SUISUN MARSH HABITAT MANAGEMENT, PRESERVATION, AND RESTORATION PLAN FINAL ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT

FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS

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Contents

Acronyms and Abbreviations

CBDA	California Bay-Delta Authority
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
DFG	California Department of Fish and Game
DWR	California Department of Water Resources
EIR	environmental impact report
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ESA	federal Endangered Species Act
SMP EIS/EIR	Suisun Marsh Habitat Management, Preservation, and Restoration Plan Final EIS/EIR
MMRP	Mitigation Monitoring and Reporting Program
NMFS	National Marine Fisheries Service
PRC	California Public Resources Code
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
SRCD	Suisun Resource Conservation District
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

Suisun Marsh Habitat Management, Preservation, and Restoration Plan
Final Environmental Impact Statement/Environmental Impact Report

Findings of Fact and Statements of Overriding Considerations

Introduction

The California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Sections 21002, 21002.1, 21081, 21081.5, 21100) and State CEQA Guidelines Section 15091(a) provide that no public agency shall approve or carry out a project for which an environmental impact report (EIR) has been certified when one or more significant environmental effects of the project have been identified, unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. These findings explain the disposition of each of the significant effects, including those that will be less than significant with mitigation. The findings must be supported by substantial evidence in the record.

There are three possible findings under Section 15091(a). The public agency must make one or more of these findings for each significant effect. The Section 15091(a) findings are:

1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Suisun Marsh Habitat Management, Preservation, and Restoration Plan (SMP) Final Environmental Impact Statement/Environmental Impact Report (SMP EIS/EIR).
2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
3. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the SMP EIS/EIR.

Each of these findings must be supported by substantial evidence in the record.

Findings

The following findings discuss the significant direct, indirect, and cumulative effects of the program to be adopted, which is referred to in the findings of fact as the SMP. The SMP is detailed in the SMP EIS/EIR, and is being approved consistent with the requirements of CEQA.

The findings have been adopted by the California Department of Fish and Game DFG. The findings address each of the SMP's significant effects in their order of appearance in the SMP EIS/EIR. For findings made under Section 15091(a)(1), a number of discrete mitigation measures will be adopted for the SMP, in addition to best management practices (BMPs), and environmental commitments

discussed in the SMP EIS/EIR. These will be implemented by DFG staff and management, as described in the Mitigation Monitoring and Reporting Program.

Where mitigation measures, BMPs, or environmental commitments are within the responsibility and jurisdiction of another public agency, the second finding (under Section 15091(a)(2)) will be made in this document. In order to make the finding, the lead agency must find that the mitigation measures have been adopted by the other public agency or can and should be adopted by the other public agency.

Where the finding is made under Section 15091(a)(3) regarding the infeasibility of mitigation measures or alternatives, the specific economic, legal, social, technological, or other considerations are described in a subsequent section.

Impact Findings

Air Quality

Impact AQ-1. Generation of Construction-Related Emissions in Excess of Draft BAAQMD Standards Associated with Restoration (Less than Significant with Mitigation)

Finding

As specified in Section 15091(a)(1) of the CEQA Guidelines, changes or alterations have been required in, or incorporated into, the SMP which avoid or substantially lessen the significant environmental effect as identified in the SMP EIS/EIR.

Rationale for Finding

Implementation of restoration projects under the SMP would require temporary construction activities in the project area which would involve the use of heavy equipment. This would generate nitrogen oxides (NOx) emissions in excess of the draft Bay Area Air Quality Management District (BAAQMD) construction thresholds. Mitigation Measures AQ-MM-1, AQ-MM-2, and AQ-MM-3 have been incorporated into the SMP to reduce this impact to a less-than-significant level.

Mitigation Measure AQ-MM-1: Limit Construction Activity during Restoration

The project proponent will limit construction activity so that site preparation can occur on only one parcel at a time. This will ensure that construction emissions do not exceed the draft BAAQMD threshold for NOX.

Mitigation Measure AQ-MM-2: Reduce Construction NOX Emissions

The project proponent will ensure that construction emissions do not exceed the BAAQMD's draft construction threshold of 54 pounds per day for NOX. Such measures include, but are not limited to implementing off-road equipment mitigation, including installing 1st tier diesel particulate filters (DPFs), and installing diesel oxidation catalysts to reduce NOx emissions by 40%. Tables 5.7-8 and 5.7-10 of the SMP EIS/EIR show appropriate types of construction equipment, and corresponding numbers of equipment pieces, that can be operating at any given time in the marsh.

Mitigation Measure AQ-MM-3: Implement All Appropriate BAAQMD Mitigation Measures

The project proponent will implement BAAQMD standard mitigation measures where appropriate and feasible. These measures include:

- Cover all haul trucks transporting soil, sand, or other loose material off-site.
- Remove all visible mud or dirt track-out onto adjacent public roads.
- Minimize idling times either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations[CCR]). Clear signage shall be provided for construction workers at all access points.
- Maintain all construction equipment in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the restoration project proponent regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Impact AQ-2: Generation of Construction-Related Emissions in Excess of Draft BAAQMD Standards Associated with Current Management Activities (Less than Significant with Mitigation)

Finding

As specified in Section 15091(a)(1) of the CEQA Guidelines, changes or alterations have been required in, or incorporated into, the SMP which avoid or substantially lessen the significant environmental effect as identified in the SMP EIS/EIR.

Rationale for Finding

Certain types of existing management activities in the project area would increase in frequency with implementation of the SMP. These activities, including constructing ditches, and coring and repairing levees, would involve the use of heavy equipment, which would generate NOx emissions in excess of the draft BAAQMD construction thresholds. Mitigation Measures AQ-MM-2, and AQ-MM-3, identified above, have been incorporated into the SMP to reduce this impact to a less-than-significant level.

Impact AQ-4: Generation of Construction-Related Emissions in Excess of Draft BAAQMD Standards Associated with Restoration and Management Activities Combined (Less than Significant with Mitigation)

Finding

As specified in Section 15091(a)(1) of the CEQA Guidelines, changes or alterations have been required in, or incorporated into, the SMP which avoid or substantially lessen the significant environmental effect as identified in the SMP EIS/EIR.

Rationale for Finding

The use of heavy equipment in construction associated with restoration and new and existing management activities would generate NOx emissions in excess of the draft BAAQMD construction thresholds were construction activities to all occur concurrently. Mitigation Measures AQ-MM-1, AQ-MM-2, AQ-MM-3, identified above, and AQ-MM-4, identified below, have been incorporated into the SMP to reduce this impact to a less-than-significant level.

Mitigation Measure AQ-MM-4: Limit Construction Activity during Restoration and Management

The project proponent will limit simultaneous restoration and management activity so that the emissions from the equipment being used in the SMP area does not exceed the emissions described in Tables 5.7-13 and 5.7-14 (of the SMP EIS/EIR), which are based on the anticipated construction equipment in Tables 5.7-8 and 5.7-10 of the SMP EIS/EIR. This will ensure that construction emissions do not exceed the draft BAAQMD threshold for NO_X.

