Print Form

Notice of Determination

Appendix D

To:

☒ Office of Planning and Research

U.S. Mail:	*Street Address:*
P.O. Box 3044	1400 Tenth St., Rm 113
Sacramento, CA 95812-3044	Sacramento, CA 95814

☒ County Clerk
County of: Colusa
Address: 546 Jay Street, Suite 200
Colusa, CA 95932
County of: Glenn
Address: 516 West Sycamore Street, Willows, CA 95988
County of: Yolo
Address: 625 Court Street, #B01, Woodland, CA 95695

From:
Public Agency: Sites Project Authority
Address: P.O. Box 517
Maxwell, CA 95955
Contact: Alicia Forsythe
Phone: 530-438-2309

Lead Agency (if different from above):
Address:
Contact:
Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2022050480

Project Title: 2022-2024 Sites Reservoir Geologic, Geophysical, and Geotechnical Investigations

Project Applicant: Sites Project Authority

Project Location (include county): Colusa, Glenn, Yolo

Project Description:

The Sites Project Authority is proposing to conduct geologic, geophysical, and geotechnical investigations in Colusa, Glenn, and Yolo Counties. These investigations are intended to provide technical information to assist in the ongoing efforts to formulate and refine the engineering design and to assist in the preparation of permit applications for the proposed Sites Reservoir and its associated facilities in western Sacramento Valley.

This is to advise that the Sites Project Authority has approved the above
(☒ Lead Agency or ☐ Responsible Agency)

described project on July 27, 2022 and has made the following determinations regarding the above
(date)
described project.

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☒ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:
122 Old Highway 99 West, Maxwell, CA, 95955

Signature (Public Agency): [signature] Title: Executive Director

Date: July 28, 2022 Date Received for filing at OPR:

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Revised 2011

Sites

A RESOLUTION OF THE SITES PROJECT AUTHORITY BOARD OF DIRECTORS RELATED TO THE SITES RESERVOIR PROJECT CERTIFYING THE FINAL EIR; ADOPTING CEQA FINDINGS, STATEMENT OF OVERRIDING CONSIDERATIONS, AND MITIGATION MONITORING AND REPORTING PROGRAM; APPROVING THE PROJECT; AND DIRECTING THE EXECUTIVE DIRECTOR TO FILE THE NOTICE OF DETERMINATION AND CERTIFY THE RECORD OF PROCEEDINGS

Resolution No. 2023-02

WHEREAS, the California Department of Water Resources ("DWR") originally published a notice of preparation ("NOP") for the Sites Reservoir Project Environmental Impact Report ("EIR") pursuant to the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) ("CEQA") on November 5, 2001; and

WHEREAS, the Sites Project Authority ("Authority") assumed the role of CEQA lead agency, and issued a supplemental NOP on February 2, 2017, conducted two scoping meetings in February 2017, and prepared a scoping report following those meetings; and

WHEREAS, in 2017 the Authority prepared a Draft Environmental Impact Report ("Draft EIR") (SCH No. 2001112009) for the Sites Reservoir Project ("Project") in accordance with CEQA and the CEQA Guidelines (14 California Code of Regulations Section 15000 et seq.); and

WHEREAS, the Draft EIR evaluated four surface water reservoir size and conveyance alternatives, ranging from 1.3 to 1.8 million-acre feet in reservoir size and included a new Delevan Pipeline to convey water to and from the Sacramento River; and

WHEREAS, the Authority issued a notice of availability ("NOA") of the Draft EIR on August 14, 2017, with the public review period extended to January 15, 2018, during which 137 comment letters and emails were received, along with comments received at two public hearings held during the public comment period; and

WHEREAS, in October 2019, the Authority initiated a value planning process to identify and evaluate additional alternatives that could make the Project more affordable for the Sites Storage Partners while also reducing impacts and addressing comments on the 2017 Draft EIR; and

WHEREAS, refinements from the value planning process resulted in the identification of three new alternatives (including one alternative with two variants) with reservoir sizes ranging from

1.3 to 1.5 million-acre feet, utilizing existing conveyance facilities to the extent practical, and eliminating the Delevan Pipeline; and

WHEREAS, based on the value planning process and pursuant to Section 15088.5 of the CEQA Guidelines, on April 22, 2020, the Board of Directors ("Board") of the Authority, as the decision-making body, directed staff to prepare and recirculate the 2017 Draft EIR as a Revised Draft EIR ("RDEIR"), completely revising the analysis to reflect the changes to the Project and the environmental analysis; and

WHEREAS, on November 12, 2021, the Authority issued an NOA and released the RDEIR for a public review period that was extended to January 28, 2022, holding two public meetings on December 15, 2021, and December 16, 2021; and

WHEREAS, during the public review period, written and oral comments were received including 101 unique communications with approximately 1,000 discrete comments; and

WHEREAS, on November 2, 2023, the Authority released a Final EIR that includes comments received during the public comment period together with responses to those comments raising significant environmental issues, and that incorporates information obtained since the release of the RDEIR, including additions, clarifications, and modifications to the analysis in the RDEIR; and

WHEREAS, pursuant to Public Resources Code Section 21092.5(a) and CEQA Guidelines Section 15088(b), the Authority provided written responses to all public agencies that submitted timely comments on the RDEIR at least 10 days prior to certification of the EIR; and

WHEREAS, the Authority made the Final EIR publicly available on its website (https://sitesproject.org/) on November 2, 2023; and

WHEREAS, the Final EIR has been prepared in accordance with the requirements of CEQA and the CEQA Guidelines; and

WHEREAS, the Final EIR sufficiently analyzes both the feasible mitigation measures that could avoid or substantially lessen the Project's significant impacts and a reasonable range of alternatives in accordance with CEQA and the CEQA Guidelines; and

WHEREAS, the findings and conclusions made by the Authority pursuant to this Resolution are based upon oral and written evidence presented as a whole and not based solely on the information provided in this Resolution; and

WHEREAS, the Board at its regular meeting on November 17, 2023, reviewed and considered the analysis in the Final EIR and the significant impacts of the Project, and this review included, but was not limited to, the information and data in the Final EIR; the comments on the RDEIR received during the public review period; and written and oral testimony given at the Authority's meetings and hearings; and

WHEREAS, the information and clarifications added to the RDEIR, the comments made in the public hearings conducted by the Authority, and the information submitted to the Authority, do not constitute significant new information requiring another round of recirculation under CEQA Guidelines Section 15088.5; and

WHEREAS, the Authority has prepared detailed findings under CEQA in accordance with Public Resources Code Sections 21081 and 28081.5 and CEQA Guidelines Sections 15091 and 15092 for each significant impact of the Project identified in the Final EIR and for each alternative evaluated in the Final EIR, including an explanation of the rationale for each finding by the Authority (attached to this resolution, including Exhibits A and B to the findings); and

WHEREAS, the Project will have significant impacts that cannot feasibly be mitigated to less than significant levels, and the Authority has accordingly prepared a Statement of Overriding Considerations (included as part of the attached findings) in accordance with Public Resources Code Section 21081(b) and CEQA Guidelines Section 15093, which concludes that specific economic, legal, social, technological, and other benefits of the Project outweigh the significant and unavoidable impacts identified in the Final EIR; and

WHEREAS, the Authority has prepared a Mitigation Monitoring and Reporting Program in compliance with Public Resources Code Section 21081.6 and CEQA Guidelines Section 15097 (attached as Exhibit B to the findings) to ensure implementation of the mitigation measures identified in the Final EIR during implementation of the Project; and

WHEREAS, the Authority has identified the location and custodian of materials that constitute the record of proceedings in this matter; and

WHEREAS, on November 6, 2023, California Governor Gavin Newsom certified the Sites Reservoir Project as an infrastructure project qualifying for judicial streamlining under Senate Bill 149 (Chapter 60, Statues of 2023), Public Resources Code Section 21189.80 et seq., and the Sites Project Authority has issued the public notices as required; and

WHEREAS, all other legal prerequisites to the adoption of this Resolution have occurred:

NOW THEREFORE, BASED ON THE FOREGOING, BE IT RESOLVED THAT THE BOARD certifies pursuant to CEQA Guidelines Section 15090 that:

1. The Final EIR (SCH# 2001112009) has been completed in compliance with CEQA and the CEQA Guidelines.

2. The Final EIR was presented to the Board and the Board reviewed and considered the information in the Final EIR, prior to approval of the Sites Reservoir Project.

3. The Final EIR reflects the Authority's independent judgement and analysis.

BE IT FURTHER RESOLVED that the Board makes and adopts the findings as required by Public Resources Code Sections 21081 and 21081.5 and CEQA Guidelines Sections 15091 and 15092, which are attached and are incorporated fully herein by this reference; and

BE IT FURTHER RESOLVED that the Board adopts the Statement of Overriding Considerations as required by Public Resources Code Section 21081(b) and CEQA Guidelines Section 15093, which is attached and is incorporated fully herein by this reference; and

BE IT FURTHER RESOLVED that the Board adopts the Mitigation Monitoring and Reporting Program as required by Public Resources Code Section 21081.6 and CEQA Guidelines Section 15097, which is attached as Exhibit B to the findings and is incorporated fully herein by this reference; and

BE IT FURTHER RESOLVED that the Board approves the Project as described in the attached CEQA findings and directs the Executive Director to file the Notice of Determination, pay all associated fees, and certify the record of proceedings, consistent with CEQA and Senate Bill 149.

PASSED, APPROVED, AND ADOPTED by the Board of Directors of the Sites Project Authority this **17th of November 2023** by the following vote:

AYES: 8

NOES: 0

ABSTAIN: 0

ABSENT: Place County Water Agency

I, Fritz Durst, Chair of the Authority Board of the Sites Project Authority, do herby certify that the resolution set forth above is a true and accurate copy of the resolution of the Sites Project Authority at a duly called meeting of the Board on **17th of November, 2023** and that said resolution has not been rescinded, amended, or modified and is in full force and effect as of the date hereof..

In Witness Whereof, I have executed this certificate this 17th of November 2023.

