5.7 Cultural Resources

This section evaluates the potential impacts of the SV 50K/Moosa 50K Alternative on cultural resources. The evaluation includes an assessment of the direct, indirect, short-term, long-term, and cumulative effects of the SV 50K/Moosa 50K Alternative on historic-period buildings and structures, and prehistoric or historic-period archaeological resources. The evaluation is based on a Supplemental Inventory and National Register Testing Report prepared by ASM Affiliates (ASM, 2007) and the Native American Consultation Report prepared by Tierra Environmental Services (Tierra, 2007). These reports comprise Appendix D to this EIR/EIS. Because Appendix D has confidential site location information, it is bound under separate cover and will not be circulated for general public review. Appendix D is available for review by qualified individuals at the Water Authority’s San Diego office located at 4677 Overland Avenue, San Diego, CA 92123.

5.7.1 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 3.7.1 (Cultural Resources for the Proposed Action) and Section 4.7.1 (Cultural Resources for the Moosa 100K Alternative) for information on the Affected Environment as it applies to the SV 50K/Moosa 50K Alternative.

5.7.1.1 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 3.7.1.1 (Cultural 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 4.7.1.1 (Cultural Resources for the Moosa 100K Alternative) of this EIR/EIS.

5.7.1.2 Regulatory Setting

The regulatory setting for the SV 50K component of the SV 50K/Moosa 50K Alternative would be the same as described in Section 3.7.1.2 (Cultural 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 4.7.1.2 (Cultural Resources for the Moosa 100K Alternative) of this EIR/EIS.

5.7.2 Project Design Features

The SV 50K/Moosa 50K Alternative would incorporate the same project design features to minimize impacts on cultural resources as those described in Sections 3.7.2 and 4.7.2 (Cultural Resources for the Proposed Action and Moosa 100K Alternative, respectively) of this EIR/EIS including, but not limited to, training of construction personnel; fencing, signage and monitoring of sites near construction limits; and monitoring of sites during initial grading within
construction limits where there is a potential for unanticipated and unknown buried cultural deposits, and protection, identification, and evaluation of observed historic properties.

5.7.3 Direct and Indirect Effects

5.7.3.1 Thresholds of Significance

Thresholds used to evaluate potential cultural resources impacts for the SV 50K/Moosa 50K Alternative are 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 cultural resources (historical and/or archaeological) would occur if the SV 50K/Moosa 50K Alternative would:

1. Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in §15064.5 of the State CEQA Guidelines and §106 of the NHPA.
2. Disturb any human remains, including those interred outside of formal cemeteries.

5.7.3.2 Impact Analysis

Methodology

The methodology used to evaluate impacts on cultural resources at the SV 50K footprint is the same as described in Section 3.7.3.2 (Cultural Resources for the Proposed Action) of this EIR/EIS, and the methodology used to evaluate impacts on cultural resources at the Moosa 50K footprint is the same as described in Section 4.7.3.2 (Cultural Resources for the Moosa 100K Alternative) of this EIR/EIS.

Threshold 1: Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in §15064.5 of the State CEQA Guidelines §106 of the NHPA

Impacts on cultural resources from the SV 50K/Moosa 50K Alternative would result from direct effects to sites due to inundation or ground disturbance for dam construction at both locations and during Moosa pipeline construction activities (i.e., clearing, grading, and trenching) in the eastern portion of the pipeline route, where it would extend through undisturbed areas along Moosa Creek; or from indirect effects from potential erosion due to wave action during reservoir filling or operations at both locations.

SV 50K

All of the sites within the SV 50K footprint were tested for National Register of Historic Places (NRHP) eligibility, and none were found to be eligible. Implementation of the project design features listed in Section 3.7.2 (Cultural Resources for the Proposed Action) would avoid
impacts at the following sites that have the potential for unanticipated, significant artifacts and intact, buried cultural deposits:

- Sites located outside (but near) dam construction boundaries (SDI-13630 and SDI-16514); and
- Sites within the construction limits that were either found to lack significance or where mitigation through data recovery has been accomplished (SDI-17650, SDI-13542 and SDI-13629H).

Therefore, the cultural resources impacts of the SV 50K component would be less than significant.

