Final Appendix I Findings of Fact and Statement of Overriding Considerations

Findings of Fact and Statement of Overriding Considerations

Section 1. Description of the Order

The categories of restoration project types eligible for enrollment under the Order are listed below. These eligible project types are described in detail in Section 2.6, *Categories of Restoration Projects in the Order* of the PEIR. An individual permitted project may incorporate one or more of these project types. Projects may conduct restoration activities such as establishment, reestablishment, rehabilitation, and/or enhancement for any of these project types:

- Improvements to Stream Crossings and Fish Passage—for upstream and downstream movement by fish and other species, and to improve functions of streams.
- Removal of Small Dams, Tide Gates, Flood Gates, and Legacy Structures to improve fish and wildlife migration, tidal and freshwater circulation and flow, and water quality.
- **Bioengineered Bank Stabilization**—to reduce input of fine sediment, enhance aquatic and riparian habitat, and improve water quality.
- Restoration and Enhancement of Off-Channel and Side-Channel Habitat to improve aquatic and riparian habitat for fish and wildlife; to restore the hydrologic, hydraulic, and biogeochemical functions and processes of streams; or both.
- Water Conservation Projects—to reduce low-flow stream diversions, through installation of features such as off-stream storage tanks and ponds and necessary off-channel infrastructure.
- **Floodplain Restoration**—to improve ecosystem function by creating hydrologic connections between streams and floodplains, through such measures as breaching and removal of levees, breaching and removal of berm and dike setbacks, and hydraulic reconnection and revegetation.
- **Removal or Remediation of Pilings and Other In-Water Structures**—to improve water quality and aquatic habitat for fish and wildlife.
- Removal of Nonnative Invasive Species and Revegetation with Native Plants—to improve watershed functions, such as aquatic and riparian habitat for fish and wildlife.
- Establishment, Restoration, and Enhancement of Tidal, Subtidal, and Freshwater Wetlands—to create or improve wetland ecological functions.
- Establishment, Restoration, and Enhancement of Stream and Riparian Habitat and Upslope Watershed Sites—to create or restore the functions of

streams and riparian areas, including upslope watershed sites that could contribute sediment to streams or disrupt floodplain and riparian functions.

The approving Water Board will determine whether an individual restoration project is eligible for authorization under the Order. All projects permitted under the Order must also incorporate applicable general protection measures into their project design to ensure avoidance and minimization of impacts on sensitive resources.

Species protection measures (Appendix F) are included in the Consolidated Final PEIR and provide avoidance and/or minimization measures developed specifically for individual covered species or covered species guilds, based upon unique life history and habitat requirements. Further, design guidelines are also included to facilitate development of individual restoration projects, in a manner that is appropriate and sustainable, minimizes adverse effects on aquatic habitats, maximizes the ecological benefits of the restoration, and is consistent with multiple permitting agency regulatory practices (e.g., CDFW, NMFS, USFWS).

Section 2. Findings Required Under CEQA

CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to substantially lessen or avoid significant environment impacts that would otherwise occur. Mitigation measures or alternatives are not required, however, where such changes are infeasible or where the responsibility for the project lies with some other agency. (CEQA Guidelines, § 15091, sub. (a), (b).)

In seeking to effectuate the substantive policy of CEQA to substantially lessen or avoid significant environmental effects to the extent feasible, an agency, in adopting findings, need not necessarily address the feasibility of both mitigation measures and environmentally superior alternatives when contemplating approval of a proposed project with significant impacts. Where a significant impact can be mitigated to an "acceptable" level solely by the adoption of feasible mitigation measures, the agency, in drafting its findings, has no obligation to consider the feasibility of any environmentally superior alternative that could also substantially lessen or avoid that same impact — even if the alternative would render the impact less severe than would the proposed project as mitigated. (Laurel Hills Homeowners Association v. City Council (1978) 83 Cal.App.3d 515, 521; see also Kings County Farm Bureau v. City of Hanford (1990) 221 Cal.App.3d 692, 730-731; and Laurel Heights Improvement Association v. Regents of the University of California ("Laurel Heights I") (1988) 47 Cal.3d 376, 400-403.)

In these Findings, the State Water Board first addresses the extent to which each significant environmental effect can be substantially lessened or avoided through the adoption of feasible mitigation measures. Only after determining that, even with the adoption of all feasible mitigation measures, an effect is significant and unavoidable does the State Water Board address the extent to which alternatives described in the PEIR are (i) environmentally superior with respect to that effect and (ii) "feasible" within the meaning of CEQA.

In cases in which a project's significant effects cannot be mitigated or avoided, an agency, after adopting proper findings, may nevertheless approve the project if it first

adopts a statement of overriding considerations setting forth the specific reasons why the agency found that the "benefits of the project outweigh the significant effects on the environment." (Public Resources Code, Section 21081, sub. (b); see also, CEQA Guidelines, Sections 15093, 15043, sub.(b).)

In the Statement of Overriding Considerations found at the conclusion of these Findings, the State Water Board identifies the specific economic, social, and other considerations that, in its judgment, outweigh the significant environmental effects that projects authorized under the Order would cause.

The California Supreme Court has stated that "[t]he wisdom of approving ... any development project, a delicate task which requires a balancing of interests, is necessarily left to the sound discretion of the local officials and their constituents who are responsible for such decisions. The law as we interpret and apply it simply requires that those decisions be informed, and therefore balanced." (Goleta II (1990) 52 Cal. 3d553, 564 [276 Cal. Rptr. 410, 801 P.2d 1161].)

These findings do not attempt to describe the full analysis of each environmental impact contained in the Consolidated Final PEIR. Instead, a full explanation of these environmental findings and conclusions are presented in the PEIR and these findings hereby incorporate by reference the discussion and analysis in the Consolidated Final PEIR supporting the determination regarding the impacts of the Order and mitigation measures designed to address those impacts. In making these findings, the State Water Board ratifies, adopts and incorporates in these findings the determinations and conclusions of the Consolidated Final PEIR relating to environmental impacts and mitigation measures except to the extent any such determinations and conclusions are specifically and expressly modified by these findings.

The State Water Board further adopts and incorporates all of the mitigation measures set forth in the Consolidated Final PEIR and Appendix J, the Mitigation Monitoring and Reporting Program (MMRP), to substantially lessen or avoid the potentially significant and significant impacts of the Order. The State Water Board adopts each of the mitigation measures proposed in the Consolidated Final PEIR to reduce or eliminate significant impacts resulting from the Order. Accordingly, in the event a mitigation measure in the Consolidated Final PEIR has inadvertently been omitted in these findings or the MMRP, such mitigation measure(s) is hereby adopted and incorporated in the findings below by reference. In addition, in the event the language describing a mitigation measures in the Consolidated Final PEIR due to a clerical error, the language of the policies and implementation measures, as set forth in the Consolidated Final PEIR shall control. The impact numbers and mitigation measure numbers used in these findings reflect the information contained in the Consolidated Final PEIR.

2.1 General Protection Measures and Species Protection Measures in the Order

To qualify for authorization under the Order, restoration projects must meet the appropriate general protection measures, species protection measures, and other conditions described in Sections 2.8.1 through 2.8.4 of the Consolidated Final PEIR. While the impact analysis for each resource area determined the nature and

significance of each impact before incorporation of general protection measures and species protection measures, the applicable measures (general and species protection) are a requirement of the Order. Therefore, if incorporating one or more general protection measures and/or species protection measures into a restoration project would reasonably mitigate an impact, then the impact conclusion is less than significant and the impact statement is located below in Section 2.2, *Impacts Found to be Less Than Significant or No Impact and Thus Requiring No Mitigation*. If the analysis has determined that an impact would remain significant after the incorporation of appropriate general protection measures and species protection measures, then the impact conclusion is significant, and mitigation measures have been recommended to further reduce the magnitude of the impact. If mitigation is required, then this impact statement is found below in Section 2.3, *Significant or Potentially Significant Impacts Reduced to Less Than Significant Levels Through Mitigation Measures*.

2.2 Impacts Found to be Less Than Significant or No Impact and Thus Requiring No Mitigation

Consistent with Public Resources Code section 21002.1 and section 15128 of the State CEQA Guidelines, the PEIR focused its analysis on potentially significant impacts, and limited discussion of other impacts for which it can be concluded with certainty there is no potential for significant adverse environmental impacts. State CEQA Guidelines section 15091 does not require specific findings to address environmental effects that an EIR identifies as "no impact" or a "less than significant" impact. Nevertheless, the State Water Board hereby finds that, based on substantial evidence in the whole of the record, restoration projects permitted under the Order, including those that incorporate general protection measures and/or species protection measures, would have either no impact or a less than significant impact to the following resource areas. Therefore, these impacts do not require mitigation (with incorporation of applicable general protection measures and/or species).

Impact Category: Aesthetics

Impact 3.2-1: Implementing future restoration projects permitted under the Order could result in substantial degradation of visual qualities.

The following general protection measures may apply to visual resources:

- GPM-11: Material Disposal
- GPM-14: Project Cleanup after Completion
- GPM-15: Revegetate Disturbed Areas
- VHDR-1: Avoidance of Vegetation Disturbance
- VHDR-3: Revegetation Materials and Methods
- VHDR-4: Revegetation Erosion Control Materials and Methods
- VHDR-5: Revegetation Monitoring and Reporting

Findings (Effects of Project Construction Activities): Construction activities for restoration projects permitted under the Order could cause temporary changes in local visual conditions. Views could include excavation, grading, vegetation removal, construction equipment, parking vehicles, and temporary construction offices. These

elements would be removed after construction; therefore, their presence would not cause permanent changes to local visual conditions. For these reasons, the visual character and quality impact associated with the Order would **less than significant**.

Impact 3.2-2: Implementing future restoration projects permitted under the Order could result in substantial adverse effects on scenic vistas and scenic resources.

The following general protection measures may apply to visual resources:

- GPM-11: Material Disposal
- GPM-14: Project Cleanup after Completion
- GPM-15: Revegetate Disturbed Areas
- VHDR-1: Avoidance of Vegetation Disturbance
- VHDR-3: Revegetation Materials and Methods
- VHDR-4: Revegetation Erosion Control Materials and Methods
- VHDR-5: Revegetation Monitoring and Reporting

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities for restoration projects permitted under the Order could be visible from designated scenic roads and highways, resulting in significant temporary and long-term or permanent adverse changes to scenic vistas. However, construction elements would be removed after construction; therefore, their presence would not cause permanent changes to local visual conditions.

Many long-term effects on visual quality from restoration projects permitted under the Order are expected to be beneficial or neutral; the projects would involve habitat restoration, which would return the existing sites to more natural characteristics. Restoration projects permitted under the Order would be visible from any of the designated scenic resources including highways, expressways, routes, or waterways. However, they would not result in substantial adverse effects on scenic vistas or scenic resources, given the relatively localized effects, and the visual qualities of the area would not be substantially degraded.

For these reasons, the impacts associated with scenic vistas and scenic resources with the Order would **less than significant**.

Impact 3.2-3: Implementing future restoration projects permitted under the Order could result in new sources of substantial light or glare.

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Restoration projects permitted under the Order would not be expected to include new permanent lighting, or buildings or other facilities that would include highly reflective materials. Routine O&M activities would introduce workers and vehicles into the study area, but nighttime lighting would not likely be required and no new sources of light and glare would be introduced to the study area. In addition, natural light reflected by constructed restoration projects (e.g., additional water present as a result of a setback levee or increase in floodplain area) is not expected to be annoying or distracting, because water features are considered aesthetically beneficial. For these reasons,

impacts associated with new sources of substantial light or glare with the Order would be **less than significant**.

Impact Category: Agricultural and Forestry Resources

Impact 3.3-1: Restoration projects permitted under the Order could convert Special Designation Farmland to nonagricultural use or conflict with a Williamson Act contract or zoning for agricultural use.

Findings (Effects of Project Construction Activities): Construction for restoration projects permitted under the Order could temporarily convert Special Designation Farmland to nonagricultural use, or could conflict with a Williamson Act contract or zoning for agricultural use. However, these conversions would be temporary, and the land is expected to be returned to agricultural use after construction. Therefore, this impact would be **less than significant**.

Impact 3.3-2: Restoration projects permitted under the Order could conflict with existing zoning for forestland, timberland, or timberland zoned Timberland Production, or could result in the loss of forestland from conversion of land to non-forest use.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction for restoration projects permitted under the Order could temporarily convert forestland or land zoned for forestland, timberland, or timberland zoned Timberland Production. However, these conversions would be temporary, and the land is expected to be returned to forestland and/or timberland use after construction.

Some types of restoration projects permitted under the Order would have beneficial impacts on forestland or land zoned for forestland, timberland, and timberland zoned timberland production (e.g., enhancement of meadow production/meadow restoration). Other restoration projects—fish screens, fishways, and bioengineered bank stabilization—would have minimal operational impacts because they would be located along streambanks or riverbanks, or in the river and would not be expected to affect forestland or timberland. Additionally, some projects—including bank stabilization, restoration and enhancement of off-channel and side-channel habitat, floodplain restoration, water conservation, and removal of nonnative terrestrial and aquatic invasive species and revegetating with native plants—would reduce soil erosion, recharge groundwater, use off-stream water storage for dry season use, provide natural pest control, and provide water quality buffers.

Water conservation projects (e.g., off-stream storage tanks and ponds) could be located in forestland or land zoned for forestland, timberland, or timberland zoned Timberland Production. However, water conservation projects would not be expected to remove forestland creating less than 10 percent native tree cover or substantially lessen the ability to grow crops associated with Timberlands. Some restoration sites could also be located on grazing lands that would result in the potential loss of rangeland available for livestock. However, restoration projects can generally allow for managed grazing.

Therefore, this impact would be less than significant.

Impact 3.3-3: Restoration projects permitted under the Order could involve other changes in the existing environment that, because of their location or nature, could indirectly result in the conversion of Special Designation Farmland to nonagricultural use or conversion of forestland to non-forest use. (p. 3.3-14 – 3.3-16).

The following general protection measures may apply to agricultural and forestry resources:

- GPM-8: Prevent Spread of Invasive Exotic Plants
- GPM-10: Equipment Maintenance and Materials Storage
- GPM-11: Material Disposal
- GPM-12: Fugitive Dust Reduction
- GPM-15: Revegetate Disturbed Areas
- IWW-14: Dredging Operations and Dredging Materials Reuse Plan
- VHDR-1: Avoidance of Vegetation Disturbance
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods
- VHDR-4: Revegetation Erosion Control Materials and Methods
- VHDR-5: Revegetation Monitoring and Reporting
- VHDR-6: Herbicide Use

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities for restoration projects permitted under the Order have the potential to negatively affect the viability of surrounding agricultural or forest uses, impede access to agricultural areas, or disrupt agricultural infrastructure.

Implementing these general protection measures would reduce the impacts of project construction related to indirect conversion of Special Designation Farmland to nonagricultural use or conversion of forestland to non-forest use to a **less-than-significant** level.

O&M activities would be limited to the footprint created during construction of restoration projects permitted by the Order. This work would be unlikely to result in indirect conversion of forestland to non-forest use, or of Special Designation Farmland to nonagricultural use. Additionally, some projects would reduce soil erosion, recharge groundwater, use off-stream water storage during the dry season, provide natural pest control, and provide water quality buffers. Therefore, these actions would be beneficial for existing Special Designation Farmland or forestland.

This impact would be less than significant.

Impact Category: Air Quality and Greenhouse Gas Emissions

Impact 3.4-1: Implementing future restoration projects permitted under the Order could conflict with an applicable air quality plan.

The following general protection measures may apply to air quality and greenhouse gas emissions:

- GPM-8: Work Area and Speed Limits
- GPM-17: Fugitive Dust Reduction

Findings (Effects of Constructed Facilities and O&M of those Facilities): Emissions-generating activities would be less intense and less frequent in the operational phase than during construction. It is anticipated that emissions from restoration projects permitted under the Order would not violate an air quality standard, contribute substantially to an air quality violation, or result in a short-term cumulatively considerable net increase of non-attainment pollutants. Therefore, this impact would be **less than significant**.

Impact 3.4-2: Emissions from future restoration projects permitted under the Order could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

The following general protection measures may apply to air quality and greenhouse gas emissions:

- GPM-8: Work Area and Speed Limits
- GPM-17: Fugitive Dust Reduction

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Restoration projects permitted under the Order could require periodic and routine maintenance. These activities would produce air pollutant emissions that could result in a cumulatively considerable net increase of a criteria pollutant for which a project region is non-attainment under an applicable federal or state ambient air quality standard. Emissions-generating activities would be similar to those described for the construction of projects; however, the level of activity would be less intense and less frequent in the operational phase than during construction.

Routine O&M activities for restoration projects permitted under the Order would not be expected to result in a cumulatively considerable net increase of any criteria pollutant for which a project region is non-attainment under an applicable federal or state ambient air quality standard and this impact would be **less than significant**.

Impact 3.4-3: Emissions from future restoration projects permitted under the Order could result in other emissions (such as those leading to odors) that would adversely affect a substantial number of people.

The following general protection measures would be required when applicable to address this impact to the extent feasible:

• IWW-13: Dredging Operations and Dredging Materials Reuse Plan

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Sources of construction-related emissions generally would not be in one location for long periods of time. The emissions would be intermittent and

would dissipate from the source rapidly over a short distance. Given the temporary and intermittent nature of the impacts and the dissipation of odors, objectionable odors are unlikely to affect a substantial number of people.

Given the temporary and intermittent nature of the impacts and the dissipation of odors from constructed restoration projects, objectionable odors are unlikely to affect a substantial number of people.

This impact would be less than significant.

Impact 3.4-4: Emissions from future restoration projects permitted under the Order could expose sensitive receptors to substantial pollutant concentrations.

The following general protection measures may apply to air quality and greenhouse gas emissions:

- GPM-8: Work Area and Speed Limits
- GPM-17: Fugitive Dust Reduction

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Restoration projects permitted under the Order could temporarily generate emissions of air pollutants. The specific locations and emissions of possible future facilities during O&M activities are not currently known; therefore, the precise air pollutant emissions impacts cannot be identified at this time. Factors necessary to identify specific impacts include the project's location and operational characteristics, frequency and duration of emissions, and the location of sensitive receptors. However, given the temporary and intermittent nature of the impacts and the dissipation of pollutant concentrations, such emissions are unlikely to affect a substantial number of people. Impacts would be **less than significant**.

Impact 3.4-5: Implementing future restoration projects permitted under the Order could result in an increase in GHG emissions that may have a significant impact on the environment

Findings (Effects of Constructed Facilities and O&M of those Facilities): Activities that generate GHG emissions would be similar to those described for the construction of projects permitted under the Order; however, the level of activity, and therefore the level of emissions, would be much lower during operations than during construction because activity would not cause an equal duration or concentration of emissions. Because operational emissions would not approach CARB's recommended thresholds and legislation that has established screening levels, the projects' GHG emissions would not be substantial and would not conflict with state and local planning efforts.

This impact would be less than significant.

Impact 3.4-6: Implementing future restoration projects permitted under the Order could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs.

