

5.7 CULTURAL AND PALEONTOLOGICAL RESOURCES

This section discusses cultural and paleontological resources within the Otay Ranch GDP and evaluates the potential for impact to these resources due to implementation of the UID SPA Plan.

This EIR tiers from the Previous Environmental Review Documents, as described in Chapter 2.0, *Introduction*. The 2013 SEIR did not address cultural or paleontological resources, but relied on analysis in the 2005 GPU EIR (EIR 05-01) and the 1993 Program EIR for the GDP (EIR 90-01). Section 3.4, *Cultural Resources*, and Section 3.6, *Paleontological Resources*, of the 1993 Program EIR identified unmitigable impacts for cultural resources and less than significant impacts with mitigation for paleontological resources. Mitigation included subsequent resource evaluation when future development is proposed. Section 4.9, *Cultural Resources and Paleontological Resources*, of the 2001 SEIR (01-01) analyzed potential impacts associated with implementation of the EastLake III SPA, including the Lake Property, and concluded potentially significant impacts could be mitigated to a level below significance. Mitigation included testing of the four lithic scatter sites to determine significance. This testing has been completed. The analysis contained in this section includes subsequent resource evaluation. Therefore, these previous mitigation measures are not incorporated by reference as they have been satisfied.

Information contained in this section is based on a site-specific technical report related to cultural resources, prepared by HELIX, including a Cultural Resources Survey (Appendix F). The paleontological resources discussion in this section is based on the following materials: (1) Technical Report, Paleontological Resource Assessment, Otay Ranch –Village 9, prepared by the Department of PaleoServices, San Diego Natural History Museum (SDNHM), in September 2010 (provided in Appendix F2 of the Village 9 EIR); (2) the project-level Geotechnical Evaluation, prepared by Ninyo & Moore in September 2014 (provided as Appendix G of this EIR), and other published and unpublished technical materials. The HELIX technical report updates the applicable information contained in the SEIRs.

5.7.1 Existing Conditions

A. **Regulatory Framework**

1. *Federal Regulations*

a. **National Historic Preservation Act**

The National Historic Preservation Act of 1966 established the National Register of Historic Places (NRHP) as the official federal list of cultural resources that have been nominated by state offices for their historical significance at the local, state, or national level. Properties listed in the NRHP, or determined eligible for listing, must meet certain criteria for historical significance and possess integrity of form, location, and setting. Under Section 106 of the Act and its implementing regulations, federal agencies are required to consider the effects of their actions, or those they fund or permit, on properties that may be eligible for listing or that are listed in the NRHP. The regulations in 36 CFR 60.4 describe the criteria to evaluate cultural resources for inclusion in the NRHP. Properties may be listed in the NRHP if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and they:

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

These factors are known as “Criteria A, B, C, and D.”

In addition, the resource must be at least 50 years old, except in exceptional circumstances. Eligible properties must meet at least one of the criteria and exhibit integrity, which is measured by the degree to which the resource retains its historical properties and conveys its historical character, the degree to which the original fabric has been retained, and the reversibility of the changes to the property. Archaeological sites are evaluated under Criterion D, which concerns the potential to yield information important in prehistory or history.

The Section 106 review process, typically undertaken between the U.S. Army Corps of Engineers as part of issuing a Section 404 permit and the State Historic Preservation Officer, involves a four-step procedure:

- (1) Initiate the Section 106 process by establishing the undertaking, developing a plan for public involvement, and identifying other consulting parties.
- (2) Identify historic properties by determining the scope of efforts, identifying cultural resources, and evaluating their eligibility for inclusion in the NRHP.
- (3) Assess adverse effects by applying the criteria of adverse effect on historic properties (resources that are eligible for inclusion in the NRHP).
- (4) Resolve adverse effects by consulting with the State Historic Preservation Officer and other consulting agencies, including the Advisory Council on Historic Preservation, if necessary, to develop an agreement that addresses the treatment of historic properties.

The Department of the Interior has set forth Standards and Guidelines for Archaeology and Historic Preservation. These standards and guidelines are not regulatory and do not set or interpret agency policy. A project that follows the standards and guidelines generally shall be considered mitigated to a less-than-significant level, according to Section 15064.5(b)(3) of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.).

b. Native American Graves Protection and Repatriation Act

Enacted in 1990, Native American Graves Protection and Repatriation Act (NAGPRA) transfers human remains, as well as funerary and religious items that were found on federal lands or are held by federal agencies and federally supported museums, to Native American Indians of

demonstrated lineal descent. It also makes the sale or purchase of those human remains illegal, whether or not they derive from federal or Native American (Bureau of Indian Affairs [BIA] or tribal) lands.

2. State Regulations

a. California Environmental Quality Act

Specific to cultural resources, Section 15064.5 of the CEQA Guidelines, as amended, state that a cultural resource would be considered significant if it is:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the California Register (Public Resources Code [PRC] §5024.1; Title 14 California Code of Regulations [CCR], Section 4850 et seq.).
2. A resource included in the local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript that 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 may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (PRC Section 5024.1, Title 14 CCR, Section 4852), including the following:
 - A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
 - B. Is associated with the lives of persons important in our past;
 - C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - D. Has yielded, or may be likely to yield, information important in prehistory or history.
4. The fact that a resource is not listed in, or determined eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1[k] of the PRC), or identified in an historical resources survey (meeting the criteria in Section 5024.1[g] of the PRC) does not preclude a lead agency

from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(i) or 5024.1.

In addition, a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. The following clarifies what constitutes as a potentially significant impact under CEQA.

- (1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- (2) The significance of an historical resource is materially impaired when a project:
 - (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
 - (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
 - (C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

CEQA applies to effects on archaeological sites.

- (1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).
- (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- (3) If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

- (4) If an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study (IS) or Environmental Impact Report (EIR), if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 15064.5 (d) & (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

- (a) When an Initial Study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code §5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:
 - (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
 - (2) The requirements of CEQA and the Coastal Act.

In accordance with CEQA, therefore, cultural resources must be assessed for project-related actions that could directly or indirectly impact them. Under this scenario, impacts to cultural resources not deemed important according to the above criteria would be considered less than significant. A summary of on-site and off-site cultural resources is provided in the discussion of Known Cultural and Paleontological Resources (Section 5.7.1 D), along with a determination as to the significance of the impact pursuant to Section 15064.5 of the CEQA Guidelines and City thresholds.

b. California Register of Historical Resources

The California Department of Parks and Recreation, Office of Historic Preservation (OHP), implements the policies of the NHPA within California. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements the state's historic preservation programs.

Created by AB 2881 (signed into law in 1992), the California Register of Historic Resources (CRHR) constitutes an authoritative listing of existing state historical resources of the state and indicates those resources worthy of protection, as prudent and feasible, from "substantial adverse change" (Section 5024.1[a] of the PRC). To be eligible for the California Register, a prehistoric or historic property must be significant at the local, state, and/or federal level under one or more of the four criteria (A through D) listed above. An historical resource can include any object, building, structure, site, area, or place that is determined to be historically or archaeologically significant.

The CRHR also identifies historical resources for state and local planning purposes, determines eligibility for State historic preservation grant funding, and provides a certain measure of protection under CEQA, including Traditional Cultural Properties.

Certain resources are determined by the statute to be automatically included in the California Register. These include:

- California properties listed on the National Register and those formally determined eligible for the National Register
- California Registered Historical Landmarks from No. 770 onward
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of identified as eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, and/or a local jurisdiction register
- Individual historical resources
- Historical resources contributing to historic districts
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone

c. Native American Graves Protection and Repatriation Act

This 2001 State Act was enacted to enhance the Federal NAGPRA at the state level and requires human remains and funerary items that are held by state agencies and museums to be transferred to Native Americans of demonstrated lineal descent.

d. Health and Safety Code Sections 7050.5, 7051, and 7054 – Human Remains

California Health and Safety Code sections 750.5, 7051, and 7054 collectively address the illegality of interference with human burial remains as well as the disposition of Native American burials in archaeological sites. Health and Safety Code Section 7050.5(b) provides required action when any human remains are discovered outside a dedicated cemetery. This includes immediate stoppage of excavation and any site disturbance (as well as any nearby area reasonably suspected to overlie adjacent remains) until the County Coroner has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Government Code Section 27492, or any other related provisions of law concerning investigation of the circumstances, manner and cause of death; and that recommendations concerning treatment and disposition of the human remains have been made to the appropriate individual per PRC Section 5097.98.

e. PRC 5097.9-5097.991 – Native American Heritage

PRC Sections 5097.9-5097.991 state that no public agency, and no private party using, occupying or operating on public property under a public license, permit, grant, lease, or contract, shall in any manner interfere with the free expression or exercise of Native American religion as provided in the U.S. Constitution and the California Constitution. Nor shall any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require it.

