scatter of flaked and ground stone tools and debris, as well as human remains. (Little Pico Creek I through Mission Period, 5500-120 cal BP)	Prehistoric, protohistoric	Not Evaluated	Possibly
CA-SLO-01692	Single bedrock mortar outcrop.	Prehistoric	Not Evaluated	No
P-40-001762/ CA-SLO-01762	Subsurface artifact deposit including Monterey chert debitage and granite and sandstone groundstone artifacts. Also a rock feature of granite boulders.	Prehistoric	Not Evaluated	No

**Table 4.7-2. Previously Recorded Sites Within a 0.25-Mile Radius**

Site No.	Description	Cultural/Temporal Affiliation	California Register Eligibility Status	In Project Area?
P-40-001951/ CA-SLO-01951	Lithic (Monterey and Franciscan chert, siliceous shale, and basalt), shell (marine), and groundstone (metate fragment) scatter. One square-stemmed projectile point (Early Period, 5500-2600 cal BP)	Prehistoric	Not Evaluated	Possibly
P-40-001952/ CA-SLO-01952	Four bedrock milling stations on flat outcrops of Vaqueros sandstone. One outcrop is within the surveyed area	Prehistoric	Not Evaluated	Yes
P-40-001953/ CA-SLO-01953	A bedrock milling station with six mortar cups directly in front of a small rock shelter that shows signs of heat and fire from a semi-buried hearth. A chert biface was also present.	Prehistoric	Not Evaluated	No
P-40-001954/ CA-SLO-01954	A bedrock milling station with a four mortar cups on a flat outcrop of Vaqueros sandstone.	Prehistoric	Not Evaluated	No
P-40-2006/ CA-SLO-2006H	Historic-era Household refuse dump within an ephemeral drainage. Includes glass bottles, wire, shoe fragment, and carports. Dates to between AD 1929 and 1954.	Historic-period	Not Evaluated	No

The study by Flint et al. (2000) characterized the area surrounding the quarry as highly sensitive for cultural resources based on a geoarchaeological study and the presence of previously recorded and newly recorded prehistoric archaeological sites. One of these sites is a village (CA-SLO-600) that directly abuts the existing quarry property. Cultural materials identified at this site included flaked and groundstone tools and debris, scatters of shell, glass trade beads, shell beads, and human remains. Other nearby sites include activity areas likely associated with the village, such as bedrock mortars, lithic scatters, and a rockshelter.

A pedestrian survey for cultural resources in the proposed quarry expansion area was conducted by archaeologists from CRMS on November 9, 2011 in tandem with a survey for paleontological resources. The methods employed by CRMS included focusing on those areas with a slope of less than 30 percent and which had good visibility; thus, the areas surveyed were primarily ridge tops and other level spots. The survey did not identify any prehistoric or historic period resources (Hannahs and Mills, 2011). An additional survey a sample of the proposed quarry expansion area was conducted by Applied Earthworks, Inc., on March 18, 2014. This five acre survey was performed to alleviate concerns brought up by Native American groups at the on-site meeting held on December 11, 2013 regarding the results of the original cultural resources survey (see EIR Section 4.7.4, Native American Consultation, and Appendix D). The sample survey focused on locations within the expansion area that would be most sensitive for prehistoric and historic period archaeological resources, including ridgetops, midslope terraces, access roads, and drainages. No prehistoric or historic period archaeological resources were identified during this survey.

A pedestrian survey of the lower portion of the Reclamation Area was performed by CRMS in March 2014. This survey included both current areas of impact, as well as the quarry's Buffer Areas. This survey noted, but did not record, the presence of one historic period and three prehistoric archaeological resources. The historic period resource, CA-SLO-2006/H, consisted of a debris dump that was located outside of the survey area and did not extend into the lower Proposed RPA area. The three prehistoric archaeological resources were a village site (CA-SLO-600), a bedrock mortar locality (CA-SLO-1952), and a deposit of faunal remains and tool manufacturing debris (CA-SLO-1951). CA-SLO-1952, the bedrock mortar locality,

was determined to extend into the Proposed Project's Buffer Area, with at least one outcrop containing bedrock mortars present within the quarry boundary. This resource has the potential to contain additional buried bedrock milling locations or associated buried archaeological deposits. The other two prehistoric archaeological resources were noted directly up to the Proposed Project's property boundary, but it could not be determined if they were present within the Proposed Project's footprint due to the conditions of the ground surface within the Buffer Area. These two sites, CA-SLO-600 and CA-SLO-1951, have a high potential to possess buried or otherwise obscured components that may extend inside the Proposed Project site (Hannahs, 2014).