FRITZ DURST

Fritz Durst, Chair Authority Board, Sites Project Authority

SITES PROJECT AUTHORITY

CERTIFICATION OF THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE SITES RESERVOIR PROJECT; ADOPTION OF CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS, STATEMENT OF OVERRIDING CONSIDERATIONS, AND MITIGATION MONITORING AND REPORTING PROGRAM; APPROVAL OF THE SITES RESERVOIR PROJECT; AND DIRECTION TO THE EXECUTIVE DIRECTOR TO FILE THE NOTICE OF DETERMINATION AND CERTIFY THE RECORD OF PROCEEDINGS

I. CERTIFICATION OF THE FINAL EIR

The Sites Project Authority ("Authority"), as lead agency under the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.) ("CEQA"), has completed the Final Environmental Impact Report ("Final EIR" or "EIR") for the Sites Reservoir Project ("Project"). The Authority prepared the EIR jointly as a joint Final EIR/Environmental Impact Statement (EIS) with the United States Department of the Interior, Bureau of Reclamation ("Reclamation"), which is the lead agency for the Project under the National Environmental Policy Act ("NEPA"). The EIR has State Clearinghouse No. 2001112009[1].

The Project involves the construction and operation of an offstream surface water reservoir to capture excess water from major storms and store the water until it is needed. The reservoir inundation area is located in rural, unincorporated areas of Glenn and Colusa Counties, and the physical Project components are located in Tehama County, Glenn County, Colusa County, and Yolo County. The water supplies stored in the reservoir would be used for the environment, people, and farms. Existing water storage facilities were designed to capture snowmelt, but precipitation in present-day California is more commonly in the form of rain. The state's demand for water to serve communities, fuel the economy, and revitalize the environment has increased far beyond what the water storage system was designed to support. To meet these new

[1] The Final EIR was released as a Final EIR/EIS; the Revised Draft EIR was released as a Revised Draft EIR/Supplemental Draft EIS; and the Draft EIR was released as a Draft EIR/EIS. As these findings are specific to the Authority's CEQA process, these findings use Final EIR, Revised Draft EIR (RDEIR), and Draft EIR in terminology.

Attachment: Sites Project Authority Certification of the Final Environmental Impact Report for the Sites Reservoir Project; Adoption of California Environmental Quality Act Findings, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program; Approval of the Sites Reservoir Project; and Direction to the Executive Director to File the Notice of Determination and Certify the Record of Proceedings

challenges, the Sites Reservoir Project has long been envisioned as one tool in a toolbox of actions to assist the State of California in achieving its water supply reliability goals. These findings address the Authority's certification of the EIR and its approval of the Project.

The EIR evaluated three alternatives, and one of the alternatives consisted of two variations, as further described below: Alternative 1A; Alternative 1B; Alternative 2; and Alternative 3, which is evaluated in the Final EIR as the Authority's proposed version of the Project ("Proposed Action"). The Project as defined for approval in these findings consists of Alternative 3 as evaluated in the Final EIR with the Terminal Regulating Reservoir ("TRR") West location.

The Authority and Reclamation published a joint Draft Environmental Impact Report/Environmental Impact Statement ("Draft EIR" or "2017 Draft EIR") in August 2017. In November 2021, the Authority and Reclamation published a joint Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement ("RDEIR"). The RDEIR constituted a complete recirculation of the entire Draft EIR pursuant to Section 15088.5 of the CEQA Guidelines (which are codified in Title 14 of the California Code of Regulations).

The 2021 RDEIR presented a project-level analysis of the potential environmental impacts of implementing the Project; identified mitigation measures to eliminate or reduce potentially significant adverse impacts; and evaluated a reasonable range of project alternatives. The Final EIR consists of three volumes: (1) Volume I is a revised version of the RDEIR; (2) Volume II contains the technical appendices to support the environmental analysis; and (3) Volume III contains the comments submitted on the RDEIR by interested public agencies, organizations, and members of the public along with the Authority's written responses to the environmental issues raised in those comments. The responses include master responses to address common themes and issues raised by multiple commenters, as well as responses to individual comments. The Final EIR is incorporated into this document by reference.

Pursuant to Section 15090 of the CEQA Guidelines, the Board of Directors of the Authority ("Board") hereby certifies that (1) the Final EIR has been completed in compliance with CEQA and the CEQA Guidelines; (2) the Board has been presented with the Final EIR and has reviewed and considered the information and analyses contained therein before making the findings in Section II and the approvals in Section III below; and (3) the Final EIR reflects the Authority's independent judgment and analysis.

Section II below presents the Authority's findings pursuant to Sections 15091, 15092, and 15093 of the CEQA Guidelines, and Section III presents the Authority's approvals for the Project.

II. FINDINGS

Having received, reviewed, and considered the Final EIR and other information in the Authority's record of proceedings in this matter, the Board hereby adopts the following findings in accordance with CEQA and the CEQA Guidelines:

Part A: Findings regarding the Authority's environmental review process and the contents of the Final EIR.

Part B: Findings regarding the Project's environmental impacts and the mitigation measures for those impacts identified in the Final EIR. As described below, Exhibit A summarizes the Project's significant environmental impacts and the mitigation measures in the Final EIR, and per Exhibit B, the mitigation measures are hereby adopted by the Board as conditions of approval for the Project.

Part C: Findings regarding alternatives and the reasons why alternatives are rejected or accepted.

Part D: Statement of Overriding Considerations explaining that the various economic, social, environmental and other benefits of implementing the Project outweigh the Project's significant unavoidable environmental impacts and therefore justify approval of the Project despite such impacts.

The Board certifies that these findings are based on full appraisal of all viewpoints, including all comments received up to the close of the public hearing on this matter concerning the environmental issues discussed in the Final EIR. The Board adopts the findings in Parts A through D below for the approvals set forth in Section III below.

Part E: Identifies the custodian and location of the record of proceedings.

Part F: Describes the Mitigation Monitoring and Reporting Program ("MMRP") for the Project, which is set forth in Exhibit B to these findings and which is adopted by the Board pursuant to Sections 15091(d) and 15097 of the CEQA Guidelines.

Part G: Summarizes the Authority's findings and determinations regarding the Project.

A. Environmental Review Process

1. Prior Environmental Review

The Department of Water Resources ("DWR") originally published a notice of preparation ("NOP") for the Sites Reservoir Project EIR on November 5, 2001. The Authority assumed the role of CEQA lead agency in 2016 and issued a supplemental NOP on February 2, 2017. The Authority then conducted two scoping meetings in February 2017 following publication of the supplemental NOP. During both scoping periods, the public was invited to submit written comments by mail, fax, or email regarding the scope, content, and format of the environmental document. The Authority and Reclamation prepared an original Scoping Report, as well as a Supplemental Scoping Report, following the scoping meetings conducted in 2017.

As noted above, the Authority released the Draft EIR in August 2017. The 2017 Draft EIR evaluated four surface water reservoir size and conveyance alternatives. All four alternatives included a reservoir, ranging in size from 1.3 to 1.8 million-acre feet ("MAF"), to be filled using

existing Sacramento River diversion facilities and a Delevan Pipeline on the Sacramento River to allow for release of flows into the river. The Authority issued a Notice of Availability for the 2017 Draft EIR on August 14, 2017, the document was made available for public review and comment, and two public hearings were held.

In October 2019, the Authority initiated a value planning process to identify and evaluate additional alternatives that could make the Project more affordable for the Sites Storage Partners[2] while also reducing environmental impacts and addressing comments received on the 2017 Draft EIR. The value planning process focused on the following primary objectives: (1) improving water supply and water supply reliability; (2) providing Incremental Level 4 water supply for refuges[3]; (3) improving the survival of anadromous fish; and (4) enhancing the Sacramento–San Joaquin Delta ("Delta") ecosystem. Secondary objectives of the value planning process were to provide opportunities for flood damage reduction and recreation. Refinements from the value planning process resulted in three new alternatives for analysis (with one of the alternatives consisting of two variants), which represented a reduction in size and environmental impacts as compared to the alternatives evaluated in the 2017 Draft EIR. These alternatives included a reservoir size ranging from 1.3 to 1.5 MAF; eliminated the Delevan Pipeline conveyance and the negative environmental consequences resulting from pipeline construction; and focused on using existing facilities to the extent practical for diversions to and releases from the reservoir.

As noted above and as further described below, the Authority – based on its value planning process, and pursuant to Section 15088.5 of the CEQA Guidelines – decided to make certain changes to the Project and to recirculate the 2017 Draft EIR as a revised draft document (namely, the RDEIR).

2. Preparation of the RDEIR

On November 12, 2021, the Authority issued the RDEIR as a complete revision of the 2017 Draft EIR to reflect changes to the Project and the environmental analysis. Following publication, the Authority made the RDEIR available for review and comment. The Authority issued a Notice of Availability and the period for commenting on the RDEIR remained open until January 11, 2022,

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[2] The governmental agencies, water organizations, and others who have funded and received a storage allocation in Sites Reservoir and the resulting water supply or water supply-related environmental benefits from the Sites Reservoir Project. Storage Partners could include local agencies, the State of California, and the federal government.

[3] The 1992 Central Valley Project Improvement Act ("CVPIA") created the Refuge Water Supply Program, which includes 19 wetland habitat areas in the Central Valley or CVPIA refuges. CVPIA refuge water supplies are categorized into three categories. Level 2 water supply represents the historical average amount of water deliveries prior to the enactment of CVPIA and represents baseline supply for the refuge. Incremental Level 4 represents the additional increment of water required for optimal wetland development. Full Level 4 water is the sum of both Level 2 and Incremental Level 4.

with an extension granted until January 28, 2022. Two public hearings were held on December 15, 2021, and December 16, 2021, to receive written or oral comments on the RDEIR. Oral comments were received from organizations and individuals at the hearings; written comments were received from Federal, State, and local agencies, and from organizations and individuals.

As explained in the text of the RDEIR, pursuant to Section 15088.5(f)(1) of the CEQA Guidelines,[4] the entirety of the draft document was revised and recirculated and reviewers were advised that the previous comments on the 2017 Draft EIR, although part of the record of proceedings for the Project, did not require a written response in the Final EIR,[5] and reviewers also were advised that new comments must be limited to the RDEIR.

The Authority received approximately 101 unique letters and communications during the extended public comment period from federal, State, and local/regional agencies; elected officials; stakeholders; non-governmental organizations; and members of the public. One form letter was submitted by 112 individuals, and a petition with approximately 1,315 signatures was received. Based on review of these letters and communications, the Authority identified approximately 1,000 discrete comments. The Authority also received several comments outside of the public comment period.

The Final EIR was made available for review by public agencies and members of the public on November 2, 2023. As noted above, Volume 3 of the Final EIR contains all of the comments received during the public comment period, together with written responses to those comments which were prepared in accordance with CEQA and the CEQA Guidelines.