**Moosa 50K**

Eight archaeological sites within the Moosa 50K study area were identified as potentially eligible for the NRHP. Based on the limited field surveys, two of these sites may no longer be eligible because major portions have been destroyed by development; therefore, six potentially eligible NRHP sites may be present within the Moosa 50K inundation area. As described in Section 4.7.3.2 (Cultural Resources for the Moosa 100K Alternative), two potentially eligible NRHP sites may be present in the eastern portion of the pipeline route, where it would extend through undisturbed areas along Moosa Creek. The total number of potentially eligible NRHP sites associated with the Moosa 50K component is eight (six in the study area and two in the pipeline route). Additional previously unrecorded sites within the Moosa 50K study area and pipeline route could be inundated, and could be directly affected by inundation or ground disturbance for Moosa dam and pipeline construction or indirectly affected by erosion from wave action during reservoir filling or operations. Therefore, direct and indirect impacts on known or previously unrecorded NRHP sites within the Moosa 50K footprint and pipeline route would be significant.

**Combined Impacts**

The total number of potentially eligible NRHP sites associated with the SV 50K/Moosa 50K Alternative is eight (six in the Moosa 50K study area and two in the Moosa pipeline route). There are no potentially eligible NRHP sites in the SV 50K footprint, although implementation of project design features listed in Section 3.7.2 (Cultural Resources of the Proposed Action) of this EIR/EIS would be required for five sites within the SV 50K footprint. Additional previously unrecorded sites within the Moosa 50K study area and pipeline route could be directly affected by inundation or ground disturbance for Moosa dam and pipeline construction, or indirectly affected by erosion from wave action during reservoir filling or operations. Therefore, due to the direct and indirect impacts on known or previously unrecorded NRHP sites within the Moosa 50K footprint and pipeline route, the combined cultural resources impacts associated with the SV 50K/Moosa 50K Alternative would be significant.

*The Moosa 50K component of the SV 50K/Moosa 50K Alternative could cause a substantial adverse change in the significance of an historical or archaeological resource as defined in*
CEQA Guidelines Section 15064.5 (Impact SV/M/CR 1). Implementation of the project design features listed in Sections 3.7.2 and 4.7.2 (Cultural Resources for the Proposed Action and Moosa 100K Alternative, respectively) would avoid impacts on cultural resources associated with the SV 50K component and could avoid impacts on some of the cultural resources associated with the Moosa 50K component. However, given the lack of detail regarding specific impacts at the Moosa sites, it would not be possible to avoid inundation of unidentified sites. Therefore, impacts of the SV 50K/Moosa 50K Alternative would be significant.

**Threshold 2: Disturb any human remains, including those interred outside of formal cemeteries**

**SV 50K**

Construction activities and reservoir drawdown are not expected to disturb any human remains, including those buried outside of formal cemeteries. Stipulations in the ESP PA address appropriate procedures for handling unexpected discoveries during construction or reservoir drawdown (refer to Section 3.7.1.2 [Cultural Resources for the Proposed Action] of this EIR/EIS). These conditions would be incorporated into the construction specifications. Therefore, potential impacts on human remains from the SV 50K component of the SV 50K/Moosa 50K Alternative would be less than significant.

**Moosa 50K**

Future NRHP evaluations and construction activities could disturb human remains, including those buried outside of formal cemeteries. Even with implementation of project design and avoidance measures, and state regulations governing the disposition of human remains, the potential (“worst-case”) impacts on human remains would be significant and unavoidable. Therefore, potential impacts on human remains from the Moosa 50K component of the SV 50K/Moosa 50K Alternative would be significant.

**Combined Impacts**

With implementation of project design and avoidance measures, and the stipulations of the ESP PA, impacts on human remains would be avoided at the SV 50K component of this alternative. However, human remains could be affected during future NRHP evaluations or during construction activities associated with the Moosa 50K component, even with implementation of project design and avoidance measures, and state regulations that address unexpected discoveries during construction. The potential (“worst-case”) impacts on human remains from the Moosa 50K component would be significant and unavoidable. Therefore, the combined impacts on potential human remains from the SV 50K/Moosa 50K Alternative would be significant.

*The Moosa 50K component of the SV 50K/Moosa 50K Alternative could disturb human remains, including those interred outside of formal cemeteries, either during future NRHP evaluations or during construction activities (Impact SV/M/CR 2). Even with implementation of project design features listed in Section 4.7.2 (Cultural Resources for the Moosa 100K Alternative) and state regulations governing the disposition of human remains, the potential (“worst-case”) impacts on human remains would be significant and unavoidable. Therefore, the combined impacts on potential human remains from the SV 50K/Moosa 50K Alternative would be significant.*
regulations that address unexpected discoveries during construction, it may not be feasible to completely avoid impacts on human remains. Therefore, impacts of the SV 50K/Moosa 50K Alternative would be significant.