This section also addresses the composition and responsibilities of the Native American Heritage Commission (NAHC). The NAHC strives for the preservation and protection of Native American human remains, associated grave goods, and cultural resources. The NAHC has developed a strategic plan to assist the public, development community, local, and federal agencies, educational institutions and California Native Americans to better understand problems relating to the protection and preservation of cultural resources and to serve as a tool to resolve these problems and create an awareness among lead agencies and developers of the importance of working with Native Americans. PRC Sections 5097.91 and 5097.98 were amended by AB 2641 in 2006. This bill authorizes the NAHC to bring an action to prevent damage to Native American burial grounds or places of worship and establishes more specific procedures to be implemented in the event that Native American remains are discovered.

f. Senate Bill 18

Senate Bill 18 (SB 18; Government Code sections 653.52.3, 65352.4) requires that prior to the adoption or any amendment of a city or county's general plan, that agency shall conduct consultations with California Native American tribes that are on the contact list maintained by the NAHC for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.995 of the Public Resources Code that are located within the city or county's jurisdiction.

g. Assembly Bill 52

On September 25, 2014 Governor Brown signed Assembly Bill No. 52 (AB 52), which creates a new category of environmental resources that must be considered under the California Environmental Quality Act: "tribal cultural resources." The legislation imposes new requirements for consultation regarding projects that may affect a tribal cultural resource, includes a broad definition of what may be considered to be a tribal cultural resource, and includes a list of recommended mitigation measures.

AB 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. "Tribal cultural resources" are defined as either (1) "sites, features, places cultural landscapes, sacred places and objects with cultural value to a California Native American tribe" that are included in the state register of historical resources or a local register of historical resources, or that are determined to be eligible for inclusion in the state register; or (2) resources determined by the lead agency, in its discretion, to be significant based on the criteria for listing in the state register.

Moreover, AB 52 requires a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, at the earliest possible point in the CEQA environmental review process, so that tribal cultural resources can be identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision-making body of the lead agency. This law addresses projects for which an NOP was released on or after June 15, 2015.

h. PRC 5097.5 – Paleontological Resources

Consideration of paleontological resources is required by CEQA (see Appendix G). Other state requirements for paleontological resource management are found in PRC Chapter 1.7, Section 5097.5, Archaeological, Paleontological, and Historical Sites. This statute specifies that state agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources. This statute does not apply to the project because none of the property is state owned.

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

3. Local Regulations

The City addresses the presence of, potential impacts to, and mitigation of significant cultural resources resulting from private and public development projects in compliance with CEQA and in accordance with Chula Vista Municipal Code (CVMC) Title 21. Historical resources protected by the City are not limited to officially listed resources, but also include resources found to be eligible for listing at the local, state and federal levels.

a. City of Chula Vista General Plan

Both the Land Use and Transportation and the Environmental Elements of the City General Plan include objectives to protect important cultural resources and support and encourage their accessibility to the public (Objective E 9), as well as to protect important paleontological resources and support and encourage public education and awareness of such resources (Objective E 10).

b. Chula Vista Municipal Code, Title 21, Historic Preservation Ordinance (HPO)

In CVMC Title 21, the City Council declares that the identification, recognition, preservation, protection and adaptive reuse of historical resources are essential for the health, prosperity, social and cultural enrichment, and general welfare of the citizens who live in, work and visit Chula Vista. The purposes of Title 21 are to:

- A. Serve as the regulatory document of the Chula Vista Historic Preservation Program;
- B. Promote and accomplish the historic preservation goals, policies, and strategies of the Chula Vista General Plan;

- C. Promote the recognition, preservation, protection and use of historical resources through historical resource surveys and the designation of historical resources;
- D. Preserve and enhance those historical resources that give Chula Vista its identity by utilizing the Secretary of Interior Standards for Treatment of Historic Properties;
- E. Honor Chula Vista's rich history and heritage by designating significant historical resources and historic preservation districts that are associated with important historical events, persons, significant architecture, and landscape elements;
- F. Provide strong and safe neighborhoods by encouraging harmony as to style, form, proportion, and material between historical resources and new construction that are located within designated historic preservation districts;
- G. Provide for a sustainable environment through the preservation and protection of resources and neighborhoods that have historical significance;
- H. Carry out the provisions of the NHPA and the Certified Local Government Program established under said act;
- I. Establish the use of incentives and benefits for the protection, retention and preservation of historical resources; and
- J. Promote the recognition, preservation, protection and use of historical resources through education and a historic preservation plan that is maintained up to date and valid.

Title 21 addresses Historic Preservation, including historical and archaeological resources. Section 21.03.004 defines archaeological resources as "subsurface or aboveground material remains of past human life or activities that are at least one hundred years of age, and may yield additional information about prehistory and history" (Chula Vista 2011a: 2). Significance standards are based upon the Secretary of the Interior Standards and Guidelines to determine appropriate "preservation, rehabilitation, restoration, and reconstruction" (Chula Vista 2011a: 9). These are addressed in more depth in the City's Historic Preservation Program (2011b) addressed below. Section 21.04.040 addresses the criteria for a historical resource to be included in the Chula Vista Register of Historical Resources, commonly referred to as the Local Register. Qualified resources include:

- Those properties previously designated prior to the effective date of [the] ordinance;
- Those properties designated by the [Historic Preservation Commission (HPC)] or Council;
- Any Chula Vista Resource listed as a National Historic Landmark;
- Any Chula Vista Resource listed on the National Register of Historic Places; and
- Any Chula Vista Resource listed on the California Register of Historical Resources by the California State Historical Resources Commission (Chula Vista 2011a: 11).

Designation of Historical resources, excluding exceptional resources by the HPC may occur when the following findings of fact are made:

- A. A Resource is at least 45 years old; and
- B. A Resource possesses historical integrity defined under Chula Vista Municipal Code §21.03.084 and the Resource is determined to have historical significance by meeting at least one of the following criteria:
 - 1. It is associated with an event that is important to prehistory or history on a national, state, regional, or local level.
 - 2. It is associated with a person or persons that have made significant contributions to prehistory or history on a national, state or local level.
 - 3. It embodies the distinctive characteristics of a style, type, period, or method of construction, or represents the work of a master or important, creative individual, and/or possesses high artistic values.
 - 4. It is an outstanding example of a publicly owned Historical Landscape, that represents the work of a master landscape architect, horticulturalist, or landscape designer, or a publicly owned Historical Landscape that has potential to provide important information to the further study of landscape architecture or history.
 - 5. It has yielded, or may be likely to yield information important in prehistory or the history of Chula Vista, the state, region, or nation (Chula Vista 2011a: 13).

c. Chula Vista Municipal Code, Title 2, Historic Preservation Commission (HPC)

CVMC Section 21.49.010 establishes the Historic Preservation Commission (HPC). The HPC meets the certified local government requirements, as defined by the NHPA, to serve as the authority on historic preservation matters and to advise the City Council (and other City boards and commissions, as needed), on historic preservation matters. The function and duties of the HPC are to:

- A. Uphold the goals and policies of the General Plan related to historic preservation.
- B. Carry out the purpose and intent of CVMC Title 21, Historic Preservation.
- C. Assist staff in the development and maintenance of a certified historic preservation program that carries out the provisions of the certified local government program.
- D. Ensure that appropriate historic contexts are identified and utilized for resource interpretation, evaluation, and recognition.
- E. Assist staff in the preparation and maintenance of a historical resources survey of recognized and potentially historically and architecturally significant structures and areas.