The Board finds and determines that the Final EIR provides adequate, good faith, and reasoned responses to all comments raising significant environmental issues.

3. Absence of "Significant New Information" Requiring Recirculation

CEQA Guidelines Section 15088.5 requires a lead the Authority to recirculate an EIR for further review and comment when significant new information is added to the EIR after release of the draft EIR but before certification of the final EIR. Under this provision, "significant new information" includes the following circumstances: (1) "[a] new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented";

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[4] This provisions states: "When an EIR is substantially revised and the entire document is recirculated, the lead agency may require reviewers to submit new comments and, in such cases, need not respond to those comments received during the earlier circulation period. The lead agency shall advise reviewers, either in the text of the revised EIR or by an attachment to the revised EIR, that although part of the record of proceedings, the previous comments do not require a written response in the final EIR, and that new comments must be submitted for the revised EIR. The lead agency need only respond to those comments submitted in response to the recirculated revised EIR."

[5] Reclamation has provided responses to the 2017 comments on the Draft EIS in Volume 3, Appendix 04A, consistent with NEPA requirements.

(2) "[a] substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance"; (3) "[a] feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it"; and (4) "[t]he draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded." CEQA Guidelines § 15088.5(a). Recirculation is not required where the new information added to the EIR merely clarifies or amplifies the environmental analysis. CEQA Guidelines § 15088.5(b).

The Board recognizes that the Final EIR incorporates information obtained by the Authority since the RDEIR was completed, and contains additions, clarifications, and other modifications. With respect to this information, the Board finds as follows:

Changes to the Authority's Proposed Action. Based on the April 2020 "Sites Project Value Planning Alternatives Appraisal Report" and Alternative VP-7 as presented in that report, the Authority in September 2020 designated "Alternative 1" as the Authority's Proposed Action for the purposes of the RDEIR analysis. Among other components, this alternative included a reservoir of 1.5 MAF in size and federal investment of up to 7% of Project costs.

However, since the publication of the RDEIR, Reclamation and the Authority have worked together to make minor adjustments in the modeling of how Reclamation would utilize the water supplied to it from the Project as a result of federal investment. The modeling done to incorporate the refinements into the Project shows that these refinements do not result in additional impacts beyond those described in the RDEIR. These refinements serve to improve the anadromous fish benefits from the Project, by enhancing opportunities for cold-water pool management in Shasta Lake, enhancing the frequency and amount of spring pulse flows in the upper Sacramento River, and increasing the ability to maintain stable river flows in the upper Sacramento River in the fall.

In addition, on November 15, 2021, the President signed into law the Infrastructure Investment and Jobs Act providing over $1 trillion in federal funding for infrastructure projects. This new law provides for a substantial increase in federal spending on infrastructure projects throughout the country.

Considering both the additional anadromous fish benefits from the Project resulting from federal investment and the increased availability of federal funding for infrastructure projects, in March 2022 the Authority designated "Alternative 3" as its Proposed Action. Alternative 3 has the same physical facilities and components as Alternatives 1, but would involve additional federal investment in the Project, at a range of between 7% and 25% of total Project costs.

As shown in the environmental analysis in the Final EIR, this change does not result in a new significant impact or a substantial increase in the severity of a significant impact identified by the RDEIR, and it does not trigger any of the other grounds for recirculation. Therefore, in

accordance with CEQA and the CEQA Guidelines, another round of recirculation of the EIR is not required as a result of this change.

Refinements to the Operations of the Project. Based on ongoing coordination with state and federal resource agencies, including the California Department of Fish and Wildlife, and in response to public comments on the RDEIR, the Final EIR includes a refinement to the Project's minimum bypass flows in the Sacramento River at Wilkins Slough. In the RDEIR, the minimum bypass flow at Wilkins Slough was included in the project description and was further enhanced in a mitigation measure. In the RDEIR, the project description set the minimum bypass flows in the Sacramento River at Wilkins Slough prior to and during Project diversions at 5,000 cubic feet per second ("cfs"). A mitigation measure in the RDEIR increased this amount to 8,000 cfs during the period from March through May. This mitigation measure was designed to reduce impacts from the Project to salmonids.

In the Final EIR, the minimum flow criteria at Wilkins Slough were strengthened, and were incorporated as an integral component of the Project, to ensure that the diversion of water from the Sacramento River to Sites Reservoir under the Project would not cause flow in the Sacramento River at Wilkins Slough to decline below 10,700 cfs, from October 1 to June 14, with no diversion occurring from June 15 to August 31 (when the Sacramento River is fully appropriated), and with minimum bypass flows of 5,000 cfs in September. As compared to the criteria used in the RDEIR, this change provides additional protection for salmonids, responds to commenter requests to limit or reduce Project diversions, and supports the impact determinations of less than significant for Impacts FISH-2 (winter-run chinook salmon), FISH-3 (spring-run chinook salmon), FISH-4 (late fall-run chinook salmon), and FISH-5 (Central Valley steelhead). This change also increases Delta inflow (the flow of fresh water into the Sacramento-San Joaquin Delta) and Delta outflow (the flow of water into the Pacific Ocean from the Delta) as compared to the flow criteria used in the RDEIR. This reduces the potential for negative flow-related effects from the Project to delta smelt and longfin smelt as compared to the flow criteria used in the RDEIR. Overall, the revisions to the Wilkins Slough bypass flow criteria in the Final EIR reduce Project impacts as compared to the analysis in the RDEIR.

Another protective measure (the Bend Bridge Pulse Protection criteria) is retained in the Final EIR but is modified slightly. In the RDEIR, pulse protection was required to last for 7 days upon initiation. In the Final EIR, this criterion and the modeling for the Project have been modified to allow pulse protection to end once the 3-day average flow at Bend Bridge exceeds 29,000 cfs, provided Project diversions subtracted from Bend Bridge flows continue to be at least 25,000 cfs. Pulse flows of these levels would provide flow continuity between the upper and lower Sacramento River and are expected to enhance survival of migrating salmon and steelhead through the middle reaches of the river. This change does not materially affect the analysis of the Project's impacts.

In light of the enhanced minimum flow criteria in the Final EIR for bypass flows in the Sacramento River at Wilkins Slough and for Bend Bridge Pulse Protection as described above, the criteria for flows at the Fremont Weir Notch that were included in the RDEIR are no longer

necessary, and thus have been removed from the Project. The revised flow criteria for the Project are anticipated to provide sufficient protections for the Fremont Weir Notch and to prevent changes in flow at the Notch, thus obviating the need for the additional flow criteria for the Notch that was included in the RDEIR.

The refinements to the Project's operational diversion criteria in the Final EIR do not result in a new significant impact or a substantial increase in the severity of a significant impact identified by the RDEIR, and do not trigger the other grounds for recirculation. Therefore, in accordance with CEQA and the CEQA Guidelines, no recirculation of the Final EIR is necessary based on these refinements to the Project operations.

***Refinements to Project Design and Facilities*.** The Final EIR includes the following refinements to the Project design and its physical facilities:

- Removal of Emergency Release Structures: Two emergency release structures have been eliminated from Alternatives 1 and 3: the Emergency Release Structure 1 located adjacent to Saddle Dam 3, and the Emergency Release Structure 2 located adjacent to Saddle Dam 5. Removal of the two emergency release structures would reduce the overall Project footprint and the impacts from construction activities, and the reservoir would continue to manage emergency releases from the Project in accordance with the requirements of DWR's Division of Safety of Dams ("DSOD"). Removal of the two release structures would generally eliminate release flows in Hunters Creek and downstream agricultural lands. Emergency drawdown releases for all alternatives would be primarily through Sites Dam and Stone Corral Creek and the Inlet-Outlet ("I/O") Works to Funks Reservoir and the TRR. Potential effects to Hunters Creek and downstream lands would occur only in the unlikely event of an emergency spill from overtopping Saddle Dam 8B, and the crest elevation of the dam would allow storage of the probable maximum flood without spilling and have a sufficient capacity to enable controlled emergency spill release to Hunters Creek if needed based on DSOD review.

- Sloped I/O Tower: The vertical, free-standing I/O tower evaluated in the RDEIR has been redesigned as a sloped I/O tower that would be supported by the slope of the reservoir. The purpose of the I/O tower is to allow flows into and out of the reservoir through the use of ports around the tower's perimeter. The number and elevation of ports and the gates of the sloped I/O tower would be the same as what was described for the vertical I/O tower in the RDEIR. The ports, gates, or valves allow for operational flexibility, including managing the temperature and quality of water released from the reservoir. The sloped I/O tower would also have movable fish screens for the exclusion of adult fish similar to that of the vertical I/O tower. Construction means and methods of the sloped I/O tower would also be similar to the vertical I/O tower. However, the sloped I/O tower would eliminate the need for significant seismic reinforcement and therefore provide cost savings. There would not be a measurable change in the size or location of the I/O tower footprint, or in the associated environmental impacts.

- One I/O Tunnel: The I/O tunnels described in the RDEIR consisted of two 23-foot-diameter I/O tunnels that would extend approximately 3,110 feet from the I/O tower through the ridge on the right abutment of Golden Gate Dam. The tunnels would daylight on the other side of the ridge and connect through four pipes to the transition manifold. The two I/O tunnels have been reduced to one tunnel of the same length and approximately 32 feet in diameter. The single tunnel would be located underground in the same alignment as the two tunnels but would be slightly larger. The single tunnel would reduce the need for materials and labor and would result in cost savings to the Project. This change would not materially alter the impact analysis as compared to the RDEIR.

The refinements to the Project's design do not result in a new significant impact or a substantial increase in the severity of a significant impact identified by the RDEIR, and do not trigger another ground for recirculation. Therefore, in accordance with CEQA and the CEQA Guidelines, no recirculation of the Final EIR is necessary based on these refinements to the Project components.

***Revisions to Mitigation Measures – Enhancement of Wilkins Sough Bypass Flow Criteria and Incorporation of these Criteria into the Project*.** As noted above, the bypass flow criteria for Wilkins Slough have been strengthened in the Final EIR to provide additional protections to fish species as compared to the flow criteria in the RDEIR. The initial Wilkins Slough criteria were presented as Mitigation Measure FISH-2.1 in the RDEIR, whereas the strengthened criteria have incorporated as an integral component of the Project in the Final EIR. The strengthened flow criteria and the additional protection they provide have thus eliminated the need for Mitigation Measure FISH-2.1, which is not included in the Final EIR.

