CVFPP

2017 UPDATE

TECHNICAL SERIES

2017 Central Valley Flood Protection Plan

Final Supplemental Program Environmental Impact Report

Findings of Fact and Statement of Overriding Considerations

August 2017

SCH 2010102044

STATE OF CALIFORNIA
THE NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

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Contents

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1.0 Introduction

The California Department of Water Resources (DWR) prepared the Central Valley Flood Protection Plan (CVFPP) to reflect a systemwide approach to improve integrated flood management in lands protected by the State Plan of Flood Control (SPFC). In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.), DWR, acting as Lead Agency, prepared a Program Environmental Impact Report (PEIR) that evaluated potential impacts on the physical environment associated with a broad range of flood protection actions included in the CVFPP (DWR, 2012b). The CVFPP was adopted and the PEIR was certified on June 29, 2012.

DWR recently prepared the 2017 CVFPP Update to describe proposed refinements to the adopted CVFPP and, as lead agency pursuant to Section 15050 of the CEQA Guidelines (Title 14 of the California Code of Regulations, Section 15000 et seq.), DWR prepared a Supplemental PEIR for the 2017 CVFPP Update.

The PEIR, as updated by the Supplemental PEIR, assesses the potential environmental effects of implementing the CVFPP and 2017 CVFPP Update, identifies means to mitigate or avoid potentially significant adverse impacts, and evaluates a reasonable range of feasible alternatives. The Supplemental PEIR makes revisions to the text of the PEIR to reflect the updated project information included in the 2017 CVFPP Update and other new information including revisions based on comments from interested public agencies, organizations, and members of the public. The PEIR and Supplemental PEIR are hereby incorporated in these findings by reference.

DWR certifies that it has been presented with the Supplemental PEIR and that it has reviewed and considered the information contained in the Supplemental PEIR before making the following certifications and the findings in Section 2 and the approvals in Section 3.0.

DWR is certifying the Supplemental PEIR for the entirety of the actions described in these findings and in the Supplemental PEIR as composing the CVFPP and 2017 CVFPP Update.

DWR certifies that the Supplemental PEIR has been completed in compliance with CEQA and the CEQA Guidelines, pursuant to Section 15090 of the CEQA Guidelines.

DWR further certifies that the Supplemental PEIR satisfies the requirements for a program-level document pursuant to CEQA Guidelines Section 15168, and for a supplemental document prepared pursuant to CEQA Guidelines Section 15163.

DWR further certifies that the Supplemental PEIR reflects its independent judgment and analysis.

Based on the foregoing, DWR finds and determines that as the environmental impact report for the CVFPP as modified by the 2017 CVFPP Update, the PEIR, as modified by the Supplemental PEIR, provides the basis for approval of the 2017 CVFPP Update, and the supporting findings set forth in Sections 2 and 3. In accordance with CEQA Section 15168(c), later review that may

be required under the provisions of CEQA for other projects implementing the CVFPP, as modified by the 2017 CVFPP Update, shall be based upon the PEIR and Supplemental PEIR as applicable.

DWR further finds and determines that the PEIR, as updated by the Supplemental PEIR, shall serve as the basis for program-level compliance with CEQA for all discretionary actions by other State and local agencies necessary to implement the CVFPP, including other projects implementing the CVFPP. Consistent with the provisions of CEQA Guidelines Section 15152(d), discretionary actions taken by State or local agencies acting as responsible or trustee agencies under CEQA with respect to the CVFPP, and other projects implementing the CVFPP, shall be based upon the PEIR, as modified by the Supplemental PEIR, together with any additional analysis as may be applicable for such projects.

2.0 Findings

2.1 Introduction

DWR is adopting these findings for the entirety of the actions described in these findings and in the Supplemental PEIR as composing the 2017 CVFPP Update. Having received, reviewed, and considered the Supplemental PEIR and other information in the record of proceedings, DWR hereby adopts the following findings in compliance with CEQA, the CEQA Guidelines, and DWR's procedures for implementing CEQA:

- Findings regarding the environmental review process and the contents of the Supplemental PEIR
- Findings regarding the environmental impacts of the 2017 CVFPP Update and the mitigation measures for those impacts identified in the PEIR and the Supplemental PEIR and adopted as conditions of approval
- Findings regarding alternatives to the program and to the location of the program and the reasons that such alternatives have not been adopted
- A statement of overriding considerations determining that the benefits of the program outweigh the significant and unavoidable environmental impacts that will result and therefore justify approval of the program despite such impacts

DWR certifies that these findings are based on full appraisal of all viewpoints, including all comments received up to the date of adoption of these findings, concerning the environmental issues identified and discussed in the Supplemental PEIR. DWR adopts these findings and the statement of overriding considerations for the approvals set forth in Section 3.0.

2.2 Environmental Review Process

2.2.1 Development of the CVFPP and 2017 CVFPP Update

Primary authorization for the CVFPP originates in Senate Bill 5 (SB 5), also known as the Central Valley Flood Protection Act of 2008 (Act). In 2008, DWR embarked on the Central Valley Flood Management Planning (CVFMP) Program, a long-term planning effort to improve integrated flood management in lands protected by the SPFC and to carry out direction from the California Legislature. Several documents, including the CVFPP, were prepared under the CVFMP Program to collectively meet requirements of the Act and related flood legislation passed in 2007. The CVFPP, adopted on June 29, 2012, describes the State Systemwide Investment Approach (SSIA) for sustainable, integrated flood management in areas protected by SPFC facilities.

The Act requires that the CVFPP be updated every 5 years. To this end, DWR prepared the 2017 CVFPP Update to describe proposed refinements to the adopted CVFPP. The 2017 CVFPP Update includes refinements to the SSIA that were identified through ongoing flood management planning and coordination with federal and local partners to improve flood protection in the Central Valley.

2.2.2 Preparation of the PEIR and Supplemental PEIR

In accordance with CEQA (Public Resources Code Section 21000 et seq.), DWR, acting as Lead Agency, prepared a PEIR that evaluated potential impacts on the physical environment associated with a broad range of flood protection actions included in the CVFPP. The CVFPP was adopted and the PEIR was certified on June 29, 2012.

In accordance with CEQA and the CEQA Guidelines, DWR prepared a Supplemental PEIR for the 2017 CVFPP Update. The Supplemental PEIR focuses its analysis (per CEQA Guidelines Sections 15162 and 15163) on how the 2017 CVFPP Update could result in new, significant impacts or a substantial increase in the severity of a significant impact, if there is substantially important new information relating to the CVFPP or its environmental effects, or if there are substantial changes with respect to the circumstances under which the project is undertaken. Similar to the PEIR, the impact analysis in the Supplemental PEIR took a broad, programmatic approach to defining significant impacts and feasible mitigation measures. Implementation actions resulting from the adopted CVFPP and the 2017 CVFPP Update would require project-level environmental review and documentation for CEQA compliance.

On March 18, 2016, DWR issued a notice of preparation announcing the intended preparation of the Supplemental PEIR and describing its proposed scope. An Environmental Checklist, which was prepared to provide an initial analysis of the refinements associated with the 2017 CVFPP Update (as it existed at the time), circulated with the notice. The notice of preparation was circulated to public agencies and interested groups and individuals for a 30-day review period that ended April 18, 2016.

DWR completed the Draft Supplemental PEIR on December 30, 2016. Consistent with the requirements of CEQA Guidelines Section 15087, beginning on that date, DWR made the Draft Supplemental PEIR widely available for review and comment by: (1) making copies available at several libraries, information repositories, and DWR offices in Sacramento and Red Bluff; (2) posting a copy on DWR's Web site; and (3) mailing copies of the Draft Supplemental PEIR and CDs containing the document to all persons who requested such copies. DWR also filed a Notice of Completion with the State Clearinghouse and provided the requisite number of copies to the Clearinghouse. Additionally, DWR participated in public hearings in Marysville on February 9, Merced on February 16, Sacramento on February 24, Woodland on March 9, and Stockton on March 17 to receive verbal comments on the Draft Supplemental PEIR. The public review and comment period concluded on March 31, 2017.

DWR also published a Notice of Availability (NOA) of the Draft Supplemental PEIR on December 30, 2016 in the Sacramento Bee. The NOA was also submitted to all 47 counties within the study area for posting on December 30, 2016.

Three people provided comments on the Draft Supplemental PEIR at the public hearings. In addition, 22 letters and e-mails were received during the public comment period, including letters from several federal, State, and local agencies and one Native American tribe.

The Supplemental PEIR contains all CEQA-related comments received during the public comment period, including those captured in transcripts of the public meeting, together with written responses to the comments, prepared in accordance with CEQA, the CEQA Guidelines, and DWR's procedures for implementing CEQA. DWR finds and determines that the Supplemental PEIR provides adequate, good-faith, and reasoned responses to all comments raising significant environmental issues.

DWR finds that only minor additions or changes were necessary to make the 2012 CVFPP PEIR adequately apply to the 2017 CVFPP Update in the current situation, as described in CEQA Guidelines Section 15163. The following factors have led DWR to conclude that the Supplemental PEIR only includes "minor changes" to the 2012 document, as compared to "major revisions." First, most of the environmental impacts discussed in 2012, such as traffic, air quality, public hazards, and aesthetics, are unaffected and did not need to be revisited. Second, within the impact areas that are addressed, only focused updates were necessary. For example, in the biological resources section only one of the dozens of species addressed – the giant garter snake – required a material update. Most of the additions and changes occurred in one portion of a single chapter (cultural and historic resources), specifically regarding the evaluation of impacts to tribal cultural resources under AB 52 (the adoption of which postdated the 2012 PEIR). Finally, a focused supplemental EIR best supports the public information purposes of CEQA, since it highlights the changes being made rather than diluting those changes through the repetition of extensive, unchanged analysis from the 2012 document. This has been more efficient for both the interested parties and for DWR and the Central Valley Flood Protection Board. Accordingly, a supplemental EIR is the appropriate document under CEQA in this context.

2.2.3 Assembly Bill (AB) 52 Compliance

Pursuant to AB 52 and the California Natural Resources Agency's (CNRA) tribal consultation policy, DWR contacted approximately 50 tribes in coordination with the Notice of Preparation released on March 18, 2016. This provided notice of the Supplemental PEIR and provided an opportunity for interested tribes to submit information and request consultation under AB 52. Based on responses to the March 18, 2016 letter, DWR initiated consultation and outreach meetings with five Native American Tribes. Consultation with three of the tribes were conducted pursuant to the framework established in AB 52 (United Auburn Indian Community, Wilton Rancheria, and Yocha Dehe Wintun Nation), and consultation with the remaining two tribes (Ione Band of Miwok Indians and Shingle Springs Band of Miwok) were conducted pursuant to the CNRA Tribal Engagement Policy and the DWR Tribal Engagement Policy. DWR released the draft Supplemental PEIR in December of 2016, and CEQA comments were due on March 31, 2017. On February 9, 2017 and March 21, 2017, DWR sent letters to the Native American Tribes that had requested consultation under AB 52 or the CNRA and DWR Tribal Engagement Policies, and the letters requested tribes to contact DWR if they wished to proceed with consultation. UAIC is the only tribe that provided comments on the draft Supplemental PEIR and requested to continue with consultation.

A lead agency may certify an environmental impact report for a project with a significant impact on an identified tribal cultural resource if a California Native American tribe has requested consultation pursuant to Public Resources Code (PRC) section 21080.3.1 and has failed to provide comments to the lead agency or otherwise engage in the consultation process. Or, a lead agency may certify an environmental document where the consultation process between the California Native American tribe and the lead agency has occurred pursuant to PRC sections 21080.3.1 and 21080.3.2, and consultation concluded pursuant to PRC section 21080.3.2(b). A consultation is considered concluded under PRC section 21080.3.2(b) when either of the following occurs:

- The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

- A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

Wilton Rancheria and Yocha Dehe Wintun Nation initially sought consultation pursuant to AB 52 (PRC 21080.3.1), but after the initial informational meeting, they did not provide comments or engage further in the consultation process. Certification of the Supplemental PEIR is authorized pursuant to PRC section 21082.3(d)(2). With respect to UAIC, as more fully explained below, consultation concluded pursuant to PRC section 21080.3.2 (b)(2), and certification is authorized under PRC section 21082.3(d)(2).

In addition to the informational meeting held in October 2016, DWR met (or teleconferenced) with several representatives of UAIC on eight occasions (April 11 and 18, May 2 and 16, June 15 and 27, July 6, and July 17, 2017).

As a result of these consultations, DWR made the following changes to the Supplemental PEIR: Added background information about tribal resources that reflect tribal views, added substantial text to the Regulatory Setting, and expanded upon a mitigation measure that will guide subsequent consultations at the project level. Despite good faith and reasonable efforts, the parties could not reach a mutual agreement on all mitigation that was proposed by the tribe. On July 28, 2017, UAIC, acknowledged that some additions and revisions to the Supplemental PEIR and associated documents mitigate or avoid significant effects to tribal cultural resources, but that additional measures that were not adopted by DWR could have further mitigated or avoided effects on tribal cultural resources.

2.3 Absence of Significant New Information

Section 15088.5 of the CEQA Guidelines requires a lead agency to recirculate an EIR for further review and comment when significant new information is added to the EIR after public notice is given of the availability of the draft EIR but before certification. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect that the project proponent declines to

implement. The CEQA Guidelines provide examples of significant new information under this standard. Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.

Various minor modifications have been made to the Supplemental PEIR text in response to comments. These changes are generally of an administrative nature, such as correcting typographical errors, making minor adjustments to the data, and adding or changing certain phrases to improve readability. DWR finds that these changes are of a minor, nonsubstantive nature and do not require recirculation of the PEIR.

Based on the foregoing, and having reviewed the information contained in the Supplemental PEIR and the record of proceedings, including the comments on the Draft Supplemental PEIR and the responses thereto, DWR hereby finds that no significant new information has been added to the Supplemental PEIR since public notice was given of the availability of the Draft Supplemental PEIR that would require recirculation under CEQA Guidelines Section 15088.5. The new information added to the Supplemental PEIR and referred to above does not involve disclosure of any new or more severe significant impacts, does not identify any new feasible alternatives or mitigation measures that would clearly lessen significant impacts that DWR declines to adopt, and does not indicate that the Draft Supplemental PEIR was in any way inadequate or conclusory.

2.3.1 Administrative Record

Pursuant to CEQA Guidelines Section 15091(e), the custodian of the documents that make up the administrative record is Michele Ng, located at the California Department of Water Resources, Division of Flood Management, Flood Planning Branch, 3464 El Camino Avenue, Suite 200, Sacramento, CA 95821.

2.4 Findings for Environmental Topic Areas

The section summarizes the environmental impacts of the project identified in the PEIR and Supplemental PEIR, and includes DWR's findings as to those impacts, as required by CEQA and the CEQA Guidelines. In most cases, the findings have not been updated from the PEIR Findings of Fact. The findings, both in this document and in prior, provide the written analysis and conclusions of DWR regarding the environmental impacts of the project, alternatives to the project, and mitigation measures proposed by the PEIR and Supplemental PEIR.

The findings made in the 2012 CVFPP PEIR Findings of Fact are unchanged for the following resources: Aesthetics; Air Quality; Climate Change; Energy; Geology, Soils, and Seismicity (Including Mineral and Paleontological Resources); Groundwater Resources; Hazards and Hazardous Materials; Hydrology; Land Use and Planning; Noise; Population, Employment, and Housing; Public Services; Recreation; Transportation and Traffic; Utilities and Service Systems; and Water Quality. In addition, findings made for Archeological and Built Environment Resources, as well as for impacts to human remains are unchanged. The Supplemental PEIR made minor updates to Agriculture and Forestry Resources; Biological Resources – Aquatic; Biological Resources – Terrestrial; Cultural and Historic Resources; and Groundwater Resources. Those minor updates do not change the findings made by DWR in its 2012 CVFPP

PEIR Findings of Fact, which are readopted except as modified below. A full explanation of these environmental findings and conclusions can be found in the PEIR and Supplemental PEIR, and these findings hereby incorporate by reference the discussion and analysis in the PEIR and Supplemental PEIR supporting their determinations regarding mitigation measures and the project's impacts.