Findings (Effects of Constructed Facilities and O&M of those Facilities): The specific locations and scale of possible future facilities are not known at this time. Factors necessary to identify specific impacts include the project's location, design features, size, and the applicable GHG reduction plans and policies of jurisdictions. However, the level of activity and therefore the level of emissions would be much lower in the O&M phase than during construction because activity would not be as intense. Also, it is assumed that projects would be operated and maintained in compliance with any policies that have been adopted as rules or regulations to reduce emissions of GHGs. Therefore, this impact would be **less than significant**.

Impact Category: Biological Resources – Terrestrial

Impact 3.5-3: Implementing restoration projects permitted under the Order could result in adverse effects on riparian habitat or sensitive natural communities.

The locations of sensitive natural communities relative to the footprints of restoration projects permitted under the Order are yet to be determined. However, the Order contains the following general protection measures to reduce this impact:

- GPM-5: Environmental Monitoring
- GPM-7: Environmentally Sensitive Areas
- GPM-8: Prevent Spread of Invasive Exotic Plants
- GPM-9: Environmentally Sensitive Areas
- GPM-12: Fugitive Dust Reduction
- GPM-15: Revegetate Disturbed Areas
- GPM-17: Fugitive Dust Reduction
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods

Additionally, restoration projects that could adversely affect riparian habitat or sensitive natural communities, would implement the following species protection measures, as applicable

- General Species Protection Measures
 - SPM-1: Preconstruction Surveys
 - SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion
- Invertebrate Species Protection Measures
 - INVERT-1: Implement California Freshwater Shrimp Measures
 - INVERT-2: Vernal Pool Branchiopods Measures
 - INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol

Findings (Effects of Project Construction Activities): Restoration projects permitted under the Order are expected to result in long-term improvements in the extent of sensitive natural communities, including riparian habitat. However, project construction work could result in unavoidable short-term impacts, including minor vegetation removal or trampling, hydrologic changes, deposition of dust or debris, soil compaction, or other

temporary disturbances that could affect habitat conditions and function. Implementing general protection measures and species protection measures would reduce the potential for impacts on riparian habitat and sensitive natural communities. Further, prior to project implementation, project proponents would be required to consult with appropriate federal, state, and/or local agencies, potentially including USACE, EPA, USFWS, and CDFW in addition to the State and/or Regional Boards. As part of the permitting process, these agencies may require project proponents to develop and implement modified and/or additional measures to protect sensitive resources under their jurisdiction. Additionally, as part of the CEQA process, the lead agency would consult with the applicable resource agencies to develop adequate project-specific mitigation measures to address impacts on sensitive natural communities. In addition, much of this mitigation for sensitive natural communities would go hand-in-hand with species protection measures developed under FESA and CESA consultation with the federal and state wildlife agencies. Completing these processes and implementing the aforementioned general protection measures and species protection would reduce the impact of construction on sensitive natural communities to a less-than-significant level.

Impact 3.5-4: Implementing restoration projects permitted under the Order could result in adverse effects on state and federally protected wetlands through direct removal, hydrological interruption, or other means.

The Order contains the following general protection measures to reduce impacts on federally and state protected wetlands and waters:

- GPM-5: Environmental Monitoring
- GPM-7: Environmentally Sensitive Areas
- GPM-10: Equipment Maintenance and Materials Storage
- GPM-11: Materials Disposal
- GPM-14: Project Cleanup after Completion
- GPM-15: Revegetate Disturbed Areas
- WQHM-1: Staging Areas and Stockpiling of Materials and Equipment
- WQHM-2: Storm Water Pollution Prevention Plan
- WQHM-3: Erosion Control Plans
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- WQHM-5: In-Water Concrete Use
- WQHM-6: Accidental Discharge of Hazardous Materials
- IWW-1: Appropriate In-Water Materials
- IWW-2: In-Water Vehicle Selection and Work Access
- IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment
- IWW-4: In-Water Staging Areas and Use of Barges
- IWW-8: Removal of Diversion and Barriers to Flow
- IWW-11: Sediment Containment during In-Water Pile Driving
- IWW-13: Dredging Operations and Dredging Materials Reuse Plan

In addition, as described above, projects would have to comply with requirements identified during the following permitting processes for impacts on jurisdictional wetlands and waters of the United States and/or state:

- U.S. Army Corps of Engineers—Clean Water Act Section 404 permit
- The respective Regional Boards—Clean Water Act Section 401 water quality certification and/or waste discharge requirements
- CDFW—Section 1600 Lake or Streambed Alteration Agreement

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities for projects permitted under the Order could disturb or remove wetlands and other waters of the United States and/or state (by regulatory definition, waters of the state also encompass all waters of the United States). Additionally, some restoration projects could convert an area from one wetland type to another. Construction activities could also affect the hydrologic patterns that sustain existing wetland features. During project-level planning, it is expected that the project proponent would conduct an aquatic resources delineation in concert with field reconnaissance visits to map and identify the extent of jurisdictional waters of the United States and/or state, including wetlands.

Implementing these regulatory requirements, the general protection measures, and species protection measures identified above would reduce the impact of project construction on jurisdictional waters and other waters to a **less-than-significant** level.

Operations of constructed infrastructure facilities would not be expected to affect wetlands or other waters of the United States and/or state; all of the impacts of these projects on wetlands and waters would have occurred during construction. Restoration projects permitted under the Order would often expand the extent of aquatic habitat, including by reestablishing wetlands in areas that were previously diked and drained for urban development or agricultural production, or by restoring side-channel habitat, seasonal floodplain, and floodplain benches in areas currently constrained by constructed levees. Thus, the net effect of many restoration projects permitted under the Order should be to increase the acreage of wetlands and other waters and/or improve the functioning of existing features of these types. The impact of constructed facilities and associated O&M on jurisdictional waters and other waters would be **less than significant**.

Impact 3.5-5: Implementing restoration projects permitted under the Order could interfere with the movement of native resident and migratory wildlife species.

To reduce this impact on the movement of native resident and migratory wildlife species, the Order includes the following general protection measures:

- GPM-2: Construction Work Windows
- GPM-3: Construction Hours
- GPM-4: Environmental Awareness Training
- GPM-5: Environmental Monitoring
- GPM-6: Work Area and Speed Limits
- GPM-7: Environmentally Sensitive Areas

- GPM-18: Trash Removed Daily
- VHDR-1: Avoidance of Vegetation Disturbance
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods

Additionally, restoration projects that could interfere with the movement of native resident and migratory wildlife species would implement the following species protection measures, as applicable.

- General Species Protection Measures
 - SPM-1: Preconstruction Surveys
 - SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion
 - SPM-3: Species Protection Construction Work Windows
 - SPM-4: Species Capture, Handling and Translocation
 - SPM-5: Sensitive Species Entrapment Prevention
 - SPM-6: Airborne Noise Reduction
- Amphibian Species Protection Measures
 - AMP-1: Wildlife Passage Design
 - AMP-2: Rain Event Limitations
 - AMP-3: Pre-Construction Survey
 - AMP-4: Disease Prevention and Decontamination
 - AMP-5: Lighting
 - AMP-6: Clearing and Grubbing Vegetation
 - AMP-7: Pump Screens
 - AMP-8: Removal of Non-native Species
 - AMP-90: Placement of Suitable Erosion Control Material
 - AMP-10: Encounters with Species
 - AMP-11: Species Observations and Handling Protocol
- Reptile Species Protection Measures
 - **REP-1: Pre-Construction Survey**
 - REP-2: Environmentally Sensitive Area Fencing
 - REP-3: Clearing and Grubbing Vegetation
 - REP-4: Prohibited Use of Rodenticides
 - REP-5: Species Observations and Encounters
 - REP-6: Species Handling and Relocation
- Bird Species Protection Measures
 - BIRD-1: Habitat Assessment
 - BIRD-2: Nest Protection Work Window
 - BIRD-3: Work Area Limits
 - BIRD-4: Site Access Restrictions
 - BIRD-5: Monitoring

- Mammal Species Protection Measures
 - MAM-1: Conduct Habitat Assessment
 - MAM-2: Exclusion Areas
 - MAM-3: Use of Handheld Tools
 - MAM-4: Species Trapping and Relocating
 - MAM-5: Reporting Requirements
- Invertebrate Species Protection Measures
 - INVERT-1: Implement California Freshwater Shrimp Measures
 - INVERT-2: Vernal Pool Branchiopods Measures
 - INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol
 - INVERT-4: Implement Butterfly Protection Measures

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction work could interfere with the local movement of native resident or migratory wildlife species. For example, ground disturbance could temporarily disrupt movement by amphibians and reptiles. However, these construction activities would not interfere substantially with the movement of these animals because they could move through adjacent habitat to nearby unaffected habitat. Construction activities, including movement of equipment and personal vehicles and removal of vegetation, could interfere with the movement of other terrestrial wildlife species, such as large mammals or birds, but these activities would not likely result in substantial effects on movement by these species because they are mobile and can move away from construction activities to other areas not being affected by construction.

Implementing the general protection measures and species protection measures identified above would reduce the impact on the movement and migratory conditions of terrestrial wildlife to a **less-than-significant** level.

Most long-term impacts on terrestrial biological resources of implementing projects permitted under the Order should be neutral or beneficial, because the specific purpose of these projects would be to correct existing conditions that contribute to resource degradation.

Constructed facilities and O&M activities are generally not expected to adversely affect movement by terrestrial wildlife species. There may be terrestrial species with more limited mobility that could be negatively affected by large-scale conversion of terrestrial habitat types to aquatic and wetland habitat features. Overall, however, the types of restoration projects that would be permitted under the Order are largely expected to improve movement and migration for terrestrial wildlife. This impact would be **less than significant**.

Impact 3.5-6: Implementing restoration projects permitted under the Order could conflict with local policies or ordinances protecting biological resources.

In general, it is expected that the general protection measures would be adequate to satisfy any requirements set forth by a local jurisdiction intended to protect biological resources:

- GPM-2: Construction Work Windows
- GPM-3: Construction Hours
- GPM-4: Environmental Awareness Training
- GPM-5: Environmental Monitoring
- GPM-6: Work Area and Speed Limits
- GPM-7: Environmentally Sensitive Areas
- GPM-18: Trash Removed Daily
- VHDR-1: Avoidance of Vegetation Disturbance
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods

Additionally, the following species protection measures, would be adequate to satisfy any requirements set forth by a local jurisdiction intended to protect biological resources, as applicable.

- General Species Protection Measures
 - SPM-1: Preconstruction Surveys
 - SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion
 - SPM-3: Species Protection Construction Work Windows
 - SPM-4: Species Capture, Handling and Translocation
 - SPM-5: Sensitive Species Entrapment Prevention
 - SPM-6: Airborne Noise Reduction
- Amphibian Species Protection Measures
 - AMP-1: Wildlife Passage Design
 - AMP-2: Rain Event Limitations
 - AMP-3: Pre-Construction Survey
 - AMP-4: Disease Prevention and Decontamination
 - AMP-5: Lighting
 - AMP-6: Clearing and Grubbing Vegetation
 - AMP-7: Pump Screens
 - AMP-8: Removal of Non-native Species
 - AMP-90: Placement of Suitable Erosion Control Material
 - AMP-10: Encounters with Species
 - AMP-11: Species Observations and Handling Protocol
- Reptile Species Protection Measures
 - **REP-1: Pre-Construction Survey**
 - REP-2: Environmentally Sensitive Area Fencing
 - REP-3: Clearing and Grubbing Vegetation
 - REP-4: Prohibited Use of Rodenticides
 - REP-5: Species Observations and Encounters
 - REP-6: Species Handling and Relocation

- Bird Species Protection Measures
 - BIRD-1: Habitat Assessment
 - BIRD-2: Nest Protection Work Window
 - BIRD-3: Work Area Limits
 - BIRD-4: Site Access Restrictions
 - BIRD-5: Monitoring
- Mammal Species Protection Measures
 - MAM-1: Conduct Habitat Assessment
 - MAM-2: Exclusion Areas
 - MAM-3: Use of Handheld Tools
 - MAM-4: Species Trapping and Relocating
 - MAM-5: Reporting Requirements
- Invertebrate Species Protection Measures
 - INVERT-1: Implement California Freshwater Shrimp Measures
 - INVERT-2: Vernal Pool Branchiopods Measures
 - INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol
 - INVERT-4: Implement Butterfly Protection Measures

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): In general, it is expected that the general protection measures and species protection measures that would protect special-status plants, special-status wildlife, sensitive natural communities, and jurisdictional wetlands and waters of the United States and/or state would be adequate to satisfy any requirements set forth by a local jurisdiction intended to protect biological resources resulting from effects pf project construction activities or constructed facilities and operations and maintenance of these facilities. Thus, implementing these general protection measures would reduce this impact to a **less-than-significant** level.

Impact 3.5-7: Implementing restoration projects permitted under the Order could conflict with the provisions of an adopted habitat conservation plan or natural community conservation plan.

In general, it is expected that the general protection measures should be adequate to eliminate any conflicts with approved conservation plans:

- GPM-2: Construction Work Windows
- GPM-3: Construction Hours
- GPM-4: Environmental Awareness Training
- GPM-5: Environmental Monitoring
- GPM-6: Work Area and Speed Limits
- GPM-7: Environmentally Sensitive Areas
- GPM-18: Trash Removed Daily
- VHDR-1: Avoidance of Vegetation Disturbance
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods

Additionally, the following species protection measures, should be adequate to eliminate any conflicts with approved conservation plans, as applicable.

- General Species Protection Measures
 - SPM-1: Preconstruction Surveys
 - SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion
 - SPM-3: Species Protection Construction Work Windows
 - SPM-4: Species Capture, Handling and Translocation
 - SPM-5: Sensitive Species Entrapment Prevention
 - SPM-6: Airborne Noise Reduction
- Amphibian Species Protection Measures
 - AMP-1: Wildlife Passage Design
 - AMP-2: Rain Event Limitations
 - AMP-3: Pre-Construction Survey
 - AMP-4: Disease Prevention and Decontamination
 - AMP-5: Lighting
 - AMP-6: Clearing and Grubbing Vegetation
 - AMP-7: Pump Screens
 - AMP-8: Removal of Non-native Species
 - AMP-90: Placement of Suitable Erosion Control Material
 - AMP-10: Encounters with Species
 - AMP-11: Species Observations and Handling Protocol
- Reptile Species Protection Measures
 - REP-1: Pre-Construction Survey
 - REP-2: Environmentally Sensitive Area Fencing
 - REP-3: Clearing and Grubbing Vegetation
 - REP-4: Prohibited Use of Rodenticides
 - REP-5: Species Observations and Encounters
 - REP-6: Species Handling and Relocation
- Bird Species Protection Measures
 - BIRD-1: Habitat Assessment
 - BIRD-2: Nest Protection Work Window
 - BIRD-3: Work Area Limits
 - BIRD-4: Site Access Restrictions
 - BIRD-5: Monitoring
- Mammal Species Protection Measures
 - MAM-1: Conduct Habitat Assessment
 - MAM-2: Exclusion Areas
 - MAM-3: Use of Handheld Tools
 - MAM-4: Species Trapping and Relocating
 - MAM-5: Reporting Requirements

- Invertebrate Species Protection Measures
 - INVERT-1: Implement California Freshwater Shrimp Measures
 - INVERT-2: Vernal Pool Branchiopods Measures
 - INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol
 - INVERT-4: Implement Butterfly Protection Measures

Findings (Effects of Project Construction Activities): Restoration projects permitted under the Order may occur in areas permitted by an adopted HCP or NCCP. During project-level planning and CEQA analysis, the potential for an overlap of project footprints with the planning areas of approved conservation plans would be evaluated. Should the analysis identify an overlap, the compatibility of the project's construction activities with the provisions of the conservation plans would need to be assessed further. Actions occurring outside the plan areas of these conservation plans would not likely result in a conflict unless the influence of the actions would extend within the conservation plan's boundaries. In some cases, an HCP, NCCP, or similar conservation plan may be in its early planning phase or in preparation, but not yet adopted. A conflict, if any, with a conservation plan that has not been adopted would not meet the criterion for a significant impact according to CEQA standards.

The impact of construction activities for proposed restoration projects permitted under the Order related to a conflict with an adopted HCP or NCCP would be **less than significant**.

Impact Category: Biological Resources - Aquatic

Impact 3.6-1: Implementing future restoration projects permitted under the Order could result in substantial adverse effects to special-status fish species directly, or indirectly through habitat modifications.

The following general protection measures would be required when applicable to address this impact to the extent feasible:

- FISH-1: Habitat Disturbance Avoidance and Minimization.
- FISH-2: Habitat Assessment and Surveys
- FISH-3: Fish Capture and Relocation
- FISH-4: Reporting
- GPM-2: Construction Work Windows
- GPM-3: Construction Hours
- GPM-4: Environmental Awareness Training
- GPM-5: Environmental Monitoring
- IWW-1: Appropriate In-Water Materials
- IWW-2: In-Water Vehicle Selection and Work Access
- IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment
- IWW-4: In-Water Staging Areas and Use of Barges
- IWW-5: Cofferdam Construction
- IWW-6: Dewatering/Diversion Restrictions

- IWW-7: Fish and Aquatic Species Exclusion while Installing Diversion Structures
- IWW-8: Removal of Diversion and Barriers to Flow
- IWW-9: In-Water Pile Driving Plan for Sound Exposure
- IWW-10: In-Water Pile Driving Methods
- IWW-11: Sediment Containment during In-Water Pile Driving
- IWW-12: Pile-Driving Monitoring
- IWW-13: Dredging Operations and Dredging Materials Reuse Plan
- SPM-3: Species Protection Construction Work Windows
- WQHM-1: Staging Areas and Stockpiling of Materials and Equipment
- WQHM-2: Storm Water Pollution Prevention Plan
- WQHM-3: Erosion Control Plans
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- WQHM-5: In-Water Concrete Use
- WQHM-6: Accidental Discharge of Hazardous Materials
- VHDR-1: Avoidance of Vegetation Disturbance
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods
- VHDR-4: Revegetation Erosion Control Materials and Methods
- VHDR-5: Revegetation Monitoring and Reporting
- VHDR-6: Herbicide Use
- VHDR-7: Herbicide Application Planning
- VHDR-8: Herbicide Application Reporting

Findings (Effects of Constructed Facilities and O&M of those Facilities): Most long-term impacts on aquatic biological resources of implementing the restoration projects permitted under the Order should be beneficial, because the specific purpose of these projects would be to restore or enhance existing conditions. However, temporary impacts could occur during maintenance activities for projects that would leave infrastructure at project sites after construction (e.g., stream crossings and fish passage improvements and water conservation projects) would require operations and maintenance of those structures, which could lead to limited, ongoing adverse impacts on special-status fish species. Maintenance activities could include sediment removal within or near the facilities, vegetation removal, and inspection and maintenance of facilities. These activities may lead to temporary mobilization of sediment, ground disturbance, chemical contamination, or vegetation removal.

Implementing the general protection measures would reduce or further reduce potential impacts to a **less-than-significant** level.

