

## 4.5 Cultural Resources

### 4.5.1 Overview

This section describes the regulatory setting applicable to cultural and paleontological resources and the potential effects of the alternatives on cultural and paleontological resources in the study area. As described in Section 3.5, Cultural Resources, the study area is considered concurrent with the Covered Lands. Cumulative effects occur at the landscape or regional level; therefore, for purposes of evaluating the cumulative effects of the alternatives, a region-scale analysis is focused on growth in the Tehachapi Uplands, generally encompassing the Tehachapi Uplands portion of the Southern California Mountains Ecoregion, and the valley and foothill areas outside the Tehachapi Uplands. A description of the cumulative effects analysis area is provided in Section 4.5.7, Cumulative Effects, along with a discussion of potential cumulative effects of the proposed action.

#### 4.5.1.1 Regulatory Setting

Activities proposed under all the alternatives would be required to conform to Federal, state, and local laws and regulations that protect cultural resources, as described below. There are no Federal laws or regulations specific to paleontological resources; however, there is a relevant state law and local policy, which are also described below.

#### National Historic Preservation Act

Section 106 of the National Historic Preservation Act requires Federal agencies to consider the effects of their actions on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment on their analyses. Historic properties are defined as resources determined to be eligible for inclusion on the National Register of Historic Places (NRHP). These resources can be determined eligible for inclusion if they possess integrity and meet one of four criteria from 36 Code of Federal Regulations (CFR) 60. The resource must:

- represent an important historic theme,
- be associated with an important person,
- illustrate a distinctive type of architecture or design, or
- yield information important in history or prehistory.

In the event that a lead Federal agency determines that its actions could adversely affect a historic property, the Federal agency would seek consultation with the State Historic Preservation Office (SHPO) to determine appropriate mitigation to minimize the effects. This process could result in a memorandum of agreement that details the methods to resolve any adverse effects. Consultation regulations are required by Section 106 of the National Historic Preservation Act and set forth in 36 CFR 800.

Native American consultation is also required. Specifically, Federal agencies are also required to consult with Native American tribes to assess whether their actions have the potential to affect Native American resources, as set forth in regulations found in 36 CFR 800.4.

The following describes the categories of cultural resources that can be evaluated under Section 106 of the National Historic Preservation Act.

- **Archaeological Properties.** Archaeological properties or resources are places where the remnants of past cultures survive in a physical context that allows for the interpretation of these remains.
- **Historic Properties.** Historic properties or resources are historic buildings or structures that are 50 years or older.
- **Native American Resources.** Native American resources are sacred sites, graves and cultural objects.

### **California Environmental Quality Act and California Health and Safety Code**

Although actions of a Federal agency are not subject to the California Environmental Quality Act (CEQA), individual projects facilitated by Federal actions may be subject to CEQA compliance. CEQA requires consideration of historically significant resources, including paleontological resources (fossil remains of life that existed in prehistoric or geologic times, which can include plants, animals, and other organisms) that meet the criteria for listing on the California Register of Historic Resources. A resource may be determined eligible for listing in the California Register of Historic Resources if:

- the resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- the resource is associated with the lives of persons important in our past;
- the resource embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values; or
- the resource has yielded, or may be likely to yield, information important in prehistory or history.

Human remains are also sometimes associated with archaeological sites and are subject to the requirements of the California Health and Safety Code Section 7050.5:

...archaeological sites known to contain human remains shall be treated in accordance with the provisions of California Health and Safety Code Section 7050.5. If human remains are exposed during construction, California Health and Safety Code Section 7050.5 states that no further disturbance will occur until the County coroner has made the necessary findings as to origin and disposition pursuant to California Public Resources Code Section 5097.98. Construction must halt in the area of the discovery of human remains, the project proponent must ensure that the area is protected, and consultation and treatment will occur as prescribed by law.

### **Kern County General Plan Policies**

In addition, the Kern County General Plan (Kern County 2009) includes policies related to cultural and paleontological resources, as listed below.

- The County will promote the preservation of cultural and historic resources, which provide ties with the past and constitute a heritage value to residents and visitors (Policy 25).
- The County will coordinate with the California State University, Bakersfield, Archaeology Inventory Center.
- The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA (Implementation Measure L).
- In areas of known paleontological resources, the County should address the preservation of these resources where feasible (Implementation Measure M).

- The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents (Implementation Measure N).
- On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document (Implementation Measure O).

#### **4.5.1.2 Methods**

The analysis of the effects and the magnitude of direct, indirect, and cumulative effects is considered in terms of whether each alternative would directly or indirectly result in destruction or disturbance of cultural resources eligible for listing in the NRHP or in the destruction or disturbance of paleontological resources. In addition, the analysis of effects considers whether the alternatives would directly or indirectly result in the alteration or destruction of the existing historic context of study area. In general, potential effects on cultural and paleontological resources were assumed to be associated with ground-disturbance activities.

