SECTION 4.7

CULTURAL & PALEONTOLOGICAL RESOURCES

This section provides a background discussion of the regulatory framework and the environmental setting with regard to cultural and paleontological resources. Cultural resources consist of archaeological sites from the prehistoric and historic periods, and buildings, structures, and objects from the historic period. Paleontological resources are the fossil remains of animals and plants from the past. Paleontological resources are not considered cultural resources because paleontological resources are not the result of human activity. However, paleontological resources are combined with cultural resources for the purposes of CEQA because paleontological resources are considered in the Cultural Resources section of the Environmental Checklist Form (CEQA Guidelines, Appendix G). Therefore, impacts to paleontological resources are also analyzed in this section.

The regulatory framework identifies the federal, state, and local regulations applicable to cultural and paleontological resources. The environmental setting focuses on the Cultural Resource Survey Area (defined below), cultural context, record search results, field inventory results, and Native American concerns. Impacts on historic resources (i.e. significant cultural resources) and paleontological resources that would result from implementing the Full Build-out Scenario or the Phased CUP Scenario are analyzed based on state and local laws and regulations.

Information contained in this section is summarized from multiple sources including the *Paleontological Resources Inventory Report* (UltraSystems 2014a); the *Phase I Cultural Resources Inventory Report* (UltraSystems 2014b); and, the *California Historical Resources Information System Records Search* prepared by the South Coastal Information Center (SCIC 2012). These documents are provided on the attached CD of Technical Appendices as **Appendix E** of this EIR. The Cultural Resource Survey Area as defined by these technical studies includes the Full Build-out Scenario (32 parcels/all 17 CUPs), plus a one-mile radius around the perimeter of the "solar field site parcels." This area in referred to hereinafter in this section as the "Cultural Resource Survey Area."

Because potential impact to archaeological and paleontological resources would be site specific, and not contingent of how many CUPs are under construction at any given time, no worst-case scenario is defined with regard to the analysis in this section.

4.7.1 REGULATORY FRAMEWORK

A. STATE

Cultural Resources

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) is the state law that addresses the evaluation of a project's impacts on cultural resources. A "project" is an activity that may cause a direct or indirect physical change in the environment and that is undertaken or funded by a state or local agency, or requires a permit, license, or lease from a state or local agency. CEQA requires that impacts to "Historical Resources" be identified and, if the impacts will be significant, that mitigation measures to reduce the impacts be applied.

A "Historical Resource" is a resource that 1) is listed in or has been determined eligible for listing in the California Register of Historical Resources (CRHR) by the State Historical Resources Commission, or has been determined historically significant by the CEQA lead agency because it meets the eligibility criteria for the CRHR; 2) is included in a local register of historical resources, as defined in Public Resources Code 5020.1(k); or 3) has been identified as significant in a historical resources survey, as defined in Public Resources Code 5024.1(g) [CCR Title 14, Section 15064.5(a)].

The eligibility criteria for the CRHR are as follows [CCR Title 14, Section 4852(b)]:

(1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

(2) It is associated with the lives of persons important to local, California, or national history.

(3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or

(4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition, the resource must retain integrity. The integrity of a resource is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [CCR Title 14, Section 4852(c)]. Resources that have been determined eligible for the National Register of Historic Places (NRHP) are automatically eligible for the CRHR.

Archaeological sites are usually evaluated under Criterion 4, the potential to yield information important in prehistory. An archaeological test program may be necessary to determine whether the site has the potential to yield important data. Imperial County, as the CEQA lead agency, makes the determination of eligibility based on the results of the test program.

AB 4239

AB 4239 established the Native American Heritage Commission (NAHC) as the primary government agency responsible for identifying and cataloging Native American cultural resources. The bill authorized the Commission to act in order to prevent damage, and insure Native American access, to sacred sites and authorized the Commission to prepare an inventory of Native American sacred sites located on public lands.

Public Resources Code 5097.97

No public agency and no private party using or occupying public property or operating on public property under a public license, permit, grant, lease, or contract made on or after July 1, 1977, shall in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the United States 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.

Public Resources Code 5097.98 (b) and (e)

Public Resources Code 5097.98 (b) and (e) require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the NAHC-identified Most Likely Descendants (MLDs) to consider treatment options. In the absence of MLDs or of a treatment acceptable to all parties, the landowner is required to reinter the remains elsewhere on the property in a location not subject to further disturbance.

California Health and Safety Code, Section 7050.5

California Health and Safety Code, Section 7050.5 makes it a misdemeanor to disturb or remove human remains found outside a cemetery. This code also requires a project owner to halt construction if human remains are discovered and to contact the county coroner.

Paleontological Significance Criteria

CEQA Guidelines Appendix G provides a checklist of questions that a lead agency should typically address if relevant to a project's environmental impacts. Appendix G Section (V)(c) asks if the project will directly or indirectly destroy a unique paleontological resource, site, or unique geological feature.

The Society of Vertebrate Paleontology (SVP), a national organization, has established a set of procedures and standards for assessing and mitigating impacts to vertebrate paleontological resources (UltraSystems 2014a).

Guidelines proposed by Eric Scott and Kathleen Springer (2003) of the San Bernardino County Museum have been proposed to identify the criteria by which paleontological resources can be considered of significant scientific interest (UltraSystems 2014a).

B. LOCAL

Cultural Resources

Imperial County General Plan

The Imperial County General Plan provides goals, objectives, and policies for the identification and protection of significant cultural resources. Specifically, the Open Space Element of the General Plan includes goals, objectives, and policies for the protection of cultural resources and scientific sites that emphasize identification, documentation, and protection of cultural resources. **Table 4.7-1** provides a consistency analysis of the goals, objectives and policies of the Imperial County General Plan relevant to cultural resources as they relate to the proposed Project. While this EIR analyzes the Project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d) and can be a source of substantial evidence in support of a consistency finding, the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 4.7-1
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Goals, Objectives and Polices	Consistent with General Plan?	Analysis
CONSERVATION AND OPEN SPACE ELEMENT		
Preservation of Cultural Resources		
Goal 3: Important prehistoric and historic resources shall be preserved to advance scientific knowledge and maintain the traditional historic element of the Imperial Valley landscape.	Yes	The proposed Project would not impact any known prehistoric or historic resources of national, state, or local significance or relatively intact resources that provide unique information about the prehistory or historic development of the Imperial Valley and its surrounds. Mitigation Measures 4.7.1a, 4.7.1b, 4.7.2, 4.7.3, 4.7.4a, and 4.7.4b are identified to address impacts should any archaeological sites, unrecorded subsurface archaeological resources, subsurface human resources, or unknown fossil resources be identified. Therefore, the proposed Project is consistent with this goal.
Objective 3.1 Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.	Yes	A cultural resources survey was conducted for the proposed Project. As discussed under Impact 4.7.1, six archaeological sites are located on the

TABLE 4.7-1
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Goals, Objectives and Polices	Consistent with General Plan?	Analysis
		Cultural Resource Survey Area. Mitigation measure MM 4.7.1 has been identified to reduce potential impacts to the archaeological sites. No other known archaeological, ecological or historical sites with scientific value or cultural significance are known to exist within the Cultural Resource Survey Area. Therefore, the proposed Project is consistent with this objective.

4.7.2 ENVIRONMENTAL SETTING

The Project is on the southern edge of the Yuha Desert. The Yuha Desert comprises the southeastern portion of the Imperial Valley and the Colorado Desert. The climate is typical to Southern California desert which can reach over 120 degrees Fahrenheit in the summer and dip to near freezing during the winter. Average annual precipitation is less than five inches and the average annual evaporation rate exceeds three feet.