Impact 3.6-2: Implementing future restoration projects permitted under the Order could result in substantial adverse direct effects on the movement of native resident or migratory fish.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Project construction activities could temporarily affect fish movement. Instream construction activities also could impede upstream passage of fishes by causing altered hydrologic conditions, such as temporarily increased velocities.

However, because cofferdams typically do not block the entire width of affected waterways, the movement of juvenile or adult fishes are unlikely to be substantially affected. Riparian corridors and rivers often serve as the main routes for movement and migration of numerous fish and wildlife species. Thus, the loss, fragmentation, or alteration of riparian and riverine habitats could limit access to habitats for breeding (e.g., seasonal spawning areas for fish), rearing, foraging, and other needs. However, impacts on riparian vegetation from construction activities are expected to be temporary, limiting the impact on fish movement.

Implementing restoration projects permitted under the Order could result in construction-related impacts on fish movement, but the impacts are expected to be minimal and temporary. Therefore, the impact of project construction activities on fish movement would be less than significant.

The long-term effects of restoration projects permitted under the Order on fish movement are expected to be **beneficial**.

Impact Category: Energy Resources

Impact 3.8.1: Implementing restoration projects permitted under the Order could result in substantial inefficient, wasteful, or unnecessary long-term consumption of energy resources or changes to hydropower generation.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities and routine O&M for restoration projects permitted under the Order would incorporate all feasible control measures to improve equipment efficiency and reduce energy use, as required by local air pollution control or management districts. These measures may include best management practices to meet the efficiency standards for on-site construction vehicles and exhaust control plans to reduce unnecessary equipment idling. The projects would also implement other policies consistent with state and local legislation and policies for energy conservation to help reduce energy use during project construction.

Therefore, this impact would be less than significant.

Impact 3.8.2: Implementing restoration projects permitted under the Order could conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities for restoration projects permitted under the Order would incorporate all feasible control measures to improve equipment efficiency and reduce energy use, as required by local air pollution control or management districts. These measures may include best management practices to meet the efficiency standards for on-site construction vehicles and exhaust control plans to reduce unnecessary equipment idling. The projects would also implement other policies consistent with state and local legislation to help reduce energy use during construction. It is anticipated that construction of restoration projects permitted under

the Order would conform to applicable state and local plans, policies, and regulations related to energy use.

Impacts associated with the loss of development or implementation of other state or local plans for renewable energy or energy efficiency would be expected to be less than significant as construction activities for restoration projects would be limited to the construction period and would not involve long-term obstruction of undeveloped land. Therefore, energy use by construction activities for restoration projects permitted under the Order would not likely conflict with any applicable state or local plans, policies, or regulations establishing energy standards and this impact would be less than significant.

It is anticipated that operational activities for restoration projects permitted under the Order would conform to applicable state and local plans, policies, or regulations related to energy use. Constructed infrastructure would not be expected to obstruct a state or local plan for renewable energy as renewable projects could be built in other locations throughout the state. Energy use during the operation of restoration projects permitted under the Order would not likely conflict with applicable state, regional, or local plans, policies, or regulations establishing energy standards. Therefore, this impact would be less than significant.

Impact Category: Geology and Soils

Impact 3.9-4: Implementing future restoration projects permitted under the Order could result in substantial soil erosion or loss of topsoil.

Projects implementing applicable general protection measures included in the Order would further reduce impacts to geology and soil resources. The following general protection measures may apply to geology and soil resources:

- GPM-15: Revegetate Disturbed Areas
- WQHM-1: Staging Areas and Stockpiling of Materials and Equipment
- WQHM-2: Storm Water Pollution Prevention Plan
- WQHM-3: Erosion Control Plans
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- VHDR-1: Avoidance of Vegetation Disturbance
- VHDR-3: Revegetation Materials and Methods
- VHDR-4: Revegetation Erosion Control Materials and Methods

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction-related and O&M activities for restoration projects permitted under the Order could result in substantial soil erosion or the loss of topsoil by disturbing large volumes of soil through excavation, earthmoving, grading, filling, or stockpiling of soil material. These disturbed soils could be more susceptible to wind and water erosion, resulting in the loss of topsoil. Water erosion has a higher potential to occur on steep and/or organic sediment and could occur in many parts of the state.

Implementing the general protection measures listed above would reduce impacts on soil erosion and the loss of topsoil to a **less-than-significant** level.

Impact Category: Hazards and Hazardous Materials

Impact 3.10-1: Implementing future restoration projects permitted under the Order could involve the routine transport, use, or disposal of hazardous materials that, if accidentally released, could create a hazard to the public or the environment, or that could be located within one-quarter mile of a school.

The Order includes the following general protection measures to reduce this impact:

- GPM-6: Work Area and Speed Limits
- GPM-7: Environmentally Sensitive Areas and/or Wildlife Exclusion
- GPM-10: Equipment Maintenance and Materials Storage
- GPM-11: Material Disposal
- GPM-12: Fugitive Dust Reduction
- GPM-14: Project Cleanup after Completion
- WQHM-1: Staging Areas and Stockpiling of Equipment
- WQHM-2: Storm Water Pollution Prevention Plan
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- WQHM-5: In-Water Concrete Use
- WQHM-6: Accidental Discharge of Hazardous Materials
- IWW-1: Appropriate In-Water Materials
- IWW-2: In-Water Vehicle Selection and Work Access
- IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment
- IWW-6: Dewater/Diversion Restrictions
- IWW-13: Dredging Operations and Dredging Materials Reuse Plan
- VHDR-6: Herbicide Use

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction and O&M of future restoration projects permitted under the Order would likely require limited quantities of hazardous materials commonly used during construction activities (e.g., fuels for equipment, oils, hydraulic fluids, solvents, cleaners, sealants, lubricants, and herbicides). The types and quantities of hazardous materials would vary by construction site and type of restoration project. If improperly used, stored, handled, transported, or disposed of, hazardous materials could be accidentally released, which could expose construction workers, the public, and the environment (including soil, groundwater, or surface water) to contamination. Furthermore, during the construction of projects requiring equipment that would use fuel, oil, and/or coolant, accidental spills could occur while equipment is refueled, or equipment could be upset, resulting in the release of fuel, oil, and/or coolant into the surrounding environment.

Implementing the general protection measures would reduce the impact on the public or the environment of an accidental release of hazardous materials, or from the location of construction activities within one-quarter mile of a school, to a **less-than-significant** level.

Impact 3.10-2: Ground-disturbing activities for construction of future restoration projects permitted under the Order could encounter previously unidentified contaminated soil and/or groundwater, potentially exposing construction workers, the public, and the environment to risks associated with hazardous materials.

Findings: Ground-disturbing activities may occur after restoration projects permitted under the Order have been constructed. Operational activities would involve installing monitoring equipment (e.g., groundwater wells, flow gauges, depth gauges, cameras, stakes, and similar equipment). However, the ground-disturbing activities would be limited and would occur in the same areas as when the facilities were constructed. Therefore, operational activities would not be expected to encounter previously unidentified contaminated soil and/or groundwater that could expose construction workers, the public, and the environment to risks associated with hazardous materials. This impact would be **less than significant**.

Impact 3.10-4: Implementing future restoration projects permitted under the Order could interfere with emergency response access or with an adopted emergency response or evacuation plan (including those located in or near state responsibility areas or land classified as very high FHSZ) or result in inadequate emergency access.

Findings (Effects of Constructed Facilities and O&M of those Facilities): Routine O&M of constructed facilities (whether natural or infrastructure) is not anticipated to interfere with emergency response access or adopted emergency response or evacuation plans. Furthermore, project proponents implementing the Order would comply with all federal, state, and local regulations and policies to help reduce impacts related to emergency response access and adopted emergency response or evacuation plans. Therefore, this impact would be **less than significant**.

Impact Category: Hydrology and Water Quality

Impact 3.11-1: Implementing restoration projects permitted under the Order could result in the release of pollutants into surface water and/or groundwater that could violate water quality standards or waste discharge requirements, substantially degrade water quality, or obstruct implementation of a water quality control plan.

The following general protection measures may apply to hydrology and water quality:

- GPM-10: Equipment Maintenance and Materials Storage
- GPM-11: Material Disposal
- GPM-12: Fugitive Dust Reduction
- WQHM-1: Staging Areas and Stockpiling of Materials and Equipment
- WQHM-2: Storm Water Pollution Prevention Plan
- WQHM-3: Erosion Control Plans
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- WQHM-5: In-Water Concrete Use
- WQHM-6: Accidental Discharge of Hazardous Materials

- IWW-1: Appropriate In-Water Materials
- IWW-2: In-Water Vehicle Selection and Work Access
- IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment
- IWW-4: In-Water Staging Areas and Use of Barges
- IWW-6: Dewatering/Diversion
- IWW-10: In-Water Pile Driving Methods
- IWW-11: Sediment Containment during In-Water Pile Driving
- IWW-12: Pile-driving Monitoring
- IWW-13: Dredging Operations and Dredging Materials Reuse Plan
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods
- VHDR-4: Revegetation Erosion Control Materials and Methods
- VHDR-6: Herbicide Use
- VHDR-7: Herbicide Application Planning
- VHDR-8: Herbicide Application Reporting

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects permitted under the Order could require the movement of earth and other materials and the use of heavy equipment. In-channel disturbance for the placement or removal of structures could cause temporary changes to water quality in several different ways. Construction work could also introduce pollutants through equipment (e.g., oils, lubricants, hydraulic fluids) and materials (e.g., soil and cover materials, concrete) into affected waterways, or into flood hazard, tsunami, or seiche zones, where inundation could release the pollutants. Localized degradation of groundwater quality could result from temporary, short-term construction activities such as building access roads and temporary facilities, or from O&M activities such as vegetation control. If hazardous materials were to be discharged to the land surface or surface waters during this work, they could travel to underlying aquifers. If the discharge volume were large enough, the hazardous materials could degrade local groundwater quality to a sufficient degree to impair its continued use.

In addition, construction activities for some restoration projects could include temporary dewatering. Groundwater extracted during dewatering operations may contain elevated levels of suspended sediment, turbidity, or other constituents (e.g., metals, construction materials) that could degrade water quality when discharged into surface waters.

It is assumed that project proponents would comply with applicable federal, state, and local regulations and ordinances.

Integration of applicable general protection measures into project designs and plans would reduce impacts from construction activities on the water quality of the study area to a **less-than-significant** level.

Impact 3.11-2: Implementing restoration projects permitted under the Order could substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that a project may impede sustainable groundwater management of the basin or obstruct implementation of a sustainable groundwater management plan.

The following general protection measures may apply to hydrology and water quality:

IWW-6: Dewatering/Diversion

Findings (Effects of Project Construction Activities, Constructed Facilities, and **O&M of those Facilities):** Construction activities for restoration projects permitted under the Order could include temporary dewatering to facilitate equipment access, excavation or placement of materials, and repair or removal of infrastructure. These activities could result in a localized, temporary reduction in groundwater levels near the construction area, which would be expected to return to preconstruction levels after dewatering activities cease (or possibly better levels, if the aquifer were depleted, or in the case of a multi-benefit restoration project). Land grading, placement of dredged or other in-water material removed (e.g., legacy structures) on land before disposal, construction of structures (e.g., fish screens, earthen embankments), and stockpiling of construction materials could change drainage patterns during construction, which typically would result in changes in groundwater recharge. Actual alterations of groundwater recharge would depend on the type of construction activity and hydrologic and hydraulic factors. Construction of restoration projects permitted under the Order could reduce groundwater levels and alter groundwater recharge. However, these reductions would be localized and temporary, and preconstruction conditions would be expected to resume, or be improved, after construction. Project construction would not be anticipated to obstruct with implementation of a sustainable groundwater management plan.

Some of the long-term effects of restoration projects permitted under the Order on groundwater recharge are expected to be beneficial (e.g., stream, floodplain, and riparian projects typically would improve groundwater recharge) or neutral. Restoration projects permitted under the Order could affect groundwater supplies and recharge.

Slurry cutoff walls may be installed in setback levees, which could restrict water flow and affect groundwater levels. The potential consequences are anticipated to be localized changes in well water levels and/or high groundwater levels near the setback levees and near the locations where slurry cutoff walls are installed. However, such changes would not be expected to substantially affect groundwater resources.

Restoration projects permitted under the Order would establish, restore, and enhance stream and riparian areas and may include activity in upslope watershed sites (e.g., outside of the State and Regional Water Boards' jurisdiction). Specific project features such as small wood structures or beaver dam analogues would increase ponding and reconnect floodplains. By increasing the rate, duration, and inundation of floodplain surfaces, these features would elevate the water table during both low- and high-flow conditions, increasing groundwater recharge. Floodplain restoration would

also allow for groundwater recharge because floodplains, when inundated with water, allow floodwaters to infiltrate the ground.

Therefore, this impact would be less than significant.

Impact 3.11-3: Implementing restoration projects permitted under the Order could substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner that could substantially increase the rate of runoff; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems; or impede or redirect flood flows.

To reduce the impact of project construction on the rate or amount of surface runoff in a manner that would increase the risk of flooding on- or off-site, the Order includes the following general protection measures:

- WQHM-1 Staging Areas and Stockpiling of Materials and Equipment
- WQHM-2: Storm Water Pollution Prevention Plan

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects permitted under the Order could temporarily change drainage patterns; however, these changes would not be expected to change surface runoff in a manner that could exceed existing or planned stormwater drainage systems and/or create or increase on- or off-site flooding. Any changes would likely have relatively localized effects on-site and immediately downstream (or downslope) of the site; floodplain restoration improvements would not be expected to increase surface elevations or the chance of flooding in adjacent floodplains. Therefore, restoration projects permitted under the Order would not increase the rate or amount of surface runoff in a manner that would increase the risk of flooding on- or off-site.

Restoration projects permitted under the Order could permanently alter drainage patterns. Many of the long-term effects of these projects on drainage patterns and flood flows are expected to be beneficial or neutral, because the specific purpose of these projects would be to correct existing conditions that contribute to resource degradation. Restoration projects could alter runoff rates and timing, as local drainage patterns could change during project construction. However, these projects would likely have relatively localized effects on-site and immediately downstream (or downslope) of the floodplain restoration improvements, and would not increase surface water elevations or the chance of flooding in adjacent floodplains.

Therefore, this impact would be less than significant.

Impact Category: Land Use and Planning

Impact 3.12-1: Restoration projects permitted under the Order could conflict with a land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect.

Findings (Effects of Project Construction Activities): Construction of restoration projects permitted under the Order could involve mobilization of equipment and materials, preparation of staging areas, installation of temporary construction offices, staging and storage of equipment and materials, vehicle parking, use of designated access and haul routes, clearing of vegetation and structures, preparation of borrow sites, site restoration and demobilization, and removal of excess materials. Restoration projects would be required to comply with applicable city and county general plans and other local policies and ordinances. Potential temporary conflicts with adjacent land uses, policies and regulations from construction noise, dust, and traffic are addressed in those sections of this PEIR.

Therefore, this impact would be less than significant.

Impact 3.12-2: Implementing restoration projects permitted under the Order could physically divide an established community.

Findings (Effects of Project Construction Activities): Construction activities for restoration projects permitted under the Order could result in the temporary physical division of the community; however, these conversions would most likely take place on the periphery of a community, rather than through the community, and would be temporary. A majority of construction activities would take place on or near a body of water, which would not further divide an established community.

Therefore, this impact would be less than significant.

Impact Category: Noise

Impact 3.14-4: Implementing future restoration projects permitted under the Order that are located within the vicinity of a private airstrip, an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, could expose people residing or working in the project area to excessive noise levels.

Findings (Effects of Constructed Facilities and O&M of those Facilities): Routine O&M activities for facilities constructed for restoration projects permitted under the Order could be located within the vicinity of a private airstrip, an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport. Depending on their location, these projects could expose people working in the project area to excessive noise levels. However, routine O&M activities (e.g., vegetation clearing, debris removal, monitoring) would be limited and temporary, occurring yearly, monthly, weekly, or on an as-needed basis, depending on the restoration project. Restoration projects permitted under the Order would not include occupied structures; therefore, exposure of people residing in the area to excessive noise levels is not applicable.

The level of significance for potential impacts depends, in large part, on its proximity to an airport use plan, or on the project's location within 2 miles of a public airport or public use airport. However, because O&M activities would be temporary, this impact would be **less than significant**.

Impact Category: Population and Housing

Impact 3.15-1: Implementing restoration projects permitted under the Order could require relocation by construction and operation crews, resulting in population growth and demand for housing.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Restoration projects permitted under the Order would have the potential to result in an increase in temporary and long-term population growth. Individual restoration project locations and the scale of potential future permitted restoration projects and their staffing needs are not known at this time. Factors necessary to identify potential impacts include the number of construction workers employed, the duration of project construction, and the location of projects relative to populated areas. However, none of the restoration projects permitted under the Order would involve constructing new homes, businesses, or other infrastructure that would provide new long-term employment opportunities or result in population growth and demand for housing. Furthermore, while temporary or longer-term population increases could occur, the potential presence of existing vacant units in and around the project area would help absorb the population increases, which would be negligible and temporary.

O&M supporting constructed infrastructure for restoration projects permitted under the Order may include maintenance and cleaning of fish screens, removal of debris and sediment from stream crossings, and maintenance and operation of fishways. These O&M activities could require additional staff. However, it is anticipated that these activities would be similar to those in the project area located near a waterway. Furthermore, the potential presence of existing vacant units in and around the project area is expected to be sufficient to accommodate any workers who temporarily relocate to the area.

Therefore, this impact would be less than significant.

Impact 3.15-2: Implementing restoration projects permitted under the Order may displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere.

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order would not result in the elimination of housing. Some construction activities could involve removing or relocating existing infrastructure such as boat docks, boat haul-out locations, campgrounds and campsites, day-use sites, roads/trails, and off-highway/off-road vehicle routes.

Water conservation projects could involve constructing new infrastructure (e.g., fish screens, fishways, pumps and piping, screens and head gates); however, these projects would most likely be in less urbanized or rural environments in areas with minimal housing. Given that the location and scope of an individual restoration project permitted under the Order are yet to be determined, the potential exists for some such projects to result in displacement of some housing and people. Factors necessary to identify specific

impacts include the type of project and the location of construction relative to people and housing. Even though these factors are not known, these impacts should be negligible because projects would typically occur in low-density population regions near waterways, limiting the potential for the displacement of people or housing. Furthermore, none of the restoration projects permitted under the Order would include the removal or relocation of housing.

Therefore, this impact would be less than significant.

Impact Category: Recreation

Impact 3.16-1: Implementing future restoration projects permitted under the Order could directly impair, degrade, or eliminate recreational resources, facilities, and opportunities.

Findings (Effects of Project Construction Activities): Construction work for restoration projects permitted under the Order could temporarily impair, degrade, or eliminate recreational resources, facilities, and opportunities. While these types of construction activities may impair recreational activities, they would not be expected to significantly impair, degrade, or eliminate recreational resources, facilities, and opportunities. In addition, a restoration project permitted by the Order could provide new recreational opportunities, which would be beneficial. In addition, restoration projects permitted under the Order such as removal of a small dam could provide increased recreational opportunities in stream or river systems, such as kayaking.