### **4.5.2 No Action Alternative**

#### **4.5.2.1 Cultural and Paleontological Resources**

##### **Commercial and Residential Development Activities**

No Commercial and Residential Development Activities would occur under the No Action Alternative. Therefore, there would be no direct or indirect effects on cultural or paleontological resources associated with Commercial and Residential Development Activities.

##### **Existing Ranch Uses**

Under the No Action Alternative, Existing Ranch Uses would continue to occur in the study area similar to existing conditions, and would be subject to the best management practices (BMPs) and use restrictions required pursuant to the Ranchwide Agreement, as currently set forth in the Interim Ranch-Wide Management Plan (RWMP) (Tejon Ranch Company 2009). All subsequent RWMPs would be required to similarly reflect BMPs that maintain the conservation values of the land, including cultural resources and the historic context of the lands, and would be reflected in the conservation easements required by the Ranchwide Agreement.

Existing Ranch Uses that involve new ground disturbance, such as farming and irrigation, and construction of roads, utilities, fences, ancillary ranch structures, and back-country cabins, could disturb cultural resources. Cultural resources are known to exist in the study area. As discussed in Section 3.5.2, Results of the Records Search, Field Surveys, and Native American Consultation, although no known cultural resources eligible for listing in the NRHP exist in the Lebec/Existing Headquarters Area, 22 sites eligible for listing in the NRHP are known to exist in the TMV Planning Area. Other resources located in TMV Planning Area Open Space as identified in the Phase I Report (W&S Consultants 2004) may also be eligible. In addition, the full remainder of the study area has not been surveyed, and cultural resource sites could also exist in those areas. As mentioned in Section 3.5.1.3, History, the continuation of Existing Ranch Uses is also important in terms of preserving the historic context of land uses.

In addition to the use restrictions and BMPs currently set forth in the Interim RWMP, Existing Ranch Uses would be required to comply with all applicable Federal, state, and local regulations on a

project-specific basis. For example, activities associated with Existing Ranch Uses that would require substantial ground disturbance would trigger the need for a local grading or building permit. It is anticipated that prior to issuance of the required permits, the local jurisdiction would require demonstration that potential effects on cultural resources would be avoided or minimized. Therefore, potential effects on cultural resources are considered to be minor.

Existing Ranch Uses that involve ground disturbance, such as farming and irrigation, and construction of roads, utilities, fences, ancillary ranch structures, and back-country cabins, could also disturb paleontological resources. As described in Section 3.5.3, Paleontological Setting, there are small areas near Castac Lake with features (older Pleistocene sediments, middens, or caves) that could include paleontological resources. As mentioned previously, the Ranchwide Agreement would require that land uses be conducted so as to maintain conservation values, which also include paleontological resources. Therefore, effects on paleontological resources associated with Existing Ranch Uses would be minor.

## 4.5.3 Proposed TU MSHCP Alternative

### 4.5.3.1 Cultural and Paleontological Resources

#### Commercial and Residential Development Activities

Ground disturbance associated with construction of Commercial and Residential Development Activities has the potential to adversely affect cultural resources. Under this alternative, 5,533 acres would be developed requiring grading with an estimated 75 million cubic yards of earth to be moved, including cut-and-fill.

As discussed in Section 3.5, Cultural Resources, surveys have been completed for the TMV Planning Area and Lebec/Existing Headquarters Area where Commercial and Residential Development Activities would occur. Based on these surveys, no known cultural resources determined to be eligible were identified in the Lebec/Existing Headquarters Area. Within the remainder of the surveyed area, 22 sites with the potential to be eligible were found in or near areas proposed for development. Although the TMV Planning Area and the Lebec/Existing Headquarters Area were surveyed and potentially eligible sites were found, there is a low potential for inadvertent discovery of cultural resources during ground disturbance.

Implementation of the mitigation discussed in Section 4.5.3.2, Mitigation Measures, would address potential effects on cultural resources by requiring preconstruction surveys for ground disturbing activities in areas not previously surveyed. Effects on cultural resources that have been deemed eligible for listing in the NRHP will be avoided by relocating the disturbance, minimized through protection of sensitive resources in place, or, if necessary, mitigated through data retrieval, all in consultation with a qualified archaeologist and SHPO as necessary.