The solar field site parcels stretch across several miles of open land, mostly active agricultural fields, from the southwestern bank of the New River to the northern bank of the All-American Canal, immediately north of the U.S.-Mexican border. The location is approximately five miles southwest of the City of El Centro and five miles west of the twin cities of Calexico, California, and Mexicali, Baja California. The tiny rural community of Mount Signal is situated to the west of the bulk of the Project site. The Greeson Drain, a tributary to the New River, aligns southeast-northwest through the central portion of the Project area (UltraSystems 2014a).

A. PALEONTOLOGY

Paleontological resources (fossil or fossils) are the remains of prehistoric life, excluding any human remains that are characterized by geologic age (i.e. typically 10,000 years older or older). Paleontological resources also include the areas where fossils were collected and the sedimentary rock formations in which they were found as well as the impressions and casts created by organisms. Examples of fossil remains include marine shells: bones and teeth of fish, reptiles and mammals; leaf collections and fossilized wood (UltraSystems 2014a).

Paleontological Records Search

A paleontological resources records search was conducted at the San Diego Natural History Museum and the Colorado Desert District Stout Research Center. Both searches revealed no occurrences of fossils on the Cultural Resource Survey Area. The records search did reveal fossil localities approximately five miles to the southwest of the Cultural Resource Survey Area, where construction activities unearthed shells and of terrestrial invertebrates and bone fragments of terrestrial vertebrates within the lake deposits of the Ancient Lake Cahuilla beds (UltraSystems 2014a, p. 9).

Paleontological Field Survey

The Paleontological field survey revealed that the Cultural Resource Survey Area has experienced extensive surface disturbances, most likely a result of farming activities. The survey revealed freshwater shells and shell fragments in some of the agricultural fields and along the New River, but no fish bone or other vertebrate remains were found. There are remnants of the native landscapes associated in a few small areas along the New River and the Greeson Wash (UltraSystems 2014a, p. 11).

B. CULTURAL RESOURCES

Pre-History

The Imperial Valley region's prehistory can be marked by four broad cultural periods: the Paleo-Indian, the Archaic (Pinto), the Gypsum (Amorgosa) and the Late Prehistoric (Patayan). The Late Prehistoric period is observed at the northern ranges of the Project area (Quinn et. al. 2014, p. 15). These periods are characterized by methods of lifestyle, migration patterns and technological advances.

The Paleo-Indian period (12,000 to 7,000 Before Present [BP]) is believed to have been a hunting-gathering lifestyle of large, now extinct, animals. Tools used during this period were basic in the early stages and became more manufactured and advanced.

The Archaic period (7,000 to 3,500 BP) indicates a diversification of the hunting-gathering tradition, with more of a focus on hunting. Also noted is an indication of seasonal occupations: the desert margins in drier times and interior valleys during periods of rain.

The Amargosa Period (3,500 to 1,100 BP) is marked by technological changes to bow and arrow-like projectile points, milling of vegetal food increases. Drills, knives, scrapers, stone and shell beads, incised and painted pebbles are also observed during this period. The presence of shell and exotic non-local lithic materials represents an increase in trade with neighboring groups.

The Late Prehistoric (1,100 BP to 1774) Patayan culture was widely dispersed across the Colorado Desert and is identified by its progression of ceramic wares. Evidenced by temporary camps, it is believed that the Patayan traveled and traded broadly. They are believed to have moved from the Colorado River to Ancient Lake Cahuilla for its resources until its final evaporation suggests a disbursement to other, more resource-rich lands. It was the first culture to experience contact with Spanish explorers in 1774, marking the end of the period. The majority of archeological sites identified in the Salton Trough region date to this period.

History

Initial exploration of the region was marked by the journeys of Don Pedro in 1772 and followed by the Anza expeditions led by Juan Bautista de Anza who, in an effort to find an overland route to the South Sea, led the first crossing of the Colorado Desert and the Salton Trough to the San Gabriel Mission. By the Mexican Period, the Colorado Desert and the San Gorgonio pass, a route that is near the northern portion of the Project area, was being used by the Maricopa Indians to carry mail between Sonora and the California Coast (Quinn et. al. 2014, p. 28). It was also used by Native Americans from the San Gabriel Mission as a route to collect salt.

The San Gorgonia Pass route continued to be a route for explorers in search of more direct courses through the area until the Yuma to San Diego trail was established and named the official road from Sonora to Alta California in 1826 (Quinn et. al. 2014, p. 29).

Expansion of the Salton Trough area began to progress quickly with a U.S. funded expedition to survey a possible transcontinental railroad route in 1853. Trail systems through the Colorado Desert supported gold prospectors to Northern California in 1848, messengers on mail routes, mineral seekers to the Anza

Borrego Desert, travelers to Arizona and Riverside County, and cattlemen and merchants. The Bradshaw trail, approximately 48 miles north of the Cultural Resource Survey Area, was the first commercial road connecting San Gorgonio Pass and the Los Angeles area with Arizona in the 1860s (Quinn et. al. 2014, p. 29). It was heavily used trail for freight and was the main means of communication between Southern California and the eastern part of the United States. Traffic on the Bradshaw trail slowed with the completion of the Southern Pacific Railroad's east route to Santa Fe, and the onset of automobile transportation across the Colorado Desert (Quinn et. al. 2014, p. 31).

The introduction of an irrigation system, known as the Imperial Canal, marked recent developments of Imperial Valley as an area with land for cultivation. Irrigation of Imperial Valley began in 1902 with the Imperial Canal and was followed by real estate developments (Quinn et. al. 2014, p. 31). Canal levees were never complete and the unusual rainfall experienced in 1904-1905 resulted in an overflow of water and the creation of the Salton Sea. The availability of water, coupled with a population influx, made agricultural development in Imperial Valley the primary economic activity. The completion of the All-American Canal, which transported water from the Colorado River to Imperial Valley, and the introduction of electricity by the Imperial Irrigation District in 1936, allowed for further population growth and agricultural production in the Imperial Valley (Quinn et. al. 2014, p. 28).

Cultural Resources in the Project Area

Records Search

A cultural resources records search was conducted by the South Coastal Information Center (SCIC), a component of the California Historical Resources Information System (CHRIS). The SCIC archives site records, maps, and reports for cultural resources in San Diego and Imperial Counties. The SCIC is located at San Diego State University in San Diego, California. The purpose of the records search was to determine the extent of previous cultural resources investigations within a 1-mile radius of the Cultural Resource Survey Area, and to determine whether any archaeological sites or architectural resources have been previously identified within the Cultural Resource Survey Area. Materials reviewed as part of the records search included archaeological site records, historic maps and listings of resources on the NRHP, CRHR, California Points of Historical Interest (PHI), and California Historical Landmarks.

The records search revealed that 35 cultural resources technical studies have been conducted on or within one-mile of the Cultural Resource Survey Area (refer to **Table 4.7-2**). Of these 35 investigations, 29 were recorded as cultural resources. Of the 29 recorded cultural resources, nine are remnants of old wagon trails, three are prehistoric sites, and the remainder comprise segments of various historic canals. Of the 29 cultural resources, four are recorded as sites within the Cultural Resource Survey Area boundaries.

Native American Consultation

The NAHC conducted a Sacred Lands File search of the Cultural Resource Survey Area and found there were no Native American cultural resources within a half mile radius of the Project's Cultural Resource Survey Area within the Sacred Lands File inventory. In a letter dated September 18, 2012, the NAHC provided a list of Native American contacts who may have knowledge of culturally significant sites within the Cultural Resource Survey Area. This letter is included as part of **Appendix E** provided on the attached CD of Technical Appendices of this EIR.