Noise

Impact NZ-6: Exposure of Noise-Sensitive Land Uses to Noise from Portable Pump Operations (Less than Significant with Mitigation)

Finding

As specified in Section 15091(a)(1) of the CEQA Guidelines, changes or alterations have been required in, or incorporated into, the SMP which avoid or substantially lessen the significant environmental effect as identified in the SMP EIS/EIR.

Rationale for Finding

As part of the SMP management activities, pumps would be used to dewater managed wetlands to augment flood and drain practices. Up to eight dewatering pumps may be operated simultaneously, which would result in pumping noise that would exceed a Community Noise Equivalent Level (CNEL) of 70 A-weighted decibels (dBA) near noise-sensitive land uses. Mitigation Measure NZ-MM-1 has been incorporated into the SMP to reduce this impact to a less-than-significant level.

Mitigation Measure NZ-MM-1: Limit Noise from Pump Operations

The specific project proponent will limit noise from pump operations, where feasible, such that noise from pump operations does not exceed 70 CNEL in the surrounding areas. Noise control measures that can be implemented to reduce noise from pumps on adjacent land uses include the following.

- All internal combustion engine–driven equipment will be equipped with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines will be strictly prohibited.
- Staging of pump equipment within 275 feet of residences will be avoided. Where equipment must be located within 275 feet of residences, enclosures or barriers will be provided around pumps to reduce noise to acceptable levels.

Utilities and Public Services

Impact UTL-1: Damage to Pipelines and/or Disruption of Electrical, Gas, or Other Energy Services during Construction or Restoration Activities (Less than Significant with Mitigation)

Finding

As specified in Section 15091(a)(1) of the CEQA Guidelines, changes or alterations have been required in, or incorporated into, the SMP which avoid or substantially lessen the significant environmental effect as identified in the SMP EIS/EIR.

In addition, as specified in Section 15091(a)(2) of the CEQA Guidelines, changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes can and should be adopted by such other agency.

Rationale for Finding

Restoration activities implemented as part of the SMP may occur on properties with overhead lines, underground pipelines, or wells. Ground-disturbing and other activities have the potential to damage these facilities or otherwise cause outages and temporarily disrupt service during construction. Mitigation Measures UTL-MM-1 and UTL-MM-2 have been incorporated into the SMP to reduce this impact to a less-than-significant level. However, these mitigation measures are dependent on negotiations with and cooperation from affected utilities, and if this cannot be achieved, the specific project resulting in such impact under the SMP would not be implemented and therefore impacts would not occur because there would be no specific project.

Mitigation Measure UTL-MM-1: Relocate Overhead Powerlines or other Utilities that Could be Affected by Construction

If overhead utilities are present on a property that could be damaged or affected during construction or restoration activities, the specific project proponent will coordinate with the utility owner and/or operator to have the lines protected or relocated to ensure there is no potential for disruption to service or damage to the facilities during or after construction. The area of relocation would be selected to ensure that there are minimal or no sensitive resources that would be affected. Environmental commitments included in Chapter 2 of the SMP EIS/EIR will be incorporated into this activity. Relocation would occur prior to inundation.

Mitigation Measure UTL-MM-2: Avoid Ground-Disturbing Activities within Pipeline Right-of-Way

The specific project proponent will coordinate with the owners and/or operators of pipelines that could be affected by restoration to determine the location of the pipelines and to design restoration to ensure that no ground-disturbing activities occur within the right-of-way. However, ground-disturbing activities associated with the repair or replacement of the pipelines as described below under Mitigation Measure MM-UTL-4 would need to occur. These activities are intended to improve the integrity of the pipelines and therefore, would not result in any additional impacts on the pipeline. Avoidance of these areas for purposes of restoration construction would ensure that no construction-related damage or disruption to services would occur.

Impact UTL-2: Damage to Utility Facilities or Disruption to Service as a Result of Restoration (Less than Significant with Mitigation)

Finding

As specified in Section 15091(a)(1) of the CEQA Guidelines, changes or alterations have been required in, or incorporated into, the SMP which avoid or substantially lessen the significant environmental effect as identified in the SMP EIS/EIR.

In addition, as specified in Section 15091(a)(2) of the CEQA Guidelines, some of the changes or alterations specified in the SMP EIS/EIR are within the responsibility and jurisdiction of other public agencies and not the agency making the finding. Therefore, such changes can and should be adopted by such other agency.

Rationale for Finding

Under the SMP, areas restored to tidal wetlands would change the general nature of properties from seasonally flooded to tidally inundated year-round. This has the potential to affect facilities that were installed prior to inundation that were not designed to exist in a tidally-inundated environment. This could result in damage to these facilities.

Inundation could also change how owners/operators of these facilities respond to emergencies such as leaks and ruptures. Since many of the pipelines in the Marsh are older than their design life, there is potential for these pipes to leak or rupture. Due to the change in the environment from seasonally inundated to permanently inundated, repair of these leaks or ruptures would require different techniques than are currently employed. These techniques may take longer, resulting in an increased period of service disruption to customers. Damage caused by inundation or an increase in service disruption time as a result of inundation would be a significant impact. Mitigation Measures UTL-MM-3 and UTL-MM-4 have been incorporated into the SMP to reduce this impact to a less-than-significant level. However, ULT-MM-3 and ULT-MM-4 require the participation of the utility owner and/or operator; therefore, these changes are within the responsibility and jurisdiction of the affected utilities. These mitigation measures are dependent on negotiations with and cooperation from affected utilities, and if this cannot be achieved, the specific project resulting in such impact under the SMP would not be implemented and therefore impacts would not occur because there would be no specific project.

Mitigation Measure UTL-MM-3: Relocate or Upgrade Utility Facilities that Could be Damaged by Inundation

Pipelines or other utilities that could be damaged by inundation would be relocated or upgraded by the utility owner and/or operator based on a determination by the utility owner and/or operator that inundation could cause damage to the facilities. Relocation would occur in areas with minimal or no sensitive resources. Upgrades could include buoyancy controls, reinforcements, or other improvements that would allow the facility to continue its normal operation under the inundated condition. Relocation and/or upgrading would occur prior to inundation of the site.

Mitigation Measure UTL-MM-4: Test and Repair or Replace Pipelines that Have the Potential for Failure

All pipelines have some potential for failure, but as pipes age, this potential may increase. Prior to inundation of a site-specific project, proponents will coordinate with pipeline owners and/or operators to have them test existing pipelines for leaks or other weaknesses that could result in a failure. Depending on the results of these tests, repairs to or replacement of the existing pipe may be conducted. Various methods for pipe repair and replacement exist, including directional drilling, open trench replacement, and placement of a secondary pipeline around the existing pipeline. All of these treatments would occur within or adjacent to the existing alignment right of way. The impacts of this mitigation measure are similar to other restoration impacts on traffic, noise, air quality, biological resources, cultural resources, and soils. Mitigation for impacts of these resources resulting from pipeline repair or replacement along with environmental commitments for major construction activities, described in Chapter 2 of the SMP EIS/EIR, would be implemented to ensure there are no additional effects related to implementing this mitigation measure.