- F. Approve designations of historical resources to the Chula Vista Register of Historical Resources.
- G. Recommend to City Council delistings from the Chula Vista Register of Historical Resources.
- H. Grant or deny applications for permits for demolition, or major alterations of historical resources.
- I. Grant or deny appeals from decisions of the Zoning Administrator for applications of minor alterations of historical resources.
- J. Encourage public understanding of and involvement in the unique historical, architectural, and environmental heritage of the City through educational programs.
- K. Explore means and support implementation strategies for the protection, retention and use of any historical resource, historic preservation district, or potential historical resource.
- L. Support the use of incentives and benefits for the protection, retention, and preservation of historical resources.
- M. Make recommendations to City Council on applications for participation in City approved historic preservation incentive programs including but not limited to the Mills Act Property Tax Abatement Program.
- N. Encourage cooperation between public and private historical and cultural preservation groups.
- O. Advise the City Council and other boards, commissions and committees as necessary on historic preservation issues.
- P. Perform other functions as appropriate to safeguard the City's historic, aesthetic, social, economic, political and architectural past. (Ord. 3197 § 3, 2011).

d. Historic Preservation Program

In addition to the General Plan and ordinances noted above, the City implements a Historic Preservation Program (HPP) to inform citizens, staff and elected and appointed officials of the regulatory requirements, program options and features, surveyed and designated properties, and economic benefits and incentives related to historic preservation in Chula Vista. The program was adopted by City Resolution No. 2011-147 on July 19, 2011 and is referenced in section 21.03.070 of the CVMC.

The HPP cites the Secretary of the Interior Standards for historical significance as including the importance in history, the physical condition, the proposed use, and the mandated code requirements (Chula Vista 2011b: 49). Cultural resources are addressed specifically under HPP Section 2.2, which references Chula Vista General Plan Chapter 9 (Chula Vista 2011b: 18-27). The goal of Objective E9 is to protect cultural resources in accordance with CEQA and encourage

their accessibility to the public for “educational, religious, cultural, scientific, and other purposes” (Chula Vista 2011b: 27).

B. Definition of Cultural Resources

CEQA defined cultural resources include prehistoric resources and historical-period resources. Title 21 Section 21.03 governs the meaning of words used in both Title 21 and the City’s Historic Preservation Program. Prehistoric resources are physical properties resulting from human activities that predate written records and are generally identified as isolated finds or sites. Prehistoric resources can include village sites, temporary camps, lithic (stone tool) scatters, roasting pits/hearths, milling features, rock features, and burials. Historic resources consist of physical properties, structures, or built items resulting from human activities after the time of written records. In North America, the historical-period is generally considered equivalent to the time period since European contact, beginning in A.D. 1492. Historic resources can include archaeological remains and architectural structures.

Paleontology is defined as the science dealing with prehistoric plant and non-human animal life. Paleontological resources (or fossils) typically encompass the remains or traces of hard and resistant materials such as bones, teeth, or shells, although plant materials and occasionally less resistant remains (e.g., tissue or feathers) can also be preserved. The formation of fossils typically involves the rapid burial of plant or animal remains and the formation of casts, molds, or impressions in the associated sediment (which subsequently becomes sedimentary rock). Because of this, the potential for fossil remains in a given geologic formation can be predicted based on known fossil occurrences from similar (or correlated) geologic formations in other locations. Accordingly, paleontological resources include not only the actual fossil remains, but also the collecting localities and associated geologic formations.

C. Existing Cultural Setting

A number of technical works discuss the prehistory of San Diego County and provide a background for understanding the archaeology of the general area surrounding the project (see Appendix F to this EIR). The following is a brief discussion of the culture history of the San Diego region.

1. Prehistoric Setting

a. Archaic Period (10,000 – 1,300 years before present)

The earliest accepted archaeological manifestation of Native Americans in the San Diego area is the San Dieguito complex, dating to approximately 10,000 years ago (Warren 1966). The material culture of the San Dieguito complex consists primarily of scrapers, scraper planes, choppers, large blades, and large projectile points; generally including tools and debitage made of fine-grained green metavolcanic material (locally known as felsite), and often heavily patinated. Sleeping circles, trail shrines, and rock alignments have also been associated with early San Dieguito sites. The San Dieguito complex is chronologically equivalent to other Paleoindian complexes across North America, and sites are sometimes called “Paleoindian” rather than “San Dieguito.”

The traditional view of San Diego prehistory has the San Dieguito complex followed by the La Jolla complex at least 7,000 years ago, possibly as long as 9000 years ago (Rogers 1966). Until relatively recently, many archaeologists felt that the San Dieguito culture lacked milling technology and saw this as an important difference between the San Dieguito and La Jolla complexes. San Dieguito material also underlies La Jolla complex strata at the C.W. Harris type site in San Dieguito Valley (Warren, ed. 1966).

The La Jolla complex is part of the Encinitas tradition; generally “recognized by millingstone assemblages in shell middens, often near sloughs and lagoons” (Moratto 1984:147). “Crude” cobble tools, especially choppers and scrapers, characterize the La Jolla complex (Moriarty 1966). Basin metates, manos, discoïdals, a small number of Pinto series and Elko series points, and flexed burials are also characteristic.

Warren et al. (1961) proposed that the La Jolla complex developed with the arrival of a desert people on the coast who quickly adapted to their new environment. Others have suggested an in situ development of the La Jolla people from the San Dieguito, or a Pleistocene migration of an ancestral stage of the La Jolla people to the San Diego coast.

Since the 1980s, archaeologists in the region have begun to question the traditional definition of San Dieguito people simply as makers of finely crafted felsite projectile points, domed scrapers, and discoïdal cores, who lacked milling technology. The traditional defining criteria for La Jolla sites (manos, metates, “crude” cobble tools, and reliance on lagoonal resources) have also been questioned. There is speculation that differences between artifact assemblages of “San Dieguito” and “La Jolla” sites reflect functional differences rather than temporal or cultural variability; and that the San Dieguito, La Jolla, and Pauma complexes are manifestations of the same culture, with differing site types “explained by site location, resources exploited, influence, innovation and adaptation to a rich coastal region over a long period of time” (Gallegos 1987:30). The classic “La Jolla” assemblage has been identified as one adapted to life on the coast and appearing to continue through time, inland sites adapted to hunting containing a different tool kit, regardless of temporal period.

Other archaeologists in San Diego, however, do not subscribe to the Early Prehistoric/Late Prehistoric chronology; and believe that an apparent overlap among assemblages identified as “La Jolla,” “Pauma,” or “San Dieguito” does not preclude the existence of a separate Early Milling period culture in the San Diego region, whatever name is used to identify it. One problem these archaeologists perceive is that many site reports in the San Diego region present conclusions based on interpretations of stratigraphic profiles from sites at which stratigraphy cannot validly be used to address chronology or changes through time. Archaeology emphasizes stratigraphy as a tool, but many of the sites known in the San Diego region are not in depositional situations. In contexts where natural sources of sediment or anthropogenic sources of debris to bury archaeological materials are lacking, other factors must be responsible for the subsurface occurrence of cultural materials, including rodent burrowing and insect activity. Many sites that have been used to help define the culture sequence of the San Diego region are the result of just such non-depositional stratigraphy.

b. Late Period (1,300 years before present - A.D. 1492)

The Late Prehistoric period is represented by San Luis Rey complex in the northern portion and the Cuyamaca complex in the southern portion of San Diego County. The Cuyamaca complex is the archaeological manifestation of the Yuman forebears of the Kumeyaay people, while the San Luis Rey complex represents the Shoshonean predecessors of the ethnohistoric Luiseño. The name Luiseño derives from Mission San Luis Rey de Francia and has been used to refer to the Indians associated with that mission, while the Kumeyaay people are also known as Ipai, Tipai, or Diegueño (named for Mission San Diego de Alcalá). Although Agua Hedionda Creek is often described as the division between the territories of the Luiseño and the Kumeyaay people, various researchers have described somewhat different boundaries for traditional use areas, and there has long been interaction among the groups. The UID project area is within Kumeyaay territory.