All tribes and individuals on the list provided by the NAHC were sent notification letters with requests for comments or concerns relative to cultural resources in the Cultural Resource Survey Area.

Three responses have been received from the Tribes:

- Ms. Gwendolyn Parada, Chairperson of the La Posta Band of Mission Indians, October 22, 2012: Requested a Native American monitor be present during and ground disturbing work on the Project site.
- Mr. Preston J. Arrow-Weed (Quechan), the Ah-Mut-Pipa Foundation, November 5, 2012: Stated that there are many cultural resources and sites within the area of the Cultural Resource Survey Area.
- Mr. Desidero Vela, Ewiiaapaayp Band of Kumeyaay Indians, November 5, 2012: Requested Native American monitors be present for any subsurface excavation. Also noted that the Cultural Resource Survey Area was Kumeyaay territory when Lake Cahuilla was present, and after Lake Cahuilla was gone, it was the location where feuds between the Kumeyaay and other tribes occurred.

Field Survey

An archaeological field survey of 1,000 acres of the Cultural Resource Survey Area was conducted by UltraSystems on October 1 thru 5, 2012. The remaining approximate 2,600 acres were surveyed by UltraSystems post-crop production (for better visibility) on November 16 thru 20, 2012. Several solar field site parcels were previously surveyed within the last two years during the ISECS site survey, and therefore were not re-surveyed for the Wistaria Ranch Solar Energy Center project. No cultural resources were recorded as a part of the previous ISECS survey for the parcels on the proposed solar field site parcels. Large parcels were inspected at 50-meter (approximately 164 feet) transects. Parcels with 0 to 5 percent visibility were not surveyed. Parcels with 50 percent or greater visibility were surveyed at 15-meter (approximately 49 feet) transect intervals.

Discovered Resources

The survey revealed three isolated occurrences of historic artifacts and six historic resources of an archaeological nature. Two of the three isolated finds were metal parts and the third isolated find was a fragment of a coffee cup. The artifacts were not related to any other artifact, site or sites and were not collected.

The six cultural resources properties discovered during the course of the UltraSystems' survey are identified with respect to the CUP(s)[1] on which the resources were discovered. The cultural resources were recorded using Department of Parks and Recreation (DPR) 523 Forms and submitted to the SCIC. The SCIC assigned site numbers; site numbers beginning with P- are Primary numbers assigned by the SCIC; site numbers beginning with CA-IMP- are Trinomial number. It should be noted that a resource that is deemed historic does not preclude also being archaeological.

CUP 13-0036

P-13-014395 consists of the Woodbine Canal located between the boundaries of APNs 052-210-025, -026, -028, and -029.

P-13-014393 consists of the Wistaria Canal and its related laterals (Numbers 1 thru 7). The Wistaria Canal is the main historical canal that supplies water to most of the solar field site parcels.

1 Note that both P-13-014393 and P-13-014396 are single resources that cross more than one CUP. Accordingly, P-13-014393 and P-13-014396 are listed relative to each CUP affected.

CUP 13-0037

CA-IMP-12136 is located in the southwestern corner of APN 052-180-028, immediately northeast of the intersection of SR 98 and the Rockwood Road. CA-IMP-12136 consists of two concrete slabs, related foundations and walkways. An extensive refuse scatter consisting of over 100 assorted metal, glass and ceramic fragments were noted near the slabs. The remainder of CA-IMP-12136 is populated with non-indigenous trees including palm and willow.

CUP 13-0038

No resources were discovered on CUP 13-0038.

CUP 13-0039

No resources were discovered on CUP 13-0039.

CUP 13-0040

No resources were discovered on CUP 13-0040.

CUP 13-0041

No resources were discovered on CUP 13-0041.

CUP 13-0042

No resources were discovered on CUP 13-0042.

CUP 13-0043

CA-IMP-12134 is located on the northwest corner of APN 052-350-022, southeast of the intersection of Lyon Street and Brockman Avenue. Extensive grading has occurred on this two-acre parcel. One or more structures appear to have once been on the parcel, but no longer remain. Past excavation of a shallow east-west drainage ditch, which revealed a large glass, ceramic and metal deposit, demonstrates that subsurface deposits of historic materials are present at CA-IMP-12134.

CA-IMP-12135 Glass and ceramic refuse scatter were noted in the northeast corner of APN 052-350-021. Artifacts noted include nine assorted fragments of clear, cobalt and green glass, and five fragments of ceramic and porcelain objects. CA-IMP-12135 does not appear to be associated with any other historic or historic archaeological site in the immediate area.

CUP 13-0044

No resources were discovered on CUP 13-0044.

CUP 13-0045

No resources were discovered on CUP 13-0045.

CUP 13-0046

No resources were discovered on CUP 13-0046.

CUP 13-0047

No resources were discovered on CUP 13-0047.

CUP 13-0048

No resources were discovered on CUP 13-0048.

CUP 13-0049

No resources were discovered on CUP 13-0049.

CUP 13-0050

P-13-014393 consists of the Wistaria Canal and its related laterals (Numbers 1 thru 7). The Wistaria Canal is the main historical canal that supplies water to most of the solar field site parcels.

CUP 13-0051

P-13-014396 consists of the Greeson Drain, located midway through APN 052-210-020.

CUP 13-0052

P-13-014396 consists of the Greeson Drain, located midway through APN 052-210-020.

Previously Recorded Resources

The following previously recorded resources could not be found during the field surveys conducted by Ultrasystems and are assumed lost due to intensive agricultural activities since initially recorded:

- CA-IMP-3321 - a segment of a wagon road to Fort Yuman;
- CA-IMP-3322 - a segment of a wagon road to Fort Yuman;
- CA-IMP-3323 - a road segment; and
- CA-IMP-3325 - a large mesquite thicket.

4.7.3 IMPACTS AND MITIGATION MEASURES

A. STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on CEQA Guidelines, Appendix G. The Project would result in a significant impact to cultural and paleontological resources if it would result in any of the following:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

d) Disturb any human remains, including those interred outside of formal cemeteries.

Impacts to a CEQA-defined Historical Resource are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are materially impaired [CCR Title 14, Section 15064.5(b)]. CEQA-defined Historical Resources include resources that are eligible for the NRHP or the CRHR [CCR Title 14, Section 15064.5(a)]. Such resources can be buildings, structures, and facilities from the historic period and prehistoric and historic archaeological sites. Demolition or alteration of eligible buildings, structures, and features to the extent that they would no longer be eligible would result in a significant impact. Whole or partial destruction of eligible archaeological sites would result in a significant impact. In addition, significant impacts could occur as a result of: destruction or physical alteration of an eligible resource, and impacts to the integrity of setting (sometimes termed "visual impacts") of eligible buildings and above-ground structures or facilities.

B. METHODOLOGY

Cultural resources identified on the solar field site parcels were conservatively assumed to be eligible for the CRHR. Construction activities were analyzed to determine whether they have the potential to demolish or destroy the Historical Resource or to materially impair the characteristics that would make a resource eligible for the CRHR. Because further evaluation of potential buried resources would require

ground disturbance, the County has determined that for purposes of this EIR, buried resources will be treated as potentially significant historical resources. Accordingly, Section D, below, analyzes potential impacts to resources assumed to be eligible CEQA-defined paleontological, cultural or historical resources.