In addition to the increased protections provided by the revised flow criteria in the Final EIR, this change reflects the fact that the Wilkins Slough criteria have been made a vital part of how the Project will operate in terms of its diversions from the Sacramento River, rather than a separate measure that is applied distinctly from the Project operations and its diversion criteria. The modeling performed for the Final EIR includes the increased bypass flow requirement, and the analysis in Chapter 11, Aquatic Biological Resources, has been updated to reflect the inclusion of the increased bypass flow requirement.

This revision in the Final EIR strengthens the effectiveness of the Wilkins Slough bypass flow criteria in terms of protection to fish species, reduces adverse impacts, and responds to agency input on the RDEIR. This revision does not result in a new significant impact or a substantial increase in the severity of a significant impact identified by the RDEIR, and it does not trigger any of the other grounds for recirculation. Therefore, in accordance with CEQA and the CEQA Guidelines, no recirculation of the EIR is necessary due to this enhancement of the Wilkins Slough bypass flow criteria.

Refinements to Modeling Used to Evaluate Project Impacts. In response to comments and coordination with agencies, several adjustments were made in the CALSIM II modeling to represent real-time operations and update the environmental analysis. Overall, the modeling for

the Final EIR includes more protective diversion criteria than the modeling used for the RDEIR. The refinements to the modeling include the following:

- Baseline: The baseline used for the Project CALSIM II modeling was updated to match the most recent Reclamation baseline study completed on November 17, 2021. Part of this update includes an increase in the Central Valley Project ("CVP") water allocation assumed for north-of-Delta Storage Partners. As a result, water from Sites Reservoir for north-of-Delta CVP Storage Partners may be used by them less frequently and may be available for other purposes.

- Shasta Lake Operations: The modeling of Sites-Shasta exchanges now supports not only Shasta Lake cold-water pool management, but also fall flow stability and spring pulse flow actions. With respect to cold-water pool management, by reducing releases from Shasta Lake in the spring and summer, the storage and cold-water pool in Shasta Lake would be preserved for use later in the year, typically during critical months of the cold-water pool management season (August and September) and into the fall. With respect to fall flow stability, Site-Shasta exchanges could be used to minimize fall-run Chinook salmon redd dewatering in the fall. With respect to spring pulse flow actions, Sites-Shasta exchanges could assist Reclamation in making spring pulse flows for the benefit of juvenile salmon outmigration in the lower Sacramento River. These adjustments to the modeling did not change any of the impact findings for the Project.

- Dead Pool Volume: The CALSIM II model now considers a smaller dead pool volume, reducing this volume from 120 thousand acre-feet ("TAF") to 60 TAF. The reduction in dead pool volume means that more Sites storage will be actively utilized. Incorporating this revision into the modeling of Project impacts showed there were no changes to the impact findings.

- Delta Salinity Accounting: CALSIM II modeling of carriage water[6] requirements for Delta salinity objectives was improved based on recommendations from DWR. This change resulted in an overall small decrease in carriage water requirements and a corresponding small increase in south-of-Delta deliveries.

- South-of-Delta Refuges: The CALSIM II modeling has been modified to provide for Delta exports to refuges to occur at both Banks and Jones Pumping Plants (instead of only at Banks Pumping Plant). The project description includes using both facilities; however, the modeling in the RDEIR did not reflect the use of the Jones Pumping Plant. This refinement

[6] Carriage water is the amount of additional water necessary for water supplies moving through the Delta to keep Delta salinity at the same level as it would have been absent the movement of the water supply through the Delta (i.e., the additional increment of water necessary to maintain Delta salinity when moving water through the Delta). Carriage water typically contributes to Delta outflow.

has minimal effect on modeling results, and most of the conveyance of refuge water still occurs at Banks Pumping Plant.

- Period of Diversion to Sites Storage: The modeling was refined to reflect the restriction that diversions to Sites storage are limited to September 1 through June 14. The project description in the RDEIR included only this period; however, the modeling in the RDEIR allowed for diversions to occur year-round. This change in modeling has little effect on the modeling results or the impact analysis, since the June 15 through August 31 diversions had been minimal in any case due to lack of diversion criteria being met during this period.

- Period of Releases to Sacramento River: When Sacramento River flow is high (i.e., flow at Wilkins Slough is greater than 15,000 cfs), the flap gates at the Knights Landing Outflow Gates are closed to prevent Sacramento River water from entering Colusa Basin Drain. To reflect this reality, CALSIM II modeling has been modified to prevent discharge of water from Sites Reservoir to the Sacramento River when the river flow is greater than 15,000 cfs. This has minimal effect on modeling results because Sites releases during periods of high flow in the Sacramento River would be rare.

The refined modeling in the Final EIR does not result in a new significant impact or a substantial increase the severity of a significant impact identified by the RDEIR, and does not trigger the other grounds for recirculation. Therefore, in accordance with CEQA and the CEQA Guidelines, no recirculation of the Final EIR is necessary based on these refinements to the modeling.

***Other Changes*.** Various minor changes and edits have been made to the text, tables, and figures of the RDEIR, as shown by strikethroughs and additions in the Final EIR. These changes are generally of an administrative nature such as correcting typographical errors, making minor adjustments to the data, and adding or changing certain text to improve readability. These changes are of a minor, non-substantive nature and do not require recirculation of the EIR.

In addition to the changes and corrections described above, the Final EIR provides additional information in response to comments and questions from agencies and the public. This additional information does not constitute significant new information requiring recirculation, but rather this information serves to clarify and amplify the analysis presented in the RDEIR.

In summary, the additional information and the changes described above do not show that:

(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.

(4) The RDEIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

Based on the foregoing, and having reviewed the information contained in the Final EIR and in the record of the Authority's proceedings, including the comments on the RDEIR and the responses thereto, and the above-described information, the Board hereby finds that no significant new information has been added to the Final EIR since public notice was given of the availability of the RDEIR that would require recirculation of the EIR.

4. AB 52 Process

As the CEQA lead agency for the Project, the Authority hereby finds the requirements of Assembly Bill 52 ("AB 52") have been satisfied, as further described below.

AB 52 Requirements. AB 52 added a variety of provisions to the CEQA statute, and it prescribes a stepwise process for a lead agency to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of a proposed project regarding potential impacts to tribal cultural resources.

AB 52 requires the lead agency, prior to release of a draft environmental impact report, to begin this consultation process with a California Native American tribe if (a) the tribe requests in writing that the lead agency formally notify it regarding proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the tribe responds in writing requesting consultation within 30 days of receipt of the notification, and requests the consultation. (California Public Resources Code Section 21080.3.1(b).) AB 52 states that the consulting parties may propose mitigation measures to avoid or lessen significant impacts to tribal cultural resources; and that the consultation may include discussion concerning the significance of tribal cultural resources, the significance of the project's impacts on the tribal cultural resources, and project alternatives or appropriate mitigation measures that the tribe may recommend to the lead agency. (California Public Resources Code Section 21080.3.2(a).)

AB 52 further provides that any mitigation measures are agreed upon in the consultation must be enforceable and recommended for inclusion in the environmental document and the project's mitigation monitoring and reporting program. (California Public Resources Code Section 21082.3(a).) Further, when a project may have a significant impact on a tribal cultural resource, the environmental document must discuss whether the proposed project has a

significant impact on an identified tribal cultural resource; and whether feasible alternatives or mitigation measures avoid or substantially lessen the impact on the identified tribal cultural resource. Cal. Pub. Res. Code § 21082.3(b).

Before certifying an environmental impact report where the project has a significant impact on a cultural resource, the lead agency must determine that one of the following has occurred: (1) the consultation process has concluded; (2) the tribe requested consultation but has failed to provide comments to the lead agency or otherwise failed to engage in the consultation process; or (3) the tribe failed to request consultation within 30 days of being notified by the lead agency about the project under AB 52. (California Public Resources Code Section 21082.3(d).) With regard to item 1 above, under AB 52, the consultation is considered concluded when: (1) the parties agree to measures to mitigate or avoid significant effects on a tribal cultural resource; or (2) a consulting party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (California Public Resources Code Section 21080.3.2(b).

Project Compliance with AB 52. The Authority has complied with all applicable requirements under AB 52. The Authority formally notified numerous tribes prior to release of the RDEIR in November 2021, and it received two written requests for consultation within 30 days, from the following two California Native American tribes: (1) the Cachil Dehe Band of Wintun Indians (Colusa Indian Community Council) ("Cachil Dehe"); and (2) the Yocha Dehe Wintun Nation ("Yocha Dehe"). One additional tribe stated that the Project is outside its area of traditional and cultural affiliation and that it would defer AB 52 consultation to tribes that are closer to the Project. In addition to the formal notifications provided by the Authority under AB 52, the Authority has made other outreach efforts to tribes outside the scope of AB 52. It has also consulted under AB 52 with the Cachil Dehe and Yocha Dehe tribes with respect to the Authority's already-approved and ongoing geotechnical investigations (which are separate CEQA projects from the Sites Reservoir Project). The Authority's various consultation and outreach efforts are shown and described in Chapter 23 of the Final EIR and in other relevant materials of the record of the Authority's proceedings in this matter.

In accordance with AB 52, Chapter 23 of the Final EIR discusses in detail the Project's impacts on tribal cultural resources and proposes specific mitigation measures to address these impacts. The Final EIR explains the basis for its analysis and findings, and it concludes that the impacts will remain significant and unavoidable after mitigation. As documented in Part D of these findings, the Board finds the Project's numerous and diverse benefits outweigh these significant impacts.

As shown and documented in Chapter 23 of the Final EIR and in other relevant materials of the record of the Authority's proceedings in this matter, the Authority consulted on numerous occasions with the Yocha Dehe about the Project, including providing a preliminary project description to facilitate early coordination well before release of the RDEIR; alerting the Tribe to the release of the RDEIR for public comment; digitizing previous studies into a geographic information system format and sending files and information to the Tribe concerning tribal

cultural resources; requesting in writing that the Tribe provide comments on the analysis of tribal cultural resources and mitigation measures discussed in the RDEIR; and meeting with the Tribe on numerous occasions. The Authority received information from Yocha Dehe on the Tribe's preferences for addressing human burials and has and will continue to incorporate this information into the implementation of the Project. Although the Authority and the Tribe met numerous times to discuss the Project and its status, and to share information, the Authority did not receive any specific written or verbal comments on the analysis of alternatives, impacts and mitigation (other than the burial treatment plan). Since March 2023, the Tribe has chosen not to attend consultation meetings with the Authority.