Furthermore, recreational opportunities are abundant throughout the study area, and construction work for restoration projects permitted under the Order would be temporary and localized. Therefore, impacts on parks, trails, boating, and fishing areas throughout the study area would be less than significant when compared to the total recreation opportunities for the surrounding populations.

This impact would be less than significant.

Impact Category: Transportation

Impact 3.17-1: Future restoration projects permitted under the Order could conflict with a plan, ordinance, or policy addressing the circulation system including transit, roadways, bicycle, and pedestrian facilities.

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Operations and maintenance of facilities for future restoration projects that would be permitted under the Order are not likely to substantially increase traffic or cause circulation problems associated with transit, roadways, bicycle, and pedestrian facilities. These projects would adhere to regional and local general plans and traffic regulations; therefore, they would not create substantial traffic during peak-hour periods. Workers involved with the operations and maintenance of constructed facilities would come from an existing worker pool within the project region and would not result in a substantial increase in the number of workers or vehicle trips. Therefore, operations would not substantially increase traffic or roadway congestion.

Some restoration projects permitted under the Order could remove or relocate bicycle and pedestrian facilities, affecting demands on other pathways and recreational activities. Constructing project facilities in waterways and small channels could affect navigation and boat traffic; periodic maintenance activities could be required, which could temporarily obstruct vessel navigation and boats. However, these restoration projects would be required to adhere to statewide, regional, and local policies, regulations, and ordinances governing traffic and circulation systems.

Therefore, this impact would be less than significant.

Impact 3.17-2: Future restoration projects permitted under the Order could conflict with or be inconsistent with State CEQA Guidelines Section 15064.3(b).

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Operations of facilities for restoration projects that would be permitted under the Order are not likely to require a large amount of automobile travel. The workers hired for each project would likely come from the regional worker pool and would not substantially increase automobile trips. Some projects may require operations and maintenance activities involving the removal of debris or the use of heavy equipment. However, substantially fewer trips are anticipated to occur than during construction.

Therefore, this impact would be less than significant.

Impact Category: Utilities and Public Services

Impact 3.19-1: Implementing future restoration projects permitted under the Order could require or result in the construction or relocation of new water or expanded water, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Findings (Constructed Facilities and O&M of those Facilities): Routine O&M activities for restoration projects permitted under the Order would not require or result in the construction or relocation of new water or expanded water, storm drainage, electric power, natural gas, telecommunications facilities or water conveyance facilities.

Therefore, this impact would be less than significant.

Impact 3.19-2: Implementing future restoration projects permitted under the Order could result in insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

Findings: (Effects of Project Construction Activities, Constructed Facilities, and **O&M of those Facilities):** Population changes could occur resulting in reasonably foreseeable future development (e.g., new housing or commercial development). These future development projects may require surface water during normal, dry and multiple dry years. These projects are not anticipated to result in insufficient water supplies by meeting existing regulatory requirements (e.g., existing Biological Opinions on the Long-Term Operations of the Central Valley Project and State Water Project). Future

restoration projects would need to comply with relevant federal, state, and local regulations and ordinances (including demonstrating there are sufficient water supplies, if needed), as would reasonably foreseeable future development projects. Therefore, implementing future restoration projects permitted under the Order would not result in insufficient water supplies to serve reasonably foreseeable future development during normal, dry, and multiple dry years.

Construction-related impacts would be temporary and short-term, and the water needed for construction and construction workers could be provided by existing municipal and non-municipal systems (such as water wells or water trucks).

Restoration projects may require a water supply for maintenance activities. For example, irrigation water may be needed for the initial establishment of native plant revegetation. However, the water supply needed for maintenance would be limited and could be met by existing municipal and non-municipal systems.

Constructed facilities, including expansion or modification of floodplains and fish passage improvements, could have effects on water supply availability if water levels are reduced near diversion intakes. However, anticipated changes in water levels resulting from constructed facilities would need to comply with relevant federal, state, and local regulations and ordinances and would not impede operations of existing diversion facilities or substantially change water supply availability to water users. Some of the long-term effects of restoration projects permitted under the Order on groundwater recharge are expected to be beneficial (e.g., stream, floodplain, and riparian restoration projects typically would improve groundwater recharge).

Therefore, this impact would be less than significant.

Impact 3.19-3: Future restoration projects permitted under the Order could be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and could fail to comply with federal, state, and local statutes and regulations related to solid waste.

Findings (Effects of Project Construction Activities. Constructed Facilities and Operations and Maintenance of those Facilities): Construction and O&M activities for restoration projects permitted under the Order could temporarily increase the amount of solid waste hauled to local landfills. The magnitude of the increase in solid waste generation would depend on the size, number, location, and nature of the projects, and their ability to recycle, reuse, or dispose of materials on-site.

Most projects permitted under the Order that would involve earthmoving activities would not generate large amounts of construction waste (e.g., organic materials from borrow areas and restoration construction sites, excavated material, and soil not suitable for earthen structures) that would require disposal at a landfill. Most excess organic material would be used to reclaim borrow areas and temporarily disturbed sites or would be provided to local farmers for incorporation into their land to help improve soil quality. Debris generated during project clearing and grubbing operations would be disposed of based on the type of material and local conditions.

The materials generated would be hauled off-site to landfills (e.g., building demolition waste); delivered to recycling facilities (e.g., concrete); sold (e.g., organic material to cogeneration facilities); or reused onsite or nearby (e.g., restoration project or other projects needing fill material). Thus, construction waste is unlikely to cause the permitted capacity of local landfills to be exceeded or would not be in compliance with federal, state, and local regulations related to solid waste.

Therefore, impacts related to solid waste disposal needs and compliance would be **less than significant**.

Impact 3.19-4: Implementing future restoration projects permitted under the Order could result in substantial adverse physical impacts associated with construction of new or modified fire protection, police protection, schools, and other public facilities.

Findings Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction and O&M activities for future restoration projects permitted under the Order would not include new land development or occupied structures that would increase population and add new public service demands. Construction and O&M activities for restoration projects permitted under the Order would not add substantial new demands to existing fire or police protection facilities, schools, or other public facilities. Increases in demands for public services, such as from jobsite accidents or jobsite security during construction of future project actions, would be temporary or short-term and are unlikely to require new or altered public service facilities because the overall numbers of workers at permitted projects would typically be a small portion of the population in any given project area.

This impact would be less than significant.

2.3 Significant or Potentially Significant Impacts Reduced to a Less Than Significant Levels Through Mitigation Measures

The following environmental significant and potentially significant impacts would be reduced to less than significant levels through implementation of applicable mitigation measures are set out below.

The State Water Board finds that the mitigation measures cited below are feasible, are adopted, and reduce impacts to a less than significant level. Accordingly, the State Water Board finds that, pursuant to Public Resources Code section 21081(a)(1) and State CEQA Guidelines section 15091(a)(1), changes or alterations required in, or incorporated into, the Order mitigate or avoid the potentially significant impacts of the Order as identified in the PEIR. Therefore, impacts in this section are considered significant or potentially significant, but implementation of mitigation measures (with incorporation of applicable general protection measures and/or species protection measures) will reduce impacts to a less than significant level.

The State Water Board or Regional Water Quality Control Board's (Regional Board) will include applicable measures below as conditions of the Notice of Applicability (NOA) issued for an individual project under the Order. The applicability of the general protection measures, species protection measures, and mitigation measures would

depend on the restoration activities, project location, and the potentially significant impacts of the individual restoration project. Implementation of the mitigation measure(s) would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

The basis for the finding for each identified impact is set forth below.

Impact Category: Aesthetics

Impact 3.2-1: Implementing future restoration projects permitted under the Order could result in substantial degradation of visual qualities.

The following general protection measures may apply to visual resources:

• VHDR-5: Revegetation Monitoring and Reporting

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure AES-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure AES-1: Minimize Degradation of Visual Quality

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Construction of restoration projects could permanently alter the existing visual landscape and during construction, some restoration projects could temporarily alter existing visual landscape due to soil exposure and immature vegetation during and after construction.

Additionally, some restoration projects could result in the placement of infrastructure. Adding a project feature that prominently contrasts with the existing visual qualities and character of the surrounding landscape could cause a change in visual quality. These facilities may not be of the same visual character as surrounding landscapes.

With implementation of the Mitigation AES-1, this impact is reduced to a **less than significant** level.

Impact 3.2-3: Implementing future restoration projects permitted under the Order could result in new sources of substantial light or glare.

The following general protection measures may apply to visual resources:

• GPM-3: Construction Hours

The following mitigation measures within the authority of the Board to impose have been adopted to address this impact to the extent feasible:

Mitigation AES-2: Avoid Effects of Project Lighting

Findings (Effects of Project Construction Activities): Construction activities or the use of construction lighting for restoration projects permitted under the Order could temporarily generate glare.

With implementation of the Mitigation Measure AES-2, this impact is reduced to a **less** than significant level.

Impact Category: Biological Resources – Terrestrial

Impact 3.5-7: Implementing restoration projects permitted under the Order could conflict with the provisions of an adopted habitat conservation plan or natural community conservation plan.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure TERR-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure TERR-1: Coordinate with CDFW, USFWS, and Permittees Regarding HCPS, NCCPs, and Other Conservation Plans

Findings (Effects of Constructed Facilities and O&M of those Facilities): Most long-term impacts on terrestrial biological resources of implementing projects permitted under the Order should be neutral or beneficial, because the specific purpose of these projects would be to correct existing conditions that contribute to resource degradation. Nonetheless, there are foreseeable circumstances in which restoration projects targeted to specifically benefit aquatic organisms may conflict with already approved conservation plans.

Depending on their specific locations and the applicable plans, constructed facilities established by projects permitted under the Order could conflict with adopted HCPs, NCCPs, or similar conservation plans. If such a restoration project would eliminate habitat that contributes to the conservation goals of species covered under an HCP or NCCP, the resource agencies that previously issued take permits under the conservation plan (e.g., CDFW and USFWS) may need to review the incidental take permits for those covered species. Based on this assessment, these agencies may determine that with the impact of the restoration project permitted under the Order on covered species' habitat, new or revised conditions would be required to offset those impacts and achieve the net conservation benefits originally identified in the HCP or NCCP.

In such a case, the CEQA lead agency for the project permitted under the Order would need to coordinate with the local entities implementing the approved conservation plan, and the resource agencies that previously issued take permits under the conservation plan. The purpose of this coordination would be to design additional project-specific measures to reduce conflicts between the project and implementation of the approved conservation plan.

With implementation of the Mitigation Measure TERR-1, this impact is reduced to a less than significant level.

Impact Category: Geology and Soils

Impact 3.9-1: Implementing future restoration projects permitted under the Order could cause direct or indirect adverse effects on people or structures related to risk of loss, injury, or death due to a fault rupture.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure GEO-1 and GEO-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure GEO-1: Include Geotechnical Design Recommendations

Mitigation Measure GEO-2: Comply with the Alquist-Priolo Act

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): The specific locations and scale of possible future restoration projects are not yet determined; therefore, the risk of a fault rupture cannot be determined. Factors needed to identify specific impacts include the project's design, its location relative to underlying soil and geotechnical conditions, and proximity to known earthquake faults. Restoration projects permitted under the Order could cause direct or indirect adverse effects on people or structures related to the risk due to a fault rupture.

Implementing Mitigation Measures GEO-1 and GEO-2 would reduce potentially significant impacts related to the potential exposure to people and structures to risk of loss, injury, or death due to a fault rupture to a **less-than-significant** level.

Impact 3.9-2: Implementing future restoration projects permitted under the Order could directly or indirectly result in adverse effects on people or structures related to risk of loss, injury, or death due to strong seismic ground shaking.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures GEO-3 and GEO-4 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure GEO-3: Conduct Individual Restoration Project Geotechnical Investigation and Report

Mitigation Measure GEO-4: Adhere to International Building Code

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): The specific locations and scale of possible future permitted restoration projects are not known at this time; therefore, the risk associated with strong seismic ground shaking cannot be determined. Restoration projects permitted under the Order could directly or indirectly result in adverse effects on people or structures related to strong seismic ground shaking.

Implementing Mitigation Measures GEO-3 and GEO-4 would reduce potentially significant impacts that could result in direct or indirect adverse effects on people or structures related to the risk due to strong seismic ground shaking to a **less-than-significant** level.

Impact 3.9-3: Implementing future restoration projects permitted under the Order could directly or indirectly cause adverse effects on people or structures from unstable soil conditions.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure GEO-3, GEO-6, GEO-7, and GEO-8 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure GEO-3: Conduct Individual Restoration Project Geotechnical Investigation and Report

Mitigation Measure GEO-6: Implement Measures for Waterway Construction Activities

Mitigation Measure GEO-7: Implement Measures for Levee Construction and Other Fill Embankment Designs

Mitigation Measure GEO-8: Assess the Presence of Highly Organic Soils

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): To determine the effects of construction activities related to unstable soils, factors such as project design, location relative to underlying soils, and geotechnical conditions would need to be known. The potential exists for indirect or direct exposure of people or structures to adverse effects from unstable soils during restoration projects permitted under the Order.

Implementing Mitigation Measures GEO-3, GEO-5, GEO-6, GEO-7, and GEO-8 would reduce potentially significant impacts related to indirect or direct adverse effects on people or structures associated with the risk from unstable soils to a **less-than-significant** level.

Impact Category: Hazards and Hazardous Materials

Impact 3.10-2: Ground-disturbing activities for construction of future restoration projects permitted under the Order could encounter previously unidentified contaminated soil and/or groundwater, potentially exposing construction workers, the public, and the environment to risks associated with hazardous materials.

The Order includes the following general protection measures to reduce this impact:

- GPM-6: Work Area and Speed Limits
- GPM-7: Environmentally Sensitive Areas and/or Wildlife Exclusion

- GPM-10: Equipment Maintenance and Materials Storage
- GPM-11: Material Disposal
- GPM-12: Fugitive Dust Reduction
- GPM-14: Project Cleanup after Completion
- WQHM-1: Staging Areas and Stockpiling of Equipment
- WQHM-2: Storm Water Pollution Prevention Plan
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- WQHM-5: In-Water Concrete Use
- WQHM-6: Accidental Discharge of Hazardous Materials
- IWW-1: Appropriate In-Water Materials
- IWW-2: In-Water Vehicle Selection and Work Access
- IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment
- IWW-6: Dewater/Diversion Restrictions
- IWW-13: Dredging Operations and Dredging Materials Reuse Plan
- VHDR-6: Herbicide Use

In addition, as part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures HAZ-1, HAZ-2, and HAZ-3 would be required when applicable to a given project. Implementation of these mitigation measures would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure HAZ-1: Prepare and Implement a Health and Safety Plan and Provide Qualified Oversight of Fill Removal Related to Earthmoving Activities

Mitigation Measure HAZ-2: Notify Appropriate Federal, State, and Local Agencies If Contaminated Soils Are Identified, and Complete Recommended Remediation Activities

Mitigation Measure HAZ-3: Notify Appropriate Federal, State, and Local Agencies If Accidental Discharges of Hazardous Materials

Findings (Effects of Project Construction Activities): Certain restoration projects permitted under the Order would have ground-disturbing construction activities (e.g., stream crossing and fish passage improvements; removal of small dams, tide gates, flood gates, and legacy structures; bioengineered bank stabilization; and restoration and enhancement of off-channel/side-channel habitat). These ground-disturbing activities (e.g., excavation, clearing of the land for preparation of site, grading, cut and fill) could cause the release of previously unidentified contaminated soil and/or groundwater that could expose construction workers, the public, and the environment to hazardous materials.

In addition, sediments excavated during dredging activities may contain hazardous materials, which could expose construction workers to health and safety risks. Construction activities from these project types may have potentially significant impacts

related to the potential exposure of construction workers, the public, and the environment to existing on-site hazardous materials.

The general protection measures would be followed to reduce the impacts of grounddisturbing activities for restoration projects permitted under the Order related to the release or exposure to previously unidentified contaminated soil and/or groundwater that could expose construction workers, the public, and the environment to risks from hazardous materials.

Implementing Mitigation Measures HAZ-1, HAZ-2, and HAZ-3 and the applicable general protection measures would reduce the impact related to potential discovery of previously unidentified contaminated soil and/or groundwater to **a less-than-significant** level.

Impact 3.10-4: Implementing future restoration projects permitted under the Order could interfere with emergency response access or with an adopted emergency response or evacuation plan (including those located in or near state responsibility areas or land classified as very high FHSZ) or result in inadequate emergency access.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure HAZ-5 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure HAZ-5: Coordinate with Applicable Federal, State, and Local Agencies and Districts

Findings (Effects of Project Construction Activities): Future restoration projects permitted under the Order could be located in areas where their construction could physically interfere with adopted emergency response plans or evacuation plans, or result in inadequate emergency access. Projects often use heavy equipment, the operation of which may temporarily disrupt existing transportation and circulation patterns in the project area. Impacts could include direct disruption of traffic flows and street operations. Some waterside restoration projects permitted under the Order may use barges to transport construction materials, workers, and equipment, which would reduce impacts on water-related response times.

The level of significance of a potential impact of a restoration project permitted under the Order related to interference with emergency response access or adopted emergency response or evacuation plans would depend, in large part, on the project's size and proximity to a populated area. Construction-related interference with emergency response, evacuation plans, and adopted emergency response would be temporary. In addition to Mitigation Measure HAZ-5, other feasible, equally effective mitigation measures are available, such as maintaining alternative property access; providing advance notification to local police, fire, and emergency service providers of the timing, location, and duration of activities that could affect emergency vehicle movement; and installing traffic control devices to maintain safe driving conditions. Implementing Mitigation Measure HAZ-5, or equally effective mitigation measures,

would reduce impacts on emergency response access or adopted emergency response and evacuation plans to a **less-than-significant** level.

Impact 3.10-5: Implementing future restoration projects permitted under the Order could expose people or structures, either directly or indirectly, to a significant loss, injury, or death due to wildland fires.

As part of the State Water Board or Regional Board' issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure FIRE-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure FIRE-1: Develop and Implement a Fire Prevention Plan

The following general protection measures would be required when applicable to address this impact to the extent feasible:

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities, (natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order could be constructed and operated in areas where their construction and operation could pose a threat to people and structures because of wildfires. The study area involves the entire state of California; therefore, restoration projects could be located in areas with moderate to high fire risk areas, or in areas where vegetation is present. Construction equipment and vehicles could come into contact with vegetated areas, potentially igniting dry vegetation by accidental discharge of sparks, resulting in fire.

Restoration projects permitted under the Order could be located in areas where their operation could pose a threat to people or structures because of wildland fires. Because the locations of future restoration projects permitted under the Order are yet to be determined, it is possible that facilities could be constructed in areas where vegetation is present in or near infrastructure, equipment, and O&M vehicles.

Implementing Mitigation Measure FIRE-1 would reduce the impact of exposure to wildland fires to a **less-than-significant** level.

