

## C.7 Cultural and Paleontological Resources

This section analyzes whether the Revised Project and PG&E Upgrades would result in any new significant impacts to cultural and paleontological resources that were not previously identified and disclosed in the 2010 Final EIR, or whether there would be a substantial increase in the severity of any previously identified impacts to these resources.

Two reports were prepared by Natural Investigations Company in 2014 for the PG&E Upgrades; these reports supported the impact assessment presented in this section. The first is the “Cultural Resources Inventory for the Panoche Valley Solar Farm Project Telecommunication Services, San Benito and Fresno Counties” (NIC, 2014a) and the second is “Cultural Resources Supplemental Letter Report, Panoche Valley Solar Farm Project Telecommunication Services” (NIC, 2014b).

### C.7.1 Environmental Setting

The following section describes any changes to the environmental setting that have occurred since 2010. Section C.7.1.1 describes any changes to the environmental setting that was presented in the 2010 Final EIR. Section C.7.1.2 describes the environmental setting for the area surrounding the PG&E transmission system upgrades.

#### C.7.1.1 Revised Solar Project

The cultural and paleontological environmental setting for the Revised Project site has remained substantially unchanged since approval of the 2010 Final EIR. The regional setting for cultural and paleontological resources remains the same as described in the 2010 Final EIR. No new cultural or paleontological sites have been identified within the project area. All ground disturbance for the Revised Project would occur within the previously surveyed study area for the Approved Project. The paleontological sensitivity of the underlying geology remains the same. The potential for encountering previously unidentified cultural or paleontological resources remains the same as analyzed in the 2010 Final EIR.

#### C.7.1.2 PG&E Upgrades

The PG&E Upgrades associated with the Revised Project include installation of approximately 17 miles of optical ground wire (OPGW) primarily on existing transmission towers between the Panoche Valley Solar Project site and the existing Panoche Substation in Fresno County. The telecommunications system upgrades also include construction of up to three new microwave communication towers and upgrades to an existing microwave tower. The PG&E transmission system upgrades would include eight new transmission structures that are required to tie the existing Moss Landing–Panoche 230 kV transmission line into the proposed PG&E switchyard, located within the Revised Project site boundaries. The new transmission structures would be installed by PG&E after site preparation is completed by the Applicant.

The environmental setting for these upgrades includes the area surrounding the Moss Landing–Panoche 230 kV transmission line between the project site and the Panoche Substation, the Call Mountains (west of the Panoche Valley), Panoche Mountain (east of the Panoche Valley), and the area surrounding the Helm Substation (approximately 13 miles southwest of the City of Fresno). Cultural and Paleontological Resources Assessments were prepared for the areas affected by the PG&E Upgrades (NIC, 2014a, b).

**Cultural Resources.** The cultural resources study area totals approximately 523 acres. The non-continuous study area includes a 500-foot buffer around each of 34 proposed work areas along the 17-mile transmission line corridor (AT&T cable site, 12 temporary pull/splice sites, three temporary landing zones,

eight temporary guard structures, nine ADSS wood pole work areas, and OPGW underground installation area) and around the offsite microwave towers on Call Mountain, on Panoche Mountain and at the Helm Substation (NIC, 2014a, b).

Cultural resources literature searches were conducted at two branches of the California Historical Resources Information System the Northwest Information Center and the Southern San Joaquin Valley Information Center. These searches indicate a total of 19 cultural resources have been previously recorded within a 0.25-mile search radius extending beyond the study described above. Of these 19 previously recorded resources, seven are located in the non-continuous study area for this document.

A cultural resources field survey was performed for the study area for the PG&E Upgrades. No cultural resources were newly identified. The Call Mountain microwave tower area, the Helm Substation microwave tower area, the Panoche Mountain microwave tower area, and the land encompassed within the Panoche Substation and adjacent power plants (Panoche Energy Center and Starwood-Midway) were not surveyed due, in part, to lack of access, and after results from the records searches and Sacred Lands File searches indicated that field surveys would not be necessary (NIC, 2014a, b).