Elements of the late prehistoric complexes include small, pressure-flaked projectile points; milling implements, including mortars and pestles; Olivella shell beads; ceramic vessels; and pictographs. Of these elements, mortars and pestles, ceramics, and pictographs are not associated with earlier sites. The Cuyamaca complex differs from the San Luis Rey complex in the following points:

- Defined cemeteries away from living areas
- Use of grave markers
- Cremations placed in urns
- Use of specially made mortuary offerings
- Cultural preference for side-notched points
- Substantial numbers of scrapers, scraper planes, etc., in contrast to small numbers of these implements in San Luis Rey sites
- Emphasis placed on use of ceramics, with a wide range of forms and several specialized items
- Steatite industry
- Substantially higher frequency of milling stone elements compared with San Luis Rey
- Clay-lined hearths

Historic Context

Spanish, Mexican and “American” cultures have all played a role in post-contact historic activities. A summary of the three periods of San Diego County history is provided below, as well as summary of the local history of Otay Ranch.

a. Spanish Period

While Juan Rodriguez Cabrillo visited San Diego briefly in 1542, the beginning of the historic period in the San Diego area is generally given as 1769. It was that year that the Royal Presidio and the first Mission San Diego were founded on a hill overlooking Mission Valley (the first mission founded in Southern California). The Mission San Diego de Alcalá was constructed in its

current location five years later. Mission San Luis Rey, in Oceanside, was founded in 1798. Asistencias (chapels) were established at Pala (1816) and Santa Ysabel (1818). The Spanish Colonial period lasted until 1821 and was characterized by religious and military institutions bringing Spanish culture (including new architectural styles) to the area and attempting to convert the Native American population to Christianity. Horses, cattle, new food products and reliance on agricultural practices, and new diseases, were all introduced by the European settlers.

b. Mexican Period

The Mexican period lasted from 1821, when California became part of Mexico, to 1848, when Mexico ceded California to the United States under the treaty of Guadalupe Hidalgo at the end of the Mexican-American War. Following secularization of the missions in 1834, mission lands were given as large land grants to Mexican citizens as rewards for service to the Mexican government. The society made a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. The Pueblo of San Diego was established during the period, and transportation routes were expanded. Cattle ranching prevailed over agricultural activities.

c. American Period

The American period began in 1848, when California was ceded to the United States. The territory became a state in 1850. Terms of the Treaty of Guadalupe Hidalgo brought about the creation of the Lands Commission in response to the Homestead Act of 1851, which was adopted as a means of validating and settling land ownership claims throughout the state. Few of the large Mexican ranchos remained intact, due to legal costs and the difficulty of producing sufficient evidence to prove title claims. Much of the land that once constituted rancho holdings became available for settlement by immigrants to California. The influx of people to California and to the San Diego region resulted from several factors, including the discovery of gold in the state, the end of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. During the late nineteenth and early twentieth centuries, rural areas of San Diego County developed small agricultural communities centered on one-room schoolhouses. Such rural farming communities consisted of individuals and families tied together through geographical boundaries, a common schoolhouse, and a church. Farmers living in small rural communities were instrumental in the development of San Diego County. They fed the growing urban population and provided business for local markets. Rural farm school districts represented the most common type of community in the county from 1870 to 1930. The growth and decline of towns occurred in response to boom and bust cycles in the 1880s.

d. Local History of Otay Ranch

Otay Ranch was originally comprised of two 1829 Mexican-period land grants (to Doña Magdalena Estudillo and her brother, José Antonio Estudillo) made by Governor José María Echandia in 1829. The overall area encompassed the Native American village of Otai. The Land Act of 1851 required all holders of property in California to prove their rights of ownership to the lands they claimed. The Estudillos petitioned for their properties for 10 years before the United States Land Commission confirmed their claims to the properties known as Rancho Otay.

The first American owner of the property (in 1872) was Solon S. Sanborn. Following that purchase, the ranch changed ownership several times before it was purchased around 1900 by John D. Spreckles, who sold the properties to sportsman Elisha Spurr Babcock. Babcock and Spreckles built a hunting lodge on the property. The property continued to change ownership, however, and by 1936, it had become the property of Stephen Birch, Sr. At this point, the original area of Rancho Otay (almost 6,658 acres) expanded to about 29,000 acres. The Birch family resided in the on-site hunting lodge and engaged in farming (principally lima beans, hay, and grain) and livestock operations. Lima beans were abandoned as a major crop when bindweed morning glory infested the fields; the last year of lima bean production was 1949. Later crops included barley, wheat, and oat hay. Following the deaths of the last Birch family owner (Stephen Birch, Sr.'s daughter Mary) in 1983, the property was sold to the Baldwin Company of Irvine in 1988.

D. Known Cultural and Paleontological Resources

Assessment of cultural resources included a cultural resources records search conducted through the California Historical Resources Information System - South Coastal Information Center (CHRIS-SCIC) located at San Diego State University. As previously noted, the evaluation of paleontological resources is based on review of the Village 9 Paleontological Resources Assessment (SDNHM 2010), the Project Geotechnical Evaluation (Ninyo & Moore 2016a), and published/unpublished SDNHM paleontological locality data and geologic/paleontological materials.

The Main Campus Property is within a large area surveyed for cultural resources by ERCE as part of the studies for the Otay Ranch project (Carrico et al. 1992). A very small portion of the Main Campus Property was surveyed for the Otay Ranch project at a later date by Brian F. Smith and Associates (BFSA) (Smith 1996). Studies for High Tech K-12 School also covered a portion of this parcel (Smith and Moreno 2006). Based on site records on file at the SCIC at San Diego State University, other portions of both the Main Campus Property and the Lake Property have been addressed by previous studies; however, reports were not available, so the extent of these studies and the precise areas covered are not known.

1. Cultural Records Search and Project Field Efforts

a. Records Search

A records search was obtained from the SCIC for the Project site and a one-mile radius around it. An effort was made to find and review reports of past archaeological studies covering the Project area. Reports were not available for some survey and testing projects (e.g., Otay Ranch Village 10), but the reports that could be obtained were reviewed.

The Main Campus Property is within a large area surveyed for cultural resources by ERCE as part of the studies for the Otay Ranch project (Carrico et al. 1992). A very small portion of the Main Campus Property was surveyed for the Otay Ranch project at a later date by Brian F. Smith and Associates (BFSA) (Smith 1996). Studies for High Tech K-12 School also covered a portion of this parcel (Smith and Moreno 2006). Based on site records on file at the SCIC, other portions of both the Main Campus Property and the Lake Property have been addressed by previous studies; however, reports were not available for these studies, so the extent of these studies and the precise

areas covered are not known. In addition, reports of cultural resource studies for the Otay Ranch Villages project (also known as the University Villages project) (Smith and Stropes 2014) and Otay Ranch Village 9 (Guerrero and Gallegos 2009, revised by Noah 2010a) became available subsequent to the background research and field survey conducted for the current UID project; these were reviewed in 2016, when they were made available to HELIX.

The proposed off-site sewer line and detention basin located south of the Main Campus is within the area surveyed for Otay Ranch by BFSa (Smith 1996), as is the western portion of the off-site sewer line from the Lake Property. The north-south portion of the Lake Property off-site sewer alignment was surveyed as part of proposed improvements for the Otay Water District (Kyle and Gallegos 1994).