2.4.1 Findings Related to the Program

Agriculture and Forestry Resources

Impact AG-1 (NTMA): Conversion of Substantial Amounts of Important Farmland to Nonagricultural Uses and Conversion of Land under Williamson Act Contracts to an Inconsistent Use Resulting from Conveyance-Related Management Activities.

Mitigation

Mitigation Measure AG-1a (NTMA & LTMA): Preserve Agricultural Productivity of Important Farmland to the Extent Feasible

In a May 4, 2005, memorandum to California Resources Agency departments, boards, and commissions, the Secretary stated that "in selecting and developing resource-related projects, departments under the Resources Agency should consider ways to reduce effects on productive agricultural lands" and encouraged departments to incorporate, where appropriate, the strategies identified in the CALFED Bay-Delta Program (CALFED) EIR to reduce the impact of the CALFED Ecosystem Restoration Program on agricultural land and water use.

The measures listed below include the applicable strategies identified in the CALFED EIR and some additional measures. Not all measures listed below may be applicable to each management action. Rather, these measures serve as an overlying mitigation framework to be used for specific management actions. The applicability of measures listed below would vary based on the lead agency, location, timing, and nature of each management action.

The project proponent will ensure that the following measures are implemented as applicable to reduce effects and preserve agricultural productivity on Important Farmland:

- Site projects and project footprints to minimize the permanent conversion of Important Farmland to nonagricultural uses.

- Identify and implement project design features that will benefit flood management, agriculture, and natural resources.

- When selecting sites and methods for repair, reconstruction, and improvement of flood control facilities, minimize the splitting or fragmentation of parcels that are to remain in agricultural use.

- Maximize contiguous parcels of agricultural land of a size sufficient to support their efficient use for continued agricultural production.

- Where the construction or operation of a facility could limit access to ongoing agricultural operations, maintain a means of reasonably convenient access to these agricultural properties as part of project design, construction, and implementation.

- At borrow sites to be returned to agricultural production, remove and stockpile, at a minimum, the upper 2 feet of topsoil and replace the topsoil after project completion as part of borrow site reclamation. Borrow site reclamation for agricultural production will also take into account the potential unique characteristics of soils for production of certain crops (e.g., clay pan soils for rice).

- In areas permanently disturbed by program activities, and where topsoil is removed as part of project construction (e.g., stripping topsoil under a levee foundation) and not reused as part of the project, make the topsoil available to less productive agricultural lands that could benefit from the introduction of good-quality soil. By agreement between the project proponent or landowners of affected properties and the recipient(s) of the topsoil, the recipient(s) would use the topsoil for agricultural purposes.

- Relocate and/or replace wells, pipelines, power lines, drainage systems, and other infrastructure that are needed for ongoing agricultural uses and would be affected by project construction or operation.

- Minimize disturbance of Important Farmland and continuing agricultural operations during construction by implementing the following measures:

  - To the extent possible, locate construction laydown and staging areas on sites that are fallow, already developed or disturbed, or to be discontinued for use as agricultural land.

  - Use existing roads to access construction areas to the extent possible.

- Coordinate with growers to develop appropriate construction practices to minimize construction-related impairment of agricultural productivity. Practices may include coordinating the movement of heavy equipment and implementing traffic control measures.

- Support the testing and application of alternative crops (i.e., agroforestry or energy crops) on idle farmland.

- Before an NTMA [or LTMA] is implemented, search the CNDDB to determine whether sensitive communities, habitats, and species observation records may be present in or near the project area. These communities, habitats, and species occurrences will be identified, mapped, and quantified as deemed appropriate. The project proponent, assisted by the primary engineering and construction contractors, will coordinate with a qualified biologist to ensure that implementation of NTMAs [or LTMAs] minimizes direct and indirect disturbance of sensitive communities, habitats, and species to the extent feasible. In consultation with USFWS and DFW, the project proponent will develop measures to minimize and, where appropriate, compensate for construction-related effects on sensitive communities, habitats, and species.

Mitigation Measure AG-1b (NTMA): Minimize Impacts on Williamson Act–Contracted Lands, Comply with Government Code Sections 51290–51293, and Coordinate with Landowners and Agricultural Operators.

The project proponent will consider the following mitigation measures and implement them, as applicable, to reduce effects on lands under Williamson Act contracts:

- The project proponent will comply with applicable provisions of California Government Code Sections 51290–51295 with regard to acquiring lands under Williamson Act contract. Sections 51290(a) and 51290(b) specify that State policy, consistent with the purpose of the Williamson Act to preserve and protect agricultural land, is to avoid locating public improvements and any public utilities improvements in agricultural preserves, whenever practicable. If such improvements must be located within a preserve, they will be located on land that is not under contract, if practicable.

- More specifically, the project proponent will comply with the following basic requirements stated in the California Government Code:

  - Whenever it appears that land within a preserve or under contract may be required for a public improvement, DOC [the California Department of Conservation] and the city or county responsible for administering the preserve must be notified (Section 51291(b)).

  - Within 30 days of being notified, DOC and the city or county must forward comments, which will be considered by the proponent of the public improvement (Section 51291(b)).

  - A public improvement may not be located within an agricultural preserve unless findings are made that (1) the location is not based primarily on the lower cost of acquiring land in an agricultural preserve and (2) for agricultural land covered under a contract for any public improvement, no other land exists within or outside the preserve where it is reasonably feasible to locate the public improvement (Sections 51291(a) and 51291(b)). If the land is acquired for the purpose of flood damage reduction measures, the project proponent(s) is exempt from the findings required in California Government Code Section 51292 (Section 51293(e)(1)).

  - The contract is normally terminated for lands acquired by eminent domain or in lieu of eminent domain (Section 51295)

  - DOC must be notified within 10 working days upon completion of the acquisition (Section 51291(c)).

  - DOC and the city or county must be notified before completion of any proposed work of any significant changes related to the public improvement (Section 51291(d)).

  - If, after acquisition, the acquiring public agency determines that the property would not be used for the proposed public improvement, DOC and the city or county administering the involved preserve must be notified before the land is returned to private ownership.

The land will be reenrolled in a new contract or encumbered by an enforceable restriction at least as restrictive as that provided by the Williamson Act (Section 51295).

- The project proponent will coordinate with landowners and agricultural operators to sustain existing agricultural operations, at the landowners' discretion, until the individual agricultural parcels are needed for project construction.

Mitigation Measure AG-1c (NTMA): Establish Conservation Easements Where Potentially Significant Agricultural Land Use Impacts Remain after Implementation of Mitigation Measures AG-1a (NTMA) and AG-1b (NTMA).

As discussed in Mitigation Measures AG-1a (NTMA) and AG-1b (NTMA), in general, where there is a reduction or termination of agricultural activities to undertake flood protection, environmental protection, or other conservation measures, project proponents should consider other measures before considering purchasing easements or other measures of compensation (collectively referred to as "easements" below). If after implementing all other applicable measures, the proposed project could still result in a potentially significant environmental impact, easements should be considered. Easements are most likely appropriate where there would be serious degradation or elimination of the physical conditions or natural processes that provide the land's resource qualities for agriculture. In this situation, there would normally also be other impacts on the environment. Where easements are applicable, the following factors will be considered:

- Where easements are considered for other resources such as terrestrial biological resources, purchase of easements should be coordinated where possible so that agricultural resources are also addressed. For example, if it were determined that a project would permanently terminate agricultural activities on a piece of land that served as Swainson's hawk foraging habitat, if an easement on another property were determined appropriate to address losses of Swainson's hawk foraging habitat, the replacement land could also support the same kind of agricultural activity as the original converted property.

- Applicable methods established in the area of the specific project activity will be considered. Methods for compensation may include but are not limited to establishing agricultural conservation easements, paying in-lieu fees toward agricultural conservation easements, supporting agricultural land trusts, and participating in habitat conservation plans or natural communities conservation plans that include conservation of agricultural lands. The appropriate ratio of purchase or establishment of agricultural conservation easements relative to conversion of Important Farmland will be established on a case-by-case basis for each project. Depending on the specifics of the impact, available agricultural conservation programs in various locations, and local or regional regulatory standards, there are some circumstances where less than a 1-to-1 compensation ratio may be appropriate, and other circumstances where greater ratios may be required. Where conservation easements are established by the project proponent, they may be held by land trusts, local governments, or other appropriate agencies that are responsible for ensuring that these lands are maintained in agricultural use.

When determining whether effects on agricultural land warrant purchase of an easement, the following factors should be considered:

- Whether the change would affect the use of the land for agricultural purposes (i.e., ceasing agricultural activities and allowing land to be fallowed or be used for resource restoration in such a way that land could be returned to agricultural production)

- Whether the change would permanently take land out of production (i.e., depositing sediment on agricultural lands)

- Whether the land could be used for agricultural production but has not been or is not likely to be able to be used for such purposes because of flooding, bad soils, lack of dependable water supplies, or other reasons

- Whether the land is currently being used for agricultural production and would not be able to be used for similar purposes in the future because of the project, but the project would provide benefits to nearby or other land that could be or is being used for agricultural purposes

- Whether the land is currently being used for agricultural production and would not be able to be used for similar purposes in the future because of the project, but the land is not Prime Farmland, Unique Farmland, or Farmland of Statewide Importance

- Whether the land is currently being used for agricultural production and would not be able to be used for similar purposes in the future because of physical changes brought about by the project, and the land is Prime Farmland, Unique Farmland, or Farmland of Statewide Importance

- Whether the land would be converted to a use that would reduce ancillary environmental benefits

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measures AG-1a (NTMA), AG-1b (NTMA), and AG-1c (NTMA) would substantially lessen potentially significant impacts associated with conversion of substantial amounts of Important Farmland to nonagricultural uses and conversion of land under Williamson Act contracts to an inconsistent use. The agricultural productivity of Important Farmland will be preserved to the extent feasible. Impacts on Williamson Act–contracted lands will be minimized through compliance with California Government Code Sections 51290–51293 and coordination with landowners and agricultural operators to sustain existing agricultural operations until individual agricultural parcels are needed for project construction. If after implementing all other applicable measures identified in Mitigation Measures AG-1a (NTMA) and AG-1b (NTMA) the proposed program could still result in a potentially significant environmental impact, conservation easements should be considered. Where easements are considered for other resources such as terrestrial biological resources, purchase of easements should be coordinated where possible so that agricultural resources are also addressed. In addition, methods for compensation may include but

are not limited to establishing agricultural conservation easements, paying in-lieu fees toward agricultural conservation easements, supporting agricultural land trusts, and participating in habitat conservation plans or natural communities conservation plans. However, until the case-by-case analysis for each project is complete, it is not possible to conclude that all potentially significant impacts could and would be mitigated. Therefore, this impact remains potentially significant and unavoidable after mitigation. DWR finds this remaining potentially significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact AG-2 (NTMA): Conversion of Important Farmland to Nonagricultural Uses and Conversion of Land under Williamson Act Contracts to an Inconsistent Use Resulting from Storage-Related Management Activities.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact AG-2 (NTMA) would be less than significant because changes in flows under the NTMAs will not be sufficient to alter the suitability of existing agricultural lands for continued agricultural production. Operational changes to reservoir releases under NTMAs will result in only minor changes in downstream river flows, and flood flows will be comparable to the periodic flood flows that have occurred historically. In addition, operational changes to existing reservoirs will be implemented in ways that will not cause substantial or long-term effects on water supply reliability or deliveries to agricultural operations.

Therefore, changes in the timing, magnitude, or frequency of flood releases included in the NTMAs will not result in conversion of Important Farmland to nonagricultural uses or cancellation of Williamson Act contracts.

Impact AG-3 (NTMA): Effects of Other NTMAs on Important Farmland and Williamson Act Contract Land.

Mitigation
Mitigation Measure AG-3 (NTMA): Implement Mitigation Measures AG-1a (NTMA), AG-1b (NTMA), and AG-1c (NTMA).

Finding
For the reasons stated in the PEIR and in the finding regarding Impact AG- 1 (NTMA) above, DWR finds that implementing applicable portions of Mitigation Measure AG-3 (NTMA) would substantially lessen the potentially significant impacts associated with conversion of agricultural land uses, including lands classified as Important Farmland, and cancellation of land under Williamson Act contracts. However, until the case-by-case analysis for each project is complete, it is not possible to conclude that all potentially significant impacts could and would be mitigated. Therefore, this impact remains potentially significant and unavoidable after mitigation. DWR finds this remaining potentially significant and unavoidable impact to be

acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact AG-4 (NTMA): Conversion of Forest Land to Nonforest Uses Resulting from Conveyance-Related Management Activities.

Mitigation
Mitigation Measure AG-4 (NTMA): Implement Mitigation Measure BIO-T-1a (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure AG-4 (NTMA) would reduce significant impacts related to conversion of forest land to nonforest uses to a less-than- significant level because the project proponent, assisted by the primary engineering and construction contractors, will coordinate with a qualified biologist to ensure construction activities of NTMAs minimize disturbance of riparian forest habitats, to the extent feasible. Temporary fencing will be installed during construction to prevent avoidable disturbance of riparian forest habitats located adjacent to construction areas. In consultation with DFG, the project proponent will develop measures to minimize and, where appropriate, compensate for effects on riparian forest habitats.

Impact AG-5 (NTMA): Conversion of Forest Land to Nonforest Uses Resulting from Storage-Related Management Activities.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact AG-5 (NTMA) would be less than significant because the proposed increased flexibility in reservoir operations will result in surface water fluctuations that will not be substantially different from existing conditions and will remain within historical fluctuation levels. Water levels in rivers below storage facilities vary dramatically, and riparian forest habitats along these waterways have generally adapted to fluctuations in river levels. Therefore, implementing NTMAs will not alter flow regimes sufficiently to result in losses of riparian forest.

Impact AG-6 (NTMA): Effects of Other NTMAs on Forest Land.

Mitigation
Mitigation Measure AG-6 (NTMA): Implement Mitigation Measure BIO-A-2b (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure AG-6 (NTMA) would reduce potentially significant impacts on riparian forest land to a less-than-significant level because DWR will coordinate with the Board and levee maintenance agencies tasked with implementing the VMS to develop and implement a plan to record data on riparian

vegetation lost or removed due to implementation of the VMS, and to ensure adequate compensation for losses of riparian habitat functions and values. The plan will be completed and suitable for implementation before the start of riparian habitat removal under the VMS; will include mechanisms to, at a minimum, record and track the acreage, type, and location of riparian habitat to be removed through implementation of the VMS or lost over time through life-cycle management (LCM); and will address compensation for the loss and degradation of riparian habitat through the enhancement, restoration, or creation of riparian habitat in other locations.

Impact AG-1 (NTMA): Conversion of Substantial Amounts of Important Farmland to Nonagricultural Uses and Conversion of Land under Williamson Act Contracts to an Inconsistent Use Resulting from Conveyance-Related Management Activities.

Mitigation

Mitigation Measure AG-1 (LTMA): Implement Mitigation Measures AG-1a (NTMA), AG-1b (NTMA), and AG-1c (NTMA).

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure AG-1 (LTMA) would substantially lessen potentially significant impacts associated with conversion of substantial amounts of Important Farmland to nonagricultural uses and conversion of land under Williamson Act contracts to an inconsistent use. The agricultural productivity of Important Farmland will be preserved to the extent feasible. Impacts on Williamson Act–contracted lands will be minimized through compliance with California Government Code Sections 51290–51293 and coordination with landowners and agricultural operators to sustain existing agricultural operations until individual agricultural parcels are needed for project construction. If after implementing all other applicable measures the proposed project could still result in a potentially significant environmental impact, conservation easements should be considered. Where easements are considered for other resources such as terrestrial biological resources, purchase of easements should be coordinated where possible so that agricultural resources are also addressed. In addition, methods for compensation may include but are not limited to establishing agricultural conservation easements, paying in-lieu fees toward agricultural conservation easements, supporting agricultural land trusts, and participating in habitat conservation plans or natural communities conservation plans. However, until the case-by-case analysis for each project is complete, it is not possible to conclude that all potentially significant impacts could and would be mitigated. Therefore, this impact remains potentially significant and unavoidable after mitigation. DWR finds this remaining potentially significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact AG-2 (LTMA): Conversion of Important Farmland to Nonagricultural Uses and Conversion of Land under Williamson Act Contracts to an Inconsistent Use Resulting from Storage-Related Management Activities.