Impact UTL-5: Damage to Pipelines and/or Disruption of Electrical, Gas, or Other Energy Services during Dredging (Less than Significant with Mitigation)

Finding

As specified in Section 15091(a)(1) of the CEQA Guidelines, changes or alterations have been required in, or incorporated into, the SMP which avoid or substantially lessen the significant environmental effect as identified in the SMP EIS/EIR.

In addition, as specified in Section 15091(a)(2) of the CEQA Guidelines, changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes can and should be adopted by such other agency.

Rationale for Finding

It is assumed that implementation of the current managed wetland activities would not result in any disruptions of electrical, gas or other energy services because these activities occur in the same or similar location each time they are conducted. However, dredging has the potential to disrupt underground facilities in the dredging areas. Figure 7.3-1 of the SMP EIS/EIR depicts the location of each of the pipelines. The location of these pipelines is marked in the Marsh. To ensure that dredging does not affect pipelines and this impact is less than significant, Mitigation Measure MM-UTL-2, identified previously, will be implemented. However, this mitigation measure is dependent on negotiations with and cooperation from affected utilities, and if this cannot be achieved, the specific project resulting in such impact under the SMP would not be implemented and therefore impacts would not occur because there would be no specific project.

Cultural Resources

Impact CUL-1: Damage to Montezuma Slough Rural Historic Landscape and Mein's Landing as a Result of Ground-Disturbing Activities along Montezuma Slough (Significant and Unavoidable)

Finding

As specified in Section 15091(a)(3) of the CEQA Guidelines, specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the SMP EIS/EIR.

Rationale for Finding

Ground-disturbing activities such as levee modifications, conversion of managed wetlands and uplands to managed wetlands, replacement of infrastructure, and enhancement of vernal pool and riparian habitat may result in damage to character-defining features of the Montezuma Slough Rural Historic Landscape. Character-defining features of this historic district include the slough levees, landscaping elements that define existing and former historic landings, pilings and piers, standing structures, archaeological sites, and shipwrecks. Damage to or the loss of one or more character-defining elements of the district may constitute an adverse impact on the resource as a whole. Such impacts may be restricted in scope; the impact need not be at an extensive, "landscape" level to constitute an adverse impact on the Montezuma Slough Rural Historic Landscape but may affect individual elements that contribute to the landscape. The Montezuma Slough Rural Historic Landscape is potentially eligible for listing in the National Register of Historic Places (NRHP) and California Register of Historic Resources (CRHR) and therefore is a likely candidate for designation as a historic property under Section 106 of the NHPA and a historical resource for the purposes of CEQA.

The historic site of Mein's Landing provides an example of the effects that tidal restoration activities would have on the Montezuma Slough Rural Historic Landscape. Levee breaching and inundation at Mein's Landing would result in damage to or the destruction of the historic site, which Esser (1999:4–5, Figure 2) identifies as both a site and a constituent element of the Montezuma Slough Rural Historic Landscape. Mein's Landing also could qualify as a historic property, historical resource, or unique archaeological resources on its own merit.

Inundation would create an aqueous environment in the vicinity of Mein's Landing. Such environments are known to hasten the degradation of character-defining elements of cultural resources, such as historic buildings and structures and archaeological sites. The effects of prolonged and repeated flooding include structural degradation (oxidation and weakening of metals) and the decay of archaeological site constituents. (Thorne 1991:Figure 1.) A levee breach would affect Mein's Landing by changing the land–water interface—a potential character-defining feature of Mein's Landing—between the resource and Montezuma Slough. The loss of or damage to character-defining features of Mein's Landing, if it is determined to be a historic property, historical resource, or unique archaeological resource, would constitute an adverse effect under NEPA and a significant impact under CEQA. Implementation of Mitigation Measure CUL-MM-1 would reduce the severity of Impact CUL-1, although not necessarily to a less-than-significant level.

The character-defining features of the Montezuma Slough Rural Historic Landscape are extensive and comprise numerous elements within the project area. Therefore, there is no technologically feasible mitigation to preserve the character-defining features of the entire landscape under the restoration and management activities proposed in the SMP or other Alternatives. Even the No Action Alternative could result in character-defining feature impacts through implementation of tidal marsh restoration that may be accomplished through other programs, such as through CALFED Proposition 204 or BDCP, or through mitigation obligations. And these actions could potentially impact the character-defining features identified above. Therefore, Mitigation Measure CUL-MM-1 is the only feasible mitigation for the SMP.

Mitigation Measure CUL-MM-1: Document and Evaluate the Montezuma Slough Rural Historic Landscape, Assess Impacts, and Implement Mitigation Measures to Lessen Impacts

No formal evaluation of the Montezuma Slough Rural Historic Landscape to determine resource significance under the NRHP criteria and CEQA has been undertaken to date; Esser (1999) identifies the presence of this rural historic landscape, but this study does not constitute complete documentation of the resource nor does it evaluate its significance. Similarly, the exact locations of the effects of Impact CUL-1 are unknown, as are the frequency and severity of impacts on the Montezuma Slough Rural Historic Landscape.

For implementation of specific actions, the state, local, or federal lead agency (as applicable) will conduct an inventory and significance evaluation of the Montezuma Slough Rural Historic Landscape. The inventory and evaluation will be conducted according to the following standards.

- The implementing regulations for Section 106 of the Natural Historic Preservation Act (NHP [36 CFR 800.4]).
- The State CEQA Guidelines (14 CCR 15064.5[a]).
- *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (48 Federal Register [FR] 44716–44742).
- *The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act* (including the Guidelines for the Treatment of Cultural Landscapes).
- Applicable NRHP bulletins and National Park Service technical briefs (Andrus and Shrimpton 1997; Birnbaum 1994; McClelland et al. 1995).

If, based on the findings of the inventory, the Montezuma Slough Rural Historic Landscape does not constitute a historic property or historical resource, implementation of the mitigation measure would reduce the severity of Impact CUL-1 to a less-than-significant level.

On the other hand, if the Montezuma Slough Rural Historic Landscape constitutes a historic property or historical resource, the lead federal or state agency, as applicable, will devise measures to reduce the severity of significant effect(s) on the property and will require implementation of the measures prior to implementation of specific restoration activities. Under CEQA, the lead agency will propose such mitigation measures in an EIR or Mitigated Negative Declaration as appropriate. For federal actions or undertakings, the lead federal agency will resolve any adverse impacts through the provisions of 36 CFR 800.6, which would be codified in an MOA and in the proposed action's EIS and ROD or Environmental Assessment supporting a Finding of No Significant Impact. Implementation

of the mitigation measures would reduce the severity of the impact, although not necessarily to a less-than-significant or non-adverse level.