Fifteen archaeological sites and one isolate have been previously recorded (and in some instances tested) within the UID boundaries and one additional site is recorded within off-site improvement areas, for a total of 17 recorded resources overall. Several of these sites include only a portion within the UID area, extending off-property; in some cases, the vast majority of the site is off-property. Twelve of the sites have been tested to assess site significance. For the other four sites, there is no record at SCIC that testing has been undertaken (see Table 1 of Appendix F). Of the 12 sites that have been assessed, two were noted on the site record as not significant resources under CEQA, and testing reports were available for six sites. For four of the sites, significance was not noted on the site record, and no reports are available for these sites at SCIC. Based on the information on the site records, however, none of the sites tested appear to represent significant cultural resources, at least for the portion within the UID project site (e.g., CA-SDI-7217 has loci that are significant, but the portion within the project site is not). The NAHC was contacted for a Sacred Lands File Check and a list of Native American contacts. Letters were sent to the contacts listed by the NAHC.

b. Project Field Efforts

The Main Campus Property and Lake Property also were surveyed for cultural resources by Affinis archaeologists and Native American monitors from Red Tail Monitoring and Research on April 18 to 23, 2013 (personnel are listed in Chapter VIII, *Personnel*, in Appendix F to this EIR). To the extent feasible the Project area was surveyed using parallel transects spaced approximately 15 meters apart. In some areas, survey was impeded by steep slopes and thick brush. Ground visibility was generally poor, especially in the western half of the Main Campus Property. A proposed off-site pipeline and detention basin also were surveyed on March 28, 2014 by an Affinis archaeologist and a Native American monitor from Red Tail Monitoring and Research. Additional site specifics are provided in Appendix F to this EIR. A proposed off-site sewer associated with the Lake Property was surveyed for cultural resources by a HELIX archaeologist and a Native American monitor from Red Tail Monitoring and Research on April 15, 2016.

The cultural resources survey resulted in the identification of 11 isolates and one archaeological site that had not been previously recorded. Four of the isolates are within the Main Campus, five are within the Lake Property, and two are in the alignment for the off-site sewer from the Lake Property. The archaeological site, a small lithic scatter, is located on the Lake Property.

Appropriate site record forms were submitted to SCIC for the newly identified resources.

c. Resource Descriptions

CA-SDI-7217: This large site includes multiple loci, with the majority of the site is located outside the project. While the overall site covers approximately 20 acres, the portion of the site within the Main Campus Property measures 76 meters by 61 meters and was tested by BFSa in 2010. Identified artifacts include lithics, including cores and some tools. A total of 25 shovel test pits (STPs) and 2 test units are identified on site documentation. All visible surface artifacts were collected during the 2010 testing program. No significance determination is given on the site record, and there is no report available, but the site record does note that based on the excavations, the site is a surface deposit with no subsurface component. The artifact listing on the site record shows that in 25 STPs and two test units, only one flake was recovered. Given the lack of a subsurface deposit and any cultural features or diagnostic material, the portion of CA-SDI-7217 within the project site is not a significant resource under CEQA or the City's guidelines presented in the General Plan and the Historic Preservation Program. A single flake was observed during the current survey. No further work is recommended at this site for the proposed project. Other portions of CA-SDI-7217 outside the Project area may retain significance.

CA-SDI-13-453: This site is mapped as partially within the off-site sewer line extending south from the Lake Property. This resource was originally recorded in conjunction with Otay Water District improvements and described as over 10 flakes and two cores in and adjacent to a dirt road. The site was tested by BFSa in 2010 and described as "an artifact scatter of over 100 metavolcanic lithics, cores, hammerstones and steep-edge tools" covering an area of 225 meters by 95 meters (2010 site record). The test unit excavated at the site yielded only five artifacts: four pieces of debitage and one tool. Although significance was not specifically noted on the site record, it was noted that sites such as this are common in the Otay Mesa area. Given the lack of a subsurface deposit and any cultural features or diagnostic material, the site does not meet the significance criteria of CEQA or the City's guidelines. In addition, BFSa collected all visible surface artifacts. The site is mapped as mainly to the east of the proposed sewer alignment, but the dirt road in which the alignment would be located crosses the site.

CA-SDI-13-454: A small lithic scatter consisting of three artifacts in a dirt road was recorded in conjunction with a water project in 1993 in the Lake Property. The site was not within any of the preferred alignments for that water project, so it was not tested, and there is no subsequent site record update indicating that any testing has been conducted. One artifact was noted in the mapped area of this site during the current survey. Because the site has not been evaluated, it is considered a potentially significant resource under CEQA and the City's guidelines.

CA-SDI-14-224: Although dense vegetation obscured visibility, a sparse lithic scatter including a number of flakes, two scrapers, and one core was recorded during Otay Ranch surveys. CA-SDI-14-224 could not be relocated during a 2010 survey for the SDG&E wood to steel pole conversion project, and there is no record that the site was tested to assess significance. A small portion of the site was mapped within the current UID project area, within the Main Campus Property. No artifacts were observed during the current survey, but ground visibility was again poor. Pending testing, the site is considered potentially significant under CEQA and the City's guidelines, but appears to be located outside the Project area.

CA-SDI-14-225: This lithic scatter also was recorded during the Otay Ranch survey, just east of the project boundary of the Main Campus Property. Flakes, at least five scrapers, and one core were noted. Site boundaries were expanded in 2001 (to the west, and onto the project) as a result of surface collection of artifacts and excavation of 10 STPs in conjunction with a detention basin project. “The site area is heavily disturbed and subsurface testing recovered no artifacts, leading to a 2001 determination that the site was not significant under CEQA. Based on this disturbance and lack of a subsurface deposit and any cultural features or diagnostic material, the site would not be a significant resource under City guidelines. Only the (not significant) portion of CA-SDI-14-225 tested in 2001 is within the current project area and no artifacts were observed during the current survey. No further work is recommended at this site related to the Project.

CA-SDI-14-228: CA-SDI-14-228 was recorded as a lithic scatter with artifacts including a core, a scraper, a retouched flake, a hammerstone, and flakes; located in the Lake Property. There is no indication that testing was ever conducted at the site. Only a portion of the site is mapped within the Project area, and no artifacts were noted during the current survey. Because the site has not been evaluated, it is considered a potentially significant resource under CEQA and the City’s guidelines. The Project as proposed would have no impacts to the site, so no further work is recommended related to the Project.

CA-SDI-18-136: A small scatter of marine shell was recorded during an archaeological study for High Tech K-12 School. Testing at the site consisted of three shovel scrapes, 10 shovel tests, and one test unit. No cultural material was found other than shell. Due to the low recovery and extensive disturbance, the site was determined not to be a significant resource under CEQA or City guidelines and the site was removed during development of the high school.

CA-SDI-20-155: This site was recorded in conjunction with environmental review for off-site grading for Village 9. It was described as three concentrations of a marine shell and flaked lithic and ground stone scatter, with shellfish thinly spread between the concentrations. Much of the shellfish noted was highly fragmented; noted on the site record as most likely being the result of agricultural activity (the site area having been disked for many years). The site record also noted that site artifacts appear to comprise a generally surficial scatter, which has been pushed to a depth of approximately 20 centimeters by the noted repeated agricultural disking. Cultural material collected during the testing included 750 shellfish fragments, one fish scale, two manos, and additional lithics and flakes.

A 2010 testing program at CA-SDI-20-155 consisted of mapping and collecting surface artifacts, surface collection of a 10-meters-by-10-meters grid in an area of relatively high shell density, excavation of STPs and a 1-meter-by-1-meter unit, as well as cataloging and analysis of cultural material collected. AMS radiocarbon dates of 3100 ±40 years BP and 3540 ±40 years Before Present (BP) were obtained on samples of shell from the site. The excavator confirmed that the site appeared to be a surface scatter dominated by shellfish remains, which repetitive agricultural disking has fragmented to a high degree and moved both laterally and vertically along the mesa top. The site was identified as not significant under Chula Vista and CEQA criteria and was recommended as ineligible for listing on the CRHR. Monitoring of grading was recommended for the site, due to the potential for subsurface features, such as hearths.

Only a small portion of CA-SDI-20-155 is located within the Main Campus Property. A thin shell scatter was noted between this site and CA-SDI-20-441, connecting the two sites, during current UID project surveys, and consistent with notations on the site record that marine shell was dispersed across the area by years of agricultural use. No change is recommended to the significance evaluation provided in 2010.