Mitigation

No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact AG-2 (LTMA) would be less than significant because changes in flows under the LTMAs will not be sufficient to alter the suitability of existing agricultural lands for continued agricultural production. Operational changes to reservoir releases under LTMAs will result in only minor changes in downstream river flows, and flood flows will be comparable to those of the periodic flood flows that have occurred historically. In addition, operational changes to existing reservoirs will be implemented in ways that will not cause substantial or long-term effects on water supply reliability or deliveries to agricultural operations. Therefore, changes in the timing, magnitude, or frequency of flood releases included in the LTMAs will not result in conversion of Important Farmland to nonagricultural uses or cancellation of Williamson Act contracts.

Impact AG-3 (LTMA): Effects of Other NTMAs on Important Farmland and Williamson Act Contract Land.

Mitigation
Mitigation Measure AG-3 (LTMA): Implement Mitigation Measures AG-1a (NTMA), AG-1b (NTMA), and AG-1c (NTMA).

Finding
For the reasons stated in the PEIR and in the finding regarding Impact AG- 1 (LTMA) above, DWR finds that implementing applicable portions of Mitigation Measure AG-3 (LTMA) would substantially lessen the potentially significant impacts associated with conversion of agricultural land uses, including lands classified as Important Farmland, and cancellation of land under Williamson Act contracts. However, until the case-by-case analysis for each project is complete, it is not possible to conclude that all potentially significant impacts could and would be mitigated. Therefore, this impact remains potentially significant and unavoidable after mitigation. DWR finds this remaining potentially significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact AG-4 (LTMA): Conversion of Forest Land to Nonforest Uses Resulting from Conveyance-Related Management Activities.

Mitigation
Mitigation Measure AG-4 (LTMA): Implement Mitigation Measure AG-4 (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure AG-4 (LTMA) would reduce significant impacts related to conversion of forest land to nonforest uses to a less-than- significant level because the project proponent, assisted by the primary engineering and construction contractors, will coordinate with a qualified biologist to ensure construction activities of LTMAs minimize disturbance of riparian forest habitats, to the extent feasible. Temporary fencing will be installed during construction to prevent avoidable disturbance of riparian forest habitats that are located adjacent to construction areas. In

consultation with DFG, the project proponent will develop measures to minimize and, where appropriate, compensate for effects on riparian forest habitats.

Impact AG-5 (LTMA): Conversion of Forest Land to Nonforest Uses Resulting from Storage-Related Management Activities.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact AG-5 (LTMA) would be less than significant because the proposed increased flexibility in reservoir operations will result in surface water fluctuations that will not be substantially different from existing conditions and will remain within historical fluctuation levels. Water levels in rivers below storage facilities already vary dramatically, and riparian forest habitats along these waterways have generally adapted to fluctuations in river levels. Therefore, implementing LTMAs will not alter flow regimes sufficiently to result in losses of riparian forest.

Impact AG-6 (LTMA): Effects of Other LTMAs on Forest Land.

Mitigation
Mitigation Measure AG-6 (LTMA): Implement Mitigation Measure AG-6 (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure AG-6 (LTMA) would reduce potentially significant impacts on riparian forest land to a less-than-significant level because DWR will coordinate with the Board and levee maintenance agencies tasked with implementing the VMS to develop and implement a plan to record data on riparian vegetation lost or removed due to implementation of the VMS, and to ensure adequate compensation for losses of riparian habitat functions and values. The plan will be completed and suitable for implementation before the start of riparian habitat removal under the VMS; will include mechanisms to, at a minimum, record and track the acreage, type, and location of riparian habitat to be removed through implementation of the VMS or lost over time through LCM; and will address compensation for the loss and degradation of riparian habitat through the enhancement, restoration, or creation of riparian habitat in other locations.

Biological Resources – Aquatic

Impact BIO-A-1 (NTMA): Potential Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Riparian Habitat, Designated Critical Habitat, and Essential Fish Habitat Caused by Siltation and Degradation of Water Quality during Construction or Operations and Maintenance Activities.

Mitigation
No mitigation is required.

Finding

For the reasons stated in the PEIR, DWR finds that Impact BIO-A-1 (NTMA) would be less than significant because compliance with federal and State permits for construction activities will require protective measures to avoid increased sedimentation and turbidity and/or release of contaminants that could degrade aquatic habitats and adversely affect aquatic species. Before implementing NTMAs, the project proponent and/or construction contractors will be required to prepare and comply with SWPPPs, and comply with the conditions of the National Pollutant Discharge Elimination System general stormwater permit for construction activity (Order No. 2009-0009-DWQ). Final design and construction specifications will require the project proponent to implement standard BMPs related to erosion, siltation, and "good housekeeping." In addition, any in-water work will require authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) and from the relevant regional water quality control board (RWQCB) under Section 401 of the CWA.

Impact BIO-A-2 (NTMA): Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Riparian Habitat, Designated Critical Habitat, and Essential Fish Habitat Caused by Loss of Overhead Cover and Instream Woody Material as Part of the Vegetation Management Strategy.

Mitigation

Mitigation Measure BIO-A-2a (NTMA): Secure Applicable State and/or Federal Permits and Implement Permit Requirements.

Not all measures listed below may be applicable to each management action. Rather, these measures serve as an overlying mitigation framework to be used for specific management actions. The applicability of measures listed below would vary based on the lead agency, location, timing, and nature of each management action.

The project proponent will ensure that the following measures are implemented to reduce the effects of repairing, reconstructing, and improving levees on trees within stream zones, shaded riverine aquatic habitat, IWM [instream woody material], listed fish species, and designated critical habitat:

- A Section 1602 streambed alteration agreement will be obtained from DFG before any trees are removed from a stream zone that is under DFG jurisdiction unless the activity is implemented by USACE. The project proponent will comply with all terms and conditions of the streambed alteration agreement, including measures to protect habitat or to restore, replace, or rehabilitate any habitat.

- The project proponent will consult or coordinate with USFWS [U.S. Fish and Wildlife Service] and NMFS [National Marine Fisheries Service] as required under the federal ESA [Endangered Species Act], and with DFG as required under the CESA [California Endangered Species Act], regarding potential impacts on listed fish species, including the loss of habitat. The project proponent will implement any additional measures developed through the ESA and CESA consultation processes, including the conditions of Section 7 biological opinions, Section 10 HCPs [habitat conservation plans], and Section 2081 permits.

Where an existing approved HCP, NCCP [natural community conservation plan], or similar plan covers an NTMA and provides for compliance with applicable State or federal regulations, the project proponent may participate in and comply with the terms of such a plan to achieve the permit compliance measures listed above. Any mitigation plantings in the floodway will not be permitted if they would result in substantial increases in flood stage elevations, or alter flows in a manner that would have a substantial adverse effect on the opposite bank.

Mitigation Measure BIO-A-2b (NTMA): Ensure Full Compensation for Losses of Riparian Habitat Functions and Values Caused by Implementing the Vegetation Management Strategy Along Levees.

DWR will coordinate with the Board and levee maintenance agencies tasked with implementing the VMS to develop and implement a plan to record data on riparian vegetation lost or removed due to implementation of the VMS, and to ensure adequate compensation for losses of riparian habitat functions and values. Although this mitigation measure is written as if a single plan is prepared, multiple plans addressing individual regions, watersheds, river corridors, or other geographic subdivisions are also acceptable.

The plan will be completed and suitable for implementation before the start of riparian habitat removal under the VMS. The plan will include mechanisms to, at a minimum, record and track the acreage, type, and location of riparian habitat to be removed through implementation of the VMS or lost over time through LCM.

The plan will also address compensation for the loss and degradation of riparian habitat through the enhancement, restoration, or creation of riparian habitat in other locations. Assessment of the value of lost or degraded habitat and of compensation habitat will take into account issues such as the differing functions of waterside and landside riparian habitat, continuity and connectivity of habitat, types of riparian habitat removed vs. type of compensation habitat (e.g., riparian scrub vs. cottonwood riparian forest), and ability of habitat to support special-status species. DWR will track habitat compensation efforts and only authorize implementation of vegetation removal under the VMS at a rate and in locations consistent with the volume and type of compensation habitat that has been established. This habitat compensation tracking program will be included in the program MMRP [mitigation monitoring and reporting plan] prepared to support this PEIR.

The plan must, at a minimum, meet the following basic performance standard:

- Authorized losses of habitat do not exceed the function and value of available compensation habitat.

DWR will coordinate with USFWS, NMFS, and DFG during preparation and implementation of the plan to incorporate into the plan appropriate compensation for effects on special-status species from vegetation management along the levee system.

Various mechanisms may be employed to provide compensation habitat under the plan, as long as the performance standard identified above is met. The mechanisms include but are not limited to the following:

- Implementation of the CVFPP Conservation Strategy Framework

- Participation in existing NCCPs, HCPs, or other conservation plans
- Purchase of habitat credits at an established mitigation bank
- Habitat restoration implemented by a levee maintenance agency or other entity

Any mitigation plantings in the floodway will not be permitted if they would result in substantial increases in flood stage elevations, or alter flows in a manner that would have a substantial adverse effect on the opposite bank.

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measures BIO-A-2a (NTMA) and BIO-A-2b (NTMA) related to implementation of the VMS generally would reduce potentially significant impacts on special-status fish, fish movement, nursery sites, riparian habitat, designated critical habitat, and essential fish habitat (EFH) to a less-than-significant level, and to a beneficial level in many cases. The extent, type, function, and values of any riparian habitat removed will be fully compensated for by enhancing, restoring, or creating riparian habitat elsewhere. However, removing riparian habitat in some locations and enhancing, restoring, or creating habitat elsewhere will result in overall relocation of riparian habitat within the Extended SPA. It is possible that although some stream or river reaches may benefit from compensatory habitat, habitat values in other stream or river reaches could be substantially reduced, adversely affecting special-status fish species that must move through these reaches. Potential adverse effects include increased predation risk, increased water temperatures, and reduced food availability. In addition, planting vegetation in the floodway may not be authorized by the Board, USACE, or other agencies if the vegetation would impede flood flows to such a degree that a rise in water surface elevation would cause a significant increase in risk to public safety. Therefore, it cannot be assured that in all instances fisheries impacts would be mitigated to a less-than-significant level, and this impact remains significant and unavoidable after mitigation. DWR finds this remaining significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact BIO-A-3 (NTMA): Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Riparian Habitat, Designated Critical Habitat, and Essential Fish Habitat Caused by Loss of Overhead Cover and Instream Woody Material during Construction.

Mitigation

Mitigation Measure BIO-A-3 (NTMA): Inventory and Replace Shaded Riverine Aquatic Habitat.

The project proponent will require that the following measures be implemented to reduce the effects of program construction activities on special-status fish, fish movement, nursery sites, riparian habitat, designated critical habitat, and EFH. These measures may already be incorporated into the conditions of permits identified above in Mitigation Measure BIO-A-2a.

- An inventory of shaded riverine aquatic habitat will be conducted before construction activities begin. Any shaded riverine aquatic habitat that is removed will be replaced, with

replacement to occur on site when feasible. This includes IWM and other instream structures, overhead shade, and shallow-water habitat.

- Mitigation credits may be purchased from a public or private mitigation bank approved by DFG, USFWS, and/or NMFS. The final number of credits to be purchased will be determined by agency staff.

- A mitigation and monitoring plan will be developed and implemented to ensure that the proposed bank treatments and any off-site mitigation treatments fully compensate for losses of shaded riverine aquatic habitat.

On-site revegetation is the preferred method of compensation. If on-site compensation is not feasible, off-site mitigation will be established either before or as soon as feasible after existing vegetation is removed, or mitigation bank credits will be purchased before existing vegetation is removed. As much of the mitigation habitat as feasible will be created at or near the project site. If off-site mitigation is necessary, a location that does not currently support riparian vegetation and is capable of supporting riparian habitats will be preferred. Revegetation requirements may be accomplished as part of implementation of the CVFPP Conservation Framework. Any mitigation plantings in the floodway will not be permitted if they would result in substantial increases in flood stage elevations, or alter flows in a manner that would have a substantial adverse effect on the opposite bank.

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-A-3 (NTMA) generally would reduce this significant impact from effects of program construction activities on special-status fish, fish movement, nursery sites, riparian habitat, designated critical habitat, and EFH. However, removing riparian habitat in some locations and enhancing, restoring, or creating habitat elsewhere will result in overall relocation of riparian habitat within the Extended SPA. It is possible that although some stream or river reaches may benefit from compensatory habitat, habitat values in other stream or river reaches could be substantially reduced, adversely affecting special-status fish species that must move through these reaches. In addition, planting vegetation in the floodway may not be authorized by the Board, USACE, or other agencies if the vegetation would impede flood flows to such a degree that a rise in water surface elevation would cause a significant increase in risk to public safety. Therefore, it cannot be assured that in all instances fisheries impacts would be mitigated to a less-than-significant level, and this impact remains significant and unavoidable after mitigation. DWR finds this remaining significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact BIO-A-4 (NTMA): Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Designated Critical Habitat, and Essential Fish Habitat Caused by an Increase in Hydrostatic Pressure, Underwater Noise, and Vibrations during Construction.

Mitigation

Mitigation Measure BIO-A-4 (NTMA): Conform to NMFS Guidelines for Pile-Driving Activities.

Several measures may be effective in reducing potential impacts on listed fish species, either by decreasing the level of underwater sound or by decreasing the number of fish exposed to the sound. The project proponent and construction contractors will implement the following measures to the extent feasible, as construction activities and site-specific conditions allow:

- Use fewer piles, smaller piles, or a different type of pile to minimize the number and/or intensity of pile hammer impacts.
- Drive piles when species of concern are not present, as determined either from surveys or by known migration and use patterns for species occurring in the project area.
- Use a vibratory hammer rather than an impact hammer.
- Use a cushioning block between the hammer and pile.
- Use a confined or unconfined air bubble curtain.
- Drive piles during periods of reduced currents.

Pile-driving activities at project sites will be monitored to ensure that the effects of pile driving on listed fish species are minimized. If any injury or mortality to fish is observed, DFG, NMFS, and/or USFWS will be immediately notified and in-water pile driving will cease.

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-A-4 (NTMA) would reduce this potentially significant impact on fish species caused by an increase in hydrostatic pressure, underwater noise, and vibrations during construction to a less- than-significant level because the project proponents will implement a suite of measures designed to reduce impacts either by decreasing the level of underwater sound or by decreasing the number of fish exposed to the sound. In addition, pile-driving activities at project sites will be monitored to ensure that the effects of pile driving on listed fish species are minimized.

Impact BIO-A-5 (NTMA): Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Riparian Habitat, Designated Critical Habitat, and Essential Fish Habitat Caused by Rock Placement.

Mitigation

Mitigation Measure BIO-A-5 (NTMA): Implement Mitigation Measures BIO-A-2a and BIO-A-2b (NTMA).