Impact CUL-2: Damage to or Destruction of Other Known Cultural Resources as a Result of Ground-Disturbing Activities in Lowland and Marsh Areas (Less than Significant with Mitigation)

Finding

As specified in Section 15091(a)(1) of the CEQA Guidelines, changes or alterations have been required in, or incorporated into, the SMP which avoid or substantially lessen the significant environmental effect as identified in the SMP EIS/EIR.

Rationale for Finding

Twenty-four previously recorded cultural resources are located in lowland and marsh areas and therefore could be affected by tidal marsh restoration in these areas (Table 7.7-10 of the SMP EIS/EIR). Under the SMP, restoration activities could damage or destroy these cultural resources by displacing or breaking artifacts or demolishing structural features. With the exception of ISO 20, the cultural resources listed in Table 7.7-10 of the SMP EIS/EIR are considered historic properties and historical resources for the purposes of SMP. Implementation of Mitigation Measure CUL-MM-2 would reduce the severity of this impact to a less-than-significant level.

Mitigation Measure CUL-MM-2: Evaluate Previously Recorded Cultural Resources and Fence NRHP- and CRHR-Eligible Resources prior to Ground-Disturbing Activities

The lead federal or state agency, as applicable, will evaluate previously recorded cultural resources located in restoration areas for NRHP and CRHR eligibility. The lead federal or state agency will ensure that all NRHP- and CRHR-eligible properties are fenced prior to start of ground-disturbing activities; no further action will be required for ineligible properties. The lead federal or state agency will use the maps contained in the site records for the eligible properties to establish site boundaries in the field. The lead federal or state agency will demarcate the site boundaries using t-stakes and orange fencing. Signs marking the fenced area as an environmentally sensitive area will be placed at suitable intervals along the fence. The lead federal or state agency will examine the fencing periodically to ensure that the barrier is not crossed and clearly delimits the site boundaries throughout the duration of ground-disturbing activities.

Impact CUL-3: Damage to Known Cultural Resources as a Result of Inundation (Significant and Unavoidable)

Finding

As specified in Section 15091(a)(3) of the CEQA Guidelines, specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the SMP EIS/EIR.

Rationale for Finding

Twenty-four previously recorded cultural resources are located in lowland and marsh areas and therefore could be affected by inundation of such areas (Table 7.7-10 of the SMP EIS/EIR). Inundation would create an aqueous environment in the vicinity of these cultural resources, which is known to hasten the degradation of character-defining elements of cultural resources, such as historic buildings and structures and archaeological sites. The effects of prolonged and repeated inundation include structural degradation (oxidation and weakening of metals) and the decay of archaeological site constituents (Thorne 1991:Figure 1). The loss of or damage to character-defining features of historic properties, historical resources, or unique archaeological resources would constitute a significant effect under NEPA and a significant impact under CEQA. With the exception of ISO 20, the cultural resources listed in Table 7.7-10 of the SMP EIS/EIR are considered historic properties and historical resources for the purposes of the SMP. Implementation of Mitigation Measure CUL-MM-3 or CUL-MM-4 would reduce Impact CUL-3, but not necessarily to a less-than-significant level.

Mitigation Measure CUL-MM-3: Protect Known Cultural Resources from Damage Incurred by Inundation through Plan Design (Avoidance)

The lead federal or state agency, as applicable, will evaluate the significance of the cultural resources listed in Table 7.7-10 of the SMP EIS/EIR prior to inundation of lands in the restoration areas. For cultural resources that the lead federal or state agency determines ineligible for listing in the NRHP and CRHR, no further action would be required. The lead federal or state agency will, on the other hand, avoid damaging NRHP- and CRHR-eligible cultural resources through plan design, using detailed maps of the cultural resources concerned and field reviews to avoid any eligible properties. In the event that implementation of CUL-MM-3 is infeasible, the lead federal or state agency will implement Mitigation Measure CUL-MM-4.

Mitigation Measure CUL-MM-4: Resolve Adverse Effects prior to Construction

Prior to approval and final design of restoration activities, the lead federal or state agency, as applicable will resolve adverse effects in accordance with Section 106 of the NHPA and CEQA, as applicable. Such effects resolutions may include Historic American Building Survey/Historic American Engineering Record (HABS/HAER) documentation of historic buildings and structures, data recovery excavations of archaeological sites, preparation of public interpretive documents, and documentation of these actions.

Impact CUL-4: Inadvertent Damage to or Destruction of As-Yet-Unidentified Cultural Resources as a Result of Ground-Disturbing Activities in Restoration Areas (Significant and Unavoidable)

Finding

As specified in Section 15091(a)(3) of the CEQA Guidelines, specific economic, legal, social, technological, or other considerations, make infeasible the mitigation measures or project alternatives identified in the SMP EIS/EIR.

Rationale for Finding

Cultural resource professionals have surveyed little of the plan area, yet 34 cultural resources have been identified to date and more than 11,000 acres of the plan area are sensitive for the presence of buried prehistoric archaeological resources (Tables 7.7-2, 7.7-5, and 7.7-6 of the SMP EIS/EIR). In the absence of professionally conducted cultural resource inventories, tidal marsh restoration has a high probability of damaging or destroying cultural resources, inclusive of the historic built environment and archaeological resources. Because of multiple property-access prohibitions, the conceptual nature of the actions in the SMP, and because not all portions of the plan area would be affected by these activities, it is not feasible to conduct a cultural resources survey of the plan area in support of the SMP EIS/EIR. Impact analysis therefore must be conceptual in nature, with detailed impact analyses transpiring during project-specific implementation.

To estimate the likelihood that restoration activities would affect as-yet-unidentified surface and buried cultural resources, Table 7.7-11 of the SMP EIS/EIR compares the extent of restoration activities to the pervasiveness of archaeologically sensitive areas in the plan area. The table treats the plan area regions separately because these regions differ in size, acreage slated for restoration, and archaeological potential. The scope of potential effects on cultural resources is assessed by comparing the amount of restoration within each region to the extent of archaeologically sensitive areas in each region. The amounts given in Table 7.7-11of the EIS/EIR are expressed as percentages of regional acreage. Region 1 possesses the highest percentage of restoration activities occurring within areas sensitive for the presence of buried archaeological resources (34.8%), The likelihood of restoration activities being situated in areas sensitive for the presence of surface-manifested prehistoric resources is highest in Region 3 (30.4%).

Given the above information, construction in unsurveyed areas likely would result in damage to or destruction of cultural resources that may meet the criteria of historic property, historical resource, or unique archaeological resource. Damage to or destruction of historical resources and unique archaeological resources constitutes a significant impact under CEQA (14 CCR 15064.5) and an adverse effect under Section 106 of the NHPA. Implementation of Mitigation Measure CUL-MM-5 would reduce Impact CUL-4, but not necessarily to a less-than-significant level. If no cultural resources are identified in specific restoration areas, or identified resources are not determined to be significant, implementation of CUL-MM-5 would reduce this impact to a less-than-significant level. If significant cultural resources are present in the restoration areas, the post-mitigation significance of Impact CUL-4 would depend on the magnitude of the physical effect. In cases where small portions of the resources are affected by the project, CUL-MM-5 would reduce this impact to a less-than-significant level. In the event of major damage or complete destruction of any significant cultural resources, CUL-MM-5 would reduce the severity of the impact, although it would still be significant.