CA-SDI-20-160: This lithic scatter, recorded by BFSa in 2010, includes flakes, a core, a hammerstone, and a tool. The site is located within the Main Campus Property. The site map shows the excavation of 13 STPs and one test unit at the site in 2010. Based on those excavations, the site identifies the site as a surface deposit with no subsurface component. Accordingly, the site is not a significant cultural resource under CEQA or the City's guidelines. No cultural material was found during the current survey and no further work is recommended for this site.

CA-SDI-20-162: This site, which is located on the Main Campus property, was recorded in 2010 and was tested with the excavation of 15 STPs, 1 test unit, and surface collection. The site is described as containing metavolcanic lithics and tools. All the STPs were negative, and the site record notes "the site is a surface deposit with a minimal subsurface component. Given the lack of a subsurface deposit and any cultural features or diagnostic material, CA-SDI-20-162 does not represent a significant cultural resource under CEQA or the City's guidelines. No cultural material was found during the current survey, and no further work is recommended.

CA-SDI-20-165: Recorded in 2010, CA-SDI-20-165 also was described as an artifact scatter of metavolcanic lithics and tools. This site is located within the Main Campus Property. The site record noted that 50 percent of the ground surface was visible. While surface artifacts were recovered, 15 STPs and 1 test unit yielded only one subsurface hammerstone, which was in the 0- to 10-centimeter level. Although significance was not specifically addressed in the site record, it was noted that (based on the excavations) the site is a surface deposit with a minimal subsurface component. Given the lack of a subsurface deposit and any cultural features or diagnostic material, CA-SDI-20-165 is not considered a significant cultural resource under CEQA or City of Chula Vista guidelines. No cultural material was found during the current survey; no further work is recommended.

CA-SDI-20-441: This site was recorded in 2011 as a large dispersed scatter of marine shell with three pieces of debitage. The site record noted that 12 STPs and 2 test units were excavated. The site sketch map did not show the locations of excavation, however, nor did it show the areas that were inaccessible due to property boundaries.

The Otay Ranch Villages cultural resource report noted that "The area defined by the surface scatter of artifacts and ecofacts is 82,709 square meters (889,949 square feet)" (Smith and Stropes 2014:5.0-503). Although the site record only noted the excavation of 12 STPs, the report indicated that 12 STPs were excavated in the eastern portion of the site, which is located within the Main Campus Property, and two additional STPs were excavated in the southern portion of the site, within the Otay Ranch Villages project site. Two 1-meter-by-1-meter test units were also excavated within what is now the Main Campus Property. "Subsurface test results did not identify any significant cultural deposits, as only marine shell was recovered from the site" (Smith and Stropes 2014:5.0-504). A total of 10 pieces of debitage was collected from the surface of the site. The vast majority of the site as it is mapped is within the Project area.

Test excavations, surface scrapes, and surface collection at CA-SDI-20-441 yielded only 10 pieces of debitage and 340.9 grams of marine shell over a large area. The cultural material is concentrated within the upper 30 centimeters. The only cultural material found during the current survey was marine shell; including the above-noted thin shell scatter between this site and CA-SDI-20-155. The site record for CA-SDI-20-155 noted that marine shell was dispersed across the area by years of agricultural use. Based on the almost total lack of subsurface cultural material at both CA-SDI-20-155 and CA-SDI-20-441 and the extremely limited research potential at both sites, no further assessment is recommended. Given these data, the site is not a significant resource under CEQA or the City's guidelines.

CA-SDI-20-551: CA-SDI-20-551 is located near the border of the Main Campus Property. The site was described as a sparse scatter of debitage. The 2012 site record indicated that the site is most likely a surface deposit. The Otay Ranch Villages cultural resources report describes CA-SDI-20-551 as a sparse lithic and marine shell scatter. Testing by BFSA in 2012 resulted in the collection of 12 pieces of marine shell but no artifacts; surface artifacts noted during the January 2012 survey could not be seen during the May 2012 testing program, due to vegetation growth (Smith and Stropes 2014). Excavation of six shovel tests and one 1-meter-by-1-meter test unit yielded no subsurface cultural material. "The testing of Site SDI-20-551 has exhausted the research potential of this site" (Smith and Stropes 2014:5.0-578). Given the lack of a subsurface deposit and any cultural features or diagnostic material, the site is not a significant resource under CEQA and the City's guidelines. No cultural material was observed during the current survey.

CA-SDI-20-552: This site was recorded in 2010 as a small dispersed shell consisting primarily of Chione and Argopecten shell species. The site appears to have been removed during construction of Eastlake Parkway and Hunte Parkway. No evidence of this site was found during the current survey. Given the nature of the site as described (small, dispersed shell scatter), no subsurface deposits would be expected to be present. Because the site has been destroyed, there would be no Project-related impacts.

CA-SDI-20-553: CA-SDI-20-553 was recorded as a scatter of marine shell, primarily Chione. No artifacts were noted on the site record. During the current survey, this site was found essentially as previously recorded. Testing of the site consisted of the mapping and recordation of all surface artifacts, and the excavation of 10 STPs and one standard test unit. The field investigations were conducted in February of 2012 (Smith and Stropes 2014:5.0-603). No cultural material was found on the surface during the testing program, but marine shell was recovered in six of the STPs. "The analysis of the cultural materials recovered from SDI-20-553 revealed a localized, shallow cultural deposit. Based on the information derived from the testing program, the site is not considered to retain any research potential" (Smith and Stropes 2014:5.0-604). Accordingly, the site is not a significant resource under CEQA or the City's guidelines.

CA-SDI-20-554: CA-SDI-20-554 was described in 2012 as a small dispersed shell scatter consisting primarily of Chione and Argopecten shell species. The site, which is located in the Main Campus Property, was tested by BFSA in 2012; the testing program included excavation of 10 STPs and one test unit. No surface artifacts were observed, but 110.3 grams of shell was collected, 99.7 grams of which came from the test unit. As stated in the report, "the site exhibits a shell scatter, but no segregated special-use areas/features or other unique elements.... The level of information already obtained from this site represents a large portion of the research potential of

the site and it is unlikely that any significantly different information would be gathered from further investigation.” The report also concluded that the site would not be considered significant according to CEQA criteria. (Smith and Stropes 2014:5.0-610). The site also does not meet the City’s significance criteria, which are essentially the same as those of CEQA. No cultural material was observed during the current survey, but ground visibility was quite poor.

Site 1: This small lithic was found during the survey of the off-site sewer associated with the Lake Property; it is located within the Lake Property. The site consists of approximately five flakes and debitage (metavolcanic and quartzite) over an area approximately 15 meters in diameter. The area is disturbed by an existing road, so the potential for subsurface cultural resources is considered to be low; however, the potential must be explored in order to assess site significance.

ISOLATES. As summarized in Table 5.7-1, *Isolates within Project Area*, 11 isolated artifacts were found during the current survey: four in the Main Campus Property, five in the Lake Property, and two in the off-site improvement areas. The isolates include one hammerstone, five flakes, three cores, one possible core, and one bifacial mano. None of the isolates were collected. In addition, one isolate was recorded in the Main Campus Property during the Otay Ranch survey: P-37-015140. That artifact, a flake, was collected during the Otay Ranch survey.

Table 5.7-1 ISOLATES WITHIN PROJECT AREA

Isolate (P-37-#)	Description
015140	Flake, porphyritic metavolcanic
033126	Hammerstone, medium- to coarse-grained metavolcanic
033127	Flake, secondary, fine-grained metavolcanic
033128	Core, multidirectional, medium- to coarse-grained metavolcanic
033129	Mano, bifacial with battering, medium- to coarse-grained metavolcanic
033130	Flake, primary, medium- to coarse-grained metavolcanic
033131	Core, bidirectional, medium- to coarse-grained metavolcanic
033132	Flake, Secondary, fine-grained metavolcanic
OS-I-2	Core, fine-grained metavolcanic
OS-I-7	Possible core, fine-grained metavolcanic
OS-I-9	Flake, tertiary, fine-grained metavolcanic
OS-I-10	Flake, tertiary, fine-grained metavolcanic

2. *Native American Concerns*

Although AB 52 consultation with Native American tribes is not required for this EIR because the NOP was released prior to the effective date of AB 52, the NAHC was contacted for a search of their Sacred Lands Files and a list of Native American contacts for this area. Letters were sent to those contacts identified by the NAHC in May 2013. The Sacred Lands File search did not indicate the presence of significant Native American cultural resources in the immediate project area. To date, the only response received has been from the Campo Band of Mission Indians, who indicated they have no comments at this time.