Phase II Archaeological testing was not performed at this time because Phase II evaluation work would needlessly disturb a site that may be left intact through avoidance measures. In addition, it is not practical to determine whether or not avoidance measures will be possible until the post-permit approval final engineering phase as the final engineering process will identify the exact location of Project facilities.

C. Issues Scoped Out as Part of the Initial Study

None of the criteria identified for Cultural Resources in Appendix G of the CEQA Guidelines, were scoped out as part of the Initial Study.

D. Project Impacts and Mitigation Measures

Impacts to Identified Archaeological Sites

Impact 4.7.1 Archaeological sites CA-IMP-12134, CA-IMP-12135, P-13-014393, CA-IMP-12136, P-13-014395, P-13-014396 could be inadvertently damaged during construction of the proposed Project. These sites could contain intact buried resources of cultural significance. Because further evaluation of these potential buried resources would require ground disturbance of the areas, the County has determined that for purposes of this EIR, it will treat the resources as potentially significant historical resources. Thus, a **potentially significant impact** is identified with regard to identified archaeological sites.

CUPs[2] 13-0036, 13-0037, 13-0043, 13-0050, CUP 13-0051, and 13-0052

Construction

The discussion of construction addresses direct impacts to the archaeological sites identified for each CUP. Potential for indirect impacts associated with human activity currently occur in association with existing agricultural activities. However, while the amount of human activity on the solar field site parcels would increase during construction of each CUP, all on-site construction workers would have taken a Worker Environmental Awareness Program (WEAP) to inform workers of potential discoveries and appropriate protocol. Upon completion of construction, the CUPs would be fenced and secured to limit access only to employees or other authorized personnel.

CUP 13-0036

P-13-014393 (CUP 13-0036, 13-0050) consists of the Wistaria Canal and its related laterals (Numbers 1-7). The Wistaria Canal is the main historical canal that supplies water to most of the solar field site parcels. P-13-014393 has the potential for intact buried deposits and could possibly yield additional information important to the understanding of the history of the region. However, the proposed Project calls for the Wistaria Canal and laterals to be left intact. Therefore, potential for damage to P-13-014393 is considered a **less than significant impact**.

[2] The impacts assessed here and elsewhere in this cultural resources section would apply to the Phased CUP Scenario regardless of whether an individual CUP or groups of CUPs were developed at a time.

P-13-014395 consists of the Woodbine Canal located between the boundaries of Assessor's Parcel Numbers (APNs) 052-210-025, -026, -028, and -029. P-13-014395 has the potential for intact buried deposits and could possibly yield additional information important to the understanding of the history of the region. However, the proposed Project calls for the Woodbine Canal and Laterals to be left intact. Therefore, disturbance to P-13-014395 is considered a **less than significant impact**.

CUP 13-0037

CA-IMP-12136 consists of two concrete slabs, related foundations and walkways. An extensive refuse scatter consisting of over 100 assorted metal, glass and ceramic fragments were noted near the slabs. The remainder of CA-IMP-12136 is populated with non-indigenous trees including palm and willow. CA-IMP-12136 has the potential for intact buried deposits and could possibly yield additional information important to the understanding of the history of the region. Therefore, damage to CA-IMP-12136 is considered a **potentially significant impact**.

CUP 13-0038

No archaeological resources were discovered on CUP 13-0038. Therefore, **no impact** would occur with regard to unevaluated archaeological sites in association with construction of CUP 13-0038.

CUP 13-0039

No archaeological resources were discovered on CUP 13-0039. Therefore, **no impact** would occur with regard to unevaluated archaeological sites in association with construction of CUP 13-0039.

CUP 13-0040

No archaeological resources were discovered on CUP 13-0040. Therefore, **no impact** would occur with regard to unevaluated archaeological sites in association with construction of CUP 13-0040.

CUP 13-0041

No archaeological resources were discovered on CUP 13-0041. Therefore, **no impact** would occur with regard to unevaluated archaeological sites in association with construction of CUP 13-0041.

CUP 13-0042

No archaeological resources were discovered on CUP 13-0042. Therefore, **no impact** would occur with regard to unevaluated archaeological sites in association with construction of CUP 13-0042.

CUP 13-0043

CA-IMP-12134 is a two-acre rectangular parcel that has been graded and appears to have once had one or more structures on it, none of which remain. However, past excavation of a shallow east-west drainage ditch that revealed a large glass, ceramic and metal deposit, demonstrates that subsurface deposits of historic materials are at CA-IMP-12134. Likewise, CA-IMP-12134 has the potential for intact buried deposits and could possibly yield additional information important to the understanding of the history of the region. Therefore, damage to CA-IMP-12134 is considered a **potentially significant impact**.

CA-IMP-12135 is a glass and ceramic refuse scatter in the northeast corner of CUP 13-0043 with noted artifacts of nine assorted fragments of clear, cobalt and green glass, and five fragments of ceramic and porcelain objects. CA-IMP-12135does not appear to be associated with any other historic or historic archaeological site in the immediate area. Nevertheless, CA-IMP-12135 has the potential for intact buried deposits and could possibly yield additional information important to the understanding of the history of the region. Therefore, disturbance to CA-IMP-12135 is considered a **potentially significant impact** at CUP 13-0043.

CUP 13-0044

No archaeological resources were discovered on CUP 13-0044. Therefore, **no impact** would occur with regard to unevaluated archaeological sites in association with construction of CUP 13-0044.

CUP 13-0045

No archaeological resources were discovered on CUP 13-0045. Therefore, **no impact** would occur with regard to unevaluated archaeological sites in association with construction of CUP 13-0045.

CUP 13-0046

No archaeological resources were discovered on CUP 13-0046. Therefore, **no impact** would occur with regard to unevaluated archaeological sites in association with construction of CUP 13-0046.

CUP 13-0047

No archaeological resources were discovered on CUP 13-0047. Therefore, **no impact** would occur with regard to unevaluated archaeological sites in association with construction of CUP 13-0047.

CUP 13-0048

No archaeological resources were discovered on CUP 13-0048. Therefore, **no impact** would occur with regard to unevaluated archaeological sites in association with construction of CUP 13-0048.

CUP 13-0049

No archaeological resources were discovered on CUP 13-0049. Therefore, **no impact** would occur with regard to unevaluated archaeological sites in association with construction of CUP 13-0049.

CUP 13-0050

P-13-014393 consists of the Wistaria Canal and its related laterals (Numbers 1-7). The Wistaria Canal is the main historical canal that supplies water to most of the solar field site parcels. P-13-014393 has the potential for intact buried deposits and could possibly yield additional information important to the understanding of the history of the region. However, the proposed Project calls for the Wistaria Canal and laterals to be left intact. Therefore, damage to P-13-014393 is considered a **less than significant impact** at CUP 13-0050.

CUP 13-0051

P-13-014396 consists of the Greeson Drain located midway in APN 052-210-020. P-13-014396 has the potential for intact buried deposits and could possibly yield additional information important to the understanding of the history of the region. However, the proposed Project calls for the Greeson Drain and Laterals to be left intact. Therefore, damage to P-13-014396 is considered a **less than significant impact** at CUP 13-0051.

CUP 13-0052

P-13-014396 consists of the Greeson Drain located midway in APN 052-210-020. P-13-014396 has the potential for intact buried deposits and could possibly yield additional information important to the understanding of the history of the region. However, the proposed Project calls for the Greeson Drain and Laterals to be left intact. Therefore, damage to P-13-014396 is considered a **less than significant impact** at CUP 13-0052.