In addition, all Commercial and Residential Development Activities would be subject to project-specific approvals from Federal, state, and local jurisdictions. It is anticipated that the local approval process would include provisions that would reduce adverse effects on cultural resources in the study area. For example, Kern County's approval of the TMV Project requires known sites be preserved in place (one may be subject to documentation requirements). Additional provisions include delineating a 25-meter buffer around known sites located within 100 meters of ground disturbance; including Native American monitors during any work at known sites; avoiding or preserving certain sites under geotextile matting and capping fill; and stopping work and following the steps and procedures specified in California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98 in the event of accidental discovery of human remains (Appendix J, MM 4.5-1 through 4.5-37 and MM 4.5-42) (Kern County 2009).

Thus, as set forth in the TMV Project approvals, all 22 NRHP-eligible sites in the TMV Specific Plan Development Envelope or that would be affected by the TMV Project will be preserved in place (one may be subject to data recovery). There are no cultural resources identified within the Oso Canyon Development Envelope and the two sites located on the border of the West of Freeway area will be avoided per the mitigation measures required by Kern County. Therefore, although Commercial and Residential Development Activities under the Proposed TU MSHCP Alternative have the potential to result in greater adverse effects on cultural resources compared with the No Action Alternative, the potential effects would be low.

As discussed under the No Action Alternative above, small areas near Castac Lake have the potential to contain older Pleistocene sediments, middens, or caves that could also contain paleontological resources. Implementation of the mitigation discussed in Section 4.5.3.2, Mitigation Measures, would reduce the effects on paleontological resources by requiring paleontological resources monitoring during excavations around Castac Lake. In addition, the local approval process includes provisions that would reduce adverse effects on paleontological resources similar to that described above. Kern County's approval of the TMV Project requires that a qualified professional vertebrate paleontologist with regional knowledge monitor all excavations areas in the Castac Lake basin identified as having a high sensitivity for Pleistocene sediments and redirecting work to other areas if paleontological resources are exposed until scientific significance of the find is assessed. Additional provisions include staking and flagging areas of potential paleontological resources to alert construction workers; assessment of potential finds by a paleontologist to determine the appropriate recovery requirements; implementing a data recovery program for all macro- and microfossils (vertebrate, invertebrate, and/or plant) recovered; and offering all fossil remains recovered during construction for curation at a recognized, permanent repository accredited with the American Association of Museums (Appendix J, MM 4.5-38 through 4.5-41) (Kern County 2009). Therefore, although potential effects on paleontological resources near Castac Lake would be greater than the No Action Alternative, the potential effects would be minor.

### **Plan-Wide Activities**

Plan-Wide Activities would occur under the Proposed TU MSHCP Alternative, similar to the Existing Ranch Uses under the No Action Alternative, with the exception that permanent ground disturbance would be limited to 200 acres. Similar to Existing Ranch Uses under the No Action Alternative, Plan-Wide Activities would be subject to the BMPs and use restrictions required pursuant to the Ranchwide Agreement, as currently set forth in the Interim RWMP. As discussed above, this entails maintaining the existing conservation values including cultural resources and the historic context of the Covered Lands consistent with the Ranchwide Agreement. All subsequent RWMPs must similarly reflect BMPs that protect the conservation values of the land, as carried through in the conservation easements required by the Ranchwide Agreement. Plan-Wide Activities that involve ground disturbance, such as farming and construction and maintenance of roads, utilities, fences, ancillary ranch structures, and back-country cabins, could destroy or disturb cultural or paleontological resources.

Cultural and paleontological resources are either known to exist or to have the potential to exist within the study area. As discussed in Section 3.5.2, Results of the Records Search, Field Surveys, and Native American Consultation, although there are no known cultural resources eligible for listing in the NRHP in the Lebec/Existing Headquarters Area, there are 22 eligible sites in the TMV Planning Area. Other resources located in TMV Planning Area Open Space as identified in the Phase I Report (W&S Consultants 2004) may also be eligible. In addition, the full remainder of the study area has not been surveyed although cultural resources could also exist in those areas. As mentioned in Section 3.5.1.3, History, continuation of ranching under Plan-Wide Activities is also important in terms of preserving the historic context of land uses. As described in Section 3.5.3, Paleontological

Setting, there are small areas near Castac Lake with features (older Pleistocene sediments, middens, or caves) that could include paleontological resources.

In addition to being conducted in a manner to maintain the existing conservation values, Plan-Wide Activities would be required to comply with all applicable Federal, state, and local regulations, and the mitigation measures in Section 4.5.3.2, Mitigation Measures. For example, the Plan-Wide Activities that would require substantial ground disturbance would trigger the need for pre-ground-disturbance surveys, monitoring for paleontological resources around Castac Lake, and the application of avoidance and minimization measures, as discussed below. It is anticipated that prior to issuance of any required permits, the local jurisdiction would require demonstration that potential effects on cultural resources would be avoided or minimized.