5.7.3.3 Mitigation Measures

To mitigate potential impacts on potentially eligible NRHP sites at the Moosa 50K component of this alternative, the Water Authority will implement the following mitigation measure:

**SV/M/CR 1-1** If the SV 50K/Moosa 50K Alternative is selected, additional comprehensive cultural resources surveys will be conducted by a qualified archaeologist within the entire Moosa 50K footprint (including the inundation area, dam construction zone, marina, and outlying components [e.g., pump stations, water storage tanks, new and relocated access roads/water lines/utility lines, quarry areas/borrow sites]), and within the eastern portion of the pipeline route where it would extend through undisturbed areas along Moosa Creek. Based on the survey results, testing and evaluation of NRHP eligibility will be conducted. The evaluation generally consists of test excavations to determine whether the sites contain the integrity, quantity, and diversity of cultural materials to contribute information about important research topics. If the sites are found to meet the criteria for NRHP eligibility, a data recovery program will be conducted. The data recovery program will be directed toward collecting an adequate amount of information from the sites to mitigate their destruction.

As evaluated in Section 5.7.3.2 (Threshold 2) above, human remains could be unavoidably affected during future NRHP evaluations or during construction activities associated with the Moosa 50K component of this alternative (**Impact SV/M/CR 2**), even with implementation of project design features listed in Section 4.7.2 (Cultural Resources for the Moosa 100K Alternative) and state regulations that address unexpected discoveries during construction. There may be no feasible measures to mitigate this impact. Therefore, under this “worst-case” assumption, there is a potential for the removal of human remains associated with the combined SV 50K/Moosa 50K Alternative which would be a significant and unmitigable impact.

5.7.3.4 Residual Impacts after Mitigation

The potential (“worst-case”) unavoidable impacts on human remains due to the Moosa 50K component (**Impact SV/M/CR 2**) of this alternative would be significant and unmitigable because any human remains discovered during future NRHP evaluations or during construction activities would need to be removed, in accordance with state laws, if redesign or avoidance measures are infeasible. A Statement of Overriding Considerations would be necessary for approval of the SV 50K/Moosa 50K Alternative.
5.7.4 Cumulative Effects

5.7.4.1 Other CIP Projects

The PEIR for the Regional Water Facilities Master Plan concluded that the significant direct and cumulative impacts on cultural resources associated with the CIP projects, such as Slaughterhouse Terminal Reservoir, Hubbard Hill Flow Regulatory Structure, North County Distribution Pipeline Flow Regulatory Structure, and Second Crossover Pipeline, when combined with other reasonably foreseeable future projects, could be reduced to below a level of significance or avoided by implementing program-level mitigation measures identified in the PEIR along with mitigation measures outlined during subsequent environmental analysis of these projects. This conclusion is incorporated into the cumulative analyses in Section 5.7.4.2 below.

5.7.4.2 ESP Projects

Previous studies associated with the ESP EIR/EIS and the San Vicente Pipeline Subsequent EIR concluded that there is no potential for the presence of cultural resources in the area of the San Vicente tunnel portal. In addition, grading and excavation has been completed at the tunnel portal area. Therefore, this ESP project would not contribute to cumulative cultural resources impacts in conjunction with the SV 50K/Moosa 50K Alternative.

5.7.4.3 Other Planned Projects with CIP and ESP Projects

This section evaluates the cumulative cultural resources impacts of the SV 50K/Moosa 50K Alternative when considered in conjunction with the other planned projects listed in Table 5.2-1 (Section 5.2 [Cumulative Projects for the SV 50K/Moosa 50K Alternative] of this EIR/EIS), and incorporates the cumulative impacts associated with the Slaughterhouse Terminal Reservoir, Hubbard Hill Flow Regulatory Structure, North County Distribution Pipeline Flow Regulatory Structure, and Second Crossover Pipeline CIP projects described in Section 5.7.4.1 above. The following cumulative analysis addresses the two significance thresholds listed in Section 5.7.3 above.

Cumulative Threshold 1: Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in §15064.5 of the State CEQA Guidelines and §106 of the NHPA

The SV 50K component of the SV 50K/Moosa 50K Alternative would not cause a substantial adverse change in the significance of an historical or archaeological resource as defined in CEQA Guidelines Section 15064.5, but the Moosa 50K component could cause a substantial adverse change. These impacts would be mitigated. Under the “worst-case” assumption that all of the cumulative projects in the vicinity of the SV 50K and Moosa 50K components (refer to Table 5.2-1, Section 5.2 [Cumulative Projects for the SV 50K/Moosa 50K Alternative] of this EIR/EIS) would be constructed within the same timeframe as the SV 50K/Moosa 50K Alternative, some of these projects could contribute to cumulative impacts on cultural resources.
Alternative 3: San Vicente 50,000 AF + Moosa 50,000 AF
Cultural Resources