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-A-5 (NTMA) would reduce this potentially significant impact on fish caused by rock placement because Mitigation Measures BIO-A-2a (NTMA) and BIO-A-2b (NTMA) include activities that will minimize and compensate for adverse effects of rock placement on aquatic resources. Additional opportunities may exist for on-site vegetation planting as part of rock placement projects. Therefore, in many instances, implementing these mitigation measures could reduce impacts to a less- than-significant level and even sometimes result in a benefit to aquatic resources. However, replacing all vegetation and IWM (and the resulting shaded riverine aquatic habitat) may not be possible in all instances because some areas, especially urban areas, may lack the right-of-way needed to implement vegetation replacement. In addition, planting vegetation in the floodway may not be authorized by the Board, USACE, or other agencies if the vegetation would impede flood flows sufficiently that a rise in water surface elevation would cause a significant increase in risk to public safety. Therefore, it cannot be assured that this impact would always be reduced to a less-than-significant level, and this impact remains significant and unavoidable after mitigation. DWR finds this remaining significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact BIO-A-6 (NTMA): Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Riparian Habitat, Designated Critical Habitat, and Essential Fish Habitat Caused by the Increased Availability of Floodplain Habitat Generated by Setback Levees.

Mitigation

Mitigation Measure BIO-A-6 (NTMA): Design and Implement Floodplain Habitat to Minimize Stranding.

To avoid or minimize the potential for fish stranding associated with the creation of new floodplain habitat, the existing topographic and hydrologic characteristics of the floodplain will be examined to define the flooding regime, drainage patterns, water depths, and potential risks of fish stranding.

Potential floodplain habitat will slope to a main channel or slough to facilitate complete drainage and avoid depressions or other low-lying floodplain features that may strand fish. Periodic recontouring (e.g., filling and excavation) of floodplain surfaces may be required to avoid stranding fish.

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-A-6 (NTMA) would reduce this potentially significant impact from fish stranding to a less-than-significant level because the topographic and hydrologic characteristics of the floodplain will be examined to define the flooding regime, drainage patterns, water depths, and potential risks of fish stranding, and because potential floodplain habitat will be specifically designed to avoid stranding through sloping of habitat in channels and periodic recontouring (as necessary).

Impact BIO-A-1 (LTMA): Potential Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Riparian Habitat, Designated Critical Habitat, and Essential Fish Habitat Caused by Siltation and Degradation of Water Quality during Construction or Operations and Maintenance Activities.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact BIO-A-1 (LTMA) would be less than significant because compliance with federal and State permits for construction activities will require protective measures to avoid increased sedimentation and turbidity and/or release of contaminants that could degrade aquatic habitats and adversely affect aquatic species. Before implementing LTMAs, the project proponent and/or construction contractors will be required to prepare and comply with SWPPPs and comply with the conditions of the National Pollutant Discharge Elimination System general stormwater permit for construction activity (Order No. 2009-0009-DWQ). Final design and construction specifications will require the project proponent to implement standard BMPs related to erosion, siltation, and "good housekeeping." In addition, any in-water work will require authorization from USACE under Section 404 of the CWA and from the relevant RWQCB under Section 401 of the CWA.

Impact BIO-A-2 (LTMA): Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Riparian Habitat, Designated Critical Habitat, and Essential Fish Habitat Caused by Loss of Overhead Cover and Instream Woody Material as Part of the Vegetation Management Strategy.

Mitigation
Mitigation Measure BIO-A-2 (LTMA): Implement Mitigation Measures BIO-A-2a (NTMA) and BIO-A-2b (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-A-2 (LTMA) related to implementation of the VMS generally would reduce the potentially significant impacts on special- status fish, fish movement, nursery sites, riparian habitat, designated critical habitat, and EFH to a less-than-significant level and to a beneficial level in many cases. The extent, type, function, and values of any riparian habitat removed will be fully compensated for by enhancing, restoring, or creating riparian habitat elsewhere. However, removing riparian habitat in some locations and enhancing, restoring, or creating habitat elsewhere will result in overall relocation of riparian habitat within the Extended SPA. It is possible that although some stream or river reaches may benefit from compensatory habitat, habitat values in other stream or river reaches may be substantially reduced, adversely affecting special-status fish species that must move through these reaches. Potential adverse effects include increased predation risk, increased water temperatures, and reduced food availability. In addition, planting vegetation in the floodway may not be authorized by the Board, USACE, or other agencies if the vegetation would impede flood flows sufficiently that a rise in water surface elevation would cause a significant increase in risk to public safety. Therefore, it cannot be

assured that in all instances fisheries impacts would be mitigated to a less- than-significant level, and this impact remains potentially significant and unavoidable after mitigation. DWR finds this remaining potentially significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact BIO-A-3 (LTMA): Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Riparian Habitat, Designated Critical Habitat, and Essential Fish Habitat Caused during Construction.

Mitigation
Mitigation Measure BIO-A-3 (LTMA): Implement Mitigation Measure BIO-A-3 (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-A-3 (LTMA) would reduce this significant impact from effects of program construction activities on special-status fish, fish movement, nursery sites, riparian habitat, designated critical habitat, and EFH. However, removing riparian habitat in some locations and enhancing, restoring, or creating habitat elsewhere will result in overall relocation of riparian habitat within the Extended SPA. It is possible that although some stream or river reaches may benefit from compensatory habitat, habitat values in other stream or river reaches could be substantially reduced, adversely affecting special-status fish species that must move through these river reaches. In addition, planting vegetation in the floodway may not be authorized by the Board, USACE, or other agencies if the vegetation would impede flood flows to such a degree that a rise in water surface elevation would cause a significant increase in risk to public safety. Therefore, it cannot be assured that in all instances fisheries impacts would be mitigated to a less-than-significant level. Therefore, this impact remains significant and unavoidable after mitigation. DWR finds this remaining significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact BIO-A-4 (LTMA): Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Designated Critical Habitat, and Essential Fish Habitat Caused by an Increase in Hydrostatic Pressure, Underwater Noise, and Vibrations during Construction.

Mitigation
Mitigation Measure BIO-A-4 (LTMA): Implement Mitigation Measure BIO-A-4 (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-A-4 (LTMA) would reduce this potentially significant impact on fish species caused by an increase in hydrostatic pressure, underwater noise, and vibrations during construction to a less- than-significant level because the project proponents will implement a suite of measures designed to reduce impacts either by decreasing the level of underwater sound or by decreasing the number of fish exposed to the sound. In addition, pile-driving activities at project sites will be monitored to ensure that the effects of pile driving on listed fish species are minimized.

Impact BIO-A-5 (LTMA): Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Riparian Habitat, Designated Critical Habitat, and Essential Fish Habitat Caused by Rock Placement.

Mitigation
Mitigation Measure BIO-A-5 (LTMA): Implement Mitigation Measure BIO-A-5 (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-A-5 (LTMA) would reduce this potentially significant impact on fish caused by rock placement because Mitigation Measures BIO-A-2a (NTMA) and BIO-A-2b (NTMA) (required as part of Mitigation Measure BIO-A-5 (NTMA)) include activities that would minimize and compensate for adverse effects of rock placement on aquatic resources. Additional opportunities may exist for on-site vegetation planting as part of rock placement projects. Therefore, in many instances, implementing these mitigation measures could reduce impacts to a less- than-significant level and even sometimes result in a benefit to aquatic resources. However, replacing all vegetation and IWM (and the resulting shaded riverine aquatic habitat) may not be possible in all instances because some areas, especially urban areas, may lack the right-of-way needed to implement vegetation replacement. In addition, planting vegetation in the floodway may not be authorized by the Board, USACE, or other agencies if the vegetation would impede flood flows sufficiently that a rise in water surface elevation would cause a significant increase in risk to public safety. Therefore, it cannot be assured that this impact would always be reduced to a less-than-significant level, and this impact remains potentially significant and unavoidable after mitigation. DWR finds this remaining potentially significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact BIO-A-6 (LTMA): Effects on Special-Status Fish, Fish Movement, Nursery Ground Usage, Riparian Habitat, Designated Critical Habitat, and Essential Fish Habitat Caused by the Increased Connectivity of Floodplain Habitat Generated by Setback Levees.

Mitigation
Mitigation Measure BIO-A-6 (LTMA): Implement Mitigation Measure BIO-A-6 (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-A-6 (LTMA) would reduce this potentially significant impact from fish stranding to a less-than-significant level because the topographic and hydrologic characteristics of the floodplain will be examined to define the flooding regime, drainage patterns, water depths, and potential risks of fish stranding, and because potential floodplain habitat will be specifically designed to avoid stranding through sloping of habitat in channels and periodic recontouring (as necessary).

Biological Resources – Terrestrial

Impact BIO-T-1 (NTMA): Construction-Related Effects of NTMAs on Sensitive Natural Communities and Habitats.

Mitigation

Mitigation Measure BIO-T-1a (NTMA): Conduct Biological Resources Surveys to Quantify Sensitive Natural Communities in Project Areas, and Avoid, Minimize, and, Where Appropriate, Compensate for Construction-Related Effects.

Not all measures listed below may be applicable to each management action. Rather, these measures serve as an overlying mitigation framework to be used for specific management actions. The applicability of measures listed below would vary based on the lead agency, location, timing, and nature of each management action.

The project proponent will ensure that applicable elements of the following measures are implemented to reduce construction-related effects of proposed NTMAs on sensitive natural communities. Where measures below call for field surveys, the project proponent may be able to rely on previous surveys that were conducted for the project area if these surveys meet the applicable agency guidelines.

- Before an NTMA is implemented, the CNDDB [California Natural Diversity Database] will be searched and other sources (which may include species experts, species recovery plans, and other monitoring or research studies) will be consulted to determine whether sensitive communities, habitats, and species observation records may be present in or near the project area. These communities, habitats, and species occurrences will be identified, mapped, and quantified as deemed appropriate. The project proponent, assisted by the primary engineering and construction contractors, will coordinate with a qualified biologist to ensure that implementation of NTMAs minimizes direct and indirect disturbance of sensitive communities, habitats, and species to the extent feasible. In consultation with USFWS and DFG, the project proponent will develop measures to minimize and, where appropriate, compensate for construction-related effects on sensitive communities, habitats, and species.

- Before an NTMA is implemented and if the project so warrants, waters of the United States will be delineated according to methods established in the USACE wetlands delineation manual and Arid West Supplement (Environmental Laboratory 1987, 2008). The delineation will map and quantify the acreage of wetland habitats in the area, and will be submitted to USACE for verification. Not all projects involving construction activities may require a delineation of waters.

- If wetlands are found within the proposed construction site or any other area to be disturbed, a wetland delineation report will be prepared and submitted to USACE. After USACE verifies the acreage of waters and wetlands, the project proponent will determine how many acres of waters of the United States and waters of the State would be affected by the NTMA. The verified wetland delineation, field observation, and as needed, hydraulic modeling will be used to make this determination. Where feasible, impacts will be avoided and minimized by establishing a buffer around wetlands and waterways.

- The project proponent will replace, restore, or enhance the acreage of all wetlands, other waters of the United States, and waters of the State that cannot be avoided and will be removed and/or degraded. Thus, the project will achieve "no net loss" of wetland functions and values, in accordance with the requirements of USACE and the Central Valley RWQCB. Wetland habitat will be restored, enhanced, and/or replaced at an acreage and location agreed upon by the project proponent, USACE, and the Central Valley RWQCB, as appropriate. The acreage, location, and methods will be determined during the Section 401 and Section 404 permitting processes, and will be based on a USACE- verified wetland delineation. Methods to be used will be approved by the agency with jurisdiction over the area.

- In consultation with the appropriate resource agency (typically DFG), native woodland areas will be identified, mapped, and quantified as deemed appropriate. The project proponent, assisted by the primary engineering and construction contractors, will coordinate with a qualified biologist to ensure that construction activities of NTMAs minimize disturbance of native woodlands, including riparian habitats, to the extent feasible. Temporary fencing will be installed during construction to prevent avoidable disturbance of native trees that are located adjacent to construction areas. In consultation with DFG, the project proponent will develop measures to minimize and, where appropriate, compensate for effects on native woodlands.

- Protected areas that are managed by federal, State, and local governments or agencies and private entities will be identified, mapped, and quantified as deemed appropriate. The project proponent will coordinate with the appropriate government or agency manager to minimize disturbance of the protected habitats, to the extent feasible.

All construction-related activities will be subject to all applicable permitting requirements. The mitigation measures described above, when combined with applicable permit requirements, must, at a minimum, meet the following basic performance standard:

- Authorized losses of habitat will not exceed the function and value of available compensation habitat.

  DWR will also track habitat compensation efforts as part of the MMRP for this PEIR.

Mitigation Measure BIO-T-1b (NTMA): Minimize Construction-Related Effects on Critical Habitat and Compensate for Unavoidable Adverse Effects.

Before an NTMA is implemented, USFWS-designated critical habitat in the project area will be identified, mapped, and quantified by a qualified biologist. The project proponent will consult with USFWS to develop and implement measures to avoid, minimize, and, where necessary, compensate for construction-related effects on primary constituent elements and potential adverse modification of critical habitat. Compensation would likely consist of enhancement, restoration, and/or creation of habitat types and vegetation communities that serve as primary constituent elements for the critical habitat affected. Compensation habitat would be enhanced/restored/created within the geographic range of critical habitat for the species in question.

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measures BIO-T-1a (NTMA) and BIO-T-1b (NTMA) would reduce the significant impact from construction activities on sensitive natural communities and habitats to a less-than-significant level because biological resource surveys to quantify sensitive natural communities in project areas will be conducted, and construction-related effects will be avoided, minimized, and where appropriate, compensated. In addition, USFWS-designated critical habitat in the project area will be identified, mapped, and quantified by a qualified biologist, and the project proponent will consult with USFWS to develop and implement measures to avoid, minimize, and, where necessary, compensate for construction-related effects on primary constituent elements and potential adverse modification of critical habitat.

Impact BIO-T-2 (NTMA): Construction-Related Effects of NTMAs on Water Quality in Sensitive Natural Communities and Special-Status Species' Habitats.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact BIO-T-2 (NTMA) would be less than significant because the project proponent and/or construction contractor will avoid increased sedimentation and turbidity and/or release of contaminants that could degrade the quality of sensitive habitats by developing and implementing a SWPPP, and by complying with the conditions of the National Pollutant Discharge Elimination System general stormwater permit for construction activity (Order No. 2009-0009-DWQ). In addition, final design and construction specifications will require the project proponent to implement standard BMPs related to erosion, siltation, and "good housekeeping."

Impact BIO-T-3 (NTMA): Construction-Related Effects of NTMAs on Special-Status Plants and Wildlife.

Mitigation
Mitigation Measure BIO-T-3a (NTMA): Conduct Focused Surveys for Special-Status Plants and Wildlife, and Avoid Impacts.

Not all measures listed below may be applicable to each management action. Rather, these measures serve as an overlying mitigation framework to be used for specific management actions. The applicability of measures listed below would vary based on the lead agency, location, timing, and nature of each management action.

The project proponent will verify whether species survey and avoidance protocols have been established for species that might be affected by the specific project, or will coordinate with the appropriate regulatory agency (e.g., USFWS or DFG) to determine an acceptable alternative method for surveying and avoiding effects on a species. To avoid effects of proposed construction activities of NTMAs on special-status plants and wildlife, the project proponent will ensure that the following measures are implemented before commencement of ground-disturbing activities associated with NTMAs. Where measures below call for field surveys, the project

proponent may rely on previous surveys that were conducted for the project area if these surveys meet the applicable agency guidelines. If avoidance consistent with these measures cannot be achieved, the project proponent will implement the minimization and compensation measures included in Mitigation Measure BIO-T-3b (NTMA) described below. Where surveys for special-status species may be necessary, the project proponent may be able to rely on previous surveys that were conducted for the project area if these surveys meet the applicable agency guidelines.

- The CNNDB will be searched to determine whether any records describe species observations and indicate the presence of habitat for those species in or near the project area. These habitats and species occurrences will be identified, mapped, and quantified as deemed appropriate. The project proponent, assisted by the primary engineering and construction contractors, will coordinate with a qualified biologist to ensure that disturbance of sensitive communities, habitats, and species is minimized during construction of NTMAs, to the extent feasible. In consultation with USFWS and DFG, the project proponent will develop measures to minimize and, where appropriate, compensate for construction-related effects on sensitive habitats and special-status species.