Furthermore, as mentioned above, ground disturbance under the Proposed TU MSHCP Alternative would be limited to 200 acres and the remaining Open Space Area (approximately 129,118 acres) would be preserved to protect the existing conservation values, which include cultural and paleontological resource values and the historic ranching context of the Covered Lands. This would result in approximately 23,001 acres of additional permanent open space preservation (protected by conservation easement or the equivalent) compared with the No Action Alternative.

For these reasons, potential effects on cultural resources from Plan-Wide Activities under the Proposed TU MSHCP Alternative would be minor and could be less than those associated with the No Action Alternative where ground disturbance in open space areas would not be limited to 200 acres.

#### 4.5.3.2 Mitigation Measures

As described above, the BMPs and use restrictions required pursuant to the Ranchwide Agreement (as currently set forth in the Interim RWMP) would reduce the effects of the Proposed TU MSHCP Alternative on cultural and paleontological resources. In addition, the following mitigation measures would reduce potential effects on cultural and paleontological resources that may be associated with the Proposed TU MSHCP Alternative.

- ***Protect Identified Significant Cultural Resources in Development Areas.*** All cultural resources in and adjacent to Development Area as identified in the Cultural Resources Survey Reports (W&S Consultants 2004, 2005, and 2006; ASM Affiliates 2010) determined eligible for the NRHP through consultation with the SHPO will be avoided/protected in place, or if necessary, mitigated through data retrieval, all in consultation with a qualified archaeologist and SHPO as necessary.
- ***Conduct Pre-Ground-Disturbance Survey in Open Space Areas Not Previously Surveyed.*** Prior to grading activities associated with Plan-Wide Activities in areas that have not previously been surveyed, a qualified archaeologist will conduct a survey of the Disturbance Area in order to identify sensitive archaeological resources. Effects on identified resources will be avoided by relocating the disturbance, minimized through protection of sensitive resources in place, or, if necessary, mitigated through data retrieval, all in consultation with a qualified archaeologist and SHPO as necessary.  
  
Prior to grading activities, all earthmoving and excavation contractor employees will attend a “tailgate” session informing them of the potential for inadvertently discovered cultural resources and/or human remains, and protection measures to be followed to prevent destruction of any and all cultural resources discovered on site (including the measures noted above and in compliance with California Health and Safety Code Section 7050.5).
- ***Conduct Paleontological Resources Monitoring During Excavations around Castac Lake.*** A qualified professional vertebrate paleontologist with regional experience will monitor all

excavations in areas around Castac Lake with Pleistocene sediments. If paleontological resources are exposed by excavation, work will be redirected and the paleontologist will assess the find for potential significance and determine the appropriate recovery requirements.

- ***Comply with Applicable Federal, State, and Local Cultural Resources Protection Requirements.*** All development within the study area would comply with Federal, state and local requirements, including completion of SHPO consultation, as relevant, and/or compliance with CEQA and other state and local laws. Site-specific minimization measures will be identified at the time that development is proposed through the planning review process. This compliance process would entail the following:
  - Conducting pre-ground-disturbance surveys,
  - Evaluating resources,
  - Consulting with SHPO through the National Historic Preservation Act requirements or CEQA requirements, as applicable,
  - Applying avoidance and minimization measures on a case-by-case basis to ensure that potential effects are addressed, and
  - Halting work in the case of an inadvertent discovery and consulting with the appropriate agency (SHPO, coroner, Native American tribe, as required).

## 4.5.4 Condor Only HCP Alternative

### 4.5.4.1 Cultural and Paleontological Resources

#### Commercial and Residential Development Activities

Potential effects on cultural and paleontological resources associated with Commercial and Residential Development Activities under the Condor Only HCP Alternative would be the same as those under the Proposed TU MSHCP Alternative.

#### Plan-Wide Activities

Potential effects on cultural and paleontological resources from Plan-Wide Activities under the Condor Only HCP Alternative would be the same as those under the Proposed TU MSHCP Alternative.

### 4.5.4.2 Mitigation Measures

As described above, the BMPs and use restrictions required pursuant to the Ranchwide Agreement (as currently set forth in the Interim RWMP) would reduce the effects of the Condor Only HCP Alternative on cultural and paleontological resources. In addition, the mitigation measures listed in Section 4.5.3.2, Mitigation Measures, for the Proposed TU MSHCP Alternative would also be implemented under the Condor Only HCP Alternative.

## 4.5.5 CCH Avoidance MSHCP Alternative

### 4.5.5.1 Cultural and Paleontological Resources

#### Commercial and Residential Development Activities

Under the CCH Avoidance MSHCP Alternative, the development of approximately 4,496 acres would require grading with an estimated 90 million cubic yards of cut-and-fill. Proposed development would be concentrated in the southwestern corner of the study area near Interstate 5 (I-5) and Castac Lake. More grading would be required in the western portion of the TMV Planning Area in order to achieve a higher density of development. This intensified development could potentially make it more difficult to avoid destroying or disturbing the 22 sites eligible for listing in the NRHP known to exist in the TMV Planning Area, which are located in or near areas proposed for development. No cultural resources eligible for listing in the NRHP were identified in the Lebec/Existing Headquarters Area. Although the TMV Planning Area has been surveyed, a low potential for accidental discovery of cultural resources remains.