In the absence of formal evaluations or sufficient data pertaining to these prehistoric archaeological resources, they are presumed to be eligible for nomination to the CRHR. As a prehistoric village site, CA-SLO-600 is also presumed to qualify as a unique archaeological resource under Public Resources Code Section 21083.2. The presence of human remains in CA-SLO-600 means that the area surrounding it is very sensitive for subsurface human burials, which, if uncovered for any reason, must be treated in a manner consistent with State law, as addressed above under Public Resources Code Sections 5097.98(b) and (e).

### **Results of Paleontological Resources Survey**

A records search of the Paleontological Resources study area conducted by the Natural History Museum of Los Angeles County and the University of California Berkeley Museum of Paleontology did not identify any previously recorded paleontological resources in the Proposed Project area, and classified it as Cretaceous-aged granite with no potential for paleontological resources. The records search did indicate that there are several geologic formations adjacent and close to the Proposed Project area that do contain significant paleontological resources and have the potential to preserve fossils (see "Paleontological Resource Existing Conditions," above). Searches conducted for the Applicant with the Natural History Museum of Los Angeles County and University of California Berkeley Museum of Paleontology in November of 2011 indicate that sensitive paleontological resources are located in formations close to the Proposed Project area, but none are located in the granite formation that underlies the Proposed Project site. The Paso Robles Formation produced two fossils in relatively close proximity to the proposed Santa Margarita Quarry Expansion project, and include lizard (*Lacertilia*), and mammoth (*Mammuthus*), identified at locality LACM 6215 just south of Paso Robles, and mastodon (*Mammutidae*) identified at locality LACM 5903, just east of Morro Bay. Both are less than 15 miles away from the Proposed Project.

A pedestrian survey for paleontological resources in the proposed expansion area was conducted on November 9, 2011 in tandem with the survey for cultural resources. The methods employed by CRMS included walking the ridgeline of the western boundary of the project, and two transects to the lowest elevation of the Proposed Project area. The survey did not identify any paleontological resources.

## **4.7.6 Project Impacts and Mitigation Measures**

### **Cultural Resources Impacts**

The literature reviews and field surveys for the Proposed Project area (Hannahs and Mills, 2011; Haydu, 2014) did not indicate the presence of any cultural resources in the proposed disturbance area. However, the survey for the quarry's Lower Area (Hannahs, 2014) did identify CA-SLO-1952 as penetrating the quarry property and noted the presence of artifacts in CA-SLO-600 and CA-SLO-1951 right up to the property line, indicating that buried components of these sites may extend into the Proposed Project footprint. Additionally, research in the region (Flint et al., 2000) suggests that the Proposed RPA area is very sensitive for buried prehistoric resources.

## Paleontological Resources Impacts

The proposed expansion area is situated within a geological context that suggests the potential for uncovering significant paleontological resources is very low. Moreover, no paleontological resources were identified during the field survey for paleontological resources (Hannahs and Mills, 2011). However, the geologic context of the Proposed RPA area is unknown. No paleontological resources would be likely to be impacted by the proposed expansion.

In conclusion, because there no historic resources or paleontological resources were identified in the proposed expansion area, there would be no impacts to any historic or paleontological resources, significant or otherwise, in the proposed expansion area. However, historic resources are present within and abutting the Proposed RPA area and may be impacted by activities there.

**Impact CR-1: Cause a significant adverse change in the significance of an historical resource as defined by Public Resources Code Section 15064.5**

### *Excavation*

Based on the cultural resources survey, background research, and characterization of the landforms in the proposed expansion area, there would be no impact to historical resources.

### *Reclamation*

The Applicant maintains a vested right to approximately 143 acres of the total existing quarry area. A 61.5-acre portion of this has been surveyed for historic resources. CA-SLO-1952 was identified as extending into this area. The activities associated with proposed final reclamation of the property, which includes grading, disking, and ripping the ground surface, as well as distributing growth medium and vegetation, could impact this historic resource. The impact to CA-SLO-1952 would be less than significant with mitigation (Mitigation Measure CR-1) incorporated (Class II).