The Authority also consulted with the Cachil Dehe – including providing a preliminary project description to facilitate early coordination well before release of the RDEIR; alerting the Tribe to the release of the RDEIR for public comment; sending files and information to the Tribe concerning tribal cultural resources; requesting in writing that the Tribe provide comments on the analysis of tribal cultural resources and mitigation measures discussed in the RDEIR; and meeting with the Tribe on numerous occasions.

The Cachil Dehe has submitted written correspondence generally expressing the following concerns, among other matters, claiming that: (1) the Authority has not complied with AB 52; (2) the Authority's mission prevents it from preparing an impartial analysis; and (3) a traditional cultural landscape exists in the Project area. The Authority finds that it has complied with AB 52 as documented in Chapter 23 of the Final EIR and in other relevant materials of the record of the Authority's proceedings in this matter. The Authority finds that it is the appropriate lead agency under CEQA in compliance with Public Resources Code Section 21067 and for the consultation process under AB 52. The Authority has requested information on the presence of a traditional cultural landscape such that the Authority can consider and assess it consistent with Public Resources Code Sections 21074(a) and 21074(b). General information has been provided on the connection between Native People and natural landscapes, but no detailed information has been provided for further assessment of these issues. The Authority has offered to fund Cachil Dehe's direct cost to complete an ethnographic study of the Project Area and develop such information. To date, Cachil Dehe has not requested funding for this effort. Outside of claiming that the Project should not be built, the Tribe has not proposed any specific modifications to alternatives or new alternatives, any specific comments on the Project's analysis of impacts to tribal cultural resources, or any specific comments on proposed mitigation measures for adoption as part of the MMRP for the Project.

Based on the foregoing, the Board hereby finds that certification of the Final EIR is appropriate under AB 52 on two independent grounds. First, that the consulting tribes have failed to provide comments to the lead agency or have otherwise failed to engage in the consultation process (Public Resources Code Section 21082.3(d)(2)). Although the Authority provided information and sought to engage each Tribe in consultation, both Yocha Dehe and Cachil Dehe have not provided specific comments on the analysis of alternatives, impacts and mitigation. Second, that the Authority has concluded, in good faith and after reasonable effort, that mutual agreement cannot be reached (Public Resources Code Sections 21080.3.2(b)(2),

21082.3(d)(1)). Although the Authority has received information recently from the Cachil Dehe, the information provided to the Authority is only general, does not allow for a further, more detailed assessment, and has generally insisted that the Project not be built.

In summary, the Board finds the Authority has complied with the requirements of AB 52. The Board wishes to express its commitment to continue to work cooperatively with the Tribes with traditional or cultural affiliation with the Project area throughout the life of the Project to better understand and respectfully incorporate the Tribes from their perspectives. Although the Board is completing the CEQA process, our desire and invitation to work together with Tribes with traditional or cultural affiliation with the Project area continue through future Project planning, implementation, and operations.

5. Differences of Opinion Regarding the Impacts of the Project

In making its determination to certify the Final EIR and to approve the Project, the Board recognizes that the Project involves a number of controversial environmental issues and that a range of technical and scientific opinions exist with respect to those issues. The Board has acquired an understanding of the range of this technical and scientific opinion by its review of the RDEIR, the comments received on the RDEIR, and the responses to those comments in the Final EIR, as well as testimony, letters, and reports regarding the Final EIR and its own experience and expertise in assessing water quality and water supply. The Board has reviewed and considered, as a whole, the information and analysis presented in the RDEIR, the information and analysis presented in the comments on the RDEIR, the information and analysis presented in the Final EIR, the information submitted on the Final EIR, and the reports and analyses prepared by the experts who prepared the EIR, by the Authority's consultants, and by staff. The Board has gained a comprehensive and well-rounded understanding of the environmental issues presented by the Project. In turn, this understanding has enabled the Board to make its decisions after weighing and considering the various viewpoints on these important issues. The Board accordingly certifies that its findings are based on full appraisal of all of the information and analysis contained in the Final EIR, as well as the other information in the record of proceedings.

B. Impacts and Mitigation Measures

These findings provide the written analysis and conclusions of the Board regarding the environmental impacts of the Project and the mitigation measures proposed by the Final EIR and adopted by the Board as conditions of approval for the Project.

In making these findings, the Board has considered the opinions of other agencies and members of the public, including opinions that disagree with some of the analysis and significance thresholds used in the Final EIR. The Board finds that the determination of significance thresholds is a judgment within the discretion of the Board; the significance thresholds used in the Final EIR are supported by substantial evidence in the record, including the expert opinion of the Final EIR preparers and the Authority staff; and the significance thresholds used in the Final EIR provide reasonable and appropriate means of assessing the significance of the adverse environmental effects of the Project.

In particular, the EIR used significance criteria for evaluating impacts that are well suited to this type of project. The criteria used in the EIR to determine whether an impact is or is not "significant" are based on, among other things, a thorough review of the recommended significance thresholds that are presented in Appendix G to the CEQA Guidelines; the relationship of the effects of the Project to the adopted policies, ordinances, and standards of the Authority and of responsible agencies; and commonly accepted practice and the professional judgment of the Final EIR authors, technical consultants, and Authority staff.

1. Findings on Project's Environmental Impacts

Exhibit A, Summary of Significant Impacts and Mitigation Measures for the Project, attached to these findings and incorporated herein by reference, summarizes the environmental determinations of the Final EIR about the Project's impacts before and after mitigation. This exhibit does not attempt to describe the full analysis of each environmental impact contained in the Final EIR. Instead, Exhibit A provides a summary description of each impact, describes the applicable mitigation measures identified in the Final EIR and adopted by the Board, and states the Board's findings on the significance of each impact after imposition of the adopted mitigation measures. As shown on Exhibit A, several impacts have been found by the Authority to be significant and unavoidable, as these impacts cannot feasibly be mitigated to a less than significant level; these significant and unavoidable impacts are also listed in Part D.1 below.

A full explanation of the Authority's environmental findings and conclusions can be found in the Final EIR, and these findings hereby incorporate by reference the discussion and analysis in the Final EIR supporting the Final EIR's determinations regarding the Project's impacts and the mitigation measures designed to address those impacts. In making these findings, the Board ratifies, adopts, and incorporates the analysis and explanation in the Final EIR, and ratifies, adopts, and incorporates in these findings the determinations and conclusions of the Final EIR relating to environmental impacts and mitigation measures, except to the extent any such determinations and conclusions are specifically and expressly modified by these findings.

2. Adoption of Proposed Modifications Design Features and Mitigation Measures as Conditions of Approval

The Board adopts, and incorporates as conditions of approval of the Project, the mitigation measures set forth in the Mitigation Monitoring and Reporting Program, or MMRP, attached to these findings as Exhibit B to reduce or avoid the potentially significant and significant impacts of the Project, as well as to reduce or avoid certain less-than-significant impacts. In adopting these mitigation measures, the Board intends to adopt each of the mitigation measures recommended for approval by the Final EIR. Accordingly, in the event a mitigation measure recommended in the Final EIR has inadvertently been omitted from Exhibit B, such mitigation measure is hereby adopted and incorporated in the findings below by reference. In addition, in the event the language describing a mitigation measure set forth in Exhibit B fails to accurately reflect the mitigation measures in the Final EIR due to a clerical error, the language of the

mitigation measure as set forth in the Final EIR shall control, unless the language of the mitigation measure has been specifically and expressly modified by these findings.

The Board finds that, for each impact that is identified in the Final EIR/EIS as potentially significant and for which mitigation is proposed that reduces the impact to a less than significant level, the applicable mitigation as presented in the Final EIR and the MMRP constitute changes or alterations required as conditions of approval for the Project that avoid or substantially lessen the significant effect as identified in the EIR.

Consistent with Public Resources Code Section 21189.82(c), the Board further confirms that the adoption of the MMRP, attached to these findings as Exhibit B, provides a binding and enforceable agreement with the Governor of California to implement the mitigation measures related to significant environmental impacts in any disadvantaged community as defined in Public Resources Code Section 21189.81(b).

3. Findings on Additional Suggested Mitigation Measures

In several comments on the RDEIR, various measures were suggested by commenters as proposed additional mitigation measures or modifications to the mitigation measures identified by the EIR. Some of the EIR's mitigation measures were modified in response to such comments. Other comments requested minor modifications in mitigation measures identified in the RDEIR, requested mitigation measures for impacts that were less than significant, or requested additional mitigation measures for impacts as to which the RDEIR identified mitigation measures that would reduce the identified impact to a less-than-significant level; these requests are declined as unnecessary.

With respect to the additional measures suggested by commenters that were not added to the Final EIR, the Board hereby adopts and incorporates by reference the reasons set forth in the responses to comments contained in the Final EIR as its grounds for rejecting adoption of these mitigation measures.

C. Basis for the Board's Decision to Approve the Project

1. Summary of Discussion of Alternatives in the Final EIR

The Final EIR evaluates three alternatives, with one of the alternatives consisting of two variations: Alternative 1A; Alternative 1B; Alternative 2; and Alternative 3, which is evaluated in the Final EIR as the Authority's proposed version of the Project, referred to as the Proposed Action. The EIR also summarizes the criteria and process that the Authority used to identify a range of reasonable alternatives for review in the EIR, and it describes proposals that the Authority concluded did not merit additional, more-detailed review either because they did not present a feasible alternative for the Project or are merely variations on the alternatives that are evaluated in detail.

2. The Board's Findings Relating to Alternatives

In making these findings, the Board certifies that it has independently reviewed and considered the information on alternatives provided in the Final EIR, including the information provided in comments on the RDEIR and the responses to those comments in the Final EIR. The Final EIR's discussion and analysis of these alternatives is not repeated in these findings, but the discussion and analysis of the alternatives in the Final EIR is incorporated in these findings by reference.

As set forth in section B above, the Board has adopted mitigation measures to avoid or reduce the significant environmental effects of the Project. As explained in section D of these findings, while these measures will not mitigate all of the Project's significant impacts to a less-than-significant level, they will mitigate those impacts to a level that the Board finds is acceptable.