Mitigation Measure CUL-MM-5: Conduct Cultural Resource Inventories and Evaluations and Resolve Any Adverse Effects

Prior to ground-disturbing activities in restoration areas, the lead federal or state agency, as applicable, will conduct a cultural resources inventory of the restoration areas according to the standards cited in Mitigation Measure CUL-MM-1. Identification methods will include surface surveys and, for areas likely to contain buried archaeological resources, subsurface testing methods commensurate with the scale of ground disturbance.

If any cultural resources are determined to be historic properties and ground-disturbing activities are found to result in adverse effects, the lead federal or state agency will resolve the effects in accordance with Section 106 of the NHPA or CEQA, as applicable.

Impact CUL-6: Damage to or Destruction of Shipwrecks or Other Submerged Resources as a Result of Channel Dredging (Less than Significant with Mitigation)

Finding

As specified in Section 15091(a)(1) of the CEQA Guidelines, changes or alterations have been required in, or incorporated into, the SMP which avoid or substantially lessen the significant environmental effect as identified in the SMP EIS/EIR.

Rationale for Finding

A review of the California State Lands Commission's (CSLC's) California Shipwreck database failed to indicate the presence of known shipwrecks in tidal sloughs in the plan area, although one is reported in Collinsville (Esser 1999:62). Nevertheless, the CSLC's website does not provide information concerning the comprehensiveness of the database or the methods employed in compiling it. The database likely does not include all shipwrecks in the project vicinity but only those reported or whose location could be reconstructed from navigational data. Therefore, channel dredging in project-area tidal sloughs may damage or destroy shipwrecks that have not yet been identified. Historic-era shipwrecks may qualify as historic properties under Section 106 of the NHPA as well as historical resources or unique archaeological resources for the purposes of CEQA. Implementation of Mitigation Measure CUL-MM-6 would reduce the severity of this impact to a less-than-significant level.

Mitigation Measure CUL-MM-6: Stop Ground-Disturbing Activities, Evaluate the Significance of the Discovery, and Implement Mitigation Measures as Appropriate

In the event that a shipwreck is encountered during channel dredging, all channel-disturbing activities within a minimum of 100 feet of the shipwreck must cease. The state, local, or federal lead agency (as applicable) will require notification and commission of a qualified maritime or underwater cultural resource specialist to inspect the find. The cultural resource specialist will record the location of the shipwreck, the circumstances leading to the inadvertent discovery, the condition and character of the shipwreck, and the degree of damage incurred as a result of channel dredging. The cultural resource specialist also will make recommendations as to the appropriate distance from the shipwreck at which channel dredging may continue. The cultural resource specialist will evaluate the shipwreck to determine whether it constitutes a historic property, historical resource, or unique archaeological resource. The cultural resource specialist and all work associated with documentation and evaluation of shipwrecks must meet the Secretary of the Interior's Standards for professional archaeologist or historian (48 FR 44720–44723) and incorporate the National Park Service's guidance concerning the nomination of shipwrecks to the NRHP (Delgado and A National Park Service Maritime Task Force 1992).

Impact CUL-7: Damage to or Destruction of Known Cultural Resources Resulting from Managed Wetland Activities (Less than Significant with Mitigation)

Finding

As specified in Section 15091(a)(1) of the CEQA Guidelines, changes or alterations have been required in, or incorporated into, the SMP which avoid or substantially lessen the significant environmental effect as identified in the SMP EIS/EIR.

Rationale for Finding

Fifteen previously recorded cultural resources are located in managed wetland areas and therefore could be affected by discing, construction of new interior ditches, and construction of new interior levees in these areas (Table 7.7-12 and 7. 7-13 of the SMP EIS/EIR). These activities would damage or destroy these cultural resources by displacing or breaking artifacts or demolishing structural features. Implementation of Mitigation Measure CUL-MM-7 would reduce the severity of this impact to a less-than-significant level.

Mitigation Measure CUL-MM-7: Prepare and Implement a Programmatic Agreement (PA) and Historic Properties Treatment Plan (HPTP) ; Evaluate Previously Recorded Cultural Resources and Fence NRHP- and CRHR-Eligible Cultural Resources prior to Ground-Disturbing Activities

Programmatic Agreement and Historic Properties Treatment Plan

The SMP will be implemented over 30 years in several phases. The current level of detail in the project description is insufficient to discuss project impacts, knowledge of which would influence with certainty the level of inventory effort with respect to the historic landscape. Similar problems with other project effects identified in this section (see below) confound attempts to inventory and evaluate cultural resources in the plan area according to the standard Section 106 process described at 36 CFR 800. Therefore, a Programmatic Agreement (PA) and Historic Properties Treatment Plan (HPTP) are the most effective ways to accommodate both the program requirements and compliance with CEQA, NEPA, and Section 106 of the NHPA. Under Section 106, a PA can be used:

i. when effects on historic properties are similar and repetitive or are multi-state or regional in scope;

ii. when effects on historic properties cannot be fully determined prior to approval of an undertaking;

iii. when nonfederal parties are delegated major decision-making responsibilities;

iv. where routine management activities are undertaken at federal installations, facilities, or other land-management units; or

v. where other circumstances warrant a departure from the normal Section 106 process. (36 CFR 800.14[b][1].)

The SMP meets the first four criteria for use of a PA. First, certain effects, particularly under the managed wetland activities (see impact discussion later herein), would be implemented repeatedly. Second, the present project description is not in a stage of development that is sufficient to complete historic property identification efforts. Third, nonfederal parties likely will have major decision-

making responsibilities with respect to implementation of the SMP. Finally, routine management (maintenance) activities will be undertaken at federal facilities under the SMP.

Reclamation will prepare the PA, which will identify standards, responsible parties, and timeframes for identifying and resolving effects on historic properties. The purpose of the PA is to document the fact that all responsible parties to the project understand there will be adverse effects on historic properties and that they agree on methods by which to resolve those adverse effects. The HPTP, on the other hand, will explain just how adverse effects will be resolved. The HPTP will provide a tailored program for historic property identification and treatment for the undertaking. The HPTP will contain research themes for expected property types (prehistoric archaeological properties, historic built environment properties, etc.) to guide all aspects of cultural resources inventories conducted for the undertaking. The research themes will be geared specifically to frame NRHP and CRHR evaluations of identified properties. The PA and HPTP will contain provisions for project activities undertaken by nonfederal entities such as DWR and SRCD. Preparation and implementation of the PA and HPTP will be completed prior to implementation of the SMP.

The PA and HPTP discussed in Mitigation Measure CUL-MM-1 will stipulate evaluation procedures for the determination of, and consultation regarding, NRHP and CRHR eligibility. Reclamation will ensure that any eligible properties are fenced prior to commencement of ground-disturbing activities; no further action will be required for ineligible properties. Reclamation will use the maps contained in the site records for the eligible properties to establish site boundaries in the field. Reclamation will demarcate the site boundaries using t-stakes and orange fencing. Signs marking the fenced area as an environmentally sensitive area will be placed at suitable intervals along the fence. Reclamation will examine the fencing periodically to ensure that the barrier is not crossed and clearly delimits the site boundaries throughout the duration of ground-disturbing activities.