3. Historical Map Review

Early maps of the project vicinity were reviewed for historical structures, features, and roads. No items of historical significance were identified within the Project area on the early maps.

4. Paleontological Resources

a. Stratigraphic Rock Units

Based on the previously described project-related and background technical materials, the principal surficial deposits and underlying geologic formations present within the project site include the following (in order of decreasing age): (1) two units of the Oligocene Otay Formation, including the Otay Formation (To) and the Otay Formation-Fanglomerate Facies (Tof); (2) Quaternary alluvial terrace deposits (Qvoa); and (3) Holocene alluvial deposits (Qya). These formations are described in more detail in Section 5.8, *Geology and Soils*, with on-site locations shown on Figure 5.8-1, *Geologic Map*. Additional surficial materials present on-site include Holocene native topsoil deposits and colluvium, and recent artificial fill. Generally thin (1 to 4 feet) topsoil deposits are present in most undeveloped portions of the site, while colluvium is typically gravity-deposited at the bottoms of slopes. Artificial fill is associated with development such as roads, trails and the existing high school campus, with colluvium, fill and topsoil deposits not depicted on Figure 5.8-1.

Numerous fossil localities have been discovered in the Otay Formation in the Otay Mesa area. These localities have produced well-preserved remains of a diverse assemblage of terrestrial vertebrates, including tortoises, lizards, snakes, birds, shrews, rodents, rabbits, dogs, foxes, rhinoceros, camels, mouse-deer, and oreodonts (SDNHM 2010). Based on these fossil discoveries, both noted units of the Otay Formation are assigned a high sensitivity for paleontological resources, with these units underlying a large portion of the Project site.

No fossils are known from Quaternary alluvial terrace deposits in the Otay Mesa area, with these deposits limited to relatively small occurrences in the southern portion of the project site. Significant land mammal fossils have been found in similar deposits throughout coastal San Diego County, with undisturbed portions of the on-site Quaternary alluvial terrace deposits therefore assigned a high sensitivity for paleontological resources.

Based on their relatively young age and lack of known fossil occurrences, Holocene alluvial deposits are assigned a low paleontological resource sensitivity.

Additional surficial materials present on-site, including Holocene native topsoil, colluvium and recent artificial fill, exhibit no potential for the occurrence of sensitive paleontological resources. This assessment is based on the recent age of these deposits, as well as their high-energy methods of formation and/or deposition (e.g., mechanical production such as crushing/screening for fill; and physical/chemical weathering and transportation/deposition by water, wind, and/or gravity for colluvium and soil).

b. Results of Record Search

Thirteen previously recorded fossil collecting localities were documented within the general project site vicinity during analysis of the adjacent Village 9 site. Specifically, these localities were discovered during paleontological monitoring of construction projects in the Otay Formation to the north and west of the Village 9 (and the proposed project) site. Fossils recovered during these efforts included plants, invertebrates and vertebrates, such as unidentified bird and lizard remains, extinct mammals, and a fossilized eggshell discovered during grading at the Village 7 project site to the north (SDNHM 2010).

5.7.2 Thresholds of Significance

According to the CEQA Guidelines, Appendix G and associated City criteria, impacts to cultural and paleontological resources would be significant if the Project would:

- **Threshold 1:** Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.
- **Threshold 2:** Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5.
- **Threshold 3:** Disturb any human remains, including those interred outside of formal cemeteries.
- **Threshold 4:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

5.7.3 Impact Analysis

A. Threshold 1: Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.

CEQA Guidelines Section 15064.5 recognizes that historical resource includes: (1) a resource in the CRHR; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

The cultural resource record search and historic map survey conducted for the project determined that no historic or potential historic structural resources occur in the project area. The project site is currently undeveloped. Therefore, there would be no impacts from the Project on structural historic resources.

B. Threshold 2: Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5.

As defined in PRC Section 21083.2 a “unique” archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

A number of archaeological sites and isolates were identified within the project area. Of the 17 archaeological sites identified within the project (Main Campus Property and Lake Property) and off-site improvement areas, 12 have been determined not to be significant resources under CEQA and the City’s guidelines. One previously recorded site has been removed by grading during construction of an abutting project. The four remaining sites are potentially significant resources pending evaluation. Two of these sites would not be subject to impacts from the project as proposed, and no further work is recommended. The remaining two known potentially significant sites within the project impact footprint (CA-SDI-13-454 and Site 1) will need to be tested to assess site significance and the significance of Project impacts. If these sites are determined to be significant resources, appropriate mitigation measures would be developed and implemented in order to mitigate Project impacts to below a level of significance. The isolates are not significant resources, and no further work is required for them.

In addition to the known resources detailed above, there is a potential for additional cultural resources to be present that could not be seen due to the limited ground visibility over a majority of the Project area. Based on this, monitoring of brushing/grubbing and initial grading by an archaeologist and a Native American monitor is recommended. A monitoring program would be required during ground-disturbing activities in previously undisturbed soils. If cultural material is encountered, monitors will have the authority to temporarily halt or redirect grading while the resources are documented and assessed. Impacts are assessed as potentially significant (Impact 5.7-1).

C. Threshold 3: Disturb any human remains, including those interred outside of formal cemeteries.

Results of the cultural resources record search and survey did not identify any human remains or records of human remains in the project areas. Given the presence of archaeological resources on the site, however, a conservative assumption is being made that previously unknown human remains may be present in the project area and off-site improvement areas. Ground-disturbing construction activities, grading, and trenching associated with the project would have the potential to uncover unknown human remains. If human remains are inadvertently uncovered, projects are required to comply with NAGPRA, PRC Section 5097.98, California NAGPRA, and Health and

Safety Code Section 7050.5, described above in Section 5.7.1, *Regulatory Framework*. However, without an archaeological monitor on the site during construction to identify evidence of remains and ensure proper regulatory compliance, ground-disturbing construction activities associated with project implementation would have the potential to result in a significant impact to human remains (Impact 5.7-2).

D. Threshold 4: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As previously noted, most of the project site is underlain by the Otay Formation, while Quaternary alluvial terrace deposits occur in the southeastern portion of the Main Campus site. These deposits are assigned as having a high paleontological resource sensitivity, and important fossils have been recovered from the Otay Formation in the project site vicinity. As a result, significant direct impacts to paleontological resources could potentially occur during project-related construction activities such as grading and trenching (Impact 5.7-3).

5.7.4 Level of Significance Prior to Mitigation

A. Historical Resources

The Project would have no impact to structural historical resources.

B. Archaeological Resources

The Project would not adversely affect known archaeologically significant resources on the site.

Impact 5.7-1: Pending testing for significance, two sites within the Project area have been identified as potentially culturally significant, and construction activities associated with the Project could inadvertently result in adverse impacts to presently unknown archaeological resources that may be uncovered during clearing and grading.

C. Human Remains

No known human remains have been identified within the Project and none of the identified sites appear to be primary habitation sites.

Impact 5.7-2: Although it is not considered likely, construction activities (e.g., clearing and grading) during Project implementation could inadvertently uncover unknown human remains. If such remains are adversely affected, the impact would be potentially significant.

D. Paleontological Resources

Impact 5.7-3: The Project site includes surficial deposits and underlying geologic formations with high paleontological resource sensitivity. As a result, Project-related construction activities would have potentially significant impact to these resources.

5.7.5 Mitigation Measures

As noted above, no historical structural resources would be impacted. Mitigation measures are identified below to address archaeological and paleontological resources. Development of the Project site would occur as future applicants apply for various permits. The measures below identify that a future applicant would be responsible for the implementation of the mitigation measures.