Six of the seven known resources within the study area are not eligible for the NRHP or CRHR. Cultural resources that have been determined ineligible for the NRHP and CRHR are not required to be avoided by project design or implementation. Four of the ineligible resources are more than 28 meters (92 feet) from the proposed improvement areas, one is partially adjacent, and one (PG&E's Moss Landing–Panoche 230 kV transmission line) is overlapped by the proposed improvement areas. The seventh resource within the study area remains unevaluated (P-10-000046, CA-FRE-46) and would be avoided by the planned telecommunication improvements (NIC, 2014a, b).

The Native American Heritage Commission (NAHC) was contacted on September 15, 2014 and October 14, 2014 (specifically concerning the Panoche Mountain microwave tower site) regarding a search of their Sacred Lands File for traditional cultural resources within or near the cultural resources study area. Replies were received from the NAHC for Fresno County and San Benito County on September 22 and October 27, 2014, respectively, stating that the searches failed to indicate the presence of Native American sacred lands or traditional cultural properties in the immediate vicinity of the PG&E Upgrades. A response from the NAHC regarding a Sacred Lands File search for the APE associated with the Panoche Mountain microwave tower site was received on October 21, 2014 which indicated that there was no presence of Native American sacred lands or traditional cultural properties in the immediate vicinity of the project area. The Applicant's consultant then contacted each of the Native American tribes or individuals provided by the NAHC for Fresno County and San Benito County, in letters dated September 25 and October 28, 2014, respectively. Follow-up telephone calls were made on October 10 and November 13, 2014 (NIC, 2014a, b).

**Paleontological Resources.** A Paleontological Settings Memorandum for the PG&E transmission line ROW was prepared by Natural Investigations Co. (NIC, 2014a). Portions of the PG&E ROW are underlain by sediments that are considered to have a moderate to high potential for sensitive paleontological resources. These include the Tulare Formation, Older Alluvium, Moreno Shale. Ground disturbing activities in portions of the ROW underlain by these sediments have the potential to impact paleontological resources. Descriptions of these formations are summarized below (NIC, 2014a).

Geologic maps indicate the Tulare Formation underlies the belt of low foothills along the northeast and southeast borders of the Panoche Valley, and also forms the edge of the alluvial fan along the western edge of the San Joaquin Valley north and south of Panoche Creek (Dibblee and Minch 2007a, 2007b, 2007c). The formation is crossed by the transmission line ROW in Sections 19, 20 and 21 of T15S, R11E

as it heads east from the Panoche Valley. This formation is known to contain highly significant vertebrate fossils and is considered to have a high paleontological potential. Through much of the San Joaquin Valley the Tulare Formation is generally found at depth below the Riverbank Formation (Lettis and Unruh, 1991), but along the margins of the Coast Ranges uplift has brought the formation to the surface.

Outcroppings of older surficial sediments Older Alluvium of late Pleistocene age are situated along the transmission line ROW across the southern base of the Panoche Hills (Dibblee and Minch 2007b, 2007c). This Older Alluvium was deposited between the middle to late Pleistocene (roughly 500,000 to 50,000 years ago) and is generally dissected by recent streams. This rock unit is known to contain significant fossils elsewhere in California, principally southern California, and has therefore been assigned a moderate paleontologic sensitivity for the project area. The Older Alluvium may have been exposed by streams between the ridges at the base of the hills where it may be difficult to distinguish from younger alluvial deposits or it may be buried by the younger alluvial deposits and modern soils at a depth of at least five feet.

A short segment of the transmission line ROW crosses the southern reaches of belts of the Moreno Shale that interfinger with the Older Alluvium in Sections 17, 18, and 20 of T15S, R12E before reaching the San Joaquin Valley (Dibblee and Minch, 2007b). This sediment has yielded highly significant terrestrial and marine vertebrate fossils and is considered to have a high paleontological potential. Fossil specimens have been found on or near the surface of the uplifted Cretaceous strata, described in this otherwise grassy foothill area as badlands.