Impact CUL-8: Damage to or Destruction of As-Yet-Unidentified Cultural Resources in Uninspected Areas as a Result of Other Ground-Disturbing Managed Wetland Activities (Significant and Unavoidable)

Finding

As specified in Section 15091(a)(3) of the CEQA Guidelines, specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the SMP EIS/EIR.

Rationale for Finding

This impact is similar to the impact described for the project under Impact CUL-4. The management activities proposed could result in damage or destruction of unknown cultural resources. In addition, some current activities would be modified and some new activities implemented. The activities and the types of cultural resources likely to be affected by each activity are summarized in Table 7.7-13 of the EIS/EIR.

The affected resource column of Table 7.7-13 identifies the broad class(es) of resources that most likely would be affected by each activity, although project-specific design specifications or work methods could result in effects to other classes of resources. The impacts identified in Table 7.7-13 of the EIS/EIR likely would be significant, although some activities such as replacing riprap on interior and exterior levees could result in non-adverse effects. Construction staging and vehicular

movement associated with riprap replacement, however, could result in cultural resource impacts off the levees. Such impacts could be significant. Implementation of Mitigation Measure CUL-MM-8 would reduce Impact CUL-8, but not necessarily to a less-than-significant level. If significant cultural resources are present in the managed wetland areas, the post-mitigation significance of Impact CUL-8 would depend on the magnitude of the physical effect. In cases where small portions of the resources are affected by the project, Mitigation Measure CUL-MM-8 would reduce this impact to a less-than-significant level. In the event of major damage or complete destruction of any significant cultural resources, Mitigation Measure CUL-MM-8 would reduce the severity of the impact, although it would still be significant.

If no cultural resources are identified in specific project areas, or identified resources are not determined to be significant, implementation of Mitigation Measure CUL-MM-8 would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-MM-8: Prepare and Implement a PA and HPTP for the SMP; Conduct Cultural Resources Inventories and Evaluations and Resolve Any Adverse Effects

Prior to implementation of managed wetland activities under the new SMP, Reclamation or the Corps will implement the provisions of the PA and HPTP. These documents will clearly identify the lead agency responsible for PA/HPTP compliance for each class of activity (for instance, Reclamation for Preservation Agreement Implementation (PAI)-funded projects), as well as historic properties identification methods. If any cultural resources are determined to be historic properties and ground-disturbing activities are found to result in adverse effects, the lead agency for the subject activities will resolve the effects in accordance with the PA and HPTP.

Public Health and Environmental Hazards

Impact HAZ-7: Increased Human and Environmental Exposure to Natural Gas and Petroleum (Less than Significant with Mitigation)

Finding

As specified in Section 15091(a)(1) of the CEQA Guidelines, changes or alterations have been required in, or incorporated into, the SMP which avoid or substantially lessen the significant environmental effect as identified in the SMP EIS/EIR.

In addition, as specified in Section 15091 (a)(2), some of the changes or alterations specified in the SMP EIS/EIR are within the responsibility and jurisdiction of other public agencies and not the agency making the finding. Therefore, such changes can and should be adopted by such other agency.

Rationale for Finding

Under the SMP, tidal restoration has the potential to occur in areas where natural gas and petroleum pipelines exist. In some instances, these pipelines were installed under conditions in which the areas that would be restored were not tidally inundated. Restoration would result in permanent tidal inundation, which would increase the potential for exposure of natural gas and petroleum to the environment and humans because, should a leak occur, it is more difficult to contain than under existing conditions. Implementation of Mitigation Measures UTL-MM-2, UTL-MM-3, UTL-MM4,

discussed previously for the Utilities Impacts, would reduce this impact to a less-than-significant level.. However, this mitigation measure is dependent on negotiations with and cooperation from affected utilities, and if this cannot be achieved, the specific project resulting in such impact under the SMP would not be implemented and therefore impacts would not occur because there would be no specific project.

Cumulative Impacts

Cumulative Cultural Resource Impacts (Significant and Unavoidable)

Finding

As specified in Section 15091(a)(3) of the CEQA Guidelines, specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the SMP EIS/EIR.

Rationale for Finding

The SMP would result in significant impacts on numerous cultural resources, including the Montezuma Hills Rural Historic Landscape. Impacts on the latter resource are especially consequential, as several constituent features—some of which are likely to have individual significance—would be affected by the SMP. Taken together with other related projects, the SMP's impacts on cultural resources would contribute to cumulative impacts on cultural resources. Implementation of Mitigation Measures CUL-MM-1 through CUL-MM-8, however, would reduce the SMP's contribution to these cumulative impacts, although not necessarily to below the level of significance. As such, this is a significant impact and the plan's contribution is considerable. The character-defining features of the Montezuma Slough Rural Historic Landscape and other cultural resources identified are extensive and comprise numerous elements within the project area. Therefore, there is no technologically feasible mitigation to preserve the character-defining features of the entire landscape or all of the significant cultural resources that may be identified under CUL-MM-1 to CUL-MM-8 during the restoration and management activities proposed in the SMP or other alternatives. Even the No Action Alternative could result in character-defining feature impacts through implementation of tidal marsh restoration may be accomplished through other programs, such as through CALFED Proposition 204 or BDCP, or through mitigation obligations. And these actions could potentially impact the character-defining features identified above. Therefore, the mitigation measure CUL-MM-1 through CUL-MM-8, are the only feasible mitigation for the SMP.

Findings for Alternatives Considered in the EIS/EIR

The following text presents findings relative to the project alternatives. Findings must be made whenever the project within the responsibility and jurisdiction of the lead agency will have a significant environmental effect.

Three alternatives, plus the SMP (Alternative A, Proposed Project) were evaluated in the EIS/EIR. The three alternatives vary in the number of acres restored and the number of acres subject to managed wetland activities. Table 1 summarizes these differences.

Table 1. Differences in Amount of Tidal Wetlands Restored and Remaining Acres Subject to Managed Wetland Activities among the Alternatives (in acres)

Alternative	Tidal Restoration Target (acres)	Managed Wetlands Subject to Managed Wetland Activities (acres)
No Action Alternative	700	52,112
Alternative B	2,000–4,000	46,000–48,000
Alternative C	7,000–9,000	42,000–44,000

The alternatives differ in the amount of acreage of restored tidal wetlands and remaining managed wetlands subject to managed wetland activities. These differences result in variations on how other SMP components such as habitat/ecological processes, public and private land use, levee integrity, water quality, and recreation are affected and managed. Below is a description of the alternatives evaluated in the SMP EIS/EIR; the components of the alternatives and impacts are also described below.