Impact 3.10-6: Implementing future restoration projects permitted under the Order could create vector habitat that would pose a significant public health hazard.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure HAZ-6 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure HAZ-6: Prepare and Implement a Vector Management Plan

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities

(natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order could create new vector habitat that would pose a significant public health hazard. Mosquitoes require standing water to complete their growth cycles, and any body of standing water that remains undisturbed for multiple days represents a potential mosquito breeding site.

Implementing Mitigation Measure HAZ-6 would reduce the impact related to public health hazards from new vector habitat to a **less-than-significant** level.

Impact Category: Mineral Resources

Impact 3.13-1: Implementing restoration projects permitted under the Order could result in the loss of availability of a known mineral resource.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure MIN-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure MIN-1: Minimize Potential Impacts from Loss of a Known Mineral Resource

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and O&M of those facilities permitted under the Order (e.g., new setback levees and floodway widening) could affect mineral resources designated by the California Geological Survey as resources of regional and statewide importance (MRZ-2), depending on the projects' locations and proximity to mineral resources. Active, permitted mines may be present, and development of the proposed restoration projects could substantially deplete already inadequate aggregate resources. Construction-related demand could exceed the availability of mineral resource supplies. For example, constructing setback levees and widening floodways would require large quantities of construction aggregate, which could limit the ability of other aggregate users in the area to obtain and use aggregate.

Implementing Mitigation Measure MIN-1, or equally effective mitigation measures, would reduce the potentially significant impacts of restoration projects permitted under the Order to a **less-than-significant** level.

Impact 3.13-2: Implementing restoration projects permitted under the Order could result in the loss of availability of a locally important mineral resource recovery site.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure MIN-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure MIN-2: Minimize Potential Impacts from the Loss of a Locally-Important Mineral Resource Recovery Site

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order could result in the loss of availability of a locally important mineral resource recovery site, if the restoration project's construction or resulting infrastructure would occur on or near mineral recovery sites that have been identified in local general plans, specific plans, or other land use plans. Many producing natural gas wells lie within delineated natural gas fields and a permitted mining operations are present in the study area.

Restoration projects have the potential to affect mineral resource recovery sites, including productive oil and natural gas wells and active mining sites, depending on the projects' specific locations and characteristics at the time they are implemented.

Impacts on mineral extraction sites would be temporary if the effects would be limited to the construction period. The impacts would be permanent if project facilities would be placed in an area where a resource recovery site exists and the extraction site would experience a permanent loss of availability. However, the specific locations and scale of future permitted restoration projects are yet to be determined. Therefore, the risk related to the loss of an important mineral resource recovery site cannot be determined. The factors necessary to identify the risk include the locations of the new facilities relative to known mineral resource recovery sites delineated on a local general plan, specific plan, or other land use plan.

Implementing Mitigation Measure MIN-2, or equally effective mitigation measures, would reduce the potentially significant impacts of restoration projects permitted under the Order to a **less-than-significant** level.

Impact Category: Noise

Impact 3.14-1: Implementing future restoration projects permitted under the Order could result in a temporary or permanent increase in ambient noise levels in excess of standards established in applicable plans and ordinances.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure NOISE-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure NOISE-2: Minimize Operations and Maintenance Noise Conflicts

Findings (Effects of Constructed Facilities and O&M of those Facilities): Routine O&M activities for constructed facilities (natural or artificial infrastructure) for restoration projects that would be permitted by the Order could produce ambient noise. For example, O&M work for fish screens on water intakes could involve operating a pump

station that would produce noise. However, pump stations are normally enclosed and would not be expected to result in a permanent substantial noise increase relative to existing conditions, nor would noise levels generated by the pump station exceed local jurisdictions' noise standards.

Most maintenance activities would involve truck trips, vegetation removal, sediment removal within or near the facilities, and inspection and maintenance of facilities. These activities could require heavy equipment that would generate noise at levels similar to those described above. However, elevated noise levels would be less frequent than during construction of these projects, because maintenance would be less frequent than ongoing construction activities.

Implementing Mitigation Measure NOISE-2 would reduce the impact related to a temporary or permanent increase in ambient noise levels from operation of constructed facilities for restoration projects permitted by the Order to a **less-than-significant level**.

Impact 3.14-2: Implementing future restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne vibration.

The following mitigation measures within the authority of the Board to impose have been adopted to address this impact to the extent feasible:

Mitigation Measure NOISE-1: Minimize Noise Conflicts

Mitigation Measure NOISE-2: Minimize Operations and Maintenance Noise Conflicts

Findings (Effects of Constructed Facilities and O&M of those Facilities): Operation of restoration projects permitted under the Order could expose people to elevated groundborne vibration, but far less frequently than during construction. Some projects, such as the construction of new levees, are not likely to generate vibration during operation. However, some heavier maintenance and repair activities could generate impacts, except that jackhammering and pile driving and other activities that would generate the highest levels of vibration would not be expected to commonly be used as part of O&M activities.

Implementation of MM-NOISE 1 and NOISE-2 would reduce the impact of groundborne vibration during O&M activities for constructed facilities for restoration projects permitted by the Order to a **less-than-significant level**.

Impact 3.14-3: Implementing future restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne noise levels.

The following general protection measures may apply to noise impacts:

- GPM-2: Construction Work Windows
- GPM-3: Construction Hours
- GPM-6: Work Area and Speed Limits
- IWW-9: In-Water Pile Driving Plan for Sound Exposure

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure NOISE-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure NOISE-2: Minimize Operations and Maintenance Noise Conflicts

Findings (Effects of Constructed Facilities and O&M of those Facilities): Routine O&M activities for constructed facilities (natural or artificial infrastructure) for future restoration projects permitted by the Order could result in a substantial (10-dBA) long-term or permanent increase in groundborne noise levels. For example, operation of fish screens on water intakes could involve using a pump station that would produce noise. Ordinarily, these facilities are enclosed and would not be expected to result in a permanent substantial increase in noise levels relative to existing conditions, nor would the noise levels generated by pump stations be expected to exceed the local jurisdictions' noise standards. However, these projects could be located in a quiet rural environment where typical noise levels may be as low as 20 dBA. As a result, operation of restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne noise levels by more than 10 dBA.

Most maintenance activities would involve truck trips, vegetation removal, sediment removal within or near the facilities, and inspection and maintenance of facilities. These activities could require heavy equipment that could generate noise levels similar to those described above, but elevated noise levels would occur less frequently than during construction of these projects, because maintenance would be less frequent than ongoing construction activities.

Therefore, the impact of excessive groundborne noise levels generated during operation of constructed facilities for restoration projects permitted by the Order would be **less than significant.**

Although the impact would be less than significant, Mitigation Measure NOISE-2 may help to further reduce impacts associated with excessive groundborne noise levels associated with operation of constructed facilities.

Impact 3.14-4: Implementing future restoration projects permitted under the Order that are located within the vicinity of a private airstrip, an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, could expose people residing or working in the project area to excessive noise levels.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure NOISE would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure NOISE-3: Prepare Preconstruction Safety Plans

Findings (Effects of Project Construction Activities): Construction of restoration projects that would be permitted under the Order could be located in the vicinity of a private airstrip, an airport land use plan, or within 2 miles of a public airport or public use airport. These restoration projects would not include occupied structures; therefore, exposure of excessive noise levels to the people residing in the area of a restoration project is not discussed further.

Implementing Mitigation Measure NOISE-3 would reduce this impact to a **less-than-significant level**.

Impact Category: Recreation

Impact 3.16-1: Implementing future restoration projects permitted under the Order could directly impair, degrade, or eliminate recreational resources, facilities, and opportunities.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure REC-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure REC-1: Minimize Impairment, Degradation, or Elimination of Recreational Resources

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Restoration projects permitted under the Order could permanently impair or eliminate recreational resources, depending on the project locations and types. Infrastructure may be removed or relocated along streams and in riparian areas. The infrastructure affected may include but would not be limited to boat docks, boat haul-out locations, campgrounds and campsites, day-use sites, and roads/trails and off-highway/off-road vehicle routes in the areas of the restoration projects.

Alternatively, a restoration project permitted by the Order could provide new recreational opportunities, which would be beneficial.

Impacts attributable to the locations, sizes, and nature of restoration projects could include long-term and permanent changes to recreational resources. However, the specific locations and scale of possible future projects are not currently known. Therefore, the potential significant recreational impacts in the study area cannot be determined at this time. The factors necessary to identify specific impacts include the size and characteristics of a project, the duration of construction, and the type and precise location of the resource or facility itself.

Implementing Mitigation Measure REC-1 would reduce the impact related to impairment, degradation, or elimination of recreational resources to a **less-than-significant** level.

Impact 3.16-2: Future restoration projects permitted under the Order could alter recreational resources or facilities or require the construction or expansion of recreational facilities that could result in environmental impacts.

The Order includes the following general protection measures to reduce this impact:

- GPM-6: Work Area and Speed Limits
- GPM-7: Environmentally Sensitive Areas and/or Wildlife Exclusion
- GPM-10: Equipment Maintenance and Materials Storage
- GPM-11: Material Disposal
- GPM-12: Fugitive Dust Reduction
- GPM-13: Trash Removed Daily
- GPM-14: Project Cleanup after Completion
- GPM-15: Revegetate Disturbed Areas
- WQHM-1: Staging Areas and Stockpiling of Equipment
- WQHM-2: Storm Water Pollution Prevention Plan
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- WQHM-5: In-Water Concrete Use
- WQHM-6: Accidental Discharge of Hazardous Materials
- IWW-1: Appropriate In-Water Materials
- IWW-2: In-Water Vehicle Selection and Work Access
- IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment
- IWW-5: Cofferdam Construction
- IWW-6: Dewater/Diversion Restrictions
- IWW-8: Removal of Diversion and Barriers to Flow
- IWW-13: Dredging Operations and Dredging Materials Reuse Plan
- VHDR-1: Avoidance of Vegetation Disturbance
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods
- VHDR-4: Revegetation Erosion Control Materials and Methods
- VHDR-6: General Herbicide Use

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures NOISE-1 and REC-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure NOISE-2: Minimize Operations and Maintenance Noise Conflicts

Mitigation Measure REC-1: Minimize Impairment, Degradation, or Elimination of Recreational Resources

Findings (Effects of Project Construction Activities, Constructed Facilities and O&M of those Facilities): Construction activities and constructed facilities for restoration projects permitted under the Order could result in the construction and

modification of recreational facilities and associated environmental impacts. However, the specific locations and scale of possible future permitted actions are not currently known. Therefore, the locations and characteristics of new or modified recreational facilities in the study area cannot be determined at this time. The factors necessary to identify individual restoration projects impacts include the project's size and characteristics, the duration of construction, and the types and precise locations of construction activities and the facility or resource itself. Restoration projects permitted under the Order could result in changes to recreational resources that could result in impacts on the environment.

Implementation of these general protection measures and Mitigation Measures REC-1 and NOISE-2 would reduce impacts to recreational resources to a **less-than-significant** level.

Impact 3.16-3: Implementing future restoration projects permitted under the Order could increase the use of existing recreational resources and facilities such that substantial physical deterioration would occur or be accelerated.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures REC-1 and REC-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure REC-1: Minimize Impairment, Degradation, or Elimination of Recreational Resources

Mitigation Measure REC-2: Minimize Impacts on Existing Recreational Resources

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order could temporarily or permanently impede recreational use, causing recreational users to be displaced to other resources or facilities. Many construction-related impacts may be temporary; however, it is reasonable to expect that some impacts may be long-term, and some may be long-term and permanent. Alternatively, scenarios including improved or setback levees, restoring upslope watershed areas, floodplain restoration, and multi-benefit restoration projects could result in new public access or recreation facilities such trails.

In addition, restoration projects such as establishing, restoring, and enhancing tidal, subtidal, and freshwater wetlands could support native marsh plants; provide habitat elements for targeted species; provide other targeted wetland functions; and provide hydrologic variability for fish and other aquatic species. Also, fish passage improvement projects (e.g., dam removal) could improve recreation (e.g., allow for boating or kayaking that was previously impassable).

The specific locations and scale of possible future permitted restoration projects are not yet known. Therefore, the potential for displacement that would accelerate physical deterioration at existing recreational facilities in the study area cannot be determined at this time. The factors necessary to identify individual restoration projects impacts include the size and characteristics of a project; the duration of construction; and the types and precise locations of construction activities, the facility or resource itself, and alternative recreational opportunities. Adverse changes to recreation resources could result from the construction and operation of restoration projects permitted under the Order.

Implementing Mitigation Measures REC-1 and REC-2 would reduce this impact to a **less-than-significant** level.

Impact Category: Transportation

Impact 3.17-1: Future restoration projects permitted under the Order could conflict with a plan, ordinance, or policy addressing the circulation system including transit, roadways, bicycle, and pedestrian facilities.

To reduce impacts on the circulation system, the Order includes the following general protection measures:

- GPM-6: Work Area and Speed Limits
- GPM-10: Equipment Maintenance and Materials Storage
- WQHM-1: Staging Areas and Stockpiling of Materials and Equipment

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure TRA-1, TRA-2, TRA-3, TRA-4, and TRA-5 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure TRA-1: Prepare Construction Traffic Management Plan

Mitigation Measure TRA-2: Prepare Waterway Traffic Control Plan

Mitigation Measure TRA-3: Develop Channel Closure Plan for Affected Facilities

Mitigation Measure TRA-4: Reduce Project Effects on Boat Passage and Transit Facilities

Mitigation Measure TRA-5: Minimize Effects on Trails and Bicycle and Pedestrian Circulation and Identify Alternatives

Findings (Effects of Project Construction Activities): Construction activities for future restoration projects that would be permitted under the Order could result in temporary partial or full road closures. As a result, these projects could conflict with a plan, ordinance, or policy associated with the circulation system, or could affect the use of federal, state, and local highways and bridges and transit, roadways, bicycle, and pedestrian facilities.

Implementation of the applicable general protection measures and Mitigation Measures TRA-1 through TRA-5 into project designs and plans would reduce the impact related to a conflict with a plan, ordinance, or policy addressing the circulation system to a **less-than-significant** level.

Impact 3.17-3: Implementing future restoration projects permitted under the Order could substantially increase hazards due to a geometric design feature or incompatible uses.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure TRA-7 and TRA-8 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure TRA-7: Conduct Routine Inspections

Mitigation Measure TRA-8: Repair Damaged Roadways and Trails Following Construction

Findings (Effects of Project Construction Activities, Constructed Facilities and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and operations and maintenance of those facilities permitted under the Order could affect transportation infrastructure such as roads, bridges, railroads, and navigable waterways. Work to establish, restore, and enhance stream and riparian habitat has the potential to affect infrastructure elements such as boat docks, boat haul-out locations, campgrounds and campsites, day-use sites, roads and trails, and off-highway/off-road vehicle routes. Such work could require substantial temporary alterations to the horizontal and vertical alignments of these facilities. Upslope restoration and enhancement projects could decommission, upgrade, and stormproof priority roads and trails.

In addition, employees could commute along designated access routes. These routes would generally be preexisting public roads near construction sites; however, new off-road haul routes may be constructed between borrow sites, staging areas, and construction sites. These constructed access roads would be temporary and restored to pre-project conditions once construction was completed.

Construction of some projects would affect navigation in waterways and deep water channels, potentially increasing hazards associated with channel design and geometric features. Such projects could expose boaters to additional hazards, such as increased water velocities, or an increased risk of a collision when multiple vessels are present in the construction area. However, the exact designs of the restoration projects permitted under the Order are yet to be determined.

Project operations could affect navigation in waterways and shallow water channels and cause a potential for an increased navigation hazard if debris such as tree snags and other types of floating or submerged debris accumulated (e.g., on bridges, culverts,

large woody material, engineered logjams). This debris could pose a navigational hazard or damage vessels navigating in the channel.

Restoration projects would be required to adhere to statewide, regional, and local policies, regulations, and ordinances governing traffic and circulation systems. Implementing Mitigation Measures TRA-7 and TRA-8 and the applicable general protection measures would reduce the impact related to a substantial increase in hazards due to a geometric design feature or incompatible use to a **less-than-significant** level.

Impact Category: Wildfire

Impact 3.20-1: Implementing restoration projects permitted under the Order could exacerbate fire risk.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure FIRE-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure FIRE-1: Develop and Implement a Fire Prevention Plan

Findings: Effects of Project Construction Activities, Constructed Facilities and O&M of those Facilities): Construction activities for restoration projects permitted under the Order could be located in areas with a High or Very High Fire Hazard Severity rating. Construction work could occur, or staging areas could be located in or near areas with dense vegetation and/or be susceptible to high winds. For example, heavy construction equipment and passenger vehicles could drive on vegetated areas before clearing and grading, which could increase the fire danger. Construction equipment or heated mufflers could throw sparks, or oils, lubricants, and other combustible materials could accidentally ignite, resulting in a fire. Construction activities such as steel cutting and welding, while uncommon for most restoration project types, are also potential sources of ignition.

O&M of restoration projects permitted under the Order could occur in areas subject to the threat of wildfires. A restoration project may include reestablishment of native vegetation in areas where vegetation had previously been removed. In such cases, fuel loading may increase after the native vegetation has grown in and may result in an increase in fire danger. In addition, vegetation could be present in or near the locations of restoration projects or facilities, and equipment and vehicles used during O&M activities could come into contact with vegetated areas and be exposed to high winds, potentially igniting dry vegetation and causing a fire. As a result, project occupants (O&M workers) could be exposed to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

The specific locations of possible future permitted restoration projects are not known at this time. Therefore, the risk of a wildfire cannot be determined. Factors necessary to identify the risk include the location of the facilities relative to areas rated as High and

Very High Fire Hazard Severity Zones and the degree of overgrown or dry vegetation in the restoration project area.

Implementing Mitigation Measure FIRE-1 would reduce the impacts of project activities related to fire risk to a **less-than-significant** level.

Impact 3.20-2: Implementing restoration projects permitted under the Order could result in downslope or downstream risks as a result of runoff, post-fire slope instability, or drainage changes.

General protection measures regarding site stabilization and erosion control would be implemented on permitted projects:

- WQHM-3: Erosion Control Plans
- WQHM-6: Accidental Discharge of Hazardous Materials
- IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods
- VHDR-4: Revegetation Erosion Control Materials and Methods

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure FIRE-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure FIRE-1: Develop and Implement a Fire Prevention Plan

Findings (Effects of Project Construction Activities, Constructed Facilities and Operations and Maintenance of those Facilities): Construction and O&M activities for restoration projects permitted under the Order would include grading and drainage changes and removal of nonnative vegetation. Construction and O&M work for restoration projects permitted under the Order could result in a reduction of vegetation in the study area. Plant roots stabilize the soil and above-ground plant pars slow the flow of water, allowing it to percolate into the soil. Removing plants during construction activities for restoration projects permitted under the Order could result in construction activities for restoration projects permitted under the soil. Removing plants during construction activities for restoration projects permitted under the Order could increase runoff.

Restoration projects could also be located in areas with a High or Very High Fire Hazard Severity rating. Removal of surface vegetation by a wildfire reduces the ability of the soil surface to absorb rainwater and can cause an increase in runoff that may include large amounts of debris.