- A qualified botanist will conduct surveys for special-status plants (as listed in Table 3.6-3) with potential to occur in appropriate habitat within the project area. The surveys will follow applicable guidelines established by USFWS and/or DFG, and will be conducted at the appropriate time of year when the target species would be clearly identifiable. If no special-status plants have the potential to occur in the project area or none are found during focused surveys, no further action is required. If special-status plants are found, areas of occupied habitat will be identified. The construction contractor will avoid these areas where feasible. Temporary fencing will be installed to protect all occupied habitat that is located adjacent to construction areas but can be avoided.

- A qualified biologist will conduct a survey in areas where elderberry shrubs could occur within 100 feet of construction and inundation areas. Surveys and stem counts will follow the USFWS conservation guidelines for the valley elderberry longhorn beetle (USFWS 1999). If elderberry shrubs are found, the project proponent will implement avoidance measures that are consistent with the USFWS conservation guidelines for this species (USFWS 1999). Where feasible, effects will be avoided by establishing and maintaining a 100-foot-wide buffer around elderberry plants. Where a 100-foot buffer is not feasible, effects may be minimized by providing a minimum setback, with a buffer around elderberry plants measuring at least 20 feet wide.

- Protocol surveys of all potential nesting trees and habitat in the area will be completed during the raptor nesting season (generally February 15–September 15 but may be adjusted for individual species), particularly if any construction activity is to occur during that season. Potential nesting trees and other nesting habitats (e.g., grasslands for northern harriers and burrowing owls) that are within one-half mile of proposed activity will be surveyed. To avoid the loss of active raptor nests, if the project proponent elects to remove trees suitable for nesting, the trees will be removed during the non-nesting season (generally between September 15 and February 15), to the extent practicable. Where feasible and depending on the species (particularly for Swainson's hawk), construction activities within one-quarter

mile of active nests will be avoided during the raptor nesting season. Other nesting raptors may tolerate a much smaller buffer (e.g., one-tenth mile).

- Surveys for other special-status wildlife listed in Table 3.6-4 with potential to occur in the project area will be conducted by a qualified biologist at the appropriate time of year when the target species would be clearly identifiable. Not all wildlife species require surveys, because their presence may be assumed based on habitat components and known locality records or they clearly will not be present in the area. USFWS and DFG will be consulted to determine for which species surveys should be conducted; appropriate species protocols will be followed. Occupied and potentially suitable habitat will be avoided where feasible by installing temporary exclusionary fencing.

- If potentially suitable habitat for giant garter snake is identified in or within 200 feet of disturbance areas by a qualified biologist, DWR will establish a 200-foot will be established around the habitat, where feasible. Buffers will be marked in the field with guidance from a qualified biologist using temporary fencing, high-visibility flagging, or other equally effective means for clearly delineating the buffers. Disturbance activities will not occur within the buffer, and workers will avoid entering the buffer at all times. If avoidance buffers are observed, no other mitigation measures for impacts on giant garter snakes will be required. If work must occur within 200 feet of potentially suitable habitat, DWR will implement mitigation measures included in Mitigation Measure BIO-T-3b, as determined to be necessary by a qualified biologist.

- If nesting areas for pond turtles are identified, a buffer area of 300 feet will be established between the nesting site and nearby wetlands, where feasible. (The nesting site may be adjacent to wetlands or extend up to 400 feet away from wetland areas in uplands.) These buffers will be indicated by temporary fencing if construction has begun or will be established before nesting periods are ended (the period from egg laying to emergence of hatchlings is normally April to November).

- Preconstruction surveys for special-status bat species will be conducted to determine the presence of roosts. When colonial roosting sites located in trees or structures must be removed, removal will occur outside of the nursery and/or hibernation seasons. Unless otherwise approved by DFG, such removal will occur during dusk and/or evening hours after bats have left the roosting site. When hibernation sites are identified on the project site, nursery and hibernation sites will be sealed before the hibernation season (November–March). Additional measures, such as monitoring and on-site mitigation roosts, will be implemented, as feasible (see H. T. Harvey & Associates 2004).

Participation in and compliance with an existing approved HCP, NCCP, or similar plan applicable to an NTMA may replace the specific survey and avoidance actions listed above if all of the following conditions are met:

- The existing approved HCP, NCCP, or similar plan is applicable to the NTMA.
- The NTMA is within the permit area.
- The NTMA is a covered activity under the existing plan.

- The plan addresses methods to identify, avoid, minimize, and compensate for effects on special-status species.

Mitigation Measure BIO-T-3b (NTMA): If Avoiding Construction-Related Effects on Special-Status Plants and Wildlife is Infeasible, Minimize and, Where Appropriate, Compensate for Effects on Special-Status Species and Loss of Habitat.

If the focused surveys described above in Mitigation Measure BIO-T-3a have been completed and avoiding effects on special-status species is infeasible, the project proponent will coordinate with the appropriate regulatory agency (e.g., USFWS or DFG) to determine acceptable methods for minimizing or compensating for effects on a species. Various minimization and compensation measures are described below. The CVFPP Conservation Strategy may be a suitable source of compensation habitat. The project proponent will ensure that the following measures are implemented to minimize and compensate for effects of proposed levee improvements on special-status plants and wildlife:

- If special-status plants cannot be avoided, the project proponent will coordinate with USFWS and/or DFG (depending on which agency has jurisdiction over the particular species) to determine appropriate minimization and compensation measures. Some local plans and policies, if applicable to the project being implemented, may require that the project proponent completely avoid effects on a special-status plant species or pay a fee to mitigate impacts. Where feasible and applicable, the project proponent will consult and/or coordinate with local agencies on these plans and policies. In some instances, sensitive plants may be relocated to an area approved by DFG or USFWS.

- If ground-disturbing activities are to occur within 20 feet of the dripline of an elderberry shrub, minimization and compensation measures consistent with the USFWS conservation guidelines (USFWS 1999) will be implemented. These measures include transplanting elderberry shrubs and planting compensatory elderberry seedlings and associated native plantings.

- If an active raptor nest is found, a biologist, in coordination with DFG, will determine an appropriate buffer that minimizes the potential for disturbing the nest. Setbacks will be marked by brightly colored temporary fencing. Based on the coordination with DFG, no construction activities will begin in the buffer area until a qualified biologist has confirmed that the nest is no longer active or that the birds are not dependent on it. A qualified biologist will monitor construction to ensure that project activities will not substantially adversely affect the nesting pair or their young. The size of the buffer may vary, depending on the nest location, nest stage, construction activity, and monitoring results. If establishing the buffer becomes infeasible or construction activities result in an unanticipated nest disturbance, DFG will be consulted to determine the appropriate course of action.

- Minimization and compensation measures for other special-status wildlife species will be developed in consultation with DFG and/or USFWS. DFG and USFWS provide standardized minimization measures for several species; for example, the giant garter snake has specific minimization measures, such as restrictions on the construction season and a requirement for

biological surveys and monitoring, exclusionary fencing, permitted capture and relocation, aquatic habitat dewatering, and restoration.

Participation in and compliance with an existing approved HCP, NCCP, or similar plan applicable to an NTMA may replace the specific minimization and compensation actions listed above if all of the following conditions are met:

- The existing approved HCP, NCCP, or similar plan is applicable to the NTMA.
- The NTMA is within the permit area.
- The NTMA is a covered activity under the existing plan.
- The plan addresses methods to identify, avoid, minimize, and compensate for effects on special-status species.

All construction-related activities will be subject to all applicable permitting requirements. The mitigation measures described above, when combined with applicable permit requirements, must, at a minimum, meet the following basic performance standard:

- Authorized losses of habitat will not exceed the function and value of available compensation habitat.

DWR will also track these habitat compensation efforts as part of the MMRP for this PEIR. These measures will be designed to ensure that construction activities of NTMAs will not result in a substantial reduction in the population size or range of any special-status plants or wildlife.

Mitigation Measure BIO-T-3c (NTMA): Secure Applicable State and/or Federal Permits and Implement Permit Requirements.

The project proponent will ensure that the following measures are implemented to reduce construction-related effects of proposed levee or other repairs, remediation, and improvements on trees and shrubs within stream zones, listed plant and wildlife species, and wetlands:

- A streambed alteration agreement, as required under Section 1602 of the California Fish and Game Code, will be obtained from DFG before any vegetation is removed from a stream zone under DFG jurisdiction unless the activity is being implemented by USACE. The project proponent will comply with all terms and conditions of the streambed alteration agreement, including measures to protect habitat or to restore, replace, or rehabilitate any habitat.
- The project proponent will consult or coordinate with USFWS under the federal ESA and DFG under the CESA regarding potential impacts on listed plant and wildlife species and associated critical habitat. The project proponent will implement any additional measures developed through the ESA and CESA consultation processes, including conditions of Section 7 biological opinions and Section 2081 permits.

- Before ground-disturbing activities begin on a project reach that contains waters of the United States, authorization for fill of such waters will be secured from USACE through the Section 404 permitting process. This permitting process will include providing compensatory mitigation for affected wetlands to ensure no net loss of wetland functions and values.

Participation in and compliance with an existing approved HCP, NCCP, or similar plan applicable to an NTMA may be used to achieve the permit compliance measures listed above if all of the following conditions are met:

- The existing approved HCP, NCCP, or similar plan is applicable to the NTMA.
- The NTMA is within the permit area.
- The NTMA is a covered activity under the existing plan.
- The plan provides for compliance with applicable State or federal regulations.

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measures BIO-T-3a (NTMA), BIO-T3b (NTMA), and BIO-T- 3c (NTMA) would reduce the significant impact related to construction effects on special-status plants and wildlife to a less-than-significant level because focused surveys for special-status plants and wildlife will be conducted and impacts will be avoided where feasible; where impacts cannot be avoided, the project proponent will coordinate with the appropriate regulatory agency (e.g., USFWS or DFG) to determine acceptable methods for minimizing or compensating for effects on a species; and applicable State and/or federal permits will be secured and permit requirements will be implemented.

Impact BIO-T-4 (NTMA): Construction-Related Effects of NTMAs on Wildlife Movement.

Mitigation

Mitigation Measure BIO-T-4 (NTMA): Implement Mitigation Measures BIO-T-1a (NTMA), BIO-T-3a (NTMA), BIO-T-3b (NTMA), and BIO-T-3c (NTMA).

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-T-4 (NTMA) would reduce the significant impact from construction-related effects on wildlife movement to a less-than- significant level because biological resources surveys will be conducted and impacts will be avoided where feasible; where impacts cannot be avoided, the project proponent will coordinate with the appropriate regulatory agency (e.g., USFWS or DFG) to determine acceptable methods for minimizing or compensating for effects on a species; and applicable State and/or federal permits will be secured and permit requirements will be implemented.

Impact BIO-T-5 (NTMA): Potential for Construction-Related Effects of NTMAs to Conflict with Local Plans and Policies.

Mitigation

Mitigation Measure BIO-T-5a (NTMA): Implement Mitigation Measures BIO-T-1a (NTMA), BIO-T-3a (NTMA), BIO-T-3b (NTMA), and BIO-T-3c (NTMA).

Mitigation Measure BIO-T-5b (NTMA): Identify Local Plans and Policies and Develop Strategy to Maintain Plan Consistency, Minimize Effects, or Compensate for Construction-Related Effects on Local Plans.

Before an NTMA is implemented, the project proponent will identify applicable local conservation plans in the area and evaluate the plans to determine whether the NTMA is within the plan area. As feasible, the project proponent will consider developing a strategy to maintain plan consistency and will consult and/or coordinate with the appropriate entity or plan administrator to develop and implement measures to avoid, minimize, and where necessary, compensate for effects on local plans. In some instances, the NTMA may be a covered activity under the plan.

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measures BIO-T-5a (NTMA) and BIO-T-5b (NTMA) would reduce the potentially significant impact from potential conflicts with local plans and policies to a less-than-significant level because the project proponent will identify applicable local conservation plans in the area and evaluate the plans to determine whether the NTMA is within the plan area. As feasible, the project proponent will consider developing a strategy to maintain plan consistency and will consult and/or coordinate with the appropriate entity or plan administrator to develop and implement measures to avoid, minimize, and where necessary, compensate for effects on local plans.

Impact BIO-T-6 (NTMA): Effects of Reservoir Operational Criteria Changes on Sensitive Natural Communities and Habitats, Special-Status Plants and Wildlife, Wildlife Movement, and Local Plans and Policies.

Mitigation

No mitigation is required.

Finding

For the reasons stated in the PEIR, DWR finds that Impact BIO-T-6 (NTMA) would be less than significant because surface water fluctuations are expected to remain within historical reservoir fluctuation levels and already vary drastically from year to year, and the riparian and aquatic habitats and special-status plants and wildlife present at these reservoirs experience these fluctuations under current conditions. Therefore, the water fluctuations that will result from reoperation of water storage facilities under the NTMAs will not substantially reduce the viability of special- status species, reduce habitat value or interfere with management of conserved lands, or eliminate opportunities for conservation actions.

Impact BIO-T-7 (NTMA): Effects of the Vegetation Management Strategy on Sensitive Natural Communities and Habitats, Special-Status Plants and Wildlife, and Wildlife Movement.

Mitigation

Mitigation Measure BIO-T-7a (NTMA): Implement Applicable Elements of Mitigation Measures BIO-T-1a (NTMA), BIO-T-3a (NTMA), BIO-T-3b (NTMA), and BIO-T-3c (NTMA) to Minimize Impacts during Vegetation Removal.

Mitigation Measure BIO-T-7b (NTMA): Implement Mitigation Measure BIO-A-2b (NTMA).

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measures BIO-T-7a (NTMA) and BIO-T-7b (NTMA) would reduce the potentially significant effects of implementing the VMS on sensitive natural communities and habitats, special-status plants and wildlife, and wildlife movement because, for example, actions will be undertaken to avoid and minimize impacts on sensitive biological resources caused by direct removal of woody vegetation as part of the VMS. However, the suite of actions that compose Mitigation Measure BIO-T-7a (NTMA) do not ensure the full replacement of riparian habitat functions and values to compensate for losses of riparian vegetation associated with implementation of the VMS. In many cases, implementing MitigationMeasure BIO-A-2b (NTMA) and meeting the performance criteria in the measure for riparian vegetation compensation would reduce impacts associated with the removal of riparian vegetation to an overall less-than- significant level because the extent, type, quality, and function of any riparian habitat removed would be fully compensated for through the enhancement, restoration, and creation of riparian habitat elsewhere.

However, removing riparian habitat in some locations and enhancing, restoring, or creating habitat elsewhere would result in overall relocation of riparian habitat within the Extended SPA. It is possible that although some areas may benefit from compensatory habitat, habitat values in other locations could be substantially reduced. It cannot be assured that wildlife movement corridors could be maintained in all instances or that relocation of riparian habitat would not restrict the range of some species. In addition, planting vegetation in the floodway may not be authorized by the Board, USACE, or other agencies if the vegetation would impede flood flows of such a magnitude that a rise in water surface elevation would cause a significant increase in risk to public safety. Therefore, it cannot be assured that in all instances impacts on sensitive terrestrial biological resources would be mitigated to a less-than-significant level, and this impact remains significant and unavoidable after mitigation. DWR finds this remaining significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact BIO-T-1 (LTMA): Construction-Related Effects of LTMAs on Sensitive Natural Communities and Habitats.

Mitigation

Mitigation Measure BIO-T-1(LTMA): Implement Mitigation Measures BIO-T-1a (NTMA) and BIO-T-1b (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-T-1 (LTMA) would reduce the significant impact from construction activities on sensitive natural communities and habitats to a less-than-significant level because biological resource surveys to quantify sensitive natural communities in project areas will be conducted, and construction-related effects will be avoided, minimized, and where appropriate, compensated. In addition, USFWS-designated critical habitat in the project area will be identified, mapped, and quantified by a qualified biologist, and the project proponent will consult with USFWS to develop and implement measures to avoid, minimize, and, where necessary, compensate for construction-related effects on primary constituent elements and potential adverse modification of critical habitat.