The Board finds that Alternative 3—considered in these findings to be the Project—would satisfy the Project Objectives.[7] The Board finds that the remaining alternatives are unable to satisfy the project objectives to the same degree as the Project and that these other alternatives do not provide the same magnitude of project benefits. The Board further finds that, on balance, none of the remaining alternatives has environmental advantages over the Project that are sufficiently substantial to justify approval of such an alternative instead of the Project, in light of each such alternative's inability to satisfy the project objectives to the same degree as the Project and to achieve the same magnitude of project benefits. Accordingly, the Board has determined to approve the Project instead of approving one of the remaining alternatives.

In making this determination, the Board finds that when compared to the other alternatives described and evaluated in the Final EIR, the Alternative 3, provides a reasonable balance between fully satisfying the project objectives and reducing potential environmental impacts to an acceptable level. The Board further finds and determines that Alternative 3 should be approved, rather than one of the other alternatives, for the reasons set forth below.

a. Description of Project Objectives

The overall goal of the Project is to construct an offstream reservoir to capture excess water from major storms and store the water until it is most needed during dry periods. The CEQA objectives of the Project are:

[7] As presented below in these findings, Alternative 3 is the substantially the same as the version of Alternative 3 that was studied in the Final EIR as the Authority's Proposed Action, with the exception that the selected version of Alternative 3 as the Project includes one project component (the "Terminal Regulating Reservoir – West Location") that was included and evaluated as part of the analysis of Alternative 2 in the EIR.

- OBJ-1: Improve water supply reliability and resiliency to meet Storage Partners' agricultural and municipal long-term average annual water demand in a cost-effective manner for all Storage Partners, including those that are the most cost-sensitive.

- OBJ-2: Provide public benefits consistent with Proposition 1 of 2014 and use Water Storage Investment Program funds to improve statewide surface water supply reliability and flexibility to enhance opportunities for habitat and fisheries management for the public benefit through a designated long-term average annual water supply.

- OBJ-3: Provide public benefits consistent with the Water Infrastructure Improvements for the Nation Act of 2016 by using federal funds, if available, provided by Reclamation to improve CVP operational flexibility in meeting CVP environmental and contractual water supply needs and improving cold-pool management in Shasta Lake to benefit anadromous fish.

- OBJ-4: Provide surface water to convey biomass from the floodplain to the Delta to enhance the Delta ecosystem for the benefit of pelagic fishes in the north Delta (e.g., Cache Slough).

- OBJ-5: Provide local and regional amenities, such as developing recreational facilities, reducing local flood damage, and maintaining transportation connectivity through roadway modifications.

b. Discussion and Findings Relating to the Alternatives Evaluated in the EIR

Chapter 2 of the Final EIR provides a full discussion of the following alternatives, which are summarized as follows:

- No Project Alternative

- Alternative 1: 1.5-million acre-feet ("MAF") reservoir, bridge, release to the Colusa Basin Drain ("CBD"), with either no Reclamation investment (Alternative 1A) or Reclamation investment of up to 7% of Project costs (Alternative 1B)

- Alternative 2: 1.3-MAF reservoir, South Road, partial release to the CBD, discharge to the Sacramento River, no Reclamation investment

- Alternative 3 (Evaluated in the Final EIR as the Authority's Proposed Action): 1.5-MAF reservoir, bridge, release to the CBD, Reclamation investment of up to 25% of the Project costs

No-Project/No-Action Alternative. Under CEQA, a "No-Project Alternative" compares the impacts of proceeding with a proposed project with the impacts of not proceeding with the Project. The No-Project Alternative describes the environmental conditions in existence at the

time the Notice of Preparation was published, along with a discussion of what would be reasonably expected to occur at the site in the foreseeable future, based on current plans and consistent with available infrastructure and community services.

As described in detail in Chapter 3 to the Final EIR, the No Project Alternative would not materially change conditions as compared to the environmental baseline, due to the following factors: (1) without the project, future land use conditions in the rural areas where the Project facilities would have been located are not projected to change substantially as compared to existing conditions; (2) the Final EIR assumes that the same regulatory criteria would continue to apply as under existing conditions, as these criteria were changed substantially in 2019-2020 and future regulatory changes are, at this point in time, in flux, uncertain and/or not yet finalized or adopted (such as potential updates to the 2006 Bay-Delta Water Quality Control Plan, as amended in 2018 [State Water Resources Control Board 2006, 2018]) ; and (3) the modeling differences between existing and projected future hydrological conditions and water demands are minimal, given that the modeling assumes a wide range of such conditions and demands over an extended period of time; the modeling already assumes full use of most water supply contract amounts (subject to availability due to hydrology); and the Authority is not aware of any new large water right, water right change, or new water supply contract that would change the assessment of this issue.

As the Project would not be built or operated under the No Project Alternative, this alternative would eliminate the significant environmental effects of the Project; however, this alternative would not satisfy any of the project objectives. On balance, the environmental benefits under this alternative are outweighed by the failure to achieve any of the project objectives and by the various benefits that would be achieved by the Project.

Action Alternatives. The action alternatives that are studied in the Final EIR (Alternatives 1A, 1B, 2 and 3) have the following common elements, including physical facilities; operation and maintenance elements; and best management practices, management plans, and technical studies.

Common Facilities:

- Improvements to and use of the existing Red Bluff Pumping Plant ("RBPP"), Tehama-Colusa Canal ("TC Canal"), Hamilton City Pump Station, and Glenn-Colusa Irrigation District ("GCID") Main Canal for the diversion and conveyance of water from the Sacramento River.

- Construction of regulating reservoirs and a conveyance complex to control the conveyance of water between Sites Reservoir, TC Canal, and GCID Main Canal. These facilities would include the regulating reservoirs, pipelines, pumping generating plants ("PGPs"), electrical substations, and maintenance buildings.

- Construction of an administration and operations building and a maintenance and storage building near the existing Funks Reservoir.

- Construction of two main dams, the Golden Gate Dam on Funks Creek and the Sites Dam on Stone Corral Creek, to impound water in the new reservoir. A series of saddle dams and saddle dikes along the northern and eastern rims of the reservoir would also be constructed to close off topographic saddles in the surrounding ridges. The I/O Works for the reservoir would be located near the Golden Gate Dam.

- Upgrades to the TC Canal and construction of a new pipeline (the Dunnigan Pipeline) to convey water from the new reservoir to the CBD and ultimately, to the Sacramento River.

- Development of two primary recreation areas and a day-use boat ramp. The recreation areas would also require a network of new roads and upgrades to existing roads for maintenance and local access. The Peninsula Hills Recreation Area would be located on up to 373 acres along the northwest shore of the new reservoir and the Stone Corral Creek Recreation Area would be located on up to 235 acres along the eastern shore of the new reservoir. These areas would provide multiple recreational amenities, including campsites, boat access, horse trails, hiking trails, and vista points. Both of the primary recreation areas would have a kiosk, access to electricity and potable water, picnic sites, hiking trails, vault toilets, and campsites. The day-use boat ramp and parking area would be located on up to 10 acres on the western side of the new reservoir.

- Construction of approximately 46 miles of new paved and unpaved roads to provide construction and maintenance access to the new facilities, as well as public access to the recreation areas.

- Acquisition and maintenance of an approximate 100-foot buffer around the new reservoir and all related facilities, buildings, and recreation areas.

Common Operations and Maintenance Elements:

Water Operations. The Project would provide water supply and water supply-related environmental benefits to the Storage Partners. Water would be diverted from the Sacramento River at the existing RBPP through the TC Canal into the existing Funks Reservoir and at the GCID Hamilton City Pump Station through the GCID Main Canal into a new Terminal Regulating Reservoir ("TRR"). From the existing Funks Reservoir and a new TRR, the water would be pumped into the new Sites Reservoir. Diversions could occur between September 1 and June 14, which corresponds with the period that the Sacramento River is not fully appropriated. Diversions would occur only when the diversion criteria are met. Water would be held in storage in the reservoir until requested for release by a Storage Partner. Water releases would generally be made from May to November but could occur at any time of the year depending on the Storage Partner's need and system conveyance capacity. Water would be released from Sites Reservoir via the I/O Works near the Golden Gate Dam back into a TRR or back into Funks Reservoir. Water released could be used along the GCID Main Canal, along the TC Canal, or conveyed to the new

Dunnigan Pipeline and discharged to the CBD and conveyed via the Sacramento River or the Yolo Bypass to a variety of locations in the Delta and south of the Delta. Releases from Sites Reservoir would be made to: (1) meet environmental purposes; (2) meet Storage Partners requests for stored water deliveries; (3) conduct operational exchanges with Reclamation in Shasta Lake; and (4) complete operational exchanges with DWR in Lake Oroville. Operations would be coordinated with Reclamation and DWR to prevent conflicts with the CVP and the State Water Project ("SWP"). Exchanges of water may occur with the CVP and SWP and have the potential to assist the CVP and SWP in meeting their regulatory obligations and their authorized purposes including to protect, restore and enhance fish, wildlife, and associated habitats, provide water supply and generate power. Exchanges are also expected to take place in real-time with local Storage Partners. Water would also be diverted and impounded from Funks and Stone Corral Creeks, and releases from Golden Gate Dam and Sites Dam, respectively, would occur into Funks and Stone Corral Creeks to maintain flows to protect downstream water right holders and ecological functions.

The Project provides flood control, ecosystem improvement, and recreation public benefits. The ecosystem benefits include providing water for Incremental Level 4 Refuge water needs for Central Valley Project Improvement Act refuges both north and south of the Delta and providing additional flow into the Yolo Bypass to benefit delta smelt. Incremental Level 4 Refuge water deliveries could occur in any water year type and at any time of year. For those refuges located south of the Delta, it is assumed that water would be moved from July to November through the Delta. Additional flows into the Yolo Bypass could occur at any time of year but are assumed to occur during the summer and fall months (August through October) of all water year types. These deliveries increase desirable food sources for delta smelt and other fish species in the late summer and early fall.

Energy Generation and Energy Use. All action alternatives would require power to run facilities and pump water but would also generate incidental power when water is released from Sites Reservoir at the PGPs. Hydropower generation would be an incidental benefit of stored water releases. The power needs for the Project beyond what could be generated by its operations would be purchased from market sources. The goal would be to purchase at least 60% from renewable, carbon-free sources from the start of operations to 2045, and to purchase 100% from renewable, carbon-free sources starting in 2045.