Operation

During Project operation and maintenance, no additional impacts to the archaeological sites would be anticipated at each CUP because the soil disturbance would have already occurred and been mitigated

during construction. Likewise, no indirect impacts would occur during Project operations because each CUP will be surrounded with an up to 7-foot chain link fence with 3-strand barb wire placed at the top, extending to a total of up to 8 feet. The fence will be monitored periodically to detect any intrusion. Therefore, a **less than significant impac**t to archeological resources would occur at CUPs 13-0036, 13-0037, 13-0043, 13-0050, CUP 13-0051 and CUP 13-0052 during Project operation.

Decommissioning

Decommissioning activities will consist of the removal of solar panels and related utility equipment. During the decommissioning phase of the Project, earth-moving activities similar to those occurring during Project construction would disturb CUPs 13-0036, 13-0037, 13-0043, 13-0050, CUP 13-0051 and CUP 13-0052. However, the ground disturbance that will occur as a result of decommissioning will be in the same locations of disturbance that occurred during Project construction of each CUP. As such, no further disturbance of potential cultural resources is expected to take place during decommissioning (UltraSystems 2014b). Therefore, no further impacts to archaeological sites would occur. As a result, impacts to archaeological sites during decommissioning are considered **less than significant** for CUPs 13-0036, 13-0037, 13-0043, 13-0050, CUP 13-0051 and CUP 13-0052.

FULL BUILD-OUT SCENARIO

Construction

No impacts to identified archaeological sites beyond those discussed above for CUPs 13-0036, 13-0037, 13-0043, 13-0050, CUP 13-0051 and CUP 13-0052 were noted to have the potential to occur during Project construction. However, these CUPs are part of the Full Build-out Scenario. Therefore, a **potentially significant** impact related to identified archaeological sites would occur during the construction of CUPs 13-0037 and 13-0043 as part of the Full Build-out Scenario regardless of whether it were developed under the Near-term Scenario (i.e. Full Build-out in Year 2016) or the Long-term Scenario (Full Build-out n Year 2024) for the Full Build-out Scenario.

Operation

During Project operation, no additional impacts to the archaeological sites within the Full Build-out Scenario would be anticipated because the soil disturbance would have already occurred and been mitigated during construction of CUPs 13-0036, 13-0037, 13-0043, 13-0050, CUP 13-0051 and CUP 13-0052. Therefore, a **less than significant** impact related to archaeological sites would occur during operation of the Full Build-out Scenario.

Decommissioning

Decommissioning activities will consist of the removal of solar panels and related utility equipment. During the Project decommissioning, earth-moving and ground disturbing activities similar to those occurring during construction would occur. However, the ground disturbance that will occur as a result of decommissioning will be in the same locations of disturbance that occurred during Project construction. As such, no further disturbance of potential cultural resources is expected to take place during decommissioning (UltraSystems 2014b). Further, any necessary mitigation or avoidance measures would have been identified and implemented during construction of CUPs 13-0036, 13-0037, 13-0043, 13-0050, CUP 13-0051 and CUP 13-0052. Therefore, no archaeological sites are anticipated to be discovered during Project decommissioning and impacts to archaeological sites are considered **less than significant** during decommissioning of the Full Build-out Scenario.

Mitigation Measures

CUPs[3] 13-0037 AND 13-0043

MM 4.7.1a Per CEQA Guidelines Section 15126.4(b)(3)(A), preservation in place is the preferred method of mitigating impacts to archaeological sites. Preservation of CA-IMP-12136, CA-IMP-12135, and CA-IMP-12134 shall be implemented to the extent feasible. However, if preservation in place is not feasible, CUPs 13-0037 and CUP 13-0043 shall be designed and constructed to avoid earth-moving activities within the immediate area (as defined by a 10-foot buffer radius around) CA-IMP-12136, CA-IMP-12135, and CA-IMP-12134. Avoidance measures shall be reflected on the final design plans submitted to the County for review and approval. Prior to any earth-moving associated with construction and decommissioning activities, construction fencing shall be placed around the immediate area of CA-IMP-12136, CA-IMP-12135, and CA-IMP-12134 as a means of keeping construction workers and equipment from disturbing the areas.

Timing/Implementation: *Prior to grading and during subsurface construction activities; during decommissioning activities within the immediate area of CA-IMP-12136, CA-IMP-12135, and CA-IMP-12134.*

Enforcement/Monitoring: *Archaeological Monitor and Imperial County Planning and Development Services Department.*

MM 4.7.1b If CA-IMP-12136, CA-IMP-12135, and/or CA-IMP-12134 cannot be avoided, a formal Phase II evaluation shall be conducted. The Phase II evaluation shall occur prior to initiation of any earth-moving activities within a 10-foot buffer radius around of CA-IMP-12136, CA-IMP-12135, and/or CA-IMP-12134 in order to assess the significance of the sites and avoid potential adverse impacts.

Phase II testing and evaluation procedures may include, but not be limited to the following techniques:

- Shovel test pits
- One meter square excavation units
- Surface collection
- Site mapping
- Soils profiles
- Soils sampling
- Artifact analysis
- Floral and faunal analysis
- Radiocarbon analysis
- Curation

These techniques are used if testing indicates a site is significant and is determined to be a "historically significant" under Section 15064.5 of the CEQA Guidelines and/or eligible for CRHR listing under PRC 5024.1.

[3] The mitigation measures required here and elsewhere in this section would apply to the Phased CUP Scenario regardless of whether an individual CUP or groups of CUPs were developed at one time.

Should the Phase II evaluation determine the presence of historical or archeological resource(s) that cannot be avoided, preservation measures shall be identified by a State-Registered Professional Archaeologist (RPA). If on-site preservation is determined infeasible, the RPA shall prepare a data recovery plan prior to commencing groundbreaking activities. The recovery plan shall describe provisions to record and document scientifically important information and, if advisable, collect and deposit excavated materials with the local California Historical Resources Information Center (CHRIS). Any recovered artifacts would be curated with a local museum. This will enable the collection of information that may be important to the prehistory or history of the local area, California, or the nation. Following data recovery, a qualified archaeological monitor shall be present during grading and subsurface construction within the areas of CA-IMP-12136, CA-IMP-12135, and/or CA-IMP-12134 to ensure undiscovered resources are protected.

Timing/Implementation: *Prior to grading and during subsurface construction activities; during decommissioning activities within the immediate area of CA-IMP-12136, CA-IMP-12135, and CA-IMP-12134.*

Enforcement/Monitoring: *RPA and Imperial County Planning and Development Services Department.*

Significance After Mitigation

Implementation of MM 4.7.1a uses avoidance as the primary mechanism to reduce impacts to sites CA-IMP-12136, CA-IMP-12135, and CA-IMP-12134. Where avoidance is not feasible, implementation of MM 4.7.1b requires a Phase II evaluation to determine potential listing eligibility of the resources. It should be noted that Phase II evaluation work before approval of final engineering plans is impractical because the exact location of the project structure will not be known until final engineering and conducting a Phase II evaluation at this time would needlessly disturb a site that may be left intact through avoidance measures. If Phase II evaluations become necessary after final engineering, then such evaluations will determine historic resources of an archeological character, the sites would be avoided, preserved in place, or a Phase III data recovery plan will be implemented by a qualified archaeological monitor. Although preservation in place is generally preferable, data recovery and curation would also adequately mitigate potentially significant impacts because information collected from these sites, if deemed appropriate through a Phase II evaluation, would preserve and yield important information about the history and settlement of California and the region. Thus, archeological sites would either be avoided, preserved in place, or a data recovery plan will be implemented by a RPA. Following implementation of mitigation measures MM 4.7.1a and 4.7.1b, potentially significant impacts to archaeological sites CA-IMP-12136, CA-IMP-12135, and CA-IMP-12134 within CUPs 13-0043 and CUP 13-0037 would be reduced to a level of **less than significant**.