Impact BIO-T-2 (LTMA): Construction-Related Effects of LTMAs on Water Quality in Sensitive Natural Communities and Special-Status Species' Habitats.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact BIO-T-2 (LTMA) would be less than significant because the project proponent and/or construction contractor will develop and implement a SWPPP and comply with the conditions of the National Pollutant Discharge Elimination System general stormwater permit for construction activity (Order No. 2009-0009-DWQ) to avoid increased sedimentation and turbidity and/or release of contaminants that could degrade the quality of sensitive habitats. In addition, final design and construction specifications will require the project proponent to implement standard BMPs related to erosion, siltation, and "good housekeeping."

Impact BIO-T-3 (LTMA): Construction-Related Effects of LTMAs on Special-Status Plants and Wildlife.

Mitigation
Mitigation Measure BIO-T-3 (LTMA): Implement Mitigation Measures BIO-T-1a (NTMA), BIO-T-3a (NTMA), BIO-T-3b (NTMA), and BIO-T-3c (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-T-3 would reduce the significant impact related to construction effects on special-status plants and wildlife to a less-than- significant level because focused surveys for special-status plants and wildlife will be conducted and impacts will be avoided where feasible; where impacts cannot be avoided, the project proponent will coordinate with the appropriate regulatory agency (e.g., USFWS or DFG) to determine acceptable methods for minimizing or compensating for effects on a species; and applicable State and/or federal permits will be secured and permit requirements will be implemented.

Impact BIO-T-4 (LTMA): Construction-Related Effects of LTMAs on Wildlife Movement.

Mitigation
Mitigation Measure BIO-T-4 (LTMA): Implement Mitigation Measures BIO-T-1a (NTMA), BIO-T-3a (NTMA), BIO-T-3b (NTMA), and BIO-T-3c (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-T-4 (LTMA) would reduce the significant impact from construction-related effects on wildlife movement to a less-than- significant level because biological resources surveys will be conducted and impacts will be avoided where feasible; where impacts cannot be avoided, the project proponent will coordinate with the appropriate regulatory agency (e.g., USFWS or DFG) to determine acceptable methods for minimizing or compensating for effects on a species; and applicable State and/or federal permits will be secured and permit requirements will be implemented.

Impact BIO-T-5 (LTMA): Potential for Construction-Related Effects of LTMAs to Conflict with Local Plans and Policies.

Mitigation
Mitigation Measure BIO-T-5 (LTMA): Implement Mitigation Measures BIO-T-1a (NTMA), BIO-T-3a (NTMA), BIO-T-3b (NTMA), BIO-T-3c (NTMA), and BIO-T-5b (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-T-5 (LTMA) would reduce the potentially significant impact from potential conflicts with local plans and policies to a less-than-significant level because the project proponent will identify applicable local conservation plans in the area and evaluate the plans to determine whether the LTMA is within the permit area. As feasible, the project proponent will consider developing a strategy to maintain plan consistency and will consult and/or coordinate with the appropriate entity or plan administrator to develop and implement measures to avoid, minimize, and where necessary, compensate for effects on local plans.

Impact BIO-T-6 (LTMA): Effects of Reservoir Operational Criteria Changes on Sensitive Natural Communities and Habitats, Special-Status Plants and Wildlife, Wildlife Movement, and Local Plans and Policies.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact BIO-T-6 (LTMA) would be less than significant because surface water fluctuations are expected to remain within historical reservoir fluctuation levels and already vary drastically from year to year, and because the riparian and aquatic habitats and special-status plants and wildlife present at these reservoirs experience these

fluctuations under current conditions. Therefore, the water fluctuations that will result from reoperation of water storage facilities under the LTMAs will not substantially reduce the viability of special-status species, reduce habitat value or interfere with management of conserved lands, or eliminate opportunities for conservation actions.

Impact BIO-T-7 (LTMA): Effects of the Vegetation Management Strategy on Sensitive Natural Communities and Habitats, Special-Status Plants and Wildlife, and Wildlife Movement.

Mitigation

Mitigation Measure BIO-T-7 (LTMA): Implement Mitigation Measure BIO-T-7a (NTMA).

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure BIO-T-7 (LTMA) would reduce the potentially significant effects of implementing the VMS on sensitive natural communities and habitats, special-status plants and wildlife, and wildlife movement because surveys will be conducted and a suite of actions designed to avoid, minimize, or compensate for adverse effects will be implemented. However, the suite of actions that compose Mitigation Measure BIO-T-7 (LTMA) do not ensure the full replacement of riparian habitat functions and values to compensate for losses of riparian vegetation associated with implementation of the VMS. For example, removing riparian habitat in some locations and enhancing, restoring, or creating habitat elsewhere will result in overall relocation of riparian habitat within the Extended SPA. It is possible that although some areas may benefit from compensatory habitat, habitat values in other locations could be substantially reduced. It cannot be assured that wildlife movement corridors could be maintained in all instances or that relocation of riparian habitat would not restrict the range of some species. In addition, planting vegetation in the floodway may not be authorized by the Board, USACE, or other agencies if the vegetation would impede flood flows to such a degree that a rise in water surface elevation would cause a significant increase in risk to public safety. Therefore, it cannot be assured that in all instances impacts on sensitive terrestrial biological resources would be mitigated to a less-than-significant level, and this impact remains significant and unavoidable after mitigation. DWR finds this remaining significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Cultural and Historic Resources

Impact CUL-1 (NTMA): Potential Damage to or Destruction of Known Archaeological Resources from Ground Disturbance or Other Construction-Related Activities.

Mitigation

Mitigation Measure CUL-1a (NTMA): Conduct Cultural Resource Studies and Avoid Effects on Known Archaeological Resources.

To minimize potential adverse effects on prehistoric and historic-era archaeological resources, the project proponent will conduct cultural resource studies before project approval (where feasible and appropriate) to identify the presence of such resources at all project sites. Where field surveys cannot be completed before project approval, such as in locations where access permission has not been received, field surveys will be completed before ground disturbance begins. These archaeological studies and surveys will be conducted by professionals who meet the Secretary of the Interior's standards for archaeology professionals. Should resources eligible for listing in the NRHP [National Register of Historic Places] and CRHR [California Register of Historical Resources] be identified within the study area, effects on those resources resulting from any NTMA will be avoided, if feasible. Methods of avoidance may include redesigning or relocating the project, such as moving an access road around an archaeological site instead of through it.

Mitigation Measure CUL-1b (NTMA): Conduct Additional Evaluations and Recover Sufficient Data to Compensate for Damage to or Destruction of Known Archaeological Sites.

If a substantial adverse change to an archaeological resource that has been determined as eligible for listing in the NRHP or the CRHR cannot be avoided, the project proponent will deploy a qualified archaeologist to conduct additional research and other tasks. These tasks will include preparing a research design; conducting additional archival and historical research, when appropriate; conducting an archaeological excavation; analyzing artifacts, features, and other attributes of the resource; and preparing a technical report documenting the methods and results of the investigation in accordance with the California Office of Historic Preservation's *Guidelines for Archaeological Research Design* (1991). The purpose of this work will be to recover a sufficient quantity of data to compensate for damage to or destruction of the resource. The procedures to be employed in this data recovery program will be determined in consultation with responsible agencies and interested parties, such as Native American tribes, as identified by the Native American Heritage Commission, as appropriate. The approved measures must be implemented before construction activities occur at the archaeological site.

An alternative method to mitigate impacts on archaeological sites considered eligible for listing in the NRHP and CRHR is to have the primary construction contractor for the project proponent cap the site with soil, gravels, rock, or appropriate vegetation to protect the deposit. For example, sites subject to inundation and water-level fluctuations may be protected from erosion by application of a layer of gravel/rock or soil, or both. A layer of soil (i.e., sterile fill) may also be placed over a site where construction of a building is planned, such that all construction activities will occur in the fill material. For sites located in areas subject to looting, vegetation such as blackberry brambles or wild rose may be planted over the site as a useful deterrent, but only in areas where operations and maintenance of facilities would not be impaired by the deterrent vegetation. If capping an archaeological site proves necessary, the project proponent will provide

the materials and labor, regularly monitor and evaluate the efficacy of the mitigation, and refresh the protection, when necessary.

Finding

For the reasons stated in the PEIR, DWR finds that when avoidance of known cultural resources is applied (where feasible) as recommended in Mitigation Measure CUL-1a (NTMA), implementation of this mitigation measure would reduce the potentially significant impact of damage to or destruction of known archaeological resources to a less-than-significant level. However, in those instances where application of Mitigation Measure CUL-1a (NTMA) is not feasible, DWR finds that implementation of Mitigation Measure CUL-1b (NTMA) would reduce this potentially significant impact to a less-than-significant level because additional archaeological evaluations will be conducted and sufficient data will be recovered to compensate for damage to or destruction of known archaeological sites.

Impact CUL-2 (NTMA): Potential Damage to or Destruction of Previously Undiscovered Buried Archaeological Resources from Ground Disturbance or Other Construction-Related Activities

Mitigation

Mitigation Measure CUL-2 (NTMA): If Cultural Resources Are Discovered, Immediately Halt Construction and Implement an Accidental-Discovery Plan.

Should cultural resources such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during construction activities, work will be suspended immediately at the location of the find and within a 100-foot radius. A qualified archaeologist will conduct a field investigation of the specific site and recommend mitigation necessary to protect or recover any cultural resource determined by the archaeologist to represent a historical resource or unique archaeological resource.

Based on the archaeologist's recommendations, the project proponent will develop measures in consultation with responsible agencies and, as appropriate, interested parties such as Native American tribes. The approved mitigation must be implemented before construction activities resume at the archaeological site, as identified by the Native American Heritage Commission.

All of the steps identified above will be detailed in an accidental-discovery plan developed before construction so that all parties are aware of the process that must be implemented should buried archaeological resources be uncovered during construction.

Construction monitoring by a qualified archaeologist in areas determined particularly sensitive for buried archaeological remains will be implemented by project proponents when warranted, as recommended by the archaeological professional. Reasons for providing an archaeological monitor may include but are not limited to the previous identification of buried cultural deposits in the project vicinity or the previous recordation of an archaeological site that could not be recently identified on the ground surface. Furthermore, some landforms, such as mounded areas in floodplains adjacent to water courses, are more likely to be sensitive for buried resources. Large-scale projects involving a great deal of ground disturbance (e.g., lengthy levee

construction) could benefit from geoarchaeological studies to determine those areas most likely to contain buried cultural deposits.

Discoveries of human remains will be treated as described in Mitigation Measure CUL-5c (NTMA), below.

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure CUL-2 (NTMA) would reduce the potentially significant impact of damage to or destruction of previously unknown archaeological resources to a less-than-significant level. If cultural resources are discovered during construction activities, construction in the vicinity of the find will immediately be halted and an accidental discovery plan (containing all measures necessary to protect or recover any cultural resource determined by the archaeologist to represent a historical resource or unique archaeological resource) will be implemented.

Impact CUL-3 (NTMA): Potential Damage or Disturbance to or Change in Significance of Built-Environment Resources.

Mitigation

Mitigation Measure CUL-3a (NTMA): Conduct Cultural Resources Studies and Avoid Effects on Built-Environment Resources.

In areas potentially containing historic resources, the project proponent will ensure that architectural history studies and surveys will be conducted by professionals who meet the Secretary of the Interior's professional standards, to identify the presence of built-environment resources within a particular project location. Should buildings or structures that are eligible for listing in the NRHP or CRHR be identified within the study area, impacts on those resources resulting from any NTMA will be avoided, if feasible. Project relocation and redesign are appropriate avoidance measures. For example, should constructing a new levee require removal of a historic farmhouse, realigning the levee away from the structure would avoid a significant adverse change to the structure.

If avoidance is not feasible, see Mitigation Measure CUL-3b (NTMA [& LTMA]) below.

Mitigation Measure CUL-3b (NTMA): Follow the Secretary of the Interior's Standards for the Treatment of Historic Properties.

In some cases, completely avoiding an element of the built environment that qualifies as a historical resource or historic property may not be feasible, and the feature must be altered as part of project implementation. In such a scenario, any program-related alterations to historic-era buildings or structures, including relocations, will conform to the *Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (1995). The project proponent will develop and implement any plans necessary to mitigate alterations to historic properties in

accordance with these standards. The plans will be submitted to the SHPO [State Historic Preservation Officer] for approval before project implementation.

If these standards cannot be met, see Mitigation Measure CUL-3c (NTMA) below.

Mitigation Measure CUL-3c (NTMA): Record Built-Environment Resources to Historic American Buildings Survey and Historic American Engineering Record Standards.

In some cases, avoiding or relocating a building or structure considered eligible for the NRHP or CRHR may not be feasible, and that resource must be demolished. These situations are expected to be rare occurrences. However, in such a scenario, the project proponent will retain a qualified architectural historian to document the affected historical built-environment resource according to Historic American Buildings Survey (HABS) or Historic American Engineering Record (HAER) standards, as appropriate. HABS and HAER documentation packages will be entered into the Library of Congress, as well as the appropriate Information Center of the California Historical Resources Information System.

Finding

For the reasons stated in the PEIR, DWR finds that where avoidance is applied (where feasible) as recommended in Mitigation Measure CUL-3a (NTMA), implementation of this mitigation measure would reduce the potentially significant impact of damage, disturbance, or changes in significance of built-environment resources to a less-than-significant level. In those instances where application of Mitigation Measure CUL-3a (NTMA) is not feasible, DWR finds that implementation of Mitigation Measure CUL-3b (NTMA) (where feasible) would reduce this potentially significant impact to a less-than-significant level because the Secretary of the Interior's standards for the treatment of historic properties will be followed when any alterations to historic-era buildings or structures are required. In those instances where application of Mitigation Measure CUL- 3b (NTMA) is not feasible, DWR finds that implementing Mitigation Measure CUL-3c (NTMA) would reduce the level of this impact. However, recording a building or structure to HABS/HAER standards as described in Mitigation Measure CUL-3c (NTMA) may not reduce the impact on significant historic buildings and structures to a less-than-significant level; although information on the building or structure will be recorded, the building or structure will still be removed. Therefore, this impact remains potentially significant and unavoidable after mitigation. DWR finds this remaining potentially significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact CUL-4 (NTMA): Potential Damage or Disturbance to Traditional Cultural Properties/Tribal Cultural Resources during Ground Disturbance or Other Construction-Related Activities.

Mitigation

Mitigation Measure CUL-4a (NTMA): Conduct Cultural Resources Studies and Avoid Effects on TCPs/TCRs.

In areas potentially containing TCPs or TCRs, an ethnographer or archaeologist who meets the Secretary of the Interior's standards as a professional cultural resource specialist will consult with appropriate populations (Native Americans or otherwise) before approval of any project and identify the presence of any TCPs/TCRs at the project location. Native American TCPs/TCRs may be identified by an ethnographer who has worked intensively with community members (often, but not always, elders) possessed of considerable knowledge about places important to the community. Efforts to identify TCPs/TCRs may include the engagement of tribal monitors. Should TCPs/TCRs be identified in the project area, they will be avoided by project redesign or project relocation, if feasible. As an example, the proposed location of a water-monitoring device may be moved to another, still appropriate, place along a stream bed to avoid a section of the creek bank that is a TCP/TCR for medicinal plants, thereby avoiding a substantial adverse change to the resource.

Where avoidance is implemented and no further mitigation is required, implementing this mitigation measure would reduce Impact CUL-4 (NTMA) to a less-than-significant level. However, if avoidance is not feasible, see Mitigation Measure CUL-4b (NTMA) below.

Mitigation Measure CUL-4b (NTMA): Consult with Native American Communities and Implement Appropriate Measures to Mitigate Effects on TCP/TCRs.

Where an identified TCP/TCR cannot be fully avoided by a proposed project, the project proponent will engage in early, meaningful consultation with Native American communities, consistent with Assembly Bill (AB) 52 and DWR's Tribal Engagement Policy, to identify ways to mitigate impacts on TCP/TCRs. This may include the engagement of tribal monitors. An example of a mitigation measure that may be implemented would be if TCP/TCR locations that presently support plant species cultivated and harvested by Native American communities for traditional medicines and foods, or for uses such as basketry, are slated for destruction to make way for planned construction, the project proponent may work with the Native American community associated with the TCP/TCR to identify other nearby locations that can support these same plants. The project proponent can then take steps to enhance existing plant populations at those locations or provide materials and labor to cultivate new plants, with assistance from the Native American community.