Increased surface runoff and erosion is also possible in a post-fire environment where surface vegetation has been removed and steep slopes can increase the velocity of runoff flows.

However, these restoration projects would not increase the rate or amount of surface runoff in a manner that would increase flooding on- or off-site, thereby resulting in downslope or downstream risk, because general protection measures regarding site

stabilization and erosion control would be implemented on permitted projects. In addition, these changes would likely have relatively localized effects on site and immediately downstream or downslope of the site. Therefore, floodplain restoration improvements are not expected to increase surface elevations or the chance of flooding in adjacent floodplains.

In addition, many of the restoration projects permitted under the Order would involve revegetating with native plants in areas where nonnative plant communities have been removed, which would restore soil stability and slow the rate of runoff. Further, many restoration project types permitted under the Order would improve the health and resiliency of vegetation communities, including communities in riparian and adjacent upslope areas that evolved with wildfire. The restoration of native vegetation communities that are more healthy and resilient would reduce downslope or downstream risks from runoff, post-fire slope instability, or drainage changes.

Construction and O&M activities for restoration projects permitted under the Order are not expected to increase the rate or amount of surface runoff or changes to drainage in a manner that would result in downslope or downstream risks. However, the exact locations and extent of restoration projects that would be permitted under the Order are not yet determined. Factors necessary to identify the risk include the location of the facilities relative to areas rated as High and Very High Fire Hazard Severity Zones and the degree of overgrown or dry vegetation in the restoration project area. Therefore, it is not possible to conclude that such projects would not result in post-fire slope instability.

The specific locations of possible future permitted restoration projects are not known at this time. Therefore, it is not possible to conclude that such projects would not result in post-fire slope instability. Factors necessary to identify the risk include the location of the facilities relative to areas rated as High and Very High Fire Hazard Severity Zones and the degree of overgrown or dry vegetation in the restoration project area.

Implementation of Mitigation Measure FIRE-1 would reduce the impacts of project O&M activities related to post-fire slope instability to a **less-than-significant** level.

2.4 Significant and Unavoidable Impacts

The following significant and potentially significant environmental impacts are unavoidable and cannot be mitigated in a manner that would lessen the impact to below the level of significance. Notwithstanding disclosure of these impacts, the State Water Board adopts the Order due to overriding considerations as set forth below in Section 4, *Statement of Overriding Considerations*.

Impact Category: Agricultural and Forestry Resources

Impact 3.3-1: Restoration projects permitted under the Order could convert Special Designation Farmland to nonagricultural use or conflict with a Williamson Act contract or zoning for agricultural use.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures AG-1, AG-2, and GEO-3 would be required when applicable to a given project. Implementation of this mitigation

measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure AG-1: Minimize and Avoid Loss of Special Designation Farmland.

Mitigation Measure AG-2: Minimize Impacts on Lands Protected by Agricultural Zoning or Williamson Act Contract

Mitigation Measure GEO-6: Implement Measures for Waterway Construction Activities

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Restoration projects permitted under the Order could result in short-term, long-term, or permanent conversion of Special Designation Farmland to nonagricultural uses; conflicts with agricultural zoning; and conflicts with Williamson Act contracts.

For these reasons, even with implementation of Mitigation Measures AG-1, AG-2, and GEO-6, this impact is **significant and unavoidable**.

Impact Category: Air Quality and Greenhouse Gas Emissions

Impact 3.4-1: Implementing future restoration projects permitted under the Order could conflict with an applicable air quality plan.

The following general protection measures may apply to air quality and greenhouse gas emissions:

- GPM-8: Work Area and Speed Limits
- GPM-17: Fugitive Dust Reduction

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure AIR-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure AIR-1: Minimize Conflicts with Applicable Air Quality Plans

Findings (Effects of Project Construction Activities): The specific locations and emissions of possible construction activities are not known at this time. Therefore, the potential for a conflict between a given restoration project permitted under the Order and an applicable air quality plan cannot be determined. Factors necessary to identify specific impacts include the location and size of the project, construction characteristics, attainment status of the local air basin or basins, and the applicable AQMPs of the local air quality district.

For these reasons, even with implementation of Mitigation Measure AIR-1, this impact is **significant and unavoidable**.

Impact 3.4-2: Emissions from future restoration projects permitted under the Order could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

The following general protection measures may apply to air quality and greenhouse gas emissions:

- GPM-8: Work Area and Speed Limits
- GPM-17: Fugitive Dust Reduction

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure AIR-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure AIR-1: Minimize Conflicts with Applicable Air Quality Plans

Findings (Effects of Project Construction Activities): The specific locations and emissions of possible future facilities are not known at this time. Therefore, the potential for substantial construction-related emissions impacts cannot be determined. Factors necessary to identify site- or resource-specific impacts include the project's location, duration, and construction characteristics, and the thresholds of the local air quality district. Construction activities for restoration projects permitted under the Order could result in a cumulatively considerable net increase of a criteria pollutant for which a project region is in non-attainment status under an applicable federal or state ambient air quality standard.

For these reasons, even with implementation of Mitigation Measure AIR-1, this impact is **significant and unavoidable**.

Impact 3.4-4: Emissions from future restoration projects permitted under the Order could expose sensitive receptors to substantial pollutant concentrations.

The following general protection measures may apply to air quality and greenhouse gas emissions:

- GPM-8: Work Area and Speed Limits
- GPM-17: Fugitive Dust Reduction

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measures AIR-1 and AIR-2 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure AIR-1: Minimize Conflicts with Applicable Air Quality Plans

Mitigation Measure AIR-2: Minimize Construction Air Pollutant Emissions

Findings (Effects of Project Construction Activities): Construction activities from restoration projects permitted under the Order could include activities that would generate air pollutant emissions such as fugitive dust, CO, and TACs that could present health risks to sensitive receptors.

The health impacts from exposure to these pollutants depend on the concentrations to which sensitive receptors are exposed, the duration of the exposure, and the toxicity of the pollutant. Although construction-related emissions would last no more than a few years and are transient, some construction activities for restoration projects permitted under the Order could occur over several years and could be close to sensitive receptors.

For these reasons, even with implementation of Mitigation Measures AIR-1 and AIR2, this impact is **significant and unavoidable**.

Impact 3.4-5: Implementing future restoration projects permitted under the Order could result in an increase in GHG emissions that may have a significant impact on the environment.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure AIR-3 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure AIR-3: Minimize GHG Emissions

Findings (Effects of Project Construction Activities): Equipment used for the construction of restoration projects permitted under the Order could increase GHG emissions in the short term. Following project completion, all construction emissions would cease. Despite the intensity and duration of construction activities, and the lack of available mitigation measures to abate GHG emissions from heavy-duty construction equipment and on-road hauling emissions, the incremental contribution to climate change by the project's construction emissions could be short term and minimal. However, construction activities permitted under the Order could increase GHG emissions. The specific locations and GHG emissions of possible future projects are not currently known; therefore, the potential for significant construction-related GHG emissions impacts cannot be identified at this time. Factors necessary to identify specific impacts include the project's location and construction characteristics, and the frequency and duration of emissions.

For these reasons, even with implementation of Mitigation Measure AIR-3, this impact is **significant and unavoidable**.

Impact 3.4-6: Implementing future restoration projects permitted under the Order could conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure AIR-1, AIR-2, and AIR-3

would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure AIR-1: Minimize Conflicts with Applicable Air Quality Plans

Mitigation Measure AIR-2: Minimize Construction Air Pollutant Emissions

Mitigation Measure AIR-3: Minimize GHG Emissions

Findings (Effects of Project Construction Activities): Construction of projects permitted under the Order could conflict with GHG emissions reduction policies, plans, and regulations. However, the specific locations and scale of possible future facilities are not currently known; therefore, the precise conflicts and subsequent impacts cannot be identified at this time. Factors necessary to identify specific impacts include the project's location, design features, and size, and the applicable GHG emissions reduction plans and policies of jurisdictions.

For these reasons, even with implementation of Mitigation Measures AIR-1, AIR-2, and AIR-3, this impact is **significant and unavoidable**.

Impact Category: Biological Resources - Terrestrial

Impact 3.5-1: Implementing restoration projects permitted under the Order could adversely affect habitat for special-status plant species.

The Order contains the following general protection measures that reduce the potential for adverse impacts on special-status plants:

- GPM-5: Monitoring
- GPM-7: Environmentally Sensitive Areas
- GPM-8: Prevent Spread of Invasive Exotic Plants
- GPM-12: Fugitive Dust Reduction
- GPM-15: Revegetate Disturbed Areas
- IWW-6: Dewatering/Diversion Restrictions
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods

Additionally, restoration projects that could adversely affect habitat for special-status wildlife species would implement the following species protection measures, as applicable:

- General Species Protection Measures
 - SPM-1: Preconstruction Surveys
 - SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion
 - SPM-3: Species Protection Construction Work Windows
 - SPM-4: Species Capture, Handling and Translocation
 - SPM-5: Sensitive Species Entrapment Prevention

- SPM-6: Airborne Noise Reduction
- Plant Species Protection Measures
 - PLANT-1: Habitat Assessment and Surveys
 - PLANT-2: Avoidance of Vernal Pool and Other Annual and Perennial Species
 - PLANT-3: Exclusion Buffer Establishment
 - PLANT-4: Work Restrictions in the Exclusion Buffer
 - PLANT-5: Biological Monitoring
 - PLANT-6: Herbicide Application, Clearing, and Ground Disturbance
 - PLANT-7¹: Measures for When Effects Cannot Be Avoided

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction-related impacts of projects permitted under the Order would not be expected to cause a major decline in the population of special-status plant species in most cases; however, in cases where the plant species' distribution is already very limited because of very specific and specialized habitat niches/requirements (e.g., requiring specific soil types such as serpentine and soil temperature range; specific requirements along tidal water and land interface), even small losses could be important and potentially significant.

The construction of restoration projects permitted under the Order could have another indirect impact: They could accidentally introduce invasive plant species, carried as seeds on construction equipment or personnel, or could spread invasive plant species through soil disturbance, which tends to promote the growth of invasive and other nonnative species.

Invasive plant species can outcompete native plant species, reducing habitat complexity and quality for both special-status plant and wildlife species. It can reasonably be expected that one or more invasive plant species could already be established in restoration project areas before any construction work begins. However, construction activities could introduce new invasive plant species to the project areas or expand the footprint of invasive plants already established in the area. The unintentional introduction or spread of invasive plants could reduce or eliminate the diversity and abundance of native plants, including those considered to be special-status plants.

Certain restoration projects are likely to permanently convert an upland-based natural community (e.g., grassland) to a wetland-based natural community (e.g., tidal marsh). Restoration actions that would create more tidal or freshwater marsh habitat would likely expand habitat opportunities for many special-status plant species that rely on such habitat types. The historical extent of wetlands in California has declined by 90 percent or more since the 1800s (California Assembly 1984). As a result, many of the special-species plants that rely on these habitat types would benefit from restoration. Conversely, expanding the footprint of aquatic habitat and wetlands may adversely affect upland special-status plants. These species may not adapt to periods of extended inundation, and they could be lost if inundated as a result of aquatic habitat restoration projects permitted under the Order.

¹ Staff Note: The PEIR listed Plant-7 in error. There is not a Plant-7 protection measure.

For these reasons, this impact is **significant and unavoidable**.

Impact 3.5-2: Implementing restoration projects permitted under the Order could result in adverse direct effects on special-status wildlife species.

The presence and extent of special-status terrestrial wildlife in the construction area of restoration projects permitted under the Order are yet to be determined at this time. However, the Order contains the following general protection measures to protect special-status terrestrial wildlife:

- GPM-2: Construction Work Windows
- GPM-3: Construction Hours
- GPM-4: Environmental Awareness Training
- GPM-5: Environmental Monitoring
- GPM-6: Work Area and Speed Limits
- GPM-7: Environmentally Sensitive Areas
- GPM-8: Work Area and Speed Limits
- GPM-9: Environmentally Sensitive Areas
- GPM-10: Equipment Maintenance and Materials Storage
- GPM-13: Trash Removed Daily
- GPM-14: Equipment Maintenance and Materials Storage
- GPM-15: Revegetated Disturbed Areas
- GPM-18: Trash Removed Daily
- GPM-20: Revegetated Disturbed Areas
- WQHM-1: Staging Areas and Stockpiling of Materials and Equipment
- WQHM-2: Storm Water Pollution Prevention Plan
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- WQHM-5: In-Water Concrete Use
- WQHM-6: Accidental Discharge of Hazardous Materials
- VHDR-1: Avoidance of Vegetation Disturbance
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods
- VHDR-4: Revegetation Erosion Control Materials and Methods
- VHDR-5: Revegetation Monitoring and Reporting

Additionally, restoration projects that could adversely affect habitat for special-status wildlife species would implement the following species protection measures, as applicable:

- General Species Protection Measures
 - SPM-1: Preconstruction Surveys
 - SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion
 - SPM-3: Species Protection Construction Work Windows
 - SPM-4: Species Capture, Handling and Translocation
 - SPM-5: Sensitive Species Entrapment Prevention
 - SPM-6: Airborne Noise Reduction

- Amphibian Species Protection Measures
 - AMP-1: Wildlife Passage Design
 - AMP-2: Rain Event Limitations
 - AMP-3: Pre-Construction Survey
 - AMP-4: Disease Prevention and Decontamination
 - AMP-5: Lighting
 - AMP-6: Clearing and Grubbing Vegetation
 - AMP-7: Pump Screens
 - AMP-8: Removal of Non-native Species
 - AMP-9: Placement of Suitable Erosion Control Material
 - AMP-10: Encounters with Species
 - AMP-11: Species Observations and Handling Protocol
- Reptile Species Protection Measures
 - **REP-1: Pre-Construction Survey**
 - REP-2: Environmentally Sensitive Area Fencing
 - REP-3: Clearing and Grubbing Vegetation
 - REP-4: Prohibited Use of Rodenticides
 - REP-5: Species Observations and Encounters
 - REP-6: Species Handling and Relocation
- Bird Species Protection Measures
 - BIRD-1: Habitat Assessment
 - BIRD-2: Nest Protection Work Window
 - BIRD-3: Work Area Limits
 - BIRD-4: Site Access Restrictions
 - BIRD-5: Monitoring
- Mammal Species Protection Measures
 - MAM-1: Conduct Habitat Assessment
 - MAM-2: Exclusion Areas
 - MAM-3: Use of Handheld Tools
 - MAM-4: Species Trapping and Relocating
 - MAM-5: Reporting Requirements
- Invertebrate Species Protection Measures
 - INVERT-1: Implement California Freshwater Shrimp Measures
 - INVERT-2: Vernal Pool Branchiopods Measures
 - INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol
 - INVERT-4: Implement Butterfly Protection Measures

Findings (Effects of Project Construction Activities, Constructed Facilities, and

O&M of those Facilities): Restoration projects permitted under the Order would likely generate elevated levels of noise, vibration, and visual and proximity-related disturbances during construction work and operation of heavy machinery. Construction

activities would typically increase the presence of humans in the immediate project area, unless the actions would occur in an urbanized area, in which case the local wildlife are likely already acclimated to human activity. Additional analysis would be required during project-level planning, when the specific location and design approach for a given project permitted under the Order would be defined further. The additional analysis would determine whether the project footprint overlaps with designated critical habitat for a federally listed species, and if so, would evaluate the potential of the action to interfere with the functional values provided by the affected critical habitat for that species.

Prior to project implementation, project proponents would be required consult with appropriate federal, state, and/or local agencies. As part of the permitting process, these agencies may require project proponents to develop and implement additional measures to protect sensitive resources under their jurisdiction. Additionally, if the CEQA lead agency for a future restoration project determines that the project's impacts on special-status wildlife species may remain significant even with implementation of these general protection measures, then additional project-specific and species-specific mitigation measures would be required. In such a case, the lead agency would coordinate with CDFW, USFWS, and/or others to design additional project-specific measures to reduce these impacts, if required.

It cannot be determined with certainty that all projects permitted under the Order would be able to implement appropriate avoidance and/or minimization measures to reduce their construction-related impacts on special-status terrestrial wildlife to a less-thansignificant level.

Typically, the overwhelming majority (if not all) future projects permitted under the Order should be able to identify and implement feasible and appropriate mitigation measures to reduce construction-associated impacts on special-status terrestrial wildlife to a less-than-significant level. In such a circumstance, the project-level CEQA analysis conducted for individual projects permitted under the Order would arrive at a conclusion of "less than significant" for impacts on special-status terrestrial wildlife.

Over the long-term, large-scale restoration projects permitted by the Order may result in large-scale conversion of habitat currently used by terrestrial wildlife to features designed principally to benefit aquatic species. No specific mitigation measures can be identified at the time of this analysis to address this issue because the precise scope, locations, and descriptions of these restoration projects are yet to be determined (they will be defined in the future by project proponents seeking permitting under the Order).

Thus, for the purposes of this programmatic analysis, impacts on terrestrial wildlife resources would be **significant and unavoidable**, because it cannot be determined with certainty that all projects permitted under the Order would be able to implement appropriate mitigation measures to reduce impacts on special-status terrestrial wildlife to a less-than-significant level.

However, based on a review of prior CEQA analyses for large-scale restoration projects, only in rare circumstances would future projects permitted under the Order be unable to identify and implement feasible, appropriate general protection and/or species protection measures (or adjust the restoration design during project planning to avoid

habitat for special-status wildlife) that would reduce O&M impacts on special-status terrestrial wildlife to a less-than-significant level.

Impact 3.5-3: Implementing restoration projects permitted under the Order could result in adverse effects on riparian habitat or sensitive natural communities.

The following general protection measures applicable to protection of sensitive natural communities during construction of projects permitted under the Order also apply to maintenance of those same projects:

- GPM-5: Environmental Monitoring
- GPM-7: Environmentally Sensitive Areas
- GPM-8: Prevent Spread of Invasive Exotic Plants
- GPM-9: Environmentally Sensitive Areas
- GPM-12: Fugitive Dust Reduction
- GPM-15: Revegetate Disturbed Areas
- GPM-17: Fugitive Dust Reduction
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods

Additionally, restoration projects that could adversely affect riparian habitat or sensitive natural communities, would implement the following species protection measures, as applicable:

- General Species Protection Measures
 - SPM-1: Preconstruction Surveys
 - SPM-2: Environmentally Sensitive Areas and/or Wildlife Exclusion
- Invertebrate Species Protection Measures
 - INVERT-1: Implement California Freshwater Shrimp Measures
 - INVERT-2: Vernal Pool Branchiopods Measures
 - INVERT-3: Implement Valley Elderberry Longhorn Beetle Protocol

Findings (Effects of Constructed Facilities and O&M of those Facilities): Most long-term impacts on terrestrial biological resources of implementing the restoration projects permitted under the Order should be neutral or beneficial, because the specific purpose of these projects would be to correct existing conditions that contribute to resource degradation. Ongoing long-term maintenance of restoration sites may result in short-term impacts on sensitive natural communities, particularly if the maintenance would involve ground disturbance and vegetation management. However, operation of infrastructure-focused projects (e.g., fish passage improvements, water conservation projects) is not expected to result in ongoing effects on sensitive natural communities. Restoration-related activities permitted under the Order are expected to result in the expansion of many sensitive natural communities, particularly riparian habitat, which would be a focus of many of the targeted project types.