## Mitigation Measure for Impact CR-1

### *Exclusion Area*

**CR-1 Implement Avoidance Measures.** In order to: (1) prevent damage to the historic resource located within the Lower Area of the Proposed RPA area that is located in one of the Buffer Areas; and, (2) avoid the inadvertent discovery of buried components of this or other historic resources, no earth-disturbing activities shall be undertaken within this Buffer Area and signage shall be erected along its boundaries by a qualified archaeologist to prevent incidental impacts.

**Impact CR-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Public Resources Code Section 15064.5**

### *Excavation*

Based on the characterization of the landforms in which the proposed expansion area is located it is unlikely that any archaeological resources will be impacted. Thus, there will be no impact to archaeological resources in the proposed expansion area.

### **Reclamation**

The Applicant maintains a vested right to approximately 143 acres of the total mining operation. A 61.5-acre portion of this has been surveyed for archaeological resources. While it is unknown if CA-SLO-600 and CA-SLO-1951 extend into the Lower Area of the Proposed RPA area, archaeological resources, including village sites and large refuse deposits, often contain extensive buried components. The activities associated with proposed final reclamation of the property, which includes grading, disking, and ripping the ground surface, as well as distributing growth medium and vegetation, could impact these or other unknown, buried archaeological resources. The potential for buried cultural resources is very high in parts of the vested portion of the Proposed RPA area (Flint et al., 2000). The impact to these unknown archaeological sites would be less than significant with mitigation (Mitigation Measures CR-2.1, CR-2.2, and CR-2.3) incorporated (Class II).

### **Mitigation Measures for Impact CR-2**

**CR-1**        **Implement avoidance measures.**

**CR-2.1**      **Prepare and implement Unanticipated Discovery and Monitoring Plan.** At least sixty days prior to ground disturbance activities related to reclamation of the Lower Area of the Proposed RPA, the Applicant shall submit to the County an Unanticipated Discovery and Monitoring Plan (Plan) for review and approval. The Plan shall be prepared by a County-qualified cultural resources specialist and shall outline the process for notification, evaluation, and actions to be taken should unanticipated cultural resources be found during construction. The Plan shall explicitly state that if previously undiscovered cultural resources, such as lithic debitage or groundstone, shell midden, historic debris, building foundations or human remains are exposed during reclamation, all ground-disturbing activities shall immediately be halted at the discovery site and within 100 feet of it. Work shall be stopped until the discovery has been evaluated by a professional cultural resources specialist and appropriate agencies have been notified. If the discovery is recommended as eligible for listing in the CRHR, impacts shall be mitigation per the actions specified in the Plan, which may include archaeological data recovery and/or monitoring.

The Plan shall additionally contain provisions in the event that human remains or suspected human remains are uncovered during Proposed RPA activities within the Lower Quarry. The provisions shall specify that all work within 100 feet of the discovery will be halted and redirected to another location. The find will be secured, and the Applicant's designated representative will be contacted immediately to inspect the find and determine whether the remains are human. If the remains are not human, the designated representative will determine whether the find is an archaeological deposit and if the site should be subject to the treatment recommendations established in the approved Unanticipated Discovery and Monitoring Plan. If the remains are human, the designated representative will immediately implement the provisions in Public Resources Code Sections 5097.9 through 5097.996, beginning with immediate notification of the County Coroner. The coroner has two working days to examine the remains after being notified. If the Coroner determines that the remains are Native American, the NAHC must be contacted within 24 hours. The NAHC, as required by Public Resources Code Section 5097.98, determines and notifies the Most Likely Descendent.

**CR-2.2**      **Implement a Worker Environmental Education Program (Cultural and Paleontological Resources).** Two weeks prior to commencement of any reclamation activities in the Lower Area of the Proposed RPA area, the Applicant shall provide training to reclamation

personnel. The training shall include onsite avoidance requirements and the procedures for reporting any sensitive resources that are cultural or paleontological in nature and may be discovered during reclamation-related ground disturbance. The training program will explain: the potential for exposing cultural and paleontological resources; the laws protecting cultural and paleontological resources; the locations of potentially sensitive areas; how to recognize cultural and paleontological resources in the field; protocols to treat unexpected discoveries; and the importance of cultural and paleontological resources to the Native American community. Proper training of reclamation personnel would lessen the potential for disturbance of known and undiscovered cultural resources during daily activities. This training shall also be performed as needed for new reclamation personnel. New personnel shall not be onsite without training and without supervision from a trained worker. The Applicant shall submit proof of this training to the County Department of Planning and Building.