A review of records maintained by the University of California Museum of Paleontology (UCMP, 2014), the PaleoBiology Database (n.d.), Fossilworks (n.d.), fossil lists, published and unpublished literature indicate that no known paleontologic resource localities are recorded in the PG&E ROW. Significant fossil specimens are known, however, from the project vicinity. Along the northern edge of the Panoche Valley north of the transmission line ROW in Section 13 of T15S, R10E, a horse fossil has been recorded from surface rocks of the Tulare Formation. Vertebrate fossils, including bear, horse, camel, and deer have also been recovered from the Tulare Formation in Little Panoche Valley to the north. Nearly 50 localities are listed in the UCMP database for the Tulare Formation in central California.

No significant fossils have been reported from the Panoche Formation in the vicinity of the PG&E alignment, although highly significant terrestrial and marine vertebrate fossils have been found in the Panoche Hills and Tumey Hills in the exposures of the neighboring Moreno Shale. Seventy-seven Moreno Shale localities are listed in the UCMP database in Fresno County, although none are currently known to be in the transmission line ROW. Elsewhere in California, older Pleistocene alluvial sediments (Qoa) have been reported to yield significant fossils of extinct animals from the Ice Age.

## **C.7.2 Applicable Regulations, Plans, and Standards**

No changes have occurred to the regulatory setting for cultural and paleontological resources since 2010.

## **C.7.3 Environmental Impacts and Mitigation Measures**

This section addresses whether the changes to the Approved Project would result in any new significant cultural/paleontological impacts or increase the severity of previously identified cultural/paleontological impacts. Section C.7.3.1 restates the significance criteria used in 2010 to determine whether any project changes result in any new or more severe significant impacts. Section C.7.3.2 summarizes the impacts and mitigation measures presented in the 2010 Final EIR for ease of reference. Section C.7.3.3 presents the updated impact analysis for the Revised Project, and Section C.7.3.4 addresses one change to an

adopted mitigation measure. Section C.7.3.5 addresses the environmental impacts that would occur as a result of the PG&E transmission system upgrades, and Section C.7.3.6 describes cumulative impacts.

### C.7.3.1 Significance Criteria

The following significance criteria for cultural and paleontological resources were derived from the Environmental Checklist in CEQA Appendix G. These significance criteria were used for the 2010 Final EIR and are also applied to this Supplemental EIR. They have been amended or supplemented, as appropriate, to address the nature of solar photovoltaic facilities and transmission line upgrades in general, and the full range of potential impacts related to this Revised Project in particular. An impact of the Revised Project and PG&E Upgrades would be considered significant and would require mitigation if it would:

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

Significance conclusions are presented regarding the significance of each identified cultural and paleontological resources impact, per the significance classification system provided in Section C.1 (Introduction to Environmental Analysis).

### C.7.3.2 Approved Project Impacts and Mitigation Measures

Table C.7-1 presents a summary of the impacts and mitigation measures applicable to the Approved Project.

**Table C.7-1. Summary of Impacts and Mitigation: Cultural and Paleontological Resources**

Impact No. and Text	Mitigation Required	CEQA Conclusion
Impact CR-1: Construction of the project may cause an adverse change to known historical resources or unique archaeological resources.	None	No Impact
Impact CR-2: Construction of the project may cause an adverse change to buried prehistoric and historical archaeological sites or buried Native American human remains.	CR-2.1: Archaeological monitoring during construction CR-2.2: Treat unknown archaeological resources accidentally discovered during construction	Class II
Impact CR-3: Operation of the project or decommissioning activities may impact previously unidentified historic or archaeological resources.	CR-2.3: Inadvertent discovery of human remains CR-2.4: Implement worker environmental awareness program	Class II
Impact CR-4: Contribute to cumulatively considerable effects on cultural resources.		Class II
Impact PA-1: Construction of the project would potentially destroy or disturb significant paleontological resources.	PA-1.1: Implement site-specific paleontological recovery PA-1.2: Paleontological monitoring during construction for unknown and accidentally discovered paleontological resources	Class II

**Table C.7-1. Summary of Impacts and Mitigation: Cultural and Paleontological Resources**

Impact No. and Text	Mitigation Required	CEQA Conclusion
Impact PA-2: Contribute to cumulatively considerable effects on paleontological resources.	PA 1.1: Implement site-specific paleontological recovery PA 1.2: Paleontological monitoring during construction for unknown and accidentally discovered paleontological resources	Class II

### C.7.3.3 Revised Solar Project Impacts

Four cultural and paleontological resources impacts are addressed in this section; cumulative impacts are evaluated in Section C.7.3.6.