Alternative B

Alternative B would restore fewer acres to tidal wetland, leaving more area subject to managed wetland activities and includes the following actions:

- restoring 2,000 to 4,000 acres of marsh to fully functioning, self-sustaining tidal wetlands and protecting and enhancing existing tidal wetland acreage; and
- enhancing the remaining 46,000 to 48,000 acres of managed wetlands levee stability and flood and drain capabilities

Finding

Table 4-1 of the SMP EIS/EIR identifies the different components of Alternative B and the impacts associated with each component relative to resources. This table shows that Alternative B does not reduce any of the significant and unavoidable impacts when compared to the SMP. However, the geographic extent of the potential restoration effects would be less because less area in the Marsh would be affected by Alternative B, whereas the potential for effects related to managed wetland activities would be greater. As discussed in Chapter 2 and Chapter 4 of the SMP EIS/EIR, Alternative B would result in fewer desired results associated with habitat/ecological processes, public/private land use, levee integrity, water quality, and recreation. In terms of habitat/ecological processes, Alternative B offers the greatest benefits for managed wetland species and the least benefits for tidal species. Compared to both existing conditions and the SMP, there would be more managed wetland activities and more of the resultant improvements in habitats for reliant species. However, there would be approximately 2,000 fewer acres of tidal wetlands in the Marsh compared to SMP, and this alternative would not fully achieve the desired results related to ecological processes. Under Alternative B there would be more hunting, bird watching, and other land-based recreational opportunities; however, there would be less fishing, as there would be less navigable water and public access. Therefore, this alternative would not fully achieve the desired results for public and private land uses or recreation. Under Alternative B there would be less restoration, and therefore more levees requiring maintenance would remain intact. As such, level system integrity would require more resources to maintain the same level of integrity. Restoration would result in a reduction in total acres of managed wetlands, reducing managed wetland discharges, which can

cause low DO and other water quality issues in some locations under certain circumstances. Alternative B would result in the preservation of more managed wetlands, and therefore improvements in water quality would be less.

Therefore, Alternative B has the potential to substantially reduce or eliminate the significant and unavoidable impacts of the SMP related to restoration, but could result in an increase in significant and unavoidable effects related to managed wetland activities.

Alternative C

Alternative C would restore more acres to tidal wetlands, leaving less area subject to managed wetland activities, and includes the following actions:

- restoring 7,000 to 9,000 acres of the Marsh to fully functioning, self-sustaining tidal wetlands and protecting and enhancing existing tidal wetlands acreage; and
- enhancing the remaining 42,000 to 44,000 acres of managed wetlands levee stability and flood and drain capabilities.

Finding

Table 4-1 of the SMP EIS/EIR identifies the different components of Alternative B and the impacts associated with each component relative to resources. This table shows that Alternative B does not reduce any of the significant and unavoidable impacts when compared to the SMP. However, the geographic extent of the potential restoration effects would be greater because more area in the Marsh would be affected by Alternative C, whereas the potential for effects related to managed wetland activities would be less. As discussed in Chapter 2 and Chapter 4 of the SMP EIS/EIR, Alternative B would result in fewer desired results associated with habitat/ecological processes, public/private land use, levee integrity, water quality, and recreation.

Alternative C includes the greatest amount of restoration, which is environmentally preferred for species that use tidal habitats. However, it also results in the greatest loss of managed wetlands, making it the least environmentally preferred for species that use these habitats. The remaining managed wetlands/duck clubs would be subject to managed wetland activities, leading to higher quality habitats for waterfowl, shorebirds, and other species that depend or rely on managed wetlands. It may be difficult to meet the goals related to habitats and ecological processes for species that depend on or use managed wetlands under this alternative, especially for species that do not use tidal wetland habitats. Under Alternative C there would be have less hunting, bird watching, and other land-based recreational opportunities, and more fishing as there would be more navigable water and public access. There would be more restoration, and therefore fewer levees requiring maintenance would remain intact. As such, fewer resources would be required to maintain the same level of integrity. Restoration would result in a reduction in total acres of managed wetlands, reducing managed wetland discharges, which can cause low DO and other water quality issues in some locations under certain circumstances. Therefore, Alternative C would result in the preservation of fewer managed wetlands, and therefore potentially greater improvements in DO conditions. However, increased restoration, depending on the exact location, breach size, and design, has the potential to make meeting the D-1641/SMPA salinity objectives for the Marsh more difficult.

Therefore, Alternative C has the potential to substantially reduce or eliminate the significant and unavoidable impacts of the SMP related to managed wetlands, but could result in an increase in significant and unavoidable effects related to restoration activities.

No Action Alternative

The No Action Alternative is what is assumed to be the conditions should the SMP not be implemented. Under the No Action Alternative, major restoration would not occur in the Marsh and managed wetland activities would be substantially limited or suspended. Although the CALFED ROD calls for tidal wetland restoration in the Marsh and other current planning efforts include restoration in the Marsh, it is not certain that substantial additional restoration would occur under the No Action Alternative. Implementation of tidal marsh restoration may be accomplished through other programs, such as through CALFED Proposition 204 or BDCP, or through mitigation obligations. There is a wide range of potential outcomes in the Marsh and there are currently no adopted plans for restoration. It is assumed for purposes of the No Action Alternative, that approximately 700 acres could be restored. Additionally, any levee breaches that occur in inaccessible areas may not be repaired, and passive restoration would occur in those areas. Additional restoration would be difficult to achieve because of the absence of a framework to protect existing managed wetlands.

If some landowners in the Marsh were able to secure individual permits, diversion restrictions would continue to be enforced, and programs to encourage landowners to manage properties to protect habitat values for listed species would continue to be implemented. Additionally, programs to control managed wetland vegetation would continue. Installation of new water diversions would continue to be minimized, and fish screens would continue to be installed on existing diversions where feasible. Existing programs to control nonnative species and protect sensitive wetlands from the adverse effects of grazing would continue to be implemented. The extent to which regulatory mechanisms would limit managed wetland operations and maintenance is speculative, but it is assumed there would be substantial changes in management of the Marsh. Existing DWR/Reclamation mitigation facilities and salinity stations would be repaired and maintained, but at a much slower rate due to obtaining permits, completing project specific CEQA/NEPA review, and compliance with mitigation measures imposed as a result.

Finding

The No Action Alternative does not meet most of the plan purposes/objectives. Levee integrity would continue to degrade and recreational opportunities would decrease as a result of no major restoration or management of wetlands. Maintenance and operations of duck clubs in the Marsh would be suspended and therefore the efficiency of flooding and draining managed wetlands would not be maximized or improved. The suspension of draining low DO water from some managed wetlands into sloughs has the potential to improve water quality in some areas under certain conditions. However, overall, there would be little if any improvement in habitats for waterfowl, fish, shorebirds, or other species because managed wetlands could not be operated to their full potential, and there would still be limited tidal marsh habitat available for terrestrial and aquatic species. Additionally, given the difficulty in securing permits to dredge and with continued difficulties in importing materials for levee repair, combined with a lack of a reliable funding source for levee repairs, it is likely that the No Action Alternative would result in degradation of managed wetland habitat. This degradation would result from the continued use of materials taken from within managed wetland areas to maintain levees, which would reduce drainage efficiencies and

increase subsidence. Additionally, it is possible that naturally breached levees would not be repaired, resulting in a loss of managed wetland habitat. This loss of managed wetlands would result in an increase in tidal wetland habitat and local, and potentially regional, changes in salinity that may adversely affect drinking water quality, depending on the extent and location of the loss. Therefore, habitats, levees, public and private land use, and water quality would continue to degrade under the No Action Alternative.