In the unlikely case that the CEQA lead agency for a restoration project determines that the project's impacts on sensitive natural communities may be significant (e.g., conversion of a terrestrial-based sensitive natural community such as Great Valley oak riparian forest into side-channel riverine habitat) even with previously identified general protection measures, additional project-specific mitigation may be required. Much of the protection of sensitive natural communities would go hand-in-hand with species-specific protection measures developed under FESA and CESA consultation with the federal and state wildlife agencies. Nonetheless, operation of large-scale restoration projects permitted by the Order may convert particular sensitive natural community habitats to other natural community types, even ones considered sensitive by CDFW.

Thus, for the purposes of this programmatic analysis, impacts on sensitive natural communities would be **significant and unavoidable**. It cannot be determined with certainty that all projects permitted under the Order would be able to implement appropriate avoidance, mitigation, and/or minimization measures to reduce impacts on any sensitive natural community to a less-than-significant level.

Based on a review of prior CEQA analyses for large-scale restoration projects, only in rare circumstances would future CEQA analyses for individual projects permitted under the Order conclude that there would be a significant impact on a particular sensitive natural community. (This is principally because most restoration activities would focus on highly altered areas where sensitive natural communities have been already degraded or eliminated.) Most projects would generally increase the extent of certain sensitive natural communities such as riparian forest (e.g., Southern cottonwood willow riparian forest, Great Valley oak riparian forest) and marsh habitat (e.g., montane freshwater marsh).

Impact Category: Biological Resources - Aquatic

Impact 3.6-1: Implementing future restoration projects permitted under the Order could result in substantial adverse effects to special-status fish species directly, or indirectly through habitat modifications.

The following general protection measures would be required when applicable to address this impact to the extent feasible:

- FISH-1: Habitat Disturbance Avoidance and Minimization.
- FISH-2: Habitat Assessment and Surveys
- FISH-3: Fish Capture and Relocation
- FISH-4: Reporting
- GPM-2: Construction Work Windows
- GPM-3: Construction Hours
- GPM-4: Environmental Awareness Training
- GPM-5: Environmental Monitoring
- IWW-1: Appropriate In-Water Materials
- IWW-2: In-Water Vehicle Selection and Work Access
- IWW-3: In-Water Placement of Materials, Structures, and Operation of Equipment
- IWW-4: In-Water Staging Areas and Use of Barges

- IWW-5: Cofferdam Construction
- IWW-6: Dewatering/Diversion Restrictions
- IWW-7: Fish and Aquatic Species Exclusion while Installing Diversion Structures
- IWW-8: Removal of Diversion and Barriers to Flow
- IWW-9: In-Water Pile Driving Plan for Sound Exposure
- IWW-10: In-Water Pile Driving Methods
- IWW-11: Sediment Containment during In-Water Pile Driving
- IWW-12: Pile-Driving Monitoring
- IWW-13: Dredging Operations and Dredging Materials Reuse Plan
- SPM-3: Species Protection Construction Work Windows
- WQHM-1: Staging Areas and Stockpiling of Materials and Equipment
- WQHM-2: Storm Water Pollution Prevention Plan
- WQHM-3: Erosion Control Plans
- WQHM-4: Hazardous Materials Management and Spill Response Plan
- WQHM-5: In-Water Concrete Use
- WQHM-6: Accidental Discharge of Hazardous Materials
- VHDR-1: Avoidance of Vegetation Disturbance
- VHDR-2: Native and Invasive Vegetation Removal Materials and Methods
- VHDR-3: Revegetation Materials and Methods
- VHDR-4: Revegetation Erosion Control Materials and Methods
- VHDR-5: Revegetation Monitoring and Reporting
- VHDR-6: Herbicide Use
- VHDR-7: Herbicide Application Planning
- VHDR-8: Herbicide Application Reporting

Findings (Effects of Project Construction Activities): In-water aquatic habitat may be physically disturbed during construction of restoration projects permitted under the Order, from activities such as dewatering, excavation, fill, and placement of materials. This disturbance could affect the juvenile and adult life stages of special-status fish species by causing direct injury or mortality, or by displacing fish or disrupting their normal behaviors. The size and extent of in-water construction activities would vary by the restoration objective. However, most of these activities would be discrete, affecting only localized areas.

All types of restoration projects requiring ground disturbance in or adjacent to streams or wetlands could increase turbidity and levels of suspended sediment within the project worksites and downstream. The resuspension and deposition of instream sediments would be an indirect impact of operating construction equipment and excavating and placing materials in the river. Short-term increases in turbidity and suspended sediment levels during construction may negatively affect fish populations and other aquatic organisms temporarily by reducing the availability of food, reducing feeding efficiency, and increasing the exposure of fishes to sediment released into the water column.

Several types of restoration projects permitted under the Order could generate noise, motion, and vibration from the use of heavy equipment, including pile driving and/or through the use of explosives for small dam removal.

Potential construction activities (e.g., removing or adding structures, modifying the morphology and topography of streams and banks) may alter bank and riparian habitat through removal of native and nonnative vegetation, excavation, and grading. Numerous other project types, such as restoring off-channel, floodplain, wetland, or riparian habitat, would create additional riparian vegetation that would enhance fish habitat.

Using herbicides to remove invasive plant species could cause short-term impacts on special-status fish species. These potential indirect impacts include the short-term loss of shading and habitat provided by the invasive plants. To minimize these potential impacts, restoration projects would implement general protection measures that require the use of best practices (e.g., spraying practices) and herbicides and/or surfactants containing labels approving their use within or adjacent to waterways.

Heavy equipment and construction materials would be required for the construction of several types of restoration projects. Equipment refueling, fluid leakage, and maintenance activities in and near stream channels pose some risk of contamination by toxic chemicals and potential take.

In addition, water that comes into contact with wet cement and other construction materials during project construction could adversely affect water quality and may harm special-status fish species. If not properly contained, contaminants (e.g., fuels, lubricants, hydraulic fluids, construction materials) could be introduced into the water system, either directly or through surface runoff. Contaminants may be toxic to fish or cause altered oxygen diffusion rates and acute and chronic toxicity to aquatic organisms, thereby reducing growth and survival.

Dewatering entails placing a temporary barrier, such as a cofferdam, to isolate the work area; rerouting streamflow around the dewatered area; pumping water out of the isolated work area; relocating fish from the work area; and restoring the project site upon project completion. The life stage of fishes most likely to be exposed to the potential impacts of dewatering would be juveniles. However, the number of juvenile fish present at a given project site may be low. Migrating adult fish may be present, but in most cases, their mobility would enable them to avoid construction areas.

Any fish present during installation of a cofferdam could be injured by the in-water construction activity itself or could become trapped behind the cofferdam. Fish trapped behind a cofferdam would experience degraded water quality (e.g., higher temperatures, less dissolved oxygen). They would also become entrained in or impinged on the pumps used for dewatering or would become stranded after dewatering is complete.

Special-status fish species may be present in the study area, and the construction of restoration projects permitted under the Order has the potential to disturb habitat for these species.

Implementing restoration projects permitted under the Order could result in construction-related disturbance and associated impacts on special-status fish species. However, the general protection measures and species protection measures identified above would avoid and/or reduce potential impacts to a **less-than-significant** level.

The only exception would be for the use of explosives for small dam removal. As described in Chapter 2 and above, in order to be considered a project eligible for the Order, the use of explosives for small dam removal would have to be justified due to site-specific conditions, including equipment access difficulties. Further, the use of explosives must be conducted in dry or dewatered conditions and potential harm to fish from the explosives blast and pressure waves would need to be analyzed. Incorporation of general protection measures and species protection measures identified above would avoid and/or reduce in most cases, however, because the exact details of blasting are yet to be determined for a given project, analysis of this type of activity is not possible at this time. As a result, the use of explosives for small dam removal would be a **significant and unavoidable impact**.

Impact Category: Cultural Resources

Impact 3.7-1: Implementing future restoration projects permitted under the Order could cause a substantial adverse change in the significance of a historical resource pursuant to State CEQA Guidelines Section 15064.5.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure CUL-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure CUL-1: Conduct Inventory and Significance Evaluation of Architectural Resources

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Project construction and constructed facilities and O&M for restoration projects permitted under the Order are the types of activities that have the potential to affect historical (i.e., architectural) resources. However, the exact details, including precise locations, of any such activities have yet to be determined. Therefore, it is not known whether implementing the restoration projects permitted under the Order would affect any architectural resources. Factors necessary to identify specific impacts on historical resources include the project's design, footprint, and type; the precise location of construction activities; and the type and location of operational activities.

Therefore, even with implementation of Mitigation Measure CUL-1, this impact would be **significant and unavoidable**.

Impact 3.7-2: Implementing future restoration projects permitted under the Order could cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure CUL-2 and CUL-3 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure CUL-2: Conduct Inventory and Significance Evaluation of Archaeological Resources

Mitigation CUL-3: Implement Measures to Protect Archaeological Resources during Project Construction or Operation

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities and constructed facilities and O&M for restoration projects permitted under the Order are the types of activities that have the potential to affect archaeological resources. However, the exact details, including precise locations, of any such activities have yet to be determined. Therefore, it is not known whether implementing restoration projects permitted under the Order would affect any archaeological resources. Factors necessary to identify specific impacts on archaeological resources include the project's design, footprint, and type; the precise location of construction activities and facilities; and the type and location of O&M activities.

Therefore, even with implementation of Mitigation Measures CUL-2 and CUL-3, this impact would be **significant and unavoidable**.

Impact 3.7-3: Implementing future restoration projects permitted under the Order could disturb any human remains, including those interred outside of dedicated cemeteries.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure CUL-2, CUL-3, and CUL-4 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure CUL-2: Conduct Inventory and Significance Evaluation of Archaeological Resources

Mitigation CUL-3: Implement Measures to Protect Archaeological Resources during Project Construction or Operation

Mitigation Measure CUL-4: Implement Measures to Protect Human Remains during Project Construction or Operation

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities and constructed facilities and O&M by project proponents for restoration projects permitted under the Order are the types of activities that have potential to affect human remains. However, the exact details, including precise locations, of any such activities have yet to be determined. Therefore, it is not known whether implementing restoration projects permitted under the Order would affect any human remains, either known or unknown, including those associated with archaeological resources. Factors necessary to identify specific impacts on human remains include the project's design, footprint, and type; the precise location of construction activities; and the type and location of operational activities.

For these reasons, even with implementation of Mitigation Measures CUL-2, CUL-3, and CUL-4, this impact is **significant and unavoidable**.

Impact Category: Geology and Soils

Findings: The types of restoration projects permitted under the Order would not include the use of septic tanks or alternative wastewater disposal because the projects would not increase the demand for wastewater disposal from construction or operation crews or occupied structures. Therefore, impacts related to this threshold of significance are not addressed further.

Impact 3.9-5: Implementing future restoration projects permitted under the Order could directly or indirectly result in the loss of a unique paleontological resource or geological resource.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure GEO-9 and GEO-10 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

Mitigation Measure GEO-9: Conduct a General Project-Level Analysis

Mitigation Measure GEO-10: Conduct Worker Training

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): To determine the effects of construction activities and constructed facilities, paleontological or geological resources would need to be known. Also, restoration projects permitted under the Order could directly or indirectly result in the loss of a unique paleontological resource or geological resource, if projects are located on or near areas where sediment with moderate to high paleontological sensitivity occurs. The potential exists for restoration projects permitted under the Order to result in adverse effects on paleontological or geological resources.

For these reasons, even with implementation of Mitigation Measures GEO-9 and GEO-10, this impact is **significant and unavoidable.**

Impact Category: Hazards and Hazardous Materials

Impact 3.10-3: Future restoration projects permitted under the Order could be implemented within 2 miles of an airport, resulting in a safety hazard.

To reduce the impacts of restoration projects permitted under the Order that would be located within 2 miles of a public or private airport, the Order includes the following general protection measure:

• GPM-4: Construction Hours

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure HAZ-4 would be required when applicable to a given project. Implementation of this mitigation measure would be

the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure HAZ-4: Establish Airport Operation Area Buffer Zones

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction of restoration projects, constructed facilities (natural or artificial infrastructure), and operations and maintenance of those facilities permitted by the Order could be located within 2 miles of an airport. Because the exact locations of projects that would be permitted by the Order are not yet determined, it is possible that some projects could be constructed within 2 miles of an airport.

The level of significance of a potential impact of a restoration project permitted under the Order would depend, in large part, on its proximity to an airport land use plan or on whether it would be within 2 miles of a public or private airport. The necessary factors to identify airport safety risks include the location of the project relative to an airport. The potential would exist for restoration projects to create safety hazards by placing people at construction sites near airports, and to result in increased collisions between aircraft and wildlife near an airport or airport land use plan.

For these reasons, even with implementation of Mitigation Measure HAZ-4, this impact is **significant and unavoidable**.

Impact Category: Land Use and Planning

Impact 3.12-1: Restoration projects permitted under the Order could conflict with a land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect.

Findings (Effects of Constructed Facilities and O&M of those Facilities): The majority of constructed facilities for restoration projects permitted under the Order would not conflict with a land use plan, policy, or regulation adopted to avoid or mitigate environmental effects. Other restoration projects could result in new long-term or permanent features that could conflict with land use plans, policies, or regulations adopted to avoid or mitigate environmental effects. Restoring and enhancing offchannel/side-channel habitat would involve reconnecting and creating side-channel. alcove, oxbow, pond, off-channel, floodplain, and other habitats, and potentially removing off-channel fill and plugs. Work may include removing or breaching levees. berms, and dikes; excavating channels; constructing wood or rock tailwater control structures; and constructing large wood habitat features. Impacts associated with construction activities and some operation activities have the potential to conflict with land use policies, such as those related to conversion of agricultural land and reduction of noise impacts. Therefore, constructed facilities and operation associated with restoration projects permitted under the Order could result in conflicts with a land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect. In these limited instances, compliance with required permits and approvals would reduce impacts associated with projects to a less than significant level. However, if there is no jurisdiction by the agency and no requirement to obtain a permit, land use policy conflicts could occur. Because there could be potential adverse changes to land use

and planning due to the construction of restoration projects, this impact would be **significant and unavoidable**.

Impact 3.12-2: Implementing restoration projects permitted under the Order could physically divide an established community.

Findings (Effects of Constructed Facilities and O&M of those Facilities):

Restoration projects permitted under the Order (e.g., new fish screens and floodplain restoration) likely would not physically divide an established community. These projects are generally located on the periphery of a community. They would not result in a permanent division of established communities, isolate industry from communities with services, or disrupt development patterns that would adversely affect the accessibility of the area.

Some facilities outside of communities could isolate developed areas from urban services. For example, removing roads for construction of a new setback levee might isolate agricultural areas from facilities and communities that provide services and markets to farmers. Also, periodic inundation of roadways from flood widening projects could preclude or inhibit access between communities and services.

Because the extent and location of restoration projects permitted under the Order are yet to be determined, it is not possible to conclude that the restoration projects would not physically divide an established community. Therefore, this impact would be **significant and unavoidable**.

Impact Category: Noise

Impact 3.14-1: Implementing future restoration projects permitted under the Order could result in a temporary or permanent increase in ambient noise levels in excess of standards established in applicable plans and ordinances.

The following general protection measures may apply to noise impacts:

- GPM-2: Construction Work Windows
- GPM-3: Construction Hours
- GPM-6: Work Area and Speed Limits
- IWW-9: In-Water Pile Driving Plan for Sound Exposure

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure NOISE-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure NOISE-1: Minimize Noise Conflicts

Findings (Effects of Project Construction Activities): Construction activities for future restoration projects permitted under the Order could require the use of haul trucks and heavy equipment. Depending on the types and models of equipment used for construction, typical noise levels for these kinds of construction equipment would range from 80 to 95 dBA maximum noise level at 50 feet (FTA 2018). Most construction

activities would occur during daylight hours; however, in rare cases, some activities, expedited projects, and projects where the construction schedule is nearing the prohibited work time frames (e.g., for biological species) may require continuous daytime and nighttime work. Also, several cities and counties have exempted construction activities from restrictive noise limits during specified daytime hours, while others have placed numeric limits on noise generated during construction.

Most restoration projects would likely occur far from residential areas and other sensitive receptors and would take place during the day. However, some construction-related activities may occur close to receptors and/or at night (e.g., if construction must be completed before a blackout period for a sensitive species).

However, the specific locations of restoration projects that would be permitted under the Order are yet to be determined. Therefore, even with implementation of general protection measures, some construction activities could result in temporary or permanent increases in ambient noise levels. Actual exposure levels would depend on multiple variables such as the intensity of construction activity, the distance of sensitive receptors to the noise source, and any structures or topography that might intervene and affect noise attenuation.

For these reasons, even with implementation of Mitigation Measure NOISE-1, this impact is **significant and unavoidable**.

Impact 3.14-2: Implementing future restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne vibration.

The following general protection measures may apply to noise impacts:

• IWW-9: In-Water Pile Driving Plan for Sound Exposure

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure NOISE-1 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure NOISE-1: Minimize Noise Conflicts

Findings (Effects of Project Construction Activities): Construction activities for restoration projects permitted under the Order could require the use of heavy equipment such as pile drivers, bulldozers, haul trucks, and jackhammers, and explosives. These types of equipment or processes could generate groundborne vibration at levels ranging from 0.035 to 1.518 inches per second PPV at 25 feet and 79–112 VdB at 25 feet (FTA 2018) and could expose sensitive receptors to elevated vibration levels.

Vibration levels typically tend to dissipate rapidly as distance increases from the vibration source. For example, stockpiling of materials may require constructing piers for barge landings, and pier construction may use pile drivers that could generate 1.518 inches per second PPV and 112 VdB at 25 feet. Applying FTA's recommended procedure for determining vibration levels at various distances from the source, the predicted most-

conservative ground vibration levels would exceed the threshold of 80 VdB for human disturbance for pile driving at distances within 290 feet. With regard to structural damage, the threshold of 0.2 inch per second PPV would be exceeded for pile driving at distances within 96 feet.

Because the exact locations of restoration projects permitted under the Order are yet to be determined at this time, it is possible that construction activities could take place near sensitive receptors which could be exposed to excessive ground borne vibration. The factors necessary to determine individual restoration projects impacts include the type and exact location of construction activities, construction schedule, type of equipment used, and applicable local noise standards. Therefore, even with implementation of Mitigation Measure NOISE-1, this impact may, in some cases, be **significant and unavoidable**.

Impact 3.14-3: Implementing future restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne noise levels.