***Impact CR-1: Construction of the project may cause an adverse change to known historical resources or unique archaeological resources (No Impact)***

No new historical resources or unique archaeological resources have been identified in the study area since 2010. Therefore, as described in the 2010 Final EIR, like the Approved Project, the Revised Project would have no impact on known historical or archaeological resources.

***Impact CR-2: Construction of the project may cause an adverse change to buried prehistoric and historical archaeological sites or buried Native American human remains (Class II)***

Although the area of ground disturbance is reduced under the Revised Project, the possibility of accidental discovery and disturbance of unknown archaeological resources or Native American human remains still exists. This impact would remain less than significant with implementation of the same previously adopted mitigation for the Approved Project (Class II).

***Impact CR-3: Operation of the project or decommissioning activities may impact previously unidentified historic or archaeological resources (Class II)***

The Revised Project occupies a smaller area than the Approved Project, and involves installation (and subsequent removal during decommissioning) of fewer solar panels. However, operation and decommissioning activities could still affect previously unidentified remains. This impact would remain less than significant with implementation of the same previously adopted mitigation for the Approved Project (Class II).

***Impact PA-1: Construction of the project would potentially destroy or disturb significant paleontological resources (Class II)***

Although the area of ground disturbance is reduced under the Revised Project, the potential for destruction or disturbance of significant paleontological resources still exists. This impact would remain less than significant with implementation of the same previously adopted mitigation for the Approved Project (Class II).

### C.7.3.4 Changes to Adopted Mitigation Measures

The Applicant has proposed changes to one mitigation measure adopted from the 2010 Final EIR for cultural and paleontological resources. The Applicant suggested change to Mitigation Measure CR-2.1 is discussed below. Mitigation Measures and APMs not shown in this section have not changed and are presented for reference only in Appendix 3. The changes to Mitigation Measure CR-2.1 are acceptable

because the extent of monitoring will be directed by the County and will be adequate to identify and evaluate resources discovered during construction.

**MM CR-2.1 Conduct cultural resource monitoring during construction.** A professional archaeologist shall monitor all subsurface construction disturbance as required by the County (with the exception of direct-driven support pipes beneath PV panels). The number of monitors present per day will be at the discretion of the County Department of Planning and Building, but shall be proportional to the amount of equipment actively excavating and shall reflect knowledge gained over the course of the project. Archaeological monitoring shall be directed by a Registered Professional Archaeologist familiar with the types of archaeological resources that could be encountered within the project area. At locations sensitive for Native American remains (i.e., within 200 meters of water courses), a Native American monitor shall be present. The County Department of Planning and Building shall ensure compliance with and effectiveness of the cultural resources monitoring program. Any unanticipated discovery shall be documented by the archaeologist on a Department of Parks and Recreation Primary Record and Archaeological Site Record (DPR 523) and further treated in accordance with MM CR-2.2 below. The Applicant shall fully fund all monitoring and documentation activities.

### **C.7.3.5 PG&E Upgrades Impacts**

The temporary and permanent cultural and paleontological resources impacts of the PG&E Upgrades are analyzed in this section. This analysis is based on the impact statements defined for the solar project, but only Impacts CR-2 and PA-1 apply to the PG&E Upgrades and are evaluated. Two of the impacts addressed for the solar project would not occur as a result of construction or operation of the PG&E Upgrades due to the lack of identified historical and unique archaeological resources and the negligible amount of ground disturbance associated with operation and decommissioning of the PG&E Upgrades. The following two impacts would not occur as a result of construction, operation, or decommissioning of the PG&E Upgrades:

- Impact CR-1: Construction of the project may cause an adverse change to known historical resources or unique archaeological resources
- Impact CR-3: Operation of the project or decommissioning activities may impact previously unidentified historic or archaeological resources

#### ***Impact CR-2: Construction of the project may cause an adverse change to buried prehistoric and historical archaeological sites or buried Native American human remains (Class III)***

