

## 5.12 Paleontological Resources

This section evaluates the potential impacts of the SV 50K/Moosa 50K Alternative on paleontological resources. This evaluation includes an assessment of the direct and cumulative effects of the SV 50K/Moosa 50K Alternative on paleontological resources (i.e., fossils). The evaluation was developed in coordination with the San Diego Natural History Museum.

### 5.12.1 Affected Environment

The SV 50K study area would be a subset of the larger SV 100K study area, and the Moosa 50K study area would be a subset of the larger Moosa 100K study area. Therefore, the following discussion refers to Section 3.12.1 (Paleontological Resources for the Proposed Action) and Section 4.12.1 (Paleontological Resources for the Moosa 100K Alternative) of this EIR/EIS for information on the Affected Environment as it applies to the SV 50K/Moosa 50K Alternative.

#### 5.12.1.1 Environmental Setting

The environmental setting for the SV 50K component of the SV 50K/Moosa 50K Alternative would be the same as described in Section 3.12.1.1 (Paleontological Resources for the Proposed Action) of this EIR/EIS, and the setting for the Moosa 50K component would be the same as described in Section 4.12.1.1 (Paleontological Resources for the Moosa 100K Alternative) of this EIR/EIS.

### Definition of Paleontological Resources and Sensitivity

Information on definitions of paleontological resources and resource sensitivities for the SV 50K/Moosa 50K Alternative would be the same as presented for the Proposed Action. Please refer to Section 3.12 (Paleontological Resources for the Proposed Action) of this EIR/EIS for this background information.

### Paleontological Sensitivity of Geologic Units in the SV 50K/Moosa 50K Study Area

As described in Section 3.12.1.1 (Paleontological Resources for the Proposed Action) and Section 4.12.1.1 (Paleontological Resources for the Moosa 100K Alternative) of this EIR/EIS, the following generalized geologic units with corresponding sensitivity for paleontological resources have been mapped within the SV 50K/Moosa 50K study area (see Figures 3.12-1 and Figure 4.12-1; Kennedy, 1999 and 2000; Tan, 2000 and 2002):

#### **SV 50K**

- Pre-batholithic and Batholithic Granitics ( $K_{g-gr}$  and  $K_{g-gdf}$ ) - sensitivity of zero
- Santiago Peak Volcanics ( $KJ_{ms}$  and  $KJ_{mv}$ ) - high sensitivity

- Poway Group ( $T_{st}$  and  $T_p$ ) - high sensitivity
- Landslides ( $Q_{ls}$ ) - zero to low sensitivity
- Alluvium/Colluvium ( $Q_{va}$ ) - low or marginal sensitivity

#### ***Moosa 50K***

- Peninsular Ranges Batholith ( $K_{g-gr}$  and  $K_{g-gdf}$ ) - sensitivity of zero
- Alluvium/Colluvium ( $Q_{oa}$  and  $Q_{al}$ ) - low or marginal sensitivity

### **5.12.1.2 Regulatory Setting**

Refer to Section 3.12.1.2 (Paleontological Resources for the Proposed Action) of this EIR/EIS for a discussion of the regulatory setting that applies to both the SV 50K and Moosa 50K components of this alternative.

## **5.12.2 Project Design Features**

The SV 50K/Moosa 50K Alternative would incorporate the same project design features to minimize impacts on paleontological resources as those described in Section 3.12.2 (Paleontological Resources for the Proposed Action) of this EIR/EIS.

## **5.12.3 Direct and Indirect Effects**

### **5.12.3.1 Thresholds of Significance**

The thresholds of significance used to evaluate paleontological resources impacts for the SV 50K/Moosa 50K Alternative would be the same as those used to evaluate impacts for the Proposed Action and the Moosa 100K Alternative. The thresholds are based on applicable criteria in the State CEQA Guidelines (CCR §§15000-15387), Appendix G. A significant impact on paleontological resources would occur if the SV 50K/Moosa 50K Alternative would:

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

### **5.12.3.2 Impact Analysis**

#### **Methodology**

The methodology used to evaluate impacts on paleontological resources at the SV 50K project site is the same as described in Section 3.12.3.2 (Paleontological Resources for the Proposed Action) of this EIR/EIS, and the methodology used to evaluate impacts on paleontological resources at the Moosa 50K project site is the same as described in Section 4.12.3.2 (Paleontological Resources for the Moosa 100K Alternative) of this EIR/EIS.