Facility Operations and Maintenance. Operations and maintenance activities for all facilities, including recreation areas, would include debris removal, vegetation control, rodent control, erosion control and protection, routine inspections (dams, tunnels, pipelines, PGPs, I/O Works, fencing, signs, and gates), painting, cleaning, repairs, and other routine tasks to maintain the facilities in accordance with design standards after construction and commissioning. Routine visual inspection of the facilities would be conducted to monitor performance and prevent mechanical and structural failures.

Best Management Practices, Management Plans, and Technical Studies. Best management practices ("BMPs"), management plans, and technical studies are part of the

Project and are described at length in the Final EIR. The BMPs would be implemented, as applicable, as part of Project design, construction, and operation/maintenance. The BMPs include applicable design standards, criteria, and requirements, as well as standard practices required on construction projects either pursuant to regulations or as a result of established best management protocols. The Authority will develop and implement a number of operations and management plans to govern the operations and maintenance activities of the Project. These would include a Reservoir Operations Plan, a Reservoir Management Plan, a Traffic Management Plan, a Land Management Plan, a Recreation Management Plan, an Initial Sites Reservoir Fill Plan, a Security Plan, and an Emergency Action Plan. Finally, technical studies for aquatic biological resources are incorporated into the Project. These technical studies will describe factors such as flow releases and adaptive management in Stone Corral and Funks Creeks, sediment monitoring and adaptive management, and fish monitoring and adaptive management.

Each alternative is further discussed below.

Alternative 1. The unique feature of Alternative 1 includes the following:

- Reservoir capacity would be 1.5 MAF;
- The TRR would be located at the TRR East location, which is on the east side of the GCID Main Canal;
- A bridge across the reservoir would provide access between the east and west sides of the reservoir;
- The Dunnigan Pipeline would extend from the TC Canal and discharge into the CBD; and
- Alternative 1A has no Reclamation investment and Alternative 1B includes Reclamation investment of up to 7% of Project costs, corresponding to up to 7% of Sites Reservoir storage space being dedicated to Reclamation's use.

Under Alternative 1, the Project would impound surface water at the Golden Gate Dam on Funks Creek and the Sites Dam on Stone Corral Creek, and would include a series of seven saddle dams along the surrounding eastern and northern ridges would close off topographic saddles to form Sites Reservoir. The 1.5-MAF reservoir would inundate approximately 13,200 acres of Antelope Valley in Colusa and Glenn counties. Water from the Sacramento River would be conveyed through existing or upgraded conveyance facilities operated by the Tehama-Colusa Canal Authority and those owned or operated by GCID to new and upgraded regulating reservoirs and into the new Sites Reservoir. Alternative 1 would involve the construction of TRR East, which is located on the east side of the GCID Main Canal.

Under Alternative 1, when releases are made from Sites Reservoir, existing and new facilities would convey water from the I/O Works to the CBD for release, from which flows could enter the Yolo Bypass or Sacramento River.

Construction roads, local roads, and maintenance roads would be developed or realigned to accommodate the reservoir facilities, including the realignment of Sites Lodoga Road with a new bridge over the reservoir.

Alternative 1A has no Reclamation investment. Alternative 1B includes Reclamation investment of up to 7% of Project costs, corresponding to up to 7% of Sites Reservoir storage space being dedicated to Reclamation's use. This equates to about 91,000 AF of storage allocation dedicated to Reclamation in Sites Reservoir. Reclamation's share of Sites Reservoir water would be flexibly used by Reclamation to meet CVP objectives of providing water for water supply reliability and environmental needs. Increased storage, diversion, and release capacity provides the CVP with additional opportunities to store and release water when it may have been otherwise constrained. Releases for Reclamation would be made for a variety of purposes as identified and directed by Reclamation and would be made in the same manner as described for all Storage Partners.

Alternative 1 consists of the same physical facilities as Alternative 3, and thus the construction impacts would be the same. The primary difference is that under Alternative 3, Reclamation investment will increase to up to 25% of Project costs. As described above in section A.3 of these findings, refinements in the modeling of how Reclamation would utilize the water supplied to it from the Project have demonstrated the enhanced opportunity under Alternative 3 for cold-water pool management in Shasta Lake, enhanced frequency and amount of spring pulse flows in the upper Sacramento River, and better ability to maintain stable river flows in the upper Sacramento River in the fall. In addition, the Infrastructure Investment and Jobs Act provides for a substantial increase in federal spending on infrastructure projects throughout the country. Due to the enhanced benefits of the Project and increased opportunity for federal funding, the Final EIR identifies Alternative 3 as its Proposed Action.

On balance, Alternative 1 does not reduce the Project's significant impacts as compared to Alternative 3 and does not offer the same type or magnitude of benefits as Alternative 3, and as a result there are specific social, environmental, and other considerations for rejecting Alternative 1.

Alternative 2. The unique features of Alternative 2 include the following:

- Reservoir capacity would be 1.3 MAF;
- The TRR would be located at the TRR West location, which is on the west side of the GCID Main Canal;
- A local access road around the southern end of the reservoir (i.e., South Road) would enable travel between the east and west sides of the reservoir;
- The Dunnigan Pipeline would extend to and discharge into the Sacramento River with primary release from the Sacramento River discharge and only a partial discharge at the CBD; and

- No Reclamation investment in the Project.

Alternative 2 would impound surface water at the Golden Gate Dam on Funks Creek and the Sites Dam on Stone Corral Creek; a series of four saddle dams (three saddle dams less than Alternative 1) along the surrounding eastern and northern ridges would close off topographic saddles to form Sites Reservoir. The 1.3-MAF reservoir (0.2 MAF less than Alternative 1) would inundate approximately 12,600 acres (600 acres less than Alternative 1) of Antelope Valley in Colusa and Glenn Counties. Alternative 2 would convey water from the Sacramento River to store in the reservoir through the same existing or upgraded conveyance facilities operated by the Tehama-Colusa Canal Authority and those owned or operated by GCID to new and upgraded regulating reservoirs and into the new Sites Reservoir. Alternative 2 would involve the construction of TRR West, which is located on the west side of the GCID Main Canal.

As under all alternatives, releases from Sites Reservoir under Alternative 2 would be made to meet environmental purposes, for Storage Partners based on their requests to meet their water supply portfolio needs, and for operational exchanges with Reclamation in Shasta Lake and with DWR in Lake Oroville. However, under Alternative 2, the Dunnigan Pipeline would be extended beyond the CBD so that releases could be discharged not only to the CBD, but also directly into the Sacramento River. Alternative 2 does not include any Reclamation investment in the Project.

As under all alternatives, construction, local, and maintenance roads would be required and developed; however, Alternative 2 does not propose a bridge for the relocated Sites Lodoga Road. Under Alternative 2, the existing Huffmaster Road would be realigned around the southern end of the reservoir and a new South Road would connect to the realigned Huffmaster Road.

Although implementation of Alternative 2 would result in a slightly smaller footprint for the reservoir, the EIR analysis demonstrates that the proposed construction of the South Road rather than a bridge would result in significant and unavoidable transportation and land use effects that would not occur under Alternatives 1 and 3.

The realignment of the Sites Lodoga Road would result in a longer route around the south side of Sites Reservoir compared to the No Project Alternative and Alternatives 1 and 3. This would have a substantial effect on school bus travel provided by the Maxwell Unified School District because of the substantial increase in the road length compared to the existing Sites Lodoga Road, as well as the increase in curves and elevation as compared to the existing road and the bridge under Alternatives 1 and 3. The realignments would result in a travel route that is approximately 14 miles longer in Alternative 2 compared to the existing travel route between Maxwell and Lodoga. Travel time on the new route would be approximately 60 minutes, which would substantially affect school bus travel. One potential measure to lessen this impact would be to shorten the length of the South Road; however, that is already presented in Alternatives 1 and 3 as the bridge crossing the Sites Reservoir. Another potential measure that was considered was the use of a ferry service that would connect both sides of Sites Reservoir to avoid the travel along the South Road for students and other users. However, it was determined that the reservoir

is not expected to maintain a consistent water level year-round. Due to unforeseeable fluctuating water levels, the potential mitigation was considered unfeasible. There are no feasible mitigation measures and operation impacts would be significant and unavoidable.

Construction and operation of Alternative 2 would also result in the physical division of established communities. While the Sites community would be inundated and displaced, the community would not be physically divided. There would be a physical division for the community of Lodoga, even though the South Road would connect Lodoga to Maxwell, because the new access route would substantially increase travel time. There are no feasible mitigation measures for this impact. This impact would be significant and unavoidable.

Alternative 2 would eliminate the significant and unavoidable impact on paleontological resources identified in the Final EIR as a result the TRR East location included as a component of Alternatives 1 and 3, since under Alternative 2, the TRR would be moved to the West location where this significant and unavoidable impact does not occur. In consideration of this factor, the Proposed Action for approval in these findings includes changing Alternative 3 as evaluated in the EIR by moving the TRR from the East to the West location. Incorporating this change into the Project thereby eliminates this significant and unavoidable impact.

Assuming Alternative 2 were revised to include the bridge component of Alternative 1 and 3, then Alternative 2 would reduce some of the significant environmental impacts associated with the construction and operation of a larger (1.5 MAF) reservoir. This is because Alternative 2 involves a smaller reservoir (1.3 MAF). However, regardless of the roadway configuration, Alternative 2 would still result in the same significant environment impacts (albeit to a lesser degree), including effects on water quality, vegetation and wetland resources, wildlife resources, agricultural resources, air quality, cultural resources, and visual resources. In addition, even if reconfigured, Alternative 2 would not provide the same magnitude of water supply benefits as Alternative 3, and thus would not meet the Project objectives to the same extent as Alternative 3 – including the objectives of improving water supply reliability and resiliency to meet Storage Partners' agricultural and municipal long-term average annual water demand in a cost-effective manner for all Storage Partners, including those that are the most cost-sensitive; providing public benefits consistent with Proposition 1 to improve statewide surface water supply reliability and flexibility; and providing public benefits consistent with the use of federal funds to improve CVP operational flexibility. The lack of Reclamation investment in Alternative 2 would also substantially reduce the Project's ability to improve cold-pool management in Shasta Lake to benefit anadromous fish as described in Chapter 11 of the Final EIR.