Implementation of the mitigation discussed in Section 4.5.3.2, Mitigation Measures, would address potential effects on cultural resources by requiring preconstruction surveys for ground disturbing activities in areas not previously surveyed. Effects on cultural resources eligible for listing in the NRHP will be avoided by relocating the disturbance, minimized through protection of sensitive resources in place, or if necessary, mitigated through data retrieval, all in consultation with a qualified archaeologist and SHPO as necessary.

In addition, as indicated in Section 4.5.3.2, Mitigation Measures, all Commercial and Residential Development would be subject to project-specific approvals from Federal and state agencies and local jurisdictions. It is anticipated that the local approval process would include provisions that would reduce adverse effects on cultural resources in the study area. For example, the Kern County's approval of the TMV Project requires known sites be preserved in place (one may be subject to documentation requirements). Additional provisions include delineating a 25-meter buffer around known sites located within 100 meters of ground disturbance, including Native American monitors during any work at known sites, avoiding or preserving certain sites under geotextile matting and capping fill, and stopping work and following the steps and procedures specified in California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98 in the event of accidental discovery of human remains (Appendix J, MM 4.5-1 through 4.5-37 and MM 4.5-42) (Kern County 2009). Although Commercial and Residential Development Activities under the CCH Avoidance MSHCP Alternative have the potential to result in greater adverse effects on cultural resources compared with the No Action Alternative, the effects would be minor.

As discussed previously, small areas near Castac Lake have the potential to contain paleontological resources. The proposed concentrated development in this area could increase the potential to destroy or disturb these resources. However, implementation of the mitigation discussed in Section 4.5.5.2, Mitigation Measures, would reduce the effects on paleontological resources by requiring paleontological resources monitoring during excavations around Castac Lake. In addition, it is anticipated the local approval process would likely include provisions that would protect these resources similar to those required of the TMV Project (Appendix J, MM 4.5-38 through 4.5-41) (Kern County 2009). Therefore, although potential effects on paleontological resources near Castac Lake would be greater than the No Action Alternative, the potential effects would be minor.

#### Plan-Wide Activities

The extent and nature of Plan-Wide Activities under the CCH Avoidance MSHCP Alternative would be similar to those associated with the No Action Alternative with the exception that permanent

ground disturbance would be limited to 200 acres. Similar to Existing Ranch Uses under the No Action Alternative, Plan-Wide Activities would be subject to the BMPs and use restrictions required pursuant to the Ranchwide Agreement, as currently set forth in the Interim RWMP. As discussed above, this entails maintaining the existing conservation values including cultural resources and the historic context of the Covered Lands consistent with the Ranchwide Agreement. All subsequent RWMPs must similarly reflect BMPs that protect the conservation values of the land, as carried through in the conservation easements required by the Ranchwide Agreement.

As discussed in Section 3.5.2, Results of the Records Search, Field Surveys, and Native American Consultation, although there are no known cultural resources eligible for listing in the NRHP in the Lebec/Existing Headquarters Area, 22 eligible sites are in the TMV Planning Area. Other resources located in TMV Planning Area Open Space as identified in the Phase I Report (W&S 2004) may also be eligible. In addition, the full remainder of the study area has not been surveyed although cultural resources could also exist in those areas. As mentioned in Section 3.5.1.3, History, continuation of ranching under Plan-Wide Activities is also important in terms of preserving historic context of land uses. As described in Section 3.5.3, Paleontological Setting, there are small areas near Castac Lake with features (older Pleistocene sediments, middens, or caves) that could include paleontological resources. Plan-Wide Activities that involve ground disturbance, such as farming and construction and maintenance of roads, utilities, fences, ancillary ranch structures, and back-country cabins, could destroy or disturb cultural or paleontological resources.

Plan-Wide Activities would be required to comply with all applicable Federal, state, and local regulations as discussed in Section 4.5.5.2, Mitigation Measures. For example, Plan-Wide Activities that would require substantial ground disturbance would trigger the need for pre-ground-disturbance surveys, monitoring for paleontological resources around Castac Lake, and the application of avoidance and minimization measures, as discussed below. It is anticipated that prior to issuance of any required permits, the local jurisdiction would require demonstration that potential effects on cultural and paleontological resources would be avoided or minimized.