<b>Impact CR-3: Significantly destroy a unique paleontological resource or site or unique geologic feature</b>
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***Excavation***

It is unlikely based on the characterization of the landforms in which the proposed expansion area is located, that any significant paleontological resources will be uncovered in the approximately 30-acre, unvested parcel. Thus, there will be no impact to paleontological resources or unique geologic features in the proposed expansion area.

***Reclamation***

The Applicant maintains a vested right to approximately 143 acres of the total Proposed RPA area. These 143 acres have not been surveyed for paleontological resources nor have the landforms in this area been characterized based on their potential for paleontological resources because of the vested nature of the existing quarry property. However, the activities associated with reclamation of the property which includes grading, disking, and ripping the ground surface as well as distributing growth medium and vegetation, could impact significant paleontological resources based on the characterization of neighboring landforms provided in the Applicant’s technical report for paleontology (Hannahs and Mills, 2011). The proximity of the Lower Miocene Vaqueros Formation, the middle Miocene Monterey Formation, the upper Miocene Santa Margarita Formation, and the Plio-Pleistocene aged Quaternary alluvium to the Lower Area of the Proposed RPA area suggests that there is a high probability for paleontological resources in the vicinity of these formations that could be disturbed due to reclamation activities if located in the Proposed RPA area. However, any impacts to paleontological resources or unique geologic features would be less than significant with mitigation (Mitigation Measure CR-3) incorporated (Class II).

**Mitigation Measure for Impact CR-3**

**CR-3 Prepare and implement Paleontological Monitoring and Treatment Plan.** At least sixty days prior to ground disturbance activities related to Phase V final reclamation in the Lower Area of the Proposed RPA area, the Applicant shall retain a qualified paleontologist to prepare a Paleontological Monitoring and Treatment Plan (Plan), and submit the Plan to the County for review and approval. The Plan shall be based on the Society for Vertebrate Paleontology (SVP) guidelines and meet all regulatory requirements. The qualified paleontologist shall have a Master’s Degree or Ph.D. in paleontology or a related field, shall have knowledge of the local paleontology, and shall be familiar with paleontological procedures

and techniques. The Plan shall identify Reclamation impact areas of moderate to high sensitivity for encountering potential paleontological resources and the shallowest depths at which those resources may be encountered. The Plan shall detail the criteria to be used to determine whether an encountered resource is significant, and if it should be avoided or recovered for its data potential. The Plan shall also detail methods for completion of a construction worker environmental awareness training program regarding the protection of paleontological resources recovery, preparation and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting.

The Plan shall outline a coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbance during grading activities in “deeper” sediments that have been determined to have a moderate to high sensitivity rating. For sediments of low or undetermined sensitivity, the Plan shall determine what level of monitoring is necessary. Sediments with no sensitivity will not require paleontological monitoring.

The Plan shall define specific conditions in which monitoring of earth-moving activities could be reduced and/or depth criteria established to trigger monitoring. These factors shall be defined by the project paleontological resource specialist, following examination of sufficient representative excavations.

The Plan shall also require that all monitoring will be completed by qualified individuals, and that all on-site monitors will have the authority to stop or otherwise divert ground-disturbing activities away from exposed fossils until such finds are appropriately assessed and recovered.

<b>Impact CR-4: Significantly disturb any human remains, including those interred outside of formal cemeteries</b>
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#### ***Excavation***

Based on the characterization of the landforms in which the proposed expansion area is located it is unlikely that any human remains will be disturbed. Thus, there will be no impact to human remains in the proposed expansion area.

#### ***Reclamation***

The Applicant maintains a vested right to approximately 143 acres of the total mining operation. A 61.5-acre portion of this has been surveyed for cultural resources. No human remains were noted within the surveyed area, however, CA-SLO-600, a village site that abuts the Lower Area of the Proposed RPA area, has been recorded as containing subsurface human remains. The activities associated with reclamation of this area, which includes grading, disking, and ripping the ground surface, as well as distributing growth medium and vegetation, could impact unknown, buried human remains. The potential for buried human remains is high in parts of the vested portion of the project because of the close proximity of a prehistoric village site with burials, and the geomorphological characterization of the area (Flint et al., 2000). The impact to these unknown human remains would be less than significant with mitigation (Mitigation Measure CR-2.1) incorporated (Class II).

#### **Mitigation Measure for Impact CR-4**

**CR-2.1 Prepare and implement Unanticipated Discovery and Monitoring Plan.**