Impacts to Unrecorded Subsurface Archaeological Resources

Impact 4.7.2 Unrecorded subsurface archaeological resources could be damaged during earth-moving activities. This is considered a **potentially significant impact**.

FULL BUILD-OUT SCENARIO/PHASED CUP SCENARIO

Construction

The Project is located in a region considered historic in relation to its surrounding proximity to the route to the San Gorgonio pass, as well as the connection to the Late Prehistoric period occupation in the northern ranges of the Cultural Resources Survey Area. This suggests that there is a potential for the

presence of archaeological resources in the subsurface of the Project area. The Project area has been previously disturbed by agricultural development. Farming activities have occurred within the agricultural fields surrounding the solar field site parcels from the 1930s to the present. The parcels were terraced, leveled and drainage tiles were installed to prepare the fields for agricultural activities (UltraSystems 2014b, pp. 34-35). Continued farming activities have included laser leveling, chiseling and subsoiling. The agricultural activities over the past 80 years in the immediate area have impacted soils to depths of five to six feet where the drainage tiles were placed (UltraSystems 2014b, pp. 34-35). Although, unlikely given the level and depth of historical disturbance, the remote possibility remains that unrecorded cultural resources could be present beneath the ground surface and that such resources could be exposed during Project construction. Therefore, the possibility of encountering or damaging unrecorded subsurface archaeological resources is considered a **potentially significant impact** during construction of either the Full Build-out Scenario (regardless of whether it were developed under the Near-term Scenario [Year 2016] or Long-term Scenario [Year 2024]) or the Phased CUP Scenario (individual CUPs or multiple CUPs).

Operation

During operation and maintenance of the Project, no additional impacts to unrecorded subsurface archaeological resources would be anticipated beyond those potentially occurring during construction. This is because the soil disturbance would have already occurred and been mitigated during construction. Therefore, both the Full Build-out Scenario and Phased CUP Scenario are anticipated to have a **less significant impact** with regard to the possibility of encountering or damaging unrecorded subsurface archaeological resources during Project operations.

Decommissioning

Decommissioning activities will consist of the removal of solar panels and related utility equipment. During the decommissioning of both the Full Build-out Scenario and Phased CUP Scenario, earth-moving activities similar to those proposed to occur during Project construction are anticipated to occur. However, the ground disturbance that will occur as a result of decommissioning will be in the same locations of disturbance that occurred during construction of each CUP. As such, no further disturbance of potential cultural resources is expected to take place during decommissioning (UltraSystems 2014b). Further, any damage to unrecorded subsurface archaeological resources would have been mitigated or avoided during construction. No unrecorded subsurface archaeological resources are anticipated to be discovered during decommissioning. Therefore, impacts to archaeological sites are considered **less than significant** during decommissioning of both the Full Build-out Scenario and Phased CUP Scenario (individual CUPs, or groups of CUPs).

Mitigation Measure

FULL BUILD-OUT SCENARIO/PHASED CUP SCENARIO

MM 4.7.2 Per CEQA Guidelines Section 15126.4(b)(3)(A), preservation in place is the preferred method of mitigating impacts to archaeological sites. To the extent feasible, any discovered archaeological resources shall be preserved in place. However, if preservation in place is not feasible, each CUP owner shall retain a Registered Professional Archaeologist (RPA). Due to the extensive disturbance by farming in the agricultural fields and the limited depth of disturbance for the proposed Project, archaeological monitoring is not required on the agricultural fields outside the three recorded historic period sites. Archeological monitoring shall be required during construction within 10 feet of the three recorded historic period sites. However, in the unlikely event that potential subsurface resources are discovered by construction

workers, the RPA shall be called to the site to investigate and monitor subsurface excavations within 100 feet of the potential resource. Monitoring activities shall be supervised by an RPA, who shall have the authority to determine the duration, intensity and inspection timing (from full-time to as-needed). The RPA shall be empowered to temporarily halt or divert construction operations within a reasonable distance from a find or resource exposure in order to determine if significant cultural resources are present, and if such resource would be adversely affected by continuing construction operations. The RPA shall immediately notify the Imperial County Planning and Development Services Department of such decisions.

Work shall not continue at the discovery site until the RPA, in coordination with Imperial County Planning and Development Services Department, conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR. If a potentially-eligible resource is encountered, then the archaeologist, lead agency, and Project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility for the CRHR and, if eligible, data recovery as mitigation. The data recovery plan shall identify methods for recovering the scientifically consequential information from and about the historical resource, and recordation/deposition of data/materials with the local California Historical Resources Information Center (CHRIS). Any recovered artifacts would be curated with a local museum. This will enable the collection of information that may be important to the prehistory or history of the local area, California, or the nation.

Timing/Implementation:	*During initial stages of ground-disturbing activity and possibly longer, depending on findings.*
Enforcement/Monitoring:	*Registered Professional Archaeologist (RPA), and the Imperial County Planning and Development Services Department.*

Significance After Mitigation

Implementation of mitigation measure MM 4.7.2 requires construction activities to be halted within a reasonable distance in the event that potential subsurface resources are discovered during construction. No further construction would occur until after an assessment of the resource by a RPA has been made. In addition, the data recovery plan would preserve any historical resource through appropriate recordation/deposition of data/materials with the local CHRIS. Following implementation of MM 4.7.2, impacts to unrecorded subsurface archaeological resources would be **less than significant** for both the Full Build-out Scenario and Phased CUP Scenario (individual CUPs, or groups of CUPs).

Impacts to Previously Unknown Subsurface Human Remains

Impact 4.7.3 Subsurface human remains, if present, could be impacted during Project construction. This is considered a **potentially significant impact**.

FULL BUILD-OUT SCENARIO/PHASED CUP SCENARIO

Construction

There is a possibility that human remains could be present beneath the ground surface of the solar field site parcels. If present, such remains could be exposed during earth-moving and ground disturbing activities. Therefore, the possibility of encountering subsurface human remains is considered a **potentially significant impact** during construction of both the Full Build-out Scenario and Phased CUP Scenario.

Operation

During operation of the Full Build-out Scenario and Phased CUP Scenario, no additional impacts to previously unknown subsurface human remains would be anticipated. Maintenance activities associated with Project operation would not involve the level of ground disturbing activities that occurred during construction. Therefore, **no significant** impact related to subsurface human remains would occur during operation of both the Full Build-out Scenario and Phased CUP Scenario.

Decommissioning

Decommissioning activities will consist of the removal of solar panels and related utility equipment. The ground disturbance that will occur as a result of decommissioning will be in the same locations of disturbance that occurred during Project construction. As such, no further disturbance of potential cultural resources is expected to take place during decommissioning (UltraSystems 2014b). Therefore, **no significant** impact related to subsurface human remains would occur during decommissioning of the Full Build-out Scenario and Phased CUP Scenario.