Furthermore, as mentioned above, ground disturbance under the CCH Avoidance MSHCP Alternative would be limited to 200 acres and the remaining Open Space Area (approximately 130,339 acres) would be preserved to protect the existing conservation values, which include cultural and paleontological resource values and the historic ranching context of the Covered Lands. This would result in approximately 24,022 acres of additional permanent open space preservation (protected by conservation easement or the equivalent) compared with the No Action Alternative.

Therefore, the potential effects on cultural resources from Plan-Wide Activities would be minor under the CCH Avoidance MSHCP Alternative and could be less than under the No Action Alternative, in which Existing Ranch Uses would not be limited to 200 acres.

#### **4.5.5.2 Mitigation Measures**

As described above, the BMPs and use restrictions required pursuant to the Ranchwide Agreement in (as currently set forth in the Interim RWMP) would reduce the effects of the CCH Avoidance MSHCP Alternative on cultural and paleontological resources. In addition, the mitigation measures listed in Section 4.5.3.2, Mitigation Measures, for the Proposed TU MSHCP Alternative, would also be implemented under the CCH Avoidance MSHCP Alternative.

## 4.5.6 Kern County General Plan Buildout Alternative

### 4.5.6.1 Cultural and Paleontological Resources

#### Commercial and Residential Development Activities

Ground disturbance associated with the construction of the proposed Commercial and Residential Development has the potential to adversely affect cultural resources. Under this alternative, 12,142 acres would be developed requiring grading with an estimated 222 million cubic yards of earth to be moved, including both cut and fill.

As discussed in Section 3.5, Cultural Resources, surveys have been completed for the TMV Planning Area and the Lebec/Existing Headquarters Area. Based on these surveys, no known cultural resources determined to be eligible were identified in the Oso Canyon Development Envelope or the Lebec/Existing Headquarters Area. Within the remainder of the surveyed area, 22 sites with the potential to be eligible were found in or near areas proposed for development. Under this alternative Commercial and Residential Development Activities would be dispersed throughout the study area. Some areas proposed for development have not been surveyed, and development could affect unknown cultural resources. There is a low potential for inadvertent discovery of cultural resources to occur during ground disturbance in areas that have been surveyed.

Implementation of the mitigation discussed in Section 4.5.3.2, Mitigation Measures, would address potential effects on cultural resources by requiring preconstruction surveys for ground-disturbing activities in areas not previously surveyed. Effects on cultural resources eligible for listing in the NRHP will be avoided by relocating the disturbance, minimized through protection of sensitive resources in place, or, if necessary, mitigated through data retrieval, all in consultation with a qualified archaeologist and SHPO as necessary.

In addition, all Commercial and Residential Development Activities would be subject to project-specific approvals from Federal, state agencies, and local jurisdictions. It is anticipated that the local approval process would also include provisions that would reduce adverse effects on cultural resources in the study area. For example, Kern County's approval of the TMV Project requires that known sites be preserved in place (one may be subject to documentation requirements). Additional provisions include delineating a 25-meter buffer around known sites located within 100 meters of ground disturbance; including Native American monitors during any work at known sites; avoiding or preserving certain sites under geotextile matting and capping fill; and stopping work and following the steps and procedures specified in California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98 in the event of accidental discovery of human remains (Appendix J, MM 4.5-1 through 4.5-37 and MM 4.5-42) (Kern County 2009).

Therefore, although Commercial and Residential Development Activities under the Kern County General Plan Buildout Alternative have the potential to result in greater adverse effects on cultural resources compared with the No Action Alternative, the potential effects would be minor.

As discussed under the No Action Alternative, paleontological resources are not known or expected to exist in the study area, with the exception of small areas near Castac Lake, which contain older Pleistocene sediments, middens, or caves that could also contain paleontological resources. Implementation of the mitigation discussed in Section 4.5.3.2, Mitigation Measures, would reduce the effects on paleontological resources by requiring paleontological resources monitoring during excavations around Castac Lake. In addition, the local approval process includes provisions that would reduce adverse effects on paleontological resources similar to that described above. Kern County's approval of the TMV Project requires that a qualified professional vertebrate paleontologist with regional knowledge monitor all excavations areas in the Castac Lake basin with

a high sensitivity for Pleistocene sediments, and that work is redirected to other areas if paleontological resources are exposed until scientific significance of the find is assessed. Additional provisions include staking and flagging areas of potential paleontological resources to alert construction workers; assessing potential finds by a paleontologist to determine the appropriate recovery requirements; implementing a data recovery program for all macro- and microfossils (vertebrate, invertebrate, and/or plant) recovered; and offering all fossil remains recovered during construction for curation at a recognized, permanent repository accredited with the American Association of Museums (Appendix J, MM 4.5-38 through 4.5-41) (Kern County 2009). Although potential effects on paleontological resources near Castac Lake would be greater than under the No Action Alternative, the potential effects would be minor.