The following general protection measures may apply to noise impacts:

- GPM-2: Construction Work Windows
- GPM-3: Construction Hours
- GPM-6: Work Area and Speed Limits
- IWW-9: In-Water Pile Driving Plan for Sound Exposure

The following mitigation measures within the authority of the Board to impose have been adopted to address this impact to the extent feasible:

Mitigation Measure NOISE-1: Minimize Noise Conflicts

Findings (Effects of Project Construction Activities): Construction activities for future restoration projects permitted under the Order could expose sensitive receptors to excessive groundborne noise levels (i.e., pile drivers, bulldozers, haul trucks, jackhammers and explosives [e.g., small dam removal]). As shown in Table 3.14-2, groundborne noise levels ranging from 25 to 40 dBA are the approximate threshold of perception for many humans ranging from inaudible to excessive for quiet sleeping areas; 35–50 dBA is the approximate dividing line between barely perceptible and distinctly perceptible, ranging from tolerable for sleeping areas to excessive in most quiet occupied areas; and 45–60 dBA ranges from excessive for sleeping areas to excessive even for infrequent events for some activities (FTA 2018). A noise level increase of 10 dBA or more is considered substantial. Construction activities would take place mostly during the day when construction-related noise increases would be smaller; however, it is possible that these increases could be substantial. Furthermore, a project may require some nighttime work to complete work before prohibited work time frames (e.g., for biological species).

Because the specific locations and scale of applicable projects are not known at this time, the potential for permitted actions to result in exposure of sensitive receptors to excessive groundborne noise levels cannot be determined. Factors necessary to determine individual restoration projects impacts include the type and precise locations

of project activities, construction schedule, types of equipment used, and local ambient and groundborne noise levels. Construction activities that would be permitted under the Order could increase groundborne noise levels by more than 10 dBA.

Therefore, even with implementation of Mitigation Measure NOISE-1, this impact would be **significant and unavoidable**.

Impact Category: Transportation

Impact 3.17-2: Future restoration projects permitted under the Order could conflict with or be inconsistent with State CEQA Guidelines Section 15064.3(b).

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure TRA-6 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure TRA-6: Reduce Emissions

Findings (Effects of Project Construction Activities): Construction activities for future restoration projects that would be permitted under the Order could exceed the threshold of significance and conflict with State CEQA Guidelines Section 15064.3(b). Equipment, materials, and workers would have to be transported to project construction sites. Larger projects located near water may use large barges to transport construction equipment and materials via waterways. However, the level of significance of impacts for automobile travel would depend on the locations and types of restoration projects permitted under the Order.

Each project would require its own analysis in terms of VMT and would be required to adhere to State CEQA Guidelines Section 15064.3(b). However, the specific projects that would be carried out under the Order are yet to be determined. Therefore, the potential exists for a restoration project to exceed the threshold of significance set for transportation impacts by the CEQA lead agency or conflict or be inconsistent with State CEQA Guidelines Section 15064.3(b).

Therefore, even with implementation of Mitigation Measure TRA-6, this impact would be **significant and unavoidable**.

Impact Category: Tribal and Cultural Resources

Impact 3.18-1: Implementing future restoration projects permitted under the Order could cause a substantial adverse change in the significance of a tribal cultural resource, as defined in PRC Section 21074.

As part of the State Water Board or Regional Board's issuance of a NOA for a restoration project under the Order, compliance with Mitigation Measure TCR-1, TCR-2, and CUL-4 would be required when applicable to a given project. Implementation of this mitigation measure would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency:

Mitigation Measure TCR-1: Conduct Inventory and Significance Evaluation of Tribal Cultural Resources with Tribes that are Culturally and Geographically Affiliated with the Project Vicinity

Mitigation Measure TCR-2: Implement Measures to Protect Tribal Cultural Resources during Project Construction or Operation. These measures include, but are not limited to, those outlined in PRC Section 21084.3.

Mitigation Measure CUL-4: Implement Measures to Protect Human Remains during Project Construction or Operation

Findings (Effects of Project Construction Activities, Constructed Facilities, and O&M of those Facilities): Construction activities and constructed facilities and operations and maintenance for restoration projects permitted under the Order are the types of activities that have potential to affect tribal cultural resources. Because the exact details, including locations, of any such activities have yet to be determined, it is not known whether implementing restoration projects permitted under the Order would affect any tribal cultural resources. Factors necessary to identify specific impacts on tribal cultural resources include the design and footprint of a project, type, and precise location and timing (i.e., seasonal access for cultural ceremonies or resources) of construction activities and facilities, and type and location of operations activities.

Therefore, even with Mitigation Measures CUL-2, CUL-3, and CUL-4, this impact would be **significant and unavoidable**.

For these reasons, this impact is significant and unavoidable.

Impact Category: Utilities and Public Services

Impact 3.19-1: Implementing future restoration projects permitted under the Order could require or result in the construction or relocation of new water or expanded water, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Findings (Effects of Project Construction Activities): Implementing future restoration projects permitted under the Order are not anticipated to require the relocation of new water or expanded water facilities due to the extensive cost of relocation and potential environmental impacts from the relocation. However, future restoration projects could require the relocation of stormwater outfalls or utilities (e.g., electric power, natural gas, or telecommunication facilities) that would cause significant environmental effects.

The types and range of potential environmental effects to other resource areas (e.g., effects to cultural or tribal cultural resources, special status species and habitat, erosion, water quality, air quality) due to the relocation of stormwater outfalls or other facilities resulting from construction activities are analyzed in the other resource sections of the PEIR. The Order includes general protection measures, species protection measures, and mitigation measures to avoid and minimize impacts on

environmental resources in the study area resulting from the implementation of future restoration projects.

Since there are significant and unavoidable impacts for some of these resource areas, this impact would be **significant and unavoidable**.

Section 3. Alternatives

The State Water Board considered alternatives to the Order presented and analyzed in the Consolidated Final EIR and presented during the comment period and public hearing process. Some of these alternatives have the potential to avoid or reduce certain significant or potentially significant environmental impacts, as set forth below. The State Water Board finds that these alternatives are infeasible. Based on the impacts identified in the Consolidated Final PEIR and other reasons summarized below, and as supported by substantial evidence in the record, the State Water Board finds that approval and implementation of the Order as presented is the most desirable, feasible, and appropriate action and hereby rejects the other alternatives and other combinations and/or variations of alternatives as infeasible based on consideration of the relevant factors set forth in CEQA Guidelines Section 15126.6, subdivision (f) (also CEQA Guidelines, Section15091, subdivision(a)(3)). Each alternative and the facts supporting the finding of infeasibility are set forth below.

3.1 Alternative Considered but Rejected

The alternative that was considered but rejected is "Flexibility in regulations regarding restoration projects (e.g., higher NTU thresholds)."

The State Water Board is governed by CWA and California Water Code requirements related to the Order. Regulations in Title 23, Division 3, Chapter 15, Article 5 of the California Code of Regulations contain the interpretation of the state's Antidegradation Policy that has been promulgated in regulations.

The State Water Board enacted the Statement of Policy with Respect to Maintaining High Quality of Waters in California, also referred to as the California Antidegradation Policy. This policy is used to ensure that high-quality water is maintained, and it limits the discharge of pollutants into high-quality water in the state (Resolution Number 68-16).

An alternative that requires the State Water Board to change threshold standards (such as NTUs) are outside the scope of the Order. Therefore, this alternative was rejected from further consideration.

3.2 Summary of Alternatives Considered

Three alternatives were identified for further evaluation in the PEIR: The No Project Alternative and two potentially feasible alternatives to the Order resulting from the alternatives development and screening process described above:

- No Project Alternative
- Alternative 1—Specify more narrowly the types of restoration projects included in the Order (e.g., the project must exceed a certain limited percent of footprint)

• Alternative 2—Eliminate certain aspects of restoration categories (e.g., eliminating bank stabilization)

No Project Alternative

The No Project Alternative consists of existing conditions at the time the NOP is published, and what would be reasonably expected to occur in the foreseeable future without adoption of the Order, based on current plans and consistent with available infrastructure. Restoration projects initiated by project proponents are assumed to continue to be implemented, and projects would remain subject to the requirement to apply for a CWA Section 401 water quality certification and/or waste discharge requirements for each restoration project. Proponents of restoration projects would continue to obtain individual CWA Section 401 water quality certifications and/or waste discharge requirements from the State Water Board and/or Regional Boards.

Relationship to Project Objectives

The No Project Alternative would not achieve the objective to help streamline the regulatory process for restoration projects statewide by interpreting state standards in a uniform manner to ensure that the projects are consistent with federal and state water quality laws. As stated above, when proponents of restoration projects apply for a Section 401 water quality certification or waste discharge requirements, they would be reviewed and evaluated without the benefit of a systematic and consistent Order process, which could result in the loss of efficiencies and a longer time frame for permit approval by the State Water Board and/or Regional Boards. In summary, the No Project Alternative does not meet the project objectives of the Order.

Facts in Support of Finding of Infeasibility

As stated above, the No Project Alternative does not meet the objectives of the Order. In addition, recognizing that each restoration project would receive its case-by-case review by the State Water Board and/or Regional Board without the opportunity for upfront and consistent identification, selection, and application of species protection measures, general protection measures, design criteria, and/or mitigation from a program EIR, the permit applications and CEQA documentation would not benefit from the eligibility requirements or time savings associated with this program and may be repetitive from one project to the next and/or vary in mitigation approaches.

Alternative 1—Specify More Narrowly the Types of Restoration Projects Included in the Order

This alternative would allow for larger restoration projects than specified in the Order for Small Habitat Restoration Projects but would be more limited than the Order. Furthermore, this alternative would define the level of restoration necessary for projects to qualify for coverage and would indicate how that level can or should be measured. This alternative differs from the Order in that restoration projects implemented by project proponents that do not meet the size constraints or certain criteria required by this alternative would not be covered under this alternative.

Relationship to Project Objectives

Because Alternative 1 would limit the restoration projects covered under the Order to specific size constraints or certain criteria, this alternative would not fully achieve streamlining of the regulatory process for restoration projects statewide.

Facts in Support of Finding of Infeasibility

As stated above, Alternative 1 partially achieves the project objectives, but this alternative would not fully achieve streamlining of the regulatory process for restoration projects statewide.

Also, depending on the specific circumstances, project size limits may be arbitrary, and imposing such limits may not reduce temporary adverse impacts, especially if appropriate protection measures are implemented. Also, if projects must meet certain criteria (e.g., the percentage of hardscape, such as concrete or unvegetated riprap, must not exceed a certain limited percentage of the total footprint), some project types—such as fish passage and road crossing improvements—may not be eligible because certain projects require a higher percentage of hardscape. More resources would also be spent on planning and permitting and less on project implementation.

Alternative 2—Eliminate Certain Aspects of Restoration Categories

This alternative would remove certain elements from the categories of restoration projects, such as the following:

- Bank stabilization projects that may depend on riprap, currently covered under the Stream and Riparian Habitat Establishment, Restoration, and Enhancement category.
- Removal, replacement, modification, retrofit, installation, or resetting of culverts, fords, bridges, and other stream crossings and water control structures of any size, currently covered under the Improvements to Stream Crossings and Fish Passage category
- Removal of small dams, currently covered under the Removal of Small Dams, Tide Gates, Flood Gates, and Legacy Structures category.

This alternative differs from the Order in that it would reduce the types or varieties of restoration projects that would be implemented under the Order.

Relationship to Project Objectives

Because Alternative 2 would remove certain elements from the categories of restoration project covered under the Order, this alternative would not fully achieve streamlining of the regulatory process for restoration projects statewide.

Facts in Support of Finding of Infeasibility

As stated above, Alternative 2 partially achieves the project objectives, but would not fully achieve streamlining of the regulatory process for restoration projects statewide.

Similar to Alternative 1, depending on the specific circumstances, restricting certain project types under Alternative 2 may not result in reduced temporary adverse impacts,

especially if the projects are planned and designed appropriately with implementation of protection measures. The Order was developed to address these issues and concerns. Specifically, all projects permitted under the Order must incorporate *applicable* general protection measures into their designs to ensure that the projects avoid and minimize impacts to sensitive resources. In addition, the Order requires a pre-application consultation meeting with the approving Water Board, unless the consultation is waived by contacting the approving Water Board.

All project types included in the Order are essential for ecological and environmental improvements. Removing projects from eligibility under the Order would cause such projects to be delayed, slowing down their implementation and associated contributions to species recovery and water quality improvement.

Alternative 3—Exclude Entire Categories of Restoration Projects

The alternative would exclude entire categories of restoration projects that would be covered under the Order. For example, under this alternative, all restoration projects associated with the Water Conservation and Floodplain Restoration categories under the Order would not be implemented. This alternative differs from the Order in that it would reduce types of restoration projects that would be authorized under the Order.

Relationship to Project Objectives

Because Alternative 3 would exclude entire categories of restoration project covered under the Order, this alternative would not fully achieve streamlining of the regulatory process for restoration projects statewide.

Facts in Support of Finding of Infeasibility

As stated above, Alternative 3 would not achieve all the project objectives. This alternative does not include all categories of restoration projects in the Order; entire categories of restoration projects would be removed.

Similar to Alternatives 1 and 2, depending on specific project circumstances, restricting certain project types under Alternative 3 may not result in reduced temporary adverse impacts, especially if the projects are planned and designed appropriately with implementation of protection measures. The Order was developed to address these issues and concerns; specifically, all projects permitted under the Order must incorporate *applicable* general protection measures into their designs so that the projects avoid and minimize impacts to sensitive resources. In addition, the Order requires a pre-application consultation meeting with the approving Water Board, unless the consultation is waived by contacting the approving Water Board.

All project types included in the Order are essential for ecological and environmental improvements. Removing projects from eligibility under the Order would cause such projects to be delayed, slowing down their implementation and associated contributions to species recovery and water quality improvement. More resources would also be spent on planning and permitting, and less for project implementation.

Environmentally Superior Alternative

As stated in the Consolidated Final PEIR, Alternatives 1, 2, and 3 would result in similar impacts compared to the Order, but potentially at a lesser magnitude. Alternative 3 excludes entire categories of restoration projects, which, depending on the excluded restoration category, could result in less construction activity than under the other alternatives. Therefore, Alternative 3 would be the environmentally superior alternative.

However, as described above, Alternative 3 would not fully achieve most of the objectives. All project types included in the Order are essential for ecological and environmental improvements and removing them from Order eligibility would cause delays in environmentally beneficial restoration projects, thus slowing down project implementation and associated contributions to species recovery and water quality improvement.

Implementation of appropriate general protection measures, species protection measures, and mitigation measures would minimize the potential for significant impacts of Alternative 3. However, as with the Order, the exact location and extent of projects that would be permitted under Alternative 3 are not known at this time. Therefore, construction-related impacts would still be considered significant and unavoidable.

Section 4. Statement of Overriding Considerations

The State Water Board hereby declares that pursuant to State CEQA Guidelines Section 15093, it has balanced the benefits of the Order against any unavoidable environmental impacts in determining to adopt the Order. Pursuant to the State CEQA Guidelines, if the benefits of the Order outweigh the unavoidable adverse environmental impacts, those impacts may be considered acceptable.

Having reduced the adverse significant environmental impacts of the Order to the extent feasible by adopting the mitigation measures contained in the Consolidated Final EIR, the MMRP, and this appendix; having considered the entire administrative record on the Order; and having weighed the benefits of the Order against its unavoidable adverse impact after mitigation, the State Water Board has determined that each of the following social, economic, and environmental benefits of the Order separately and individually outweighs the potential unavoidable adverse impacts and renders those potential adverse impacts acceptable, based upon the following overriding considerations.

The considerations taken into account by the State Water Board in making this decision are identified below.

4.1 Policy Considerations

Efforts to enhance and restore habitats and ecological functions and processes throughout the state are ongoing. A wide variety of California laws, mandates, plans, mitigation requirements, and initiatives—many of which are the result of decades-long collaboration and reports based on scientific research—call for the restoration of aquatic, riparian, and floodplain habitats.

In 2019, the California Natural Resources Agency, in collaboration with the California Environmental Protection Agency (including the State Water Board), and California

Department of Food and Agriculture launched the Cutting Green Tape initiative, which focuses on improving processes and policies and increasing regulatory efficiency. In addition, in 2020, Governor Gavin Newsom issued the Nature-Based Solutions Executive Order (N-82-20) that set the goal of conserving 30 percent of California's lands and coastal waters by 2030 (Office of Governor Gavin Newsom 2020). The State Water Board's purpose for the Order—to improve the efficiency of regulatory review for projects that restore aquatic and riparian habitats and improve water quality (Consolidated Final PEIR Section 2.2.1)—contributes to and is consistent with the statewide initiatives.

4.2 Economic Considerations

Restoration projects that fall outside the scope of the General Order for Small Habitat Restoration Projects (Order #SB12006GN) must obtain an individual water quality certification and/or waste discharge requirements from the State Water Board and/or the appropriate Regional Board. This process can require greater time and expense and provides less regulatory certainty for restoration project proponents than would be expected to request authorization under a General Order. As stated in Consolidated Final PEIR Section 2.2.2, the objective of the Order is to help expedite statewide implementation of restoration projects to improve the environment and make the regulatory process efficient by interpreting state standards in a uniform manner to ensure that applicable projects are consistent with federal and state water quality laws.

The permit process can result in higher costs for both the regulatory agency and the project proponent without the establishment of a streamlined approach (Hanak et al. 2013). Actions to simplify the process and lower the cost of permitting could leave more dollars available for the actual restoration work (Public Policy Institute of California 2021).

To ensure that funding is used efficiently, and restoration projects are implemented in a timely manner, agencies have already developed programmatic processes, such as those existing programmatic permits and authorizations for restoration projects listed in Appendix C of the Consolidated Final PEIR. The restoration projects permitted under the Order contribute to and are consistent with these programmatic processes, which generally require less time and financial cost. The Order also clarifies regulatory expectations and serves as a helpful, timesaving planning tool, by including environmental protection measures and design guidelines for project proponent reference during the design phase of a project.

4.3 Social Considerations

California is home to an unparalleled range of landscapes, many of them unique to this state. Traveling south to north or east to west in California, one passes through an immense spectrum of natural beauty and biological diversity, which adds immeasurably to the quality of life of 37 million Californians by providing clean air and water, wildlife habitat, recreation, and view sheds, and a host of other tangible and intangible benefits. The people of California, recognizing both the value of the state's ecological wealth and the threats it faces from population growth and accompanying pressures, have enacted a range of environmental laws, and funded environmental protection through voter-approved bond acts. Environmental quality in the state has improved, but much remains

to be done. Public health, recreation, economic development, and overall quality of life are not only compatible with but dependent upon the continued vigorous pursuit of California's environmental goals (Sustainable Conservation 2011).

Programmatic permits and authorizations for restoration projects, such as the Order, are one of the most effective approaches for enabling the faster approval of environmentally beneficial projects while ensuring that essential environmental protections are in place and funding is spent effectively on project implementation. Healthy, revitalized rivers and other waterways improve water quality and supply so that people, farms, and wildlife have the water they need to thrive. As Californians face ever more extreme climate changes and environmental challenges, each effort to restore and revitalize aquatic habitat adds up to a meaningful win for the entire state (Sustainable Conservation 2022).

The restoration projects permitted under the Order contribute to and are consistent with meeting California's environmental goals and providing environmental benefits to the residents of California.