Working with local Native American communities to develop interpretive programs is another measure to mitigate impacts on TCP/TCRs. Programs may include developing signage, constructing visitor centers describing locations that have sacred or other special meaning to Native Americans, developing and implementing management plans for important cultural resources, or establishing conservation easements to protect culturally important places.

For each subsequent project implemented under the CVFPP, DWR will follow the consultation processes described in Public Resources Code Sections 21080.3.1 and 21080.3.2 for Native American Tribes that request notice and consultation under AB 52. These processes include the following:

- DWR will maintain a notification list of Tribal contacts.

- DWR will notify Tribal contacts within 14 days from deciding to undertake a project.

- Tribes may respond to the notifications in writing within 30 days and request consultation on the project.

- DWR will begin consultation with the Tribe within 30 days of receiving the tribe's written request.

- Consultation will end when DWR and the interested Tribe(s) agree to measures to mitigate or avoid a significant effect on a TCR, or a party acting in good faith and after a reasonable effort, concludes that a mutual agreement cannot be reached.

For projects implemented under the CVFPP, the topics to be addressed in each project-level consultation will depend upon the interests and concerns of the consulting Tribe and the specifics of the project and its context including project and alternatives footprint. Without limiting the scope of future consultations under Public Resources Code section 21080.3.2 in any way, these topics may include one or more of the following:

- Obtaining information that may be held by the affiliated Tribe, including Tribal Historic Preservation Offices, or others concerning the location and characteristics of any tribal cultural resources that may be located in the project area. This may include tribal registers, inventories, and geographical information systems. The characteristics of potentially affected resources may include, but are not limited to, the nature of the resource (village site, burial site, sacred site, etc.), the areal extent of the resource, and the cultural significance of the resource to the Tribe.

- Reviewing results of previous flood safety work and existing investigations (including non-invasive investigations, geoarchaeology, surveys, testing, data recovery, and well, trench, and boring logs) in proximity to the project area and to known potentially affected TCRs to further characterize known resources within the project footprint. The purposes of the review of previous investigations are to: provide data concerning the inventory of TCRs in the project area, describe and evaluate the significance of any known TCRs, and provide information useful in determining potential project effects on identified TCRs in the project footprint. Undertaking additional investigations appropriate to the scale and type of activity to further characterize known resources, where needed, and to assess the sensitivity for potential unknown resources in the project area. Other non-invasive investigatory methods may be appropriate and will be discussed with affiliated Tribes.

- Integrating Native American values into tribal cultural resource significance evaluations (using criteria 1, 2, 3 and 4). In applying the criteria set forth in the subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to the Native American tribe.

- Developing feasible avoidance measures for known resources. In some circumstances, only minor location adjustments or redesign may be needed to avoid the resource. Avoidance measures could include relocating haul and access roads, staging areas, spoil piles, and

borrow areas. In other circumstances, such as operations and maintenance activities, opportunities for avoidance may be more limited.

- To the extent that avoidance is infeasible or unanticipated discoveries are encountered, developing appropriate mitigation measures to minimize the impacts to the resource. Such measures would include those described in Section 15370 of the CEQA Guidelines and may include providing Native American tribes that are affiliated with the project area with a schedule of ground-disturbing activities, considering alternative construction methods, potential reburial locations, potential site protection, buffer zones, a burial recovery plan, a cultural and Tribal resources management and treatment plan, sensitivity training, and discussing alternative equipment. It is recognized that in certain circumstances these measures might not reduce the effects on cultural resources and values to a less than significant level, and that some mitigation measures may themselves result in impacts that need to be addressed. Providing for the appropriate involvement of qualified Tribal monitors, including notification, coordination and safety protocols, and consideration of compensation.

- Undertaking the activities described above with full respect for the potentially affected tribal cultural resources and their significance to the Tribe. In particular, full consideration will be given to the Most Likely Descendant's recommendation for treatment and disposition of ancestral human remains and grave goods, consistent with Public Resources Code section 5097.98.

In addition to formal consultations required by AB 52 in connection with future projects that are implemented under the CVFPP, DWR will comply with the DWR Tribal Engagement Policy and will notify Tribes culturally and traditionally affiliated with the project area, as appropriate, in connection with future ground disturbing geotechnical surveys that may have an effect on tribal cultural resources that are known to be present or that are likely to be present in the vicinity of the ground disturbing activities. When determining the presence or likely presence of tribal cultural resources, in addition to other sources, the following may be reviewed: the applicable Information in the California Historical Resources Information System, NAHC Sacred Lands database, ethnographic research, records maintained by the affiliated Tribe, and the results of previous surveys and investigations.

This mitigation measure was developed solely for projects that may be implemented under the CVFPP and corresponding consultations under AB 52, and is not necessarily applicable to tribal consultations conducted in conjunction with other DWR projects.

Mitigation Measure CUL-4c (NTMA): Cultural Resource Awareness and Sensitivity Training

Only personnel who have received cultural resource awareness and sensitivity training will be allowed to enter areas potentially containing TCPs or TCRs. Training will include a presentation developed in coordination with affiliated tribal representatives. Topics may include the potential presence and type of Native American and non-Native American resources that might be found

during operations associated with the individual flood control projects, and necessary reporting protocols. Written materials will be provided to personnel as appropriate.

Implementing Mitigation Measure CUL-4a (NTMA) and a suite of measures as necessary in Mitigation Measure CUL-4b (NTMA) and CUL-4c (NTMA) would reduce Impact CUL-4 (NTMA) to a less-than-significant level in most cases, but may not necessarily reduce impacts on some categories of TCP/TCRs. For example, a tribe's sacred site that is regularly visited for ceremonies could be destroyed during levee construction. In this situation, the direct impacts of the action cannot be fully mitigated even though some form of mitigation may be negotiated with the tribe to ameliorate the action. In such instances, Impact CUL-4 (NTMA) would be potentially significant and unavoidable.

Finding

For the reasons stated in the PEIR and Supplemental PEIR, DWR finds that where avoidance is applied (where feasible) as recommended in Mitigation Measure CUL-4a (NTMA), implementation of this mitigation measure would reduce the potentially significant impact of damage or disturbance to traditional cultural properties/tribal cultural resources (TCPs/TCRs) to a less-than-significant level. In those instances where application of Mitigation Measure CUL-4a (NTMA) is not feasible, DWR finds that implementation of Mitigation Measure CUL-4b (NTMA) and CUL-4c (NTMA) will reduce this impact to a less-than-significant level in most cases, but may not necessarily reduce impacts on some categories of TCPs/TCRs. For example, a tribe's sacred site that is regularly visited for ceremonies could be destroyed during levee construction. In this situation, the direct impacts of the action cannot be fully mitigated even though some form of mitigation may be negotiated with the tribe to ameliorate the action. In such instances, this impact would remain potentially significant and unavoidable after mitigation. DWR finds this remaining potentially significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact CUL-5 (NTMA): Potential Damage or Disturbance to Human Remains, Including Those Interred Outside of Formal Cemeteries, during Ground Disturbance or Other Construction-Related Activities.

Mitigation

Mitigation Measure CUL-5a (NTMA): Conduct Cultural Resources Studies and Avoid Effects on Human Remains.

The project proponent will ensure that archaeological and historical studies and surveys will be conducted by professionals who meet the Secretary of the Interior's standards, to identify the presence of human remains within a particular project location. Should human remains be identified within the study area, impacts on those remains resulting from any NTMA will be avoided, if feasible. Project relocation and redesign are appropriate avoidance measures. For example, should construction of a new maintenance facility be proposed at a place known to contain human remains, relocation of the facility would avoid disturbing the burials.

Mitigation Measure CUL-5b (NTMA): Relocate Known Cemeteries.

The project proponent will consult with the entity (county, city, or private) that has jurisdiction over the cemetery, and with interested parties as appropriate, to identify a satisfactory place to relocate human remains that would provide protection from future disturbance. Similarly, if Native American burials are known to exist in an archaeological site, the project proponent will work with the appropriate tribe, as identified by the Native American Heritage Commission, to identify a satisfactory location for reinterment of burials in a protected location.

Mitigation Measure CUL-5c (NTMA): Immediately Halt Construction If Human Remains Are Discovered and Implement a Burial Treatment Plan.

Construction activities have the potential to result in unanticipated effects on buried human remains where there is no surface indication of their presence. Under these circumstances, the project proponent will adhere to the requirements described in Section 7050.5 of the California Health and Safety Code and PRC [Public Resources Code] Section 5097.98:

- If human remains are uncovered during ground-disturbing activities, potentially damaging excavation must halt in the area of the remains and the local county coroner must be notified. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code, Section 7050.5(b)).

- If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code, Section 7050(c)).

- In turn, under the provisions of PRC Section 5097.98, NAHC will identify a Most Likely Descendant (MLD). The MLD designated by the NAHC will have at least 48 hours to inspect the site and propose treatment and disposition of the remains and any associated grave goods.

For large projects (e.g., new levee construction) or projects where a high probability of encountering human remains exists, a burial treatment plan will be developed by the project proponent in consultation with local Native American tribes before construction. During this process, all parties will be made aware of the actions required should buried Native American human remains be uncovered during construction. The plan will detail allof the activities identified above and include treatment preferences identified by the MLD.

Smaller, localized projects do not require a burial treatment plan. Examples of such projects are modifications of existing facilities and projects that do not involve ground disturbance (e.g., purchases of easements, structure modifications). However, should human remains be uncovered during these project activities, treatment of the remains will strictly follow the requirements in Section 7050.5 of the California Health and Safety Code and PRC Section 5097.98.

Some burials and cemeteries may also be TCRs as described in Impact CUL-4 above. In that situation, the impact analysis, mitigation measures, and potentially significant and unavoidable impact conclusion described under Impact CUL-4 could apply. Burials and cemeteries may also be archaeological resources as described in Impacts CUL-1 and/or CUL-2 above. In that

situation, the impact analysis, mitigation measures, and less than significant impact conclusion described under those impacts could apply.

Finding

For the reasons stated in the PEIR, DWR finds that where avoidance is applied (where feasible) as recommended in Mitigation Measure CUL-5a (NTMA), implementing this mitigation measure would reduce the potentially significant impact of damage or disturbance to human remains to a less-than-significant level. In those instances where application of Mitigation Measure CUL-5a (NTMA) is not feasible, DWR finds that implementing Mitigation Measures CUL-5b (NTMA) and CUL-5c (NTMA) would reduce this potentially significant impact to a less-than- significant level because known cemeteries that cannot be avoided will be relocated and the requirements described in Section 7050.5 of the California Health and Safety Code and PRC Section 5097.98 will be applied.

Impact CUL-1 (LTMA): Potential Damage to or Destruction of Known Archaeological Resources from Ground Disturbance or Other Construction-Related Activities.

Mitigation

Mitigation Measure CUL-1a (LTMA): Implement Mitigation Measure CUL-1a (NTMA).
Mitigation Measure CUL-1b (LTMA): Implement Mitigation Measure CUL-1b (NTMA).

Finding

For the reasons stated in the PEIR, DWR finds that where avoidance is applied (where feasible) as recommended in Mitigation Measure CUL-1a (LTMA), implementation of this mitigation measure would reduce the potentially significant impact of damage to or destruction of known archaeological resources to a less-than-significant level. However, in those instances where application of Mitigation Measure CUL-1a (LTMA) is not feasible, DWR finds that implementation of Mitigation Measure CUL-1b (LTMA) would reduce this potentially significant impact to a less-than- significant level because additional archaeological evaluations will be conducted and sufficient data will be recovered to compensate for damage to or destruction of known archaeological sites.

Impact CUL-2 (LTMA): Potential Damage to or Destruction of Previously Undiscovered Buried Archaeological Resources from Ground Disturbance or Other Construction-Related Activities.

Mitigation

Mitigation Measure CUL-2 (LTMA): Implement Mitigation Measure CUL-2 (NTMA).

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation Measure CUL-2 (NTMA) would reduce the potentially significant impact of damage to or destruction of previously unknown archaeological resources to a less-than-significant level because if cultural resources are discovered during construction activities, construction in the vicinity of the find will immediately be halted and an accidental discovery plan (containing all measures necessary

to protect or recover any cultural resource determined by the archaeologist to represent a historical resource or unique archaeological resource) will be implemented.

Impact CUL-3 (LTMA): Potential Damage or Disturbance to or Change in Significance of Built-Environment Resources.

Mitigation
Mitigation Measure CUL-3a (LTMA): Implement Mitigation Measure CUL-3a (NTMA).
Mitigation Measure CUL-3b (LTMA): Implement Mitigation Measure CUL-3b (NTMA).
Mitigation Measure CUL-3c (LTMA): Implement Mitigation Measure CUL-3c (NTMA).

Finding
For the reasons stated in the PEIR, DWR finds that where avoidance is applied (where feasible) as recommended in Mitigation Measure CUL-3a (LTMA), implementation of this mitigation measure would reduce the potentially significant impact of damage, disturbance, or changes in significance of built-environment resources to a less-than-significant level. In those instances where application of Mitigation Measure CUL-3a (LTMA) is not feasible, DWR finds that implementation of Mitigation Measure CUL-3b (LTMA) (where feasible) would reduce this potentially significant impact to a less-than-significant level because the Secretary of the Interior's standards for the treatment of historic properties will be followed when any alterations to historic-era buildings or structures are required. In those instances where application of Mitigation Measure CUL- 3b (LTMA) is not feasible, DWR finds that implementing Mitigation Measure CUL-3c (LTMA) would reduce the level of this impact. However, recording a building or structure to HABS/HAER standards as described in Mitigation Measure CUL-3c (LTMA) may not reduce the impact on significant historic buildings and structures to a less-than-significant level; although information on the building or structure will be recorded, the building or structure will still be removed. Therefore, this impact remains potentially significant and unavoidable after mitigation. DWR finds this remaining potentially significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact CUL-4 (Long-Term Management Activity [LTMA]): Potential Damage or Disturbance to Traditional Cultural Properties during Ground Disturbance or Other Construction-Related Activities.

Mitigation
Mitigation Measure CUL-4a (LTMA): Implement Mitigation Measure CUL-4a (NTMA).
Mitigation Measure CUL-4b (LTMA): Implement Mitigation Measure CUL-4b (NTMA).
Mitigation Measure CUL-4c (LTMA): Implement Mitigation Measure CUL-4c (NTMA).

Finding
For the reasons stated in the PEIR and Supplemental PEIR, DWR finds that where avoidance is applied (where feasible) as recommended in Mitigation Measure CUL-4a (LTMA), implementation of this mitigation measure would reduce the potentially significant impact of damage or disturbance to traditional cultural properties/tribal cultural resources (TCPs/TCRs) to

a less-than-significant level. In those instances where application of Mitigation Measure CUL-4a (LTMA) is not feasible, DWR finds that implementation of Mitigation Measure CUL-4b (LTMA) and CUL-4c (LTMA) would reduce this impact to a less-than-significant level in most cases, but may not necessarily reduce impacts on some categories of traditional cultural properties. For example, a tribe's sacred site that is regularly visited for ceremonies could be destroyed during levee construction. In this situation, the direct impacts of the action cannot be fully mitigated even though some form of mitigation may be negotiated with the tribe to ameliorate the action. In such instances, this impact would remain potentially significant and unavoidable after mitigation. DWR finds this remaining potentially significant and unavoidable impact to be acceptable because the environmental, economic, legal, social, technological, and other benefits outweigh and override this and the other unavoidable environmental impacts of the project for the reasons set forth in Section 3.0 of this document.

Impact CUL-5 (LTMA): Potential Damage or Disturbance to Human Remains, Including Those Interred Outside of Formal Cemeteries, during Ground Disturbance or Other Construction-Related Activities.