Although the PG&E Upgrades would involve only a small amount of ground disturbance (such as for preparation of pulling/stringing sites and installation of new ADSS wood poles and interconnection TSPs), the possibility of accidental discovery and disturbance of unknown archaeological resources or Native American human remains still exists. This risk would be reduced by AMM CR-1 (Pre-Construction Worker Cultural Resources Training), AMM CR-2 (Resource Avoidance), AMM CR-3 (Construction Monitoring), AMM CR-4 (Unanticipated Discovery of Cultural Deposits), and AMM CR-5 (Unanticipated Discovery of Human Remains). These measures would be implemented as part of the proposed PG&E Upgrades. The full text of these Avoidance & Minimization Measures is presented in Table B-12 (Section B.11). This impact would be less than significant (Class III).

***Impact PA-1: Construction of the project would potentially destroy or disturb significant paleontological resources (Class III)***

Although the area of ground disturbance is minor under the PG&E Upgrades, the potential for destruction or disturbance of significant paleontological resources still exists. This risk would be reduced by AMM CR-1 (Pre-Construction Worker Cultural Resources Training), AMM CR-2 (Resource Avoidance), AMM CR-3 (Construction Monitoring), AMM CR-4 (Unanticipated Discovery of Cultural Deposits). These measures would be implemented as part of the proposed PG&E Upgrades. The full text of these Avoidance & Minimization Measures is presented in Table B-12 (Section B.11). This impact would be less than significant (Class III).

### **C.7.3.6 Cumulative Impacts**

The projects that have been constructed or proposed in the area of potential cumulative effects have changed since 2010, as described in Section D of this SEIR. Ground disturbance is reduced under the Revised Project, and no new historical resources or unique archaeological resources have been identified. Ground disturbance for the PG&E Upgrades would be very minor. However, the possibility of accidental discovery and disturbance of previously unidentified cultural and paleontological resources still exists. If encountered, these previously unidentified resources are expected to be similar to other buried resources throughout the region. Therefore, impacts to previously unidentified resources under the Revised Project or the PG&E Upgrades could combine with similar impacts from other projects that have been constructed or proposed in the area of potential cumulative effects. Other projects generally implement standard mitigation or avoidance measures similar to those described for the Revised Project and the PG&E Upgrades. Therefore the cumulative impact would be less than significant.

## **C.7.4 Summary of Impacts**

The significance of impacts for cultural and paleontological resources for the Revised Project and for the PG&E Upgrades is summarized in Sections C.7.4.1 and C.7.4.2. Section C.7.4.3 summarizes the impacts of all project components.

### **C.7.4.1 Revised Solar Project**

The impacts for cultural and paleontological resources summarized in Table C.7-1 remain accurate. With implementation of mitigation, the Revised Project will have the same less than significant impacts on cultural and paleontological resources as the Approved Project (Class II).

### **C.7.4.2 PG&E Upgrades**

The PG&E Upgrades will also result in similar potential adverse impacts to previously unknown archaeological sites, buried Native American human remains, and paleontological resources as the Approved Project. This risk would be reduced through implementation of AMMs CR-1 through CR-5, which would be implemented as part of the upgrades. All cultural and paleontological impacts related to the PG&E Upgrades would be less than significant (Class III).

### **C.7.4.3 Overall Significance of Impacts**

The overall impacts of the solar project and the PG&E upgrades would be less than significant with implementation of previously adopted mitigation and AMMs (Class II). All solar project impacts to cultural and paleontological resources would be less than significant with implementation of previously

adopted mitigation (Class II). All PG&E upgrades impacts to cultural and paleontological resources would be less than significant with implementation of AMMs. Cumulative impacts related to cultural and paleontological resources would be less than significant with incorporation of previously adopted mitigation and AMMs.

## **C.7.5 References**

NIC (Natural Investigations Company). 2014a. Cultural Resources Inventory for the Panoche Valley Solar Farm Project Telecommunication Services, San Benito and Fresno Counties, California. Citrus Heights, California. Prepared for Energy Renewal Partners, LLC. 13 November 2014.

\_\_\_\_\_. 2014b. Cultural Resources Supplemental Letter Report, Panoche Valley Solar Farm Project Telecommunication Services, Fresno County, California. Citrus Heights, California. Prepared for Energy Renewal Partners, LLC. 24 November 2014.