These projects would be required to comply with mitigation measures or regulations intended to avoid or mitigate significant impacts on cultural resources. Effects would not be cumulatively considerable. Therefore, potential cumulative impacts on cultural resources due to the SV 50K/Moosa 50K Alternative, when combined with the cumulative impacts from the Slaughterhouse Terminal Reservoir, Hubbard Hill Flow Regulatory Structure, North County Distribution Pipeline Flow Regulatory Structure, and Second Crossover Pipeline CIP projects and other planned cumulative projects listed in Table 5.2-1 (Section 5.2 [Cumulative Projects for the SV 50K/Moosa 50K Alternative] of this EIR/EIS), would be less than significant after mitigation.

_Cumulative Threshold 2: Disturb any human remains, including those interred outside of formal cemeteries_

The Moosa 50K component of this alternative could disturb human remains, including those interred outside of formal cemeteries, even with implementation of project design and avoidance measures, and state regulations that address unexpected discoveries during construction. Under the “worst-case” assumption that all of the cumulative projects in the vicinity of the SV 50K and Moosa 50K components (refer to Table 5.2-1, Section 5.2 [Cumulative Projects for the SV 50K/Moosa 50K Alternative] of this EIR/EIS) would be constructed within the same timeframe as the SV 50K/Moosa 50K Alternative, some of these projects could contribute to cumulative impacts on human remains. Along with the potential (“worst-case”) unavoidable impacts on human remains due to the Moosa 50K component, and the removal of human remains that may occur from other cumulative projects in the vicinity, these potential cumulative impacts on human remains would be cumulatively considerable and unmitigable. There may be no feasible measures to mitigate this impact. Therefore, potential cumulative impacts on human remains due to the SV 50K/Moosa 50K Alternative, when combined with the cumulative impacts from the Slaughterhouse Terminal Reservoir, Hubbard Hill Flow Regulatory Structure, North County Distribution Pipeline Flow Regulatory Structure, and Second Crossover Pipeline CIP projects and other planned cumulative projects listed in Table 5.2-1 (Section 5.2 [Cumulative Projects for the SV 50K/Moosa 50K Alternative] of this EIR/EIS), would be significant (Impact SV/M/CR 2C).

_Implementation of mitigation measure SVM/CR 1-1, along with project design features listed in Section 4.7.2 (Cultural Resources for the Moosa 100K Alternative), would mitigate or avoid cumulative impacts on potentially eligible NRHP sites at the Moosa 50K component of this alternative. The Slaughterhouse Terminal Reservoir, Hubbard Hill Flow Regulatory Structure, North County Distribution Pipeline Flow Regulatory Structure, and Second Crossover Pipeline CIP projects, and other planned cumulative projects listed in Table 5.2-1 (Section 5.2 [Cumulative Projects for the SV 50K/Moosa 50K Alternative] of this EIR/EIS), would be required to comply with mitigation measures or regulations intended to avoid or mitigate significant impacts on cultural resources. Therefore, cumulative impacts on potentially eligible NRHP sites from the SV 50K/Moosa 50K Alternative, when combined with the potential cumulative impacts associated with the Slaughterhouse Terminal Reservoir, Hubbard Hill Flow Regulatory Structure, North County Distribution Pipeline Flow Regulatory Structure, and Second Crossover Pipeline CIP projects and other planned cumulative projects listed in_
Table 5.2-1 (Section 5.2 [Cumulative Projects for the SV 50K/Moosa 50K Alternative] of this EIR/EIS), would be less than significant after mitigation.

The potential (“worst-case”) unavoidable cumulative impacts on human remains (Impact SV/M/CR 2C) from the Moosa 50K component of this alternative, when combined with the potential cumulative impacts associated with the Slaughterhouse Terminal Reservoir, Hubbard Hill Flow Regulatory Structure, North County Distribution Pipeline Flow Regulatory Structure, and Second Crossover Pipeline CIP projects and other planned cumulative projects listed in Table 5.2-1 (Section 5.2 [Cumulative Projects for the SV 50K/Moosa 50K Alternative] of this EIR/EIS), would remain significant and unmitigable, even with implementation of project design features listed in Section 4.7.2 (Cultural Resources for the Moosa 100K Alternative) and state laws that address unexpected discoveries during construction (because it may not be feasible to completely avoid impacts on human remains). A Statement of Overriding Considerations would be necessary for approval of the SV 50K/Moosa 50K Alternative.