Mitigation

Mitigation Measure CUL-5a (LTMA): Implement Mitigation Measure CUL-5a (NTMA).
Mitigation Measure CUL-5b (LTMA): Implement Mitigation Measure CUL-5b (NTMA).
Mitigation Measure CUL-5c (LTMA): Implement Mitigation Measure CUL-5c (NTMA).

Finding

For the reasons stated in the PEIR, DWR finds that where avoidance is applied (where feasible) as recommended in Mitigation Measure CUL-5a (LTMA), implementing this mitigation measure would reduce the potentially significant impact of damage or disturbance to human remains to a less-than-significant level. In those instances where application of Mitigation Measure CUL-5a (LTMA) is not feasible, DWR finds that implementing Mitigation Measures CUL-5b (LTMA) and CUL-5c (LTMA) would reduce this potentially significant impact to a less-than- significant level because known cemeteries that cannot be avoided will be relocated and the requirements described in Section 7050.5 of the California Health and Safety Code and PRC Section 5097.98 will be applied.

Groundwater Resources

Impact GRW-1 (NTMA): Potential Localized Degradation of Groundwater Quality Related to Construction, Operation, and Maintenance Activities.

Mitigation

No mitigation is required.

Finding

For the reasons stated in the PEIR, DWR finds that Impact GRW-1 (NTMA) would be less than significant because for each CVFPP project an SWPPP will be prepared that will identify BMPs to prevent or minimize the introduction of contaminants into surface and groundwater.

Impact GRW-2 (NTMA): Degradation of Groundwater Quality Resulting from Decreased Natural Recharge or Increased Pumping due to Reduced Water Supplies from Changes to Reservoir Operational Criteria.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact GRW-2 (NTMA) would be less than significant because the use of weather forecasting and coordinated operations in conjunction with NTMAs will improve the reliability and efficiency of reservoir operations. In years when only smaller storms are forecasted, reservoirs will retain more water, thus increasing the availability of needed water supply. Similarly, coordinated operations will improve the reliability and efficiency of reservoir operations. It will enable reservoir operators to increase or decrease releases to maximize the availability of water supply while still improving management of flood risks. Even if water deliveries are reduced in certain critically dry years, several mechanisms in the water supply system will be used to alleviate the shortfalls. Among those mechanisms is the use of groundwater from water banks that will prevent excess pumpage from overdrafted aquifers that could substantially degrade groundwater quality. Therefore, implementing NTMAs will not affect the capacity of reservoirs, the volume of water in the reservoirs, or carryover storage in a way that will increase the demand on groundwater supplies such that groundwater quality will be degraded.

Impact GRW-3 (NTMA): Depletion of Groundwater Levels Resulting from Decreased Natural Recharge or Increased Pumping due to Reduced Water Supplies from Changes to Reservoir Operational Criteria.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact GRW-3 (NTMA) would be less than significant because the use of weather forecasting and coordinated operations in conjunction with NTMAs will improve the reliability and efficiency of reservoir operations. In years when only smaller storms are forecasted, reservoirs will retain more water, thus increasing the availability of needed water supply. Similarly, coordinated operations will improve the reliability and efficiency of reservoir operations. It will enable reservoir operators to increase or decrease releases to maximize the availability of water supply while still improving management of flood risks. Therefore, implementing the NTMAs will not affect the capacity of the reservoirs, the volume of water in the reservoirs, or carryover storage in a way that will reduce natural groundwater recharge or require additional groundwater pumping. In addition, there are mechanisms to deal with reduced water deliveries, including use of groundwater from water banks that could be used to prevent depletion of groundwater resources in sensitive areas.

Impact GRW-4 (NTMA): Modification of Groundwater Flows Resulting in Decreased Natural Recharge to Regional or Local Groundwater Supplies or Reduced or Delayed Local Drainage.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact GRW-4 (NTMA) would be less than significant because where installing a slurry wall could reduce recharge to nearby shallow aquifers, any impact in the form of decreased water-table elevation will likely only affect the shallow aquifer as deep as the bottom of the wall. Furthermore, it is not anticipated that these potential effects will propagate beyond the vicinity of the slurry wall; rather, they will be localized. Thus, the proposed program will not substantially deplete groundwater supplies, nor will it interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or lowering of the local groundwater table level (e.g., drop in the production rate of preexisting nearby wells to a level that will not support existing land uses or planned uses for which permits have been granted).

Impact GRW-1 (LTMA): Potential Localized Degradation of Groundwater Quality Related to Construction, Operation, and Maintenance Activities.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact GRW-1 (LTMA) would be less than significant because for each CVFPP project an SWPPP will be prepared that will identify BMPs to prevent or minimize the introduction of contaminants into surface and groundwater.

Impact GRW-2 (LTMA): Degradation of Groundwater Quality Resulting from Decreased Natural Recharge or Increased Pumping due to Reduced Water Supplies from Changes to Reservoir Operational Criteria.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact GRW-2 (LTMA) would be less than significant because the use of weather forecasting and coordinated operations in conjunction with LTMAs will improve the reliability and efficiency of reservoir operations. In years when only smaller storms are forecasted, reservoirs will retain more water, thus increasing the availability of needed water supply. Similarly, coordinated operations will improve the reliability and efficiency of reservoir operations. It will enable reservoir operators to increase or decrease releases to maximize the availability of water supply while still improving management of flood risks. Even if water deliveries are reduced in certain critically dry years, several mechanisms in the water supply system will be used to alleviate the shortfalls. Among those mechanisms will be

the use of groundwater from water banks that would prevent excess pumpage from overdrafted aquifers that could substantially degrade groundwater quality. Therefore, implementing LTMAs will not affect the capacity of reservoirs, the volume of water in the reservoirs, or carryover storage in a way that will increase the demand on groundwater supplies such that groundwater quality will be degraded.

Impact GRW-3 (LTMA): Depletion of Groundwater Levels Resulting from Decreased Natural Recharge or Increased Pumping due to Reduced Water Supplies from Changes to Reservoir Operational Criteria.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact GRW-3 (LTMA) would be less than significant because the use of weather forecasting and coordinated operations in conjunction with LTMAs will improve the reliability and efficiency of reservoir operations. In years when only smaller storms are forecasted, reservoirs will retain more water, thus increasing the availability of needed water supply. Similarly, coordinated operations will improve the reliability and efficiency of reservoir operations. It will enable reservoir operators to increase or decrease releases to maximize the availability of water supply while still improving management of flood risks. Therefore, implementing the LTMAs will not affect the capacity of the reservoirs, the volume of water in the reservoirs, or carryover storage in a way that will reduce natural groundwater recharge or require additional groundwater pumping. In addition, there are mechanisms to deal with reduced water deliveries, including use of groundwater from water banks that could be used to prevent depletion of groundwater resources in sensitive areas.

Impact GRW-4 (LTMA): Modification of Groundwater Flows Resulting in Decreased Natural Recharge to Regional or Local Groundwater Supplies or Reduced or Delayed Local Drainage.

Mitigation
No mitigation is required.

Finding
For the reasons stated in the PEIR, DWR finds that Impact GRW-4 (LTMA) would be less than significant because in the case where installing a slurry wall could reduce recharge to nearby shallow aquifers, any impact in the form of decreased water-table elevation will likely only affect the shallow aquifer as deep as the bottom of the wall. Furthermore, it is not anticipated that these potential effects will propagate beyond the vicinity of the slurry wall; rather, they will be localized. Thus, the proposed program will not substantially deplete groundwater supplies, nor will it interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or lowering of the local groundwater table level (e.g., drop in the production rate of preexisting nearby wells to a level that will not support existing land uses or planned uses for which permits have been granted).

Impact GRW-5 (LTMA): Degradation of Water Quality or Adverse Rise in Groundwater Elevation as a Result of Groundwater Banking.

Mitigation

Mitigation Measure GRW-5a (LTMA): Develop and Implement Groundwater Management Plans or Expand Existing Groundwater Management Plans, Including Defining Basin Management Objectives, Groundwater Monitoring Plans, and Conditions under Which Corrective Actions Are Taken.

Formalized groundwater management plans will be developed or expanded by the project proponent to guide management of groundwater basins where managed groundwater recharge and/or groundwater banking projects are to occur. These plans will include quantifiable basin-management objectives and groundwater monitoring plans to allow for management of the basin in a manner that minimizes adverse effects on groundwater. The plans will identify conditions to be evaluated using groundwater monitoring data and will describe corrective actions that may be taken, such as modifications to groundwater banking operations.

Mitigation Measure GRW-5b (LTMA): Conduct Phase I Environmental Site Assessments.

Phase I Environmental Site Assessments will be conducted by the project proponent at all sites before groundwater banking activities begin to prevent the degradation of water quality associated with recharging water in a potentially contaminated aquifer or exposing rising groundwater to contaminated soils.

Finding

For the reasons stated in the PEIR, DWR finds that implementing Mitigation MeasuresGRW-5a (LTMA) and GRW-5b (LTMA) would reduce potentially significant impacts related to degradation of water quality or adverse rise in groundwater elevation as a result of groundwater banking to a less-than-significant level because groundwater management plans will be prepared and implemented (that include basin management objectives, groundwater monitoring plans, and conditions under which corrective actions are taken) and Phase I Environmental Site Assessments will be performed before the start of groundwater banking activities.

2.4.2 Findings Related to Cumulative Impacts

In addition to the significant and potentially significant impacts caused by the program, DWR finds that implementation of the CVFPP could result in a cumulatively considerable contribution to significant and unavoidable cumulative impacts. The findings made in the 2012 CVFPP Findings of Fact for Cumulative Impacts remain unchanged, apart from Cultural Resources whose findings are described below.

Cultural Resources

Prehistoric human habitation sites are relatively common in riverbank, natural overbank deposits, and floodplain areas, and burial sites (including marked and unmarked cemeteries) are occasionally encountered in the course of ground-disturbing activities. As discussed in Section 3.8, “Cultural Resources,” of the PEIR, it is likely that known or unknown archaeological resources could be disturbed and cultural resources damaged or destroyed during construction of NTMAs and LTMAs. Losses of an archaeological resource could occur where excavations

encounter archaeological deposits that cannot be removed or recovered (e.g., underneath new facilities), or where recovery would not be sufficient to prevent the loss of the cultural material's significance. Historic resources could also be damaged or require removal from areas where new facilities or floodway expansions would occur. If these resources would be eligible for listing in the NRHP, the impact of their modification or destruction would be significant. In addition, traditional cultural properties/tribal cultural resources could be damaged or destroyed, or loss of use could occur if access to such properties is removed.

Implementing Mitigation Measures CUL-1 (NTMA and LTMA) through CUL-5 (NTMA and LTMA) would reduce effects on potentially significant cultural resources; however, adverse effects on significant historic buildings and structures and traditional cultural properties/tribal cultural resources may still occur. Therefore, Impacts CUL-3 (NTMA and LTMA), and CUL-4 (NTMA and LTMA) would be potentially significant and unavoidable.

Reasonably foreseeable future projects related to the CVFPP could result in the same potentially significant impacts on the same types of cultural resources described above. Even if related projects were to implement mitigation measures, adverse impacts would likely still occur, and thus the impacts of the related projects would be significant and unavoidable. Loss of archaeological resources would add to a historical trend in the loss of these resources as artifacts of cultural significance and as objects of research significance. Therefore, as urban development proceeds, a significant and unavoidable cumulative impact is ongoing in the project region. Thus, for the reasons identified in the PEIR and Supplemental PEIR, despite implementation of Mitigation Measures CUL-1 (NTMA and LTMA) through CUL-5 (NTMA and LTMA), the program would result in a cumulatively considerable, incremental contribution to a cumulatively significant and unavoidable impact related to cultural and historic resources.

2.4.3 Findings Related to Project Alternatives

Where a lead agency has determined that, even after adoption of all feasible mitigation measures, a project as proposed would still cause one or more significant environmental impacts that cannot be substantially lessened or avoided, the lead agency, prior to approving the project as mitigated, must first determine, with respect to such impacts, whether there remain any project alternatives that are both environmentally superior and feasible within the meaning of CEQA.

Findings for project alternatives were made in the 2012 CVFPP PEIR Findings of Fact. The Supplemental PEIR did not identify new significant impacts. Therefore, no new alternatives have been identified. Also, no other factors would make the prior alternatives worthy of reconsideration . Therefore, the findings from 2012 still apply.

2.5 Summary of Findings

Based on the foregoing findings and the information contained in the administrative record, DWR has made one or more of the following findings with respect to each of the potentially significant and significant environmental effects of the project identified in the PEIR and Supplemental PEIR:

- Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effects on the environment.

- Those changes or alterations are wholly or partially within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other public agency.

- Specific economic, social, technological, or other considerations make infeasible the mitigation measures or alternatives identified in the PEIR and Supplemental PEIR that would otherwise avoid or substantially lessen the identified significant environmental effects of the project.

Based on the foregoing findings and information contained in the record, it is hereby determined that:

- All significant effects on the environment due to approval of the project have been eliminated or substantially lessened where feasible.

- Any remaining significant effects on the environment found unavoidable are acceptable due to the factors described in the statement of overriding considerations in Section 3.

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3.0 Statement of Overriding Considerations

In accordance with CEQA Guidelines Section 15093, DWR, in determining whether or not to approve the project, balanced the economic, social, technological, and other benefits of the project against its unavoidable environmental risks, and has found that the benefits of the project outweigh the significant adverse environmental effects that are not mitigated to less-than-significant levels. The reasons for DWR's determination are as follows.

- DWR is charged with planning and providing for flood risk reduction in specified locations in the Central Valley. Flood risk reduction in the Central Valley is necessary to provide economic, social, and other benefits, as flood events are often uncontrolled and can result in deaths or injuries, damage to property and infrastructure, and release of environmental contaminants. Often the adverse environmental impacts of flooding are greater than the environmental impacts of flood risk reduction projects.

- The current flood risk reduction system in the Central Valley has been developed largely in an incremental fashion over the past 160 years. Most of the system was not designed and built to modern engineering design and construction standards. As a result, significant portions of the Central Valley's flood risk reduction system contain deficiencies that are in need of correction.

- DWR must operate in a complex regulatory environment, conforming to multiple federal and State requirements that sometimes conflict. In many respects, DWR is required by federal or State laws to take certain actions, and noncompliance is not a legally feasible option.

- State law and policy require that the flood risk reduction system in the Central Valley be managed to promote multiple objectives, including flood protection, protection or enhancement of water supplies, and maintenance or improvement of habitat. DWR has limited available funds to achieve these multiple objectives, and so economic tradeoffs between the various objectives must be made. There is not presently, and likely will never be, sufficient funding to protect all areas of the Central Valley from flooding, while at the same time enhancing or retaining agricultural, habitat, and other values to the extent that various interests may desire.

These considerations were first described in the 2012 CVFPP Statement of Overriding Considerations, and continue to apply for certification of the Supplemental PEIR. In light of these considerations, DWR finds that the specific economic, legal, social, technological, and/or flood risk reduction benefits of the CVFPP, as updated by the 2017 CVFPP Update, outweigh the unavoidable adverse environmental effects.

This statement of overriding considerations is based on DWR's review of the PEIR and Supplemental PEIR and other information in the administrative record, including but not limited to the CVFPP, the 2017 CVFPP Update, and their supporting documents.

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4.0 Acronyms and Abbreviations

AB ..... Assembly Bill
CEQA ..... California Environmental Quality Act
CVFMP ..... Central Valley Flood Management Plan
CVFPP ..... Central Valley Flood Protection Plan
DWR ..... California Department of Water Resources
LTMA ..... long-term management activity
NAHC ..... Native American Heritage Commission
NOA ..... Notice of Availability
NTMA ..... near-term management activity
PEIR ..... Program Environmental Impact Report
SPFC ..... State Plan of Flood Control
SSIA ..... State Systemwide Investment Approach
TCP ..... traditional cultural properties
TCR ..... tribal cultural resources

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