### **Existing Ranch Uses**

Under the Kern County General Plan Buildout Alternative, Existing Ranch Uses would continue to occur in the study area similar to existing conditions. Existing Ranch Uses that involve ground disturbance, such as farming and irrigation, and construction of roads, utilities, fences, ancillary ranch structures, and back country cabins, could destroy or disturb cultural or paleontological resources.

As discussed in Section 3.5.2, Results of the Records Search, Field Surveys, and Native American Consultation, although there are no known cultural resources eligible for listing in the NRHP in the Lebec/Existing Headquarters Area, 22 sites eligible for listing in the NRHP are in the TMV Planning Area. Other resources located in TMV Planning Area Open Space as identified in the Phase I Report (W&S Consultants 2004) may also be eligible. In addition, the full remainder of the study area has not been surveyed, and cultural resource sites could also exist in those areas. As mentioned in Section 3.5.1.3, History, the continuation of Existing Ranch Uses is also important in terms of preserving historic context of land uses. As described in Section 3.5.3, Paleontological Setting, there are small areas near Castac Lake with features (older Pleistocene sediments, middens, or caves) that could include paleontological resources.

Existing Ranch Uses would be required to comply with all applicable Federal, state, and local regulations as discussed in Section 4.5.6.2, Mitigation Measures. For example, activities associated with Existing Ranch Uses that would require substantial ground disturbance would trigger the need for a grading or building permit. It is anticipated that prior to issuance of any required permits, the local jurisdiction would require demonstration that potential effects on cultural resources would be avoided or minimized.

As described in Chapter 2, Proposed TU MSHCP and Alternatives, the limitations of the Ranchwide Agreement would not apply under this alternative. However, even in the absence of the Ranchwide Agreement, historic ranch practices as reflected in the Interim RWMP are anticipated to continue (although they cannot be assured), and compliance with legal requirements governing ground-disturbing activities directly affecting cultural or paleontological resources would apply. For these reasons, similar to the No Action Alternative, the effects of Existing Ranch Uses under the Kern County General Plan Buildout Alternative would be minor.

### **4.5.6.2 Mitigation Measures**

As described above, the limitations of the Ranchwide Agreement would not apply under the Kern County General Plan Buildout Alternative. However, even in the absence of the Ranchwide Agreement, BMPs and use restrictions (as currently set forth in the Interim RWMP) are anticipated to continue (although they cannot be assured). Restrictions imposed by the TMV Project Approvals and by easement language in the Existing Conservation Easement Areas would apply under the Kern County General Plan Buildout Alternative. The mitigation measures listed in Section 4.5.3.2,

Mitigation Measures, for the Proposed TU MSHCP Alternative would also be implemented under the Kern County General Plan Buildout Alternative.

## 4.5.7 Cumulative Effects

The approach for analyzing cumulative effects on cultural and paleontological resources is described in Section 4.0.4, Methods for Assessing Cumulative Effects, which includes a list of reasonably foreseeable projects considered in this assessment. Specific to cultural and paleontological resources, the potential for cumulative effects are assessed in the context of the criteria discussed in Section 4.5.1.2, Methods, which includes each alternative's potential contribution to the destruction or disturbance of cultural resources eligible for listing in the NRHP or the destruction or disturbance of paleontological resources. As defined in Section 4.0.4.1, Cumulative Effects Analysis Area, and described in the introduction to this section above, the area analyzed in terms of cumulative effects on cultural resources generally encompasses the Tehachapi Uplands portion of the Southern California Mountains Ecoregion, and the valley and foothill areas outside the Tehachapi Uplands.

Cumulative effects on cultural and paleontological resources are indirect or secondary effects related to the future development that would be facilitated by issuance of an incidental take permit (ITP) by the Service. Whether or not such effects would be substantial cumulatively is primarily dependent on the mitigation measures put in place by other Federal, local, and state authorities pursuant to their project approval process.

### 4.5.7.1 Cultural Resources

As indicated in Section 3.5, Cultural Resources, prehistoric and historic use of the region was fairly dispersed. Within the immediate vicinity of the Covered Lands, the Fort Tejon State Historic Park is the only known historic resource. Archaeological sites have been documented in the Covered Lands and the potential remains for other previously undocumented sites to exist.

As discussed in this section, all of the alternatives have a potential to result in some effects on cultural resources. Adverse effects would occur primarily related to the potential disturbance of archaeological sites during ground-disturbing activities. When considered in the context of other reasonably foreseeable projects, it is possible that the proposed action could contribute to a cumulatively adverse effect on cultural resources associated with the substantial loss or destruction of cultural resources within the cumulative effects analysis area.