A. **Historical Resources**

No mitigation measures are required.

B. **Archaeological Resources**

Project construction activities could inadvertently result in adverse impacts to presently unknown archaeological resources that may be uncovered during clearing and grading (Impact 5.7-1). Implementation of Mitigation Measures 5.7-1a and 5.7-1b would reduce impacts to less than significant levels:

5.7-1a Archaeological Monitor. Prior to issuance of land development permits, including clearing or grubbing and grading permits, the applicant shall provide written confirmation and incorporate into grading plans, to the satisfaction of the Development Services Director (or their designee), that a principal investigator as listed by the Secretary of the Interior (CFR Title 36, Section 61) has been retained in an oversight capacity to ensure that an archaeological monitor will be present during all cutting of previously undisturbed soil. If these cutting activities would occur in more than one location, multiple monitors shall be provided to monitor these areas, as determined necessary by the principal investigator.

5.7-1b Resource Discovery Procedure. During the initial grading of previously undisturbed soils within the UID project area and any off-site improvement areas, prehistoric and historic resources may be encountered. In the event that the monitor identifies a potentially significant site, the archaeological monitor shall secure the discovery site from further impacts by delineating the site with staking and flagging, and by diverting grading equipment away from the archaeological site. Following notification to the Development Services Director (or their designee), the archaeological monitor shall conduct investigations as necessary to determine if the discovery is significant under the criteria listed in CEQA and the environmental guidelines of Chula Vista.

If the discovery is determined to be not significant, grading operations may resume and the archaeological monitor shall summarize the findings in a letter report to the Development Services Director (or their designee) following the completion of mass grading activities. The letter report shall describe the results of the on-site archeological monitoring, each archaeological site observed, the scope of testing conducted, results of laboratory analysis (if applicable), and conclusions. The letter report will be completed to the satisfaction of the Development Services Director (or their designee) prior to release of grading bonds. Any artifacts recovered during the evaluation shall be curated at a curation facility approved by the Development Services Director (or their designee).

For those prehistoric/historic resources that are determined to be significant, the following measures shall be implemented by the applicant:

- i. An alternate means of achieving mitigation shall be pursued. In general, these forms of mitigation include: (1) site avoidance by preservation of the site in a natural state in open space or in open space easements; (2) site avoidance by preservation through capping the site and placing landscaping on top of the fill; (3) data recovery through implementation of an excavation and analysis program; or (4) a combination of one or more of the above measures. Procedures for implementing the alternative forms of mitigation described herein are further detailed in the Mitigation Monitoring and Reporting Program adopted as part of the 1993 Otay Ranch General Development Plan Program EIR (EIR 90-01).
- ii. For those sites for which avoidance and preservation is not feasible or appropriate, the applicant shall prepare a Data Recovery Plan. The plan will, at a minimum, include the following: (1) a statement of why data recovery is appropriate as a mitigating measure; (2) a research plan that explicitly provides the research questions that can reasonably be expected to be addressed by excavation and analysis of the site; (3) a statement of the types and kinds of data that can reasonably be expected to exist at the site and how these data will be used to answer important research questions; (4) a step-by-step discussion of field and laboratory methods to be employed and (5) a statement regarding provisions for curation and storage of the artifacts, notes, and photographs. In cases involving historic resources, archival research and historical documentation shall be used to augment field-testing programs. Grading operations within the affected area may resume once the site has been fully evaluated and mitigated to the satisfaction of the Development Services Director (or their designee). All significant artifacts collected during the implementation of the Data Recovery Plan shall be curated at a facility approved by the Development Services Director (or their designee).
- iii. Following the completion of mass grading operations, the applicant shall prepare a plan that addresses the temporary on-site presentation and interpretation of the results of the results of the archaeological studies for the project. This could be accomplished through exhibition within a future community center, civic building and/or multi-purpose building. This exhibition will only be for temporary curation of those materials being actively used for interpretation and display, and that permanent curation of artifacts and data will be at a regional repository when one is established. All significant artifacts collected during the implementation of the Data Recovery Plan shall be permanently curated at a facility approved by the Development Services Director (or their designee).

C. Human Remains

Project construction activities could inadvertently uncover unknown human remains (Impact 5.7-2). Implementation of Mitigation Measure 5.7-2 would reduce impacts to less than significant levels:

5.7-2 Human Remains Disturbance Protocol. If human remains are discovered during grading or site preparation activities within the UID on-site development or off-site improvement project areas, the archaeological monitor shall secure the discovery site from any further disturbance. State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to the origin and disposition of the remains pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the NAHC. The Native American Heritage Commission will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American. The Most Likely Descendent will assist the Development Services Director (or their designee) in determining what course of action shall be taken to deal with the remains. Grading operations within the affected area may resume once the site has been fully evaluated and mitigated to the satisfaction of the Development Services Director (or their designee). The Archaeological Monitor shall summarize the findings in a letter report to the Development Services Director (or their designee) following the completion of mass grading activities.

D. Paleontological Resources

Project construction activities could impact surficial deposits and/or underlying geologic formations with high paleontological resource sensitivity (Impact 5.7-3). Implementation of Mitigation Measures 5.7-3a through 5.7-3d would reduce impacts to less than significant levels:

5.7-3a Paleontological Resource Mitigation Program. Prior to the issuance of grading permits for the proposed on-site development or off-site improvement Project areas, the applicant shall provide written confirmation to the Development Services Director (or their designee) that a qualified paleontologist has been retained to carry out an appropriate mitigation program. A qualified paleontologist is defined as an individual with a M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques. A pre-grade meeting shall be held between the paleontologist and the grading and excavation contractors.

5.7-3b Paleontological Monitor. A paleontological monitor shall be on-site at all times during the original cutting of previously undisturbed areas of the Otay Formation or Quaternary alluvial terrace deposits to inspect cuts for contained fossils. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall work under the direction of a qualified paleontologist.

- i. The monitor shall be on the site at least on a quarter-time basis during the original cutting of previously undisturbed sediments of low sensitivity geologic formations (Holocene alluvial deposits) to inspect cuts for contained fossils. He or she shall periodically (every several weeks) inspect original cuts in deposits with unknown resource sensitivity, if applicable (e.g., Quaternary alluvium).
- ii. In the event that fossils are discovered in unknown, low or high sensitivity materials, the per-day field monitoring time shall be increased. Conversely, if

fossils are not discovered, the monitoring, at the discretion of the Planning Department, shall be reduced. A paleontological monitor is not needed during grading in areas with deposits exhibiting no resource sensitivity (topsoil and artificial fill).

5.7-3c Fossil Discovery Procedure. If fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short time frame, although some fossil specimens (e.g., a complete whale skeleton) may require an extended salvage time. In these instances, the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains such as isolated mammal teeth, it may be necessary in certain instances, and at the discretion of the paleontological monitor, to set up a screen-washing operation on the site.

5.7-3d Fossil Recording. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum. A final summary report shall be completed, and shall include discussions of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils.

5.7.6 Level of Significance After Mitigation

A. Historic Resources

Impacts to historic resources would be less than significant without mitigation.

B. Archaeological Resources

Potential impacts to unknown archaeological resources (Impact 5.7-1) would be reduced to less than significant levels with implementation of Mitigation Measures 5.7-1a and 5.7-1b because archaeological monitoring would occur during Project construction. If a potentially significant site is identified, construction activities would halt and resource discovery procedures would be followed.

C. Human Remains

Potential impacts to unknown human remains (Impact 5.7-2) would be reduced to less than significant levels with implementation of Mitigation Measure 5.7-2 because State Health and Safety Code Section 7050.5 would be implemented and impacts related to human remains discovered during Project construction would be less than significant.

D. Paleontological Resources

Potential impacts to paleontological resources (Impact 5.7-3) would be reduced to less than significant levels with implementation of Mitigation Measures 5.7-3a through 5.7-3d because a resource mitigation monitoring program would be implemented in the event paleontological resources are discovered, which would reduce impacts to less than significant.