The No Action Alternative would substantially reduce or eliminate the significant and unavoidable impacts of the SMP; however, none of the SMP objectives would be met.

Statement of Overriding Considerations Supporting Approval of the Suisun Marsh Habitat Management, Preservation, and Restoration Plan

Per the requirements of CEQA (PRC Sections 21002, 21002.1, 21081) and State CEQA Guidelines (15 CCR 15093), DFG finds that approval of the SMP, whose potential environmental impacts have been evaluated in the EIS/EIR, and as indicated in the above findings and MMRP, will result in the occurrence of significant effects which are not avoided or substantially lessened, as described in the above findings. These significant effects include:

- loss of cultural resources; and,
- cumulative cultural resources impacts.

Pursuant to PRC Section 21081(b), specific overriding economic, legal, social, technological, or other benefits outweigh the unavoidable adverse environmental effects. The specific reasons to support this approval, given the potential for significant unavoidable adverse impacts, are based on the following.

Benefit Category

(1) Social Benefits. Improvements in managed wetlands along with increasing the area of navigable waters in the Marsh through restoration would improve public and private land use opportunities, including fishing, bird watching, and other activities such as non-consumptive recreation (Section 7-2 Social and Economic Conditions page 7.2-5 and 7.2-6; Section 7-4 Recreation Resources page 7.4-7 and 7.4-8). The conversion of privately managed wetlands to public tidal wetlands will provide increased public hunting opportunities (Section 7-4 Recreation Resources page 7.4-7 and 7.4-8). SMP-related improvements will improve the overall health and social value of other public trust resources that depend on the State's surface waters, including fish, wildlife and native vegetation (Section 6.1 Fish page 6.1-1 and 6.1-41 to 6.1-43, and 6.1-55 to 6.1-56; Section 6.3 Wildlife pages 6.3-1, and 6.3-39 to 6.3-52; Section 6.2 Vegetation and Wetlands pages 6.2-26 to 6.2-28, 6.2-31 and 6.2-32), .

(2) Other Benefits (Biological). The SMP rehabilitates the natural processes where feasible in Suisun Marsh to support more fully, with minimal human intervention, natural aquatic and associated terrestrial biotic communities and habitats, in ways that favor native species of those

communities (Chapter 2 Habitat Management, Preservation, and Restoration plan page 2-12 to 2-15; Section 5.1 Water Supply, Hydrology, and Delta Water Management page 5.1-27; Section 5.4 Flood Control and Levee Stability pages 5.4-7 to 5.4-8; Section 5.5 Sediment Transport page 5.5-5 and 5.5-6; and, Section 6.3 Wildlife pages 6.3-39 to 6.3-52). Restoration of tidal wetlands in the Marsh would contribute to the recovery of special-status wildlife species, including small mammals (salt marsh harvest mouse, Suisun shrew), birds (California clapper rail, California black rail, Suisun song sparrow, salt marsh common yellowthroat), fish (salmonids, Delta smelt, longfin smelt, Sacramento splittail, green sturgeon), and plants (soft bird's-beak, Suisun thistle, Delta tule pea) (Chapter 2 Habitat Management, Preservation, and Restoration Plan page 2-12 and Section 6.3 Wildlife pages 6.3-39 to 6.3-52). Tidal wetland restoration also will be designed to accommodate sea level rise more easily than managed wetlands because the gradual elevations within tidal wetlands will not require the same level of levee maintenance and will provide an area for sediment accretion. (Chapter 2 Habitat Management, Preservation, and Restoration Plan page 2-12 and Section 5.5 Sediment Transport page 5.5-5 and 5.5-6) Restoration of tidal wetlands would be implemented over the 30-year SMP timeframe, and benefits from individual projects would change as elevations rise, vegetation becomes established, and vegetation communities shift over time from low marsh to high marsh conditions. All restored areas are most likely to provide different types and magnitude of benefits at any given period after restoration and at different geographic locations, as local and regional conditions will determine the salinity regime, plant communities, and rate of sedimentation.

(3) Other Benefits (Flood Control) The majority of Suisun Marsh, including wildlife habitat, is situated at or below mean tide elevation. Levees serve as the primary flood protection for Suisun Marsh lands, infrastructure, and natural resources. Exterior levees are used in conjunction with interior levees, ditches, and water control structures to retain, exclude, and direct water. Many of the managed wetland activities are intended to aid in the maintenance of the existing levee system. Without the SMP, these activities may not be implemented and flood control could be compromised. Additionally, restoration activities under the SMP would require some amount of levee improvements to convert interior levees to exterior levees. These improvements would ensure that adjacent properties, including natural resources, are adequately protected from flooding and improved levee stability would reduce the risk of catastrophic levee failure (Section 5.4 Flooding Control and Levee Stability pages 5.4-7 to 5.4-8). Additionally, the opportunities to design levees in restoration areas to serve as habitat through creating benches, using vegetation as buffers for levees, and creating gently sloping levees, is anticipated to reduce the need for robust maintenance of these levees and/or the use of non-biological protection, such as riprap.

References Cited

Andrus, P. W., and R. H. Shrimpton. 1997. *How to Apply the National Register Criteria for Evaluation*. National Register Bulletin 15. Washington, DC.: U.S. Department of the Interior, National Park Service, National Register of Historic Places.

Birnbaum, C. A. 1994. *Protecting cultural landscapes: planning, treatment and management of historic landscapes*. Preservation Briefs 36. Washington, D.C.: U.S. Department of the Interior, National Park Service, Technical Preservation Services.

Delgado, J. P., and A National Park Service Maritime Task Force. 1992. *Nominating historic vessels and shipwrecks to the National Register of Historic Places*. National Register Bulletin 20. Washington, D.C.: U.S. Department of the Interior, National Park Service.

Esser, K. S. 1999. Notoriously Swampy and Overflowed: An Inland Maritime Landscape of the California Delta. Unpublished Master's thesis, Sonoma State University, Rohnert Park, CA. On file at Northwest Information Center, California Historical Resources Information System, Rohnert Park (Study S-22333).

McClelland, L. F., J. T. Keller, G .P. Keller, and R. Z. Melnick. 1995. *Guidelines for evaluating and documenting rural historic landscapes*. National Register Bulletin 30. Washington, D.C.: U.S. Department of the Interior, National Park Service.

Thorne, R. M. 1991. *Intentional site burial: a technique to protect against natural or mechanical loss*. Revised. Technical Brief 5. Washington, D.C.: U.S. Department of the Interior, National Park Service, Archeological Assistance Program.