Mitigation Measure

FULL BUILD-OUT SCENARIO/PHASED CUP SCENARIO

MM 4.7.3 In the event that evidence of human remains is discovered, construction activities within 200 feet of the discovery shall be halted or diverted and the Imperial County Coroner shall be notified (Section 7050.5 of the Health and Safety Code). If the Coroner determines that the remains are Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) which shall designate a Most Likely Descendant (MLD) for the discovery (Section 5097.98 of the Public Resources Code). The designated MLD shall have 48 hours from the time access to the solar field site parcels is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the Public Resources Code). If no agreement is reached, the landowner shall rebury the remains with appropriate dignity where they will not be further disturbed (Section 5097.98 of the Public Resources Code). With regards to the new burial site, in order to protect it, the landowner shall either record the site with the NAHC or the appropriate California Historical Resources Information System Center; record an open space or conservation zoning designation or easement; or record a document with the county in which the property is located (AB 2641). If the remains are not Native American, then the coroner shall follow all applicable laws for removal and treatment of the remains.

Timing/Implementation: *During construction and decommissioning activities.*
Enforcement/Monitoring: *Imperial County Planning and Development Services Department, Imperial County Coroner in coordination with NAHC.*

Significance After Mitigation

Implementation of mitigation measure MM 4.7.3 requires construction activities to be halted or diverted in the event that human remains are discovered. The County Coroner and NAHC will be notified as appropriate. Following implementation of MM 4.7.3, potential construction impacts to unrecorded subsurface human remains would be **less than significant** for both the Full Build-out Scenario and Phased CUP Scenario.

Paleontological Resources

Impacts to Nonrenewable Fossil Remains

Impact 4.7.4 Fossil remains could be destroyed by excavation and other earth-moving activities. This is considered a **potentially significant impact**.

FULL BUILD-OUT SCENARIO/PHASED CUP SCENARIO

Construction

The entire Paleontological Resources Survey Area is located within the former lakebed of Ancient Lake Cahuilla (UltraSystems 2014a, p. 6). The Ancient Lake Cahuilla lakebed sediments lie below the surface soils. Lakebed sediments have been proven to contain fossils or fossil remains such as invertebrates, small vertebrates, and extinct larger mammals (UltraSystems 2014a, p. 11). Further, the San Diego Natural History Museum and the Colorado Desert District Stout Research Center suggest that the lakebed sediments within which the Cultural Resources Survey Area lies have been previously determined to be at least moderately sensitive for nonrenewable paleontological resources, both vertebrates and invertebrates (UltraSystems 2014a, p. 9).

No paleontological resources were observed during the field survey, likely due to the disturbed nature of the surface soils from farming practices on the solar field site parcels and its surroundings. As such, the upper layers of soil are unlikely to contain intact paleontological remains. However, the absence of fossils on the surface does not preclude the possibility of fossil presence within subsurface deposits (UltraSystems 2014a, p. 4). The potential of the proposed Project to impact nonrenewal paleontological resources is low in the disturbed surface sediments. In contrast, the potential for the proposed Project to impact nonrenewable paleontological resources in the subsurface of the undisturbed Ancient Lake Cahuilla sediments and underneath the older alluvium is high (UltraSystems 2014a, p. 12).

The proposed Project includes excavation that would disturb subsurface sediments at depths between 25 to 50 feet (WRS 2014). Therefore, Project-related drilling, excavation and other earth-moving activities have the potential to physically destroy non-renewable scientifically important fossil remains in these formations and sediments, resulting in a **potentially significant impact** for both the Full Build-out Scenario and Phased CUP Scenario.

Operation

During operations and maintenance of the Project, no additional impacts to nonrenewable fossil remains would be anticipated because the soil disturbance would have already occurred and been mitigated during construction. Therefore, impacts to nonrenewable fossil remains during operation of both the Full Build-out Scenario and Phased CUP Scenario (individual CUPs, or groups of CUPs) are considered **less than significant**.

Decommissioning

Decommissioning activities will consist of the removal of solar panels and related utility equipment. During Project decommissioning, no additional impacts to fossil remains would be anticipated because the area of ground disturbance will be the same as the locations of disturbance that occurred during construction. As such, no further disturbance of potential paleontological resources is expected to take place during decommissioning (UltraSystems 2014a). Therefore, impacts related to fossil remains during decommissioning of the Full Build-out Scenario and Phased CUP Scenario (individual CUPs, or groups of CUPs) are considered **less than significant**.

Mitigation Measures

FULL BUILD-OUT SCENARIO/ PHASED CUP SCENARIO

MM 4.7.4a Each CUP owner shall retain a qualified paleontologist. Due to the significant disturbance from agricultural activities to depths of 5 feet, paleontological monitoring shall take place during construction of the initial 10 percent of land area of each CUP for 2 days per week when ground disturbance is at a depth of 5 feet and deeper. Following that period, if no paleontological resources meeting the San Bernardino County Museum significance criteria are found, the Principal Paleontologist may review the procedures and, if warranted, reduce the rate of monitoring to one day per week. However, if paleontological sensitive soils (as defined per the Society of Vertebrate Paleontology) or paleontological resources (per significance criteria of the San Bernardino County Museum) are encountered, monitoring shall be increased to full-time within a radius of 100 meters of the location of the find. Full time monitoring may become necessary if the earth-moving operations continuously impact undisturbed paleontologically sensitive soils. A program to mitigate impacts on paleontological resources that are exposed shall be developed and implemented.

Timing/Implementation:	*During construction of the initial 10% of total solar field grading activities and possibly longer, depending on findings.*
Enforcement/Monitoring:	*Applicant and Imperial County Planning and Development Services Department.*

MM 4.7.4b Earth-moving operations impacting the soils five feet and deeper within the Project area shall be "spot-checked" up to two days per week by a RPA to determine whether undisturbed lakebed sediments have been encountered. During construction on the initial ten percent of total solar field grading, disturbance below 5 feet shall be monitored through "spot-checking" two days per week. If within that period no paleontological findings meeting the San Bernardino County Museum significance criteria are found, the Principal Paleontologist may review the procedures and, if warranted, reduce the rate of "spot-checking" to one day per week. If paleontologically sensitive soils, as defined by the Society of Vertebrate Paleontology (1995), are being impacted, or if paleontological resources meeting the San Bernardino County Museum significance criteria are encountered, they would be reported to the Principal Paleontologist and monitoring would be increased to full-time within a radius of 100 meters of the find. Full time monitoring may become necessary if the earth-moving operations continuously impact paleontological sensitive soils. A program to mitigate Project impacts on paleontological resources that are exposed shall be developed and implemented.

Paleontological monitors shall be equipped to salvage fossils as they are unearthed (to help avoid construction delays) and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Fossil specimens shall be curated by accessioning into an established, accredited museum repository with permanent retrievable paleontological storage. A

report of findings with an appended itemized inventory of specimens shall be prepared. Submittal of the report and inventory to the Imperial County Planning and Development Services Department, along with confirmation of the curation of recovered specimens into an established, accredited museum repository, shall signify completion of the program to mitigate impacts to paleontological resources.

Timing/Implementation: *During construction and during decommissioning activities that include disturbance three feet or deeper.*

Enforcement/Monitoring: *Applicant and Imperial County Planning and Development Services Department.*

Significance After Mitigation

Mitigation measures MM 4.7.4a, MM 4.7.4b and MM 4.7.4c require that a qualified paleontologist be present to monitor certain excavation construction and decommissioning activities within all CUPs (13-0036 thru 13-0052). The qualified paleontologist would be empowered to determine the level of monitoring necessary; to halt or divert construction away from large specimens; and to curate fossil specimens. In addition, paleontological monitoring shall be required if decommissioning activities reach a certain depth. Implementation of MM 4.7.4a and MM 4.7.4b would reduce impacts to fossil remains to **less than significant** for both the Full Build-out Scenario and Phased CUP Scenario.