As indicated above, all the alternatives would be required to comply with applicable mitigation and BMPs to minimize any effects on cultural resources. It is presumed that other potential projects or activities within the cumulative effects study area would also be required to comply with similar regulations and requirements to address potential effects on cultural resources as those discussed above for the proposed action. Because existing regulations would require that adverse effects on cultural resources be adequately mitigated at the project-level, it is assumed that potential adverse effects would not become cumulatively considerable. Therefore, none of the alternatives would result in a substantial contribution to a cumulative effect on cultural resources.

### 4.5.7.2 Paleontological Resources

As indicated in Section 3.5, Cultural Resources, sedimentary deposits, which have the potential to contain Pleistocene fossils, can be found in the valley bottoms and in small areas near Castac Lake. However, the majority of the cumulative effects analysis area is underlain by igneous and metamorphic rocks of the mountain plutons, which are not known to yield fossiliferous material. While scattered commercial and residential development and other associated activities may have

resulted in the disturbance of some paleontological resources, it is presumed that most resources have not been disturbed within the cumulative effects analysis area.

As discussed in this section, all of the alternatives have a potential to result in some effects on paleontological resources. Adverse effects would occur primarily related to ground-disturbing activities. When considered in the context of other reasonably foreseeable projects, it is possible that the proposed action could contribute to a cumulatively adverse effect from the substantial loss or destruction of paleontological resources within the cumulative effects analysis area.

As indicated above, all the alternatives would be required to comply with applicable mitigation and BMPs to minimize any effects. It is presumed that other potential projects or activities within the cumulative effects study area would also be required to comply with similar regulations and requirements to address potential effects on paleontological resources. Because existing regulations would require that adverse effects be adequately mitigated at the project-level, it is assumed that potential adverse effects would not become cumulatively considerable. Therefore, none of the alternatives would result in a substantial contribution to a cumulative effect on paleontological resources.

## 4.5.8 Comparison of Alternatives

The exact contours, locations, and building designs of the Commercial and Residential Development Activities are not known. Therefore, the comparison of alternatives is based on the acreage of disturbance and cut-and-fill estimates and the preserved acres where Existing Ranch Uses or Plan-Wide Activities would occur for each of the alternatives as presented in Table 4.5-1.

**Table 4.5-1 Comparison of Disturbance Areas and Open Space Areas for Each Alternative**

	No Action Alternative	Proposed TU MSHCP/Condor Only HCP Alternative	CCH Avoidance MSHCP Alternative	Kern County General Plan Buildout Alternative
Ground disturbance (acres)	0	5,533	4,496	12,142
Cut/fill (cubic yards)	0	75 million	< 90 million	222 million
Population	0	11,441	9,957	22,800
Permanently preserved open space (acres) <sup>1</sup>	106,317 (75%)	129,318 (91%)	130,339 (92%)	119,392 (84%) <sup>2</sup>

<sup>1</sup> Percentage representative of percentage of total study area (Covered Lands) (141,886 acres).

<sup>2</sup> The Kern County General Plan Buildout Alternative includes both permanently preserved open space (34,130 acres) and restricted open space (85,262 acres).

Although the No Action Alternative would result in the least amount of open space protected by conservation easements, there would be no potential effects associated with Commercial and Residential Development Activities. By comparison, the remaining alternatives would all result in potential effects on cultural and paleontological resources from ground disturbance associated with Commercial and Residential Development Activities. Generally speaking, the potential for adverse effects would increase with the extent and intensity of the development. As indicated in Table 4.5-1, the CCH Avoidance MSHCP Alternative would result in the least amount of developed area; however, this alternative would require more extensive grading. The Proposed TU MSHCP Alternative and the Condor Only HCP Alternative would result in the next greatest amount of permanent ground disturbance and the Kern County General Plan Buildout Alternative would result in the greatest amount of ground disturbance. Therefore, the Kern County General Plan Buildout Alternative would

have the greatest potential for effects on cultural and paleontological resources. However, as indicated in the discussions above, it is anticipated that the potential effects under all the alternatives would be minor.

As discussed in this section, the potential effects of Existing Ranch Uses and Plan-Wide Activities on cultural and paleontological resources would be minor for all the alternatives. Under the Proposed TU MSHCP, Condor Only HCP, and CCH Avoidance HCP Alternatives, the extent of ground disturbance from Plan-Wide Activities would be limited to 200 acres, which could result in fewer effects compared to the No Action Alternative. By comparison, the Kern County General Plan Buildout Alternative would result in slightly less open space preservation compared to the other build alternatives and a slightly greater potential for effects compared to the other build alternatives. The potential effects of Existing Ranch Uses under the Kern County General Plan Buildout Alternative would be comparable to the effects from those uses under the No Action Alternative.