## **Analysis**

***Threshold 1: Directly or indirectly destroy a unique paleontological resource or site or geologic feature***

### **SV 50K and Moosa 50K Impacts**

The conclusions in Section 3.12.3.2 (Paleontological Resources for the Proposed Action) and 4.12.3.2 (Paleontological Resources for the Moosa 100K Alternative) of this EIR/EIS, that there would be potential to excavate or inundate geologic formations with high paleontological resource sensitivity, also applies to the SV 50K and Moosa 50K footprints. However, with implementation of the project design features listed in Section 3.12.2 (Paleontological Resources for the Proposed Action) of this EIR/EIS, significant impacts on paleontological resources due to the SV 50K/Moosa 50K Alternative would be reduced. Therefore, paleontological impacts due to the SV 50K/Moosa 50K Alternative would be less than significant.

### **Combined Impacts**

The potential impacts of the SV 50K/Moosa 50K Alternative would affect paleontologically sensitive sedimentary deposits at two separate locations. Thus, the total impact of the SV 50K/Moosa 50K Alternative is greater than that of either the Proposed Action or the Moosa 100K Alternative alone. However, implementation of the project design features listed in Section 3.12.2 (Paleontological Resources for the Proposed Action) of this EIR/EIS would occur at both the SV 50K and Moosa 50K project site. Therefore, paleontological impacts due to the combined impacts of the SV 50K and Moosa 50K components would be less than significant.

*The SV 50K/Moosa 50K Alternative would not directly or indirectly destroy a unique paleontological resource or site or geologic feature. Therefore, paleontological resource impacts due to the SV 50K/Moosa 50K Alternative would be less than significant.*

### **5.12.3.3 Mitigation Measures**

Impacts on paleontological resources would be less than significant. Therefore, no mitigation measures are required.

### **5.12.3.4 Residual Impacts after Mitigation**

No residual impacts would occur.

## **5.12.4 Cumulative Effects**

### **5.12.4.1 Other CIP Projects**

CIP projects that would contribute to cumulative paleontological impacts would include those projects that would also impact the Proposed Action and the Moosa 100K Alternative identified in Sections 3.12.4.1 and 4.12.4.1, respectively. These projects would include the Slaughterhouse Terminal Reservoir, Hubbard Hill Flow Regulatory Structure, North County Distribution Pipeline Flow Regulatory Structure, and Second Crossover Pipeline. The PEIR for the Regional Water Facilities Master Plan concluded that, if there is potential for sensitive paleontological resources to exist, as with the SV 50K/Moosa 50K Alternative, the Water Authority would implement project design features or mitigation measures that would reduce paleontological impacts to a less-than-significant level. Additional PEIR cumulative impact conclusions are discussed in Section 3.12.4.1 (Paleontological Resources for the Proposed Action). The conclusions regarding cumulative paleontological resource impacts for the Water Authority project listed above are incorporated into the cumulative paleontological analysis in Section 5.12.4.3 below.

### **5.12.4.2 ESP Projects**

Grading activities have been completed for the San Vicente Pipeline tunnel portal and the San Vicente Pump Station/Surge Control Facility; therefore, these ESP projects would not contribute to cumulative paleontological resources impacts, and are not addressed in the cumulative paleontological impact analyses in Section 5.12.4.3 below.

### **5.12.4.3 Other Planned Projects with CIP and ESP Projects**

This section evaluates the cumulative paleontological resource impacts of the SV 50K/Moosa 50K Alternative when considered in conjunction with the other planned projects listed in Table 5.2-1, and incorporates the cumulative paleontological impacts associated with the CIP and ESP projects described in the above sections. The following cumulative paleontological resources analysis addresses the significance threshold listed in Section 5.12.3 above.

#### ***Cumulative Threshold 1: Directly or indirectly destroy a unique paleontological resource or site or geologic feature***

Potentially sensitive paleontological resources exist within the SV 50K/Moosa 50K Alternative project area. Cumulative paleontological impacts for the SV 50K and Moosa 50K components of the SV 50K/Moosa 50K Alternative would be the same as those discussed in Section 3.12.4.3 (Paleontological Resources for the Proposed Action) and Section 4.12.4.2 (Paleontological Resources for the Moosa 100K Alternative) of this EIR/EIS. Cumulative paleontological impacts due to CIP and ESP projects and other cumulative projects in the vicinity of the SV 50K/Moosa 50K Alternative would be the same as those identified in Section 3.12.4.3 (Paleontological Resources for the Proposed Action) and Section 4.12.4.2 (Paleontological

Resources for the Moosa 100K Alternative) of this EIR/EIS. Even when considering the combined cumulative impacts of the two project sites, with incorporation of project design features listed in Section 3.12.2 (Paleontological Resources for the Proposed Action), effects would not be cumulatively considerable. Cumulative impacts would be less than significant.

*Cumulative paleontological resource impacts due to construction of the SV 50K/Moosa 50K Alternative, when combined with construction impacts associated with the CIP and ESP projects listed above, and the other planned cumulative projects listed in Table 5.2-1, would be less than significant.*

This page is intentionally left blank.