4.7.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

A. CUMULATIVE SETTING

The geographic scope of the cumulative setting for cultural resources includes proposed, planned and reasonably foreseeable and approved projects and development in Imperial County outlined in Table 3.0-1 in Chapter 3.0. The Project area possesses the potential for significant cultural resources that, in many cases, have not been well documented or recorded. Thus, there is the potential for cumulative projects in Imperial County to disturb areas that may contain known or unknown cultural or paleontological resources.

B. CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative impacts to Archaeological and Historic Resources

Impact 4.7.5 Implementation of the proposed Project, in combination with proposed, approved, and reasonably foreseeable projects in the cumulative setting, has the potential to result in impacts to archaeological and historic resources. However, archeological and historical impacts are addressed on a project-by-project basis through the CEQA process. Therefore, this is considered a **less than cumulatively considerable impact**.

FULL BUILD-OUT SCENARIO/PHASED CUP SCENARIO

Construction

Cumulative development of the proposed, approved and reasonably foreseeable renewable energy projects identified in Table 3.0-1 in Chapter 3.0, Introduction to the Environmental Analysis and Assumptions Used, would result in the loss and/or degradation of archaeological and historic resources. The potential disturbance of human remains would also increase. These cumulative effects of development on cultural resources would be addressed on a project-by-project basis. Potential impacts to archaeological sites CA-IMP-12134, CA-IMP-12135, CA-IMP-12136 resulting from the proposed Project would be mitigated through implementation of MM 4.7.1a and MM 4.7.1b. Project-specific

mitigation measures would also reduce potential project impacts to unrecorded archaeological resources (MM 4.7.2) and human remains (MM 4.7.3) during construction of the proposed Project.

In addition, the potential exists for previously unrecorded subsurface archaeological resources and human remains to be located within the boundaries of the Project site and the cumulative projects listed in Table 3.0-1. Project-specific mitigation measures would also reduce potential project impacts to unrecorded archaeological resources (MM 4.7.2) and human remains (MM 4.7.3) during construction of the proposed Project.

Future projects in Imperial County with potentially significant impacts to archaeological and historical resources would be required to comply with federal, state, and local regulations and ordinances protecting cultural resources through implementation of similar project-specific mitigation measures during construction. Therefore, through compliance with regulatory requirements, standard conditions of approval, and mitigation measures MM 4.7.1a, MM 4.7.1b, MM 4.7.2 and MM 4.7.3, both the proposed Full Build-out Scenario and Phased CUP Scenario would have a **less than cumulatively considerable contribution** to impacts to archaeological and historical resources during Project construction. Likewise, both the Full Build-out Scenario and Phased CUP Scenario would result in a **less than cumulatively considerable impact** to archaeological and historic resources during Project construction.

Operation

During Project operations, no additional cumulative impacts to archeological or historical resources or human remains would be anticipated because the soil disturbance would have already occurred and been mitigated during construction. Therefore, both the proposed Full Build-out Scenario and Phased CUP Scenario would have a **less than cumulatively considerable contribution** to impacts to archaeological and historical resources during Project operations. Likewise, both the Full Build-out Scenario and the Phased CUP Scenario would result in **less than cumulatively considerable impacts** to archaeological and historic resources during Project operations.

Decommissioning

Decommissioning activities will consist of the removal of solar panels and related utility equipment. Despite the amount of disturbance occurring during decommissioning activities, additional cumulative impacts to archeological, historical resources or human remains are anticipated to have no additional impacts to archeological and historical resources because the ground disturbance that will occur as a result of decommissioning will be in the same locations of disturbance that occurred as a result of construction. As such, no further disturbance of potential archeological and historical resources is expected to take place during decommissioning (UltraSystems 2014b). Therefore, **no cumulatively significant impact** related to fossil remains would occur during decommissioning of either the Full Build-out Scenario or the Phased CUP Scenario.

Mitigation Measures

None required.

Significance After Mitigation

Implementation of Project-specific mitigation measures MM 4.7.1a, MM 4.7.1b, MM 4.7.2 and MM 4.7.3 would address potential impacts to archaeological and historic resources through construction monitoring, curation of resources, and proper handling of human remains if discovered. Therefore, following implementation of these mitigation measures, cumulative impacts associated with cultural resources would be **less than cumulative considerable**.

Cumulative Impacts to Paleontological Resources

Impact 4.7.6 Implementation of the proposed Project in combination with proposed, approved, proposed, and reasonably foreseeable development in the cumulative setting, has the potential to result in impacts to paleontological resources including fossil remains and fossil bearing geological formations. However, such impacts are addressed on a project-by-project basis through the CEQA process. Therefore, impacts to paleontological resources are considered **less than cumulatively considerable.**

Construction

There is a potential for paleontological resources on the solar field site and others in the geographic scope to be impacted during construction. A cumulative impact would occur if either the Full Build-out Scenario or Phased CUP Scenario, in combination with cumulative projects, would damage or destroy paleontological resources. However, with the implementation of mitigation measures MM 4.7.4a and MM 4.7.4b, both the Full Build-out Scenario and Phased CUP Scenario would have a less than significant impact on paleontological resources on a project-level and a **less than cumulatively considerable contribution** to cumulative impacts to paleontological resources during Project construction. Likewise, other cumulative projects would be required to comply with existing regulations and undergo CEQA review to assure that any impacts are appropriately evaluated and, if necessary, mitigated. Therefore, through compliance with regulatory requirements, standard conditions of approval, and mitigation measures MM 4.7.4a and MM 4.7.4b, both the Full Build-out Scenario and Phased CUP Scenario would have a **less than cumulatively considerable impact** on paleontological resources during Project construction.

Operation

During Project operation, no additional cumulative impacts to paleontological resources would be anticipated because the soil disturbance would have already occurred and been mitigated during construction. Therefore, a **less than cumulatively considerable contribution** to cumulative impacts to paleontological resources would occur during Project operations for both the Full Build-out Scenario and Phased CUP Scenario. Likewise, both the Full Build-out Scenario and the Phased CUP Scenario would result in **less than cumulatively considerable impacts** to paleontological resources during operation.

Decommissioning

Decommissioning activities will consist of the removal of solar panels and related utility equipment. Despite the amount of disturbance occurring during decommissioning activities, additional cumulative impacts to paleontological resources because the ground disturbance that will occur as a result of decommissioning will be in the same locations of disturbance that occurred as a result of construction. As such, no further disturbance of potential paleontological resources is expected to take place during decommissioning (UltraSystems 2014a). Therefore, a **less than cumulatively considerable contribution** to cumulative impacts to paleontological resources would occur during decommissioning for both the Full Build-out Scenario and Phased CUP Scenario. Likewise, a **less than cumulatively considerable impact** related to paleontological resources would occur during decommissioning of both the Full Build-out Scenario and the Phased CUP Scenario.

Mitigation Measures

None required.

Significance After Mitigation

Implementation of mitigation measures MM 4.7.4a and MM 4.7.4b requires that a qualified paleontologist be present to monitor ground disturbing construction activities on the solar field site

parcels. The qualified paleontologist would be empowered to determine the level of monitoring necessary, to halt or divert construction away from large specimens, and to curate fossil specimens. During decommissioning, MM 4.7.4c would require a paleontological monitor for excavations beyond a specific depth. Therefore, implementation of mitigation measures MM 4.7.4a, MM 4.7.4b and MM 4.7.4d would reduce impacts to paleontological resources to l**ess than cumulative considerable** for both the Full Build-out Scenario and the Phased CUP Scenario.