For these reasons, the Board finds that while Alternative 2 could be configured to reduce the magnitude of significant impacts from a larger reservoir, it would still result in significant and unavoidable environmental impacts, would not meet the Project objectives to the same extent as Alternative 3, and would not provide the same magnitude of project benefits. As a result, there are specific social, environmental, and other considerations for rejecting Alternative 2.

Alternative 3. Alternative 3 has the same physical facilities as Alternative 1 and is similar in terms of the potential environmental impacts from construction and operation. The key difference is that Alternative 3 would include increased Reclamation participation and investment as compared to Alternative 1, with investment of up to 25% of the Project cost. This increased level of Reclamation investment would result in up to 25% of Sites Reservoir storage space being dedicated to Reclamation's use.

Increased Reclamation investment would require some reduction in local participation for Alternative 3 as compared with Alternative 1; it is assumed that Storage Partners that are local agencies (statewide) would reduce their participation to accommodate the investment by Reclamation.

Under Alternative 3, the increased federal investment in the Project would provide enhanced opportunities for flexibility in terms of the use of Sites water by Reclamation to meet CVP objectives for water supply and environmental purposes. The increased level of Reclamation investment would also result in increased opportunities for maintaining cold-water pool in Shasta Lake, enhanced frequency and amount of spring pulse flows in the upper Sacramento River, and better ability to maintain stable river flows in the upper Sacramento River in the fall. For example, and as described in Chapter 11 of the Final EIR, Alternative 3 is expected to provide a net benefit to anadromous fish in the Sacramento River. More specifically, Alternative 3 would provide a net benefit to late fall-run juvenile rearing habitat availability as compared to the baseline. Alternative 3 also has the most and largest increases in steelhead juvenile rearing habitat availability. In addition, Alternative 3 is expected to result in positive benefit to winter-run chinook salmon populations as evidenced by the results of the National Marine Fisheries Service's Winter-run Life Cycle modeling effort.

Further, as explained above, while Alternative 3 as analyzed in the Final EIR includes the eastern location for the TRR (TRR East), the significant and unavoidable environmental impacts on paleontology resulting from the placement of the TRR in this location have been eliminated from the Project as presented in these findings for final approval. Instead of the eastern location, the Project as presented for approval in these findings includes the western placement of the TRR (TRR West), which is evaluated in the RDEIR and Final EIR as a component of Alternative 2. The EIR demonstrates that this change in location for the TRR (from East to West) will avoid a significant impact on paleontological resources. Including TRR West as part of the Project does not result in any new or significant impacts beyond those contemplated in the Final EIR as TRR West was included in and fully analyzed in the Final EIR as part of Alternative 2.

Summary of Findings Regarding Alternatives. For all of the foregoing reasons, the Board has determined to approve Alternative 3, with the TRR West location, instead of one of the other alternatives to the Project.

c. Findings Regarding Suggestions for Modifying the Project and Variations on the Alternatives

Various modifications to the Project and variations on the alternatives were proposed either in comments on the RDEIR or in letters submitted to the Authority after the Final EIR was completed. Some commenters claimed that additional alternatives should have been included in the assessment. Most commenters did not provide information to explain how their suggested plans or proposals would avoid or substantially lessen significant effects of the Project alternatives. The responses to comments in the Final EIR address the suggestions provided by commenters on the RDEIR. Three common themes were identified regarding commenter suggestions for alternatives, as follows:

- Operational criteria should be consistent with the 2006 Bay-Delta Water Quality Control Plan, as amended in 2018 ("Bay-Delta Plan") (State Water Resources Control Board 2006, 2018), updates or alternative bypass flows and should incorporate or include the updates to the Bay-Delta Plan water quality control objectives or include a range of bypass flows that might then support the Bay-Delta Plan updates.

- The EIR should assess more than one operational scenario because evaluating more than one operational scenario could reduce or avoid adverse environmental impacts.

- Modifications to reservoir operations should be made regarding decreases in diversions and/or increases in bypass flows compared to those evaluated in the RDEIR.

Bay-Delta Water Quality Control Plan Updates. As noted in the Final EIR in Master Response 2, the State Water Board does not intend to complete the Bay-Delta Water Quality Control Plan until 2025, and the associated modeling has not been released. The Bay-Delta Plan and its update process are a different effort that is not part of the Project or its environmental review process. However, the Bay-Delta Water Quality Control Plan is discussed in Chapter 31, Cumulative Impacts, of the Final EIR. The State Water Board is in the process of updating the Bay-Delta Plan for the Sacramento River watershed but has not approved an update of the plan. The State Water Board has not provided enough information as part of the water quality control planning update process to disaggregate the potential estimated water supply effect for an evaluation of the potential change to water available for Sites Reservoir at its proposed points of diversion on the Sacramento River, Funks Creek, and Stone Corral Creek. Nor is there enough information currently available to evaluate the water supply effects during the Project's proposed diversion season. As such, including an operational scenario that "incorporates" the Bay-Delta Plan updates is not currently feasible, or even possible. However, the Authority Board recognizes and acknowledges that updates to the Bay-Delta Plan could result in changes to diversions for Sites Reservoir and would be implemented through terms of the Sites water right including application of Standard Permit Term 96 (Sites Project Authority 2022) which the Authority has requested to be included in the Sites water right. Should diversions be altered in the future in association with implementation of the Bay-Delta Plan updates, impacts on aquatic biological resources would be no more severe or greater in magnitude than currently disclosed

in the EIR, as the purpose of any Bay-Delta Plan update and subsequent diversion alterations, if required, would be to support the applicable water quality beneficial uses, including ecosystem and cold-water fishery uses in the Sacramento River and Bay-Delta.

Multiple Operational Scenarios/Modifications to Project Operations. The Authority and Reclamation evaluated multiple operational scenarios over the course of Project development that were designed to meet the Project objectives; enhance Project benefits; and reduce or avoid significant environmental impacts. This evaluation resulted in (1) elimination of the previously proposed Delevan Facility and its resulting environmental impacts; and (2) strengthening of the Wilkins Slough minimum bypass flow criteria for the protection of fish species.

Further, as described in the Final EIR, the Authority considered more restrictive operational criteria in connection with its 2019 Value Planning Process, and it determined that such more restrictive criteria would substantially reduce the Project benefits such that it would not qualify for state funding under Proposition 1 and would also significantly increase the costs of the Project water. In addition, as discussed in Master Response 9, changes to the Project's operational scenario would not serve to reduce the significant environmental impacts resulting from Project construction, and also would not avoid or reduce other significant impacts resulting from Project operations – including effects on water quality and cultural resources.

Findings Regarding Adequacy of Range of Alternatives. Based on the analysis in the Final EIR/EIS and other documents in the Authority's record of proceedings in this matter, the Board finds the Final EIR evaluates a reasonable range of alternatives in compliance with CEQA and the CEQA Guidelines, and that the proposals for additional alternatives as suggested in the comments on the RDEIR are not feasible alternatives requiring CEQA analysis.

The range of alternatives evaluated in the EIR reflects a reasonable attempt to identify and evaluate alternatives that would potentially be capable of reducing the Project's environmental effects, while accomplishing the project objectives to different extents. The Board finds that the alternatives analysis is sufficient to inform the Board and the public regarding the tradeoffs between the degree to which alternatives to the Project could reduce environmental impacts and the corresponding degree to which the alternatives to the Project would hinder the Authority's ability to achieve most of its project objectives.

D. Statement of Overriding Considerations

1. Impacts That Remain Significant

As discussed in Exhibit A, the Board has found that the following impacts of the Project remain significant following adoption and implementation of the mitigation measures described in the Final EIR:

Number	Phase	Alts	Environmental Impact
WQ-1	Construction	1, 2, & 3	**Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during construction.** In the short-term (within 1–10 years of initial filling), operational release may cause degradation of water quality by potentially contributing to increases in aqueous and fish tissue methylmercury concentrations in the Colusa Basin Drain, Funks and Stone Corral Creeks, and the north Delta; mitigation is proposed but due to the uncertainty of effectiveness under the Project-specific conditions, this impact has been determined to be significant and unavoidable.
WQ-2	Operation	1, 2, & 3	**Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during operation.** Operational releases may cause degradation of water quality in the north Delta in dry and critical water years by potentially contributing to increases in aqueous and fish tissue methylmercury concentrations; mitigation is proposed but due to the uncertainty of effectiveness under the Project-specific conditions, this impact has been determined to be significant and unavoidable.
VEG-2	Construction	1, 2, & 3	**Substantial adverse effect (i.e., loss or removal) on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service**. Construction related effects to upland riparian and oak woodlands, primarily in the reservoir inundation area, would be significant and unavoidable even with mitigation because of the long-term loss of upland riparian and oak savanna habitat.

Number	Phase	Alts	Environmental Impact
VEG-4	Construction	1, 2, & 3	**Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance.** Oak woodlands are considered important under the state Oak Woodlands Conservation Act and county general plans, long-term loss of blue oak woodland from construction would conflict with these policies.
WILD-1	Construction	1, 2, & 3	**Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (golden eagle only).** The removal of mature trees within blue oak woodland, foothill pine, and oak savanna communities would be a long-term impact on golden eagle because of the length of time that would be required for newly planted trees to reach mature size and fully replace the habitat function and habitat value of the removed trees.
WILD-2	Construction & Operation	1, 2, & 3	**Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites.** Construction and operation of the Sites Reservoir would create a substantial barrier to the movement of native or migratory wildlife species or with established wildlife corridors that would not be fully mitigated.
GEO-7	Construction	1, 3	**Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.** The use of cement deep soil mixing for construction of TRR East could destroy paleontological resources. The ground disturbance would be deep, and a paleontological monitor would not be able to observe the disturbance or halt construction. Note that under the Project as proposed for approval in these findings, the location of the TRR under Alternative 3 has been moved to the west (TRR West), thereby avoiding this significant and unavoidable impact.

Number	Phase	Alts	Environmental Impact
LAND-1	Construction & Operation	2	**Physical division of an established community.** Construction and operation would result in the physical division of the community of Lodoga because the new South Road access route would substantially increase travel time to Maxwell.
AG-1	Operation	1, 2, & 3	**Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.** The Project would result in permanent conversion of Important Farmland to nonagricultural uses, mitigation would not replace or restore the acres of Important Farmland permanently converted to nonagricultural uses.
AG-2	Construction & Operation	1, 2, & 3	**Conflict with existing zoning for agricultural use or a Williamson Act contract.** Alternative 1 or 3 would remove a total of 13,868 acres from Williamson Act contracts as a result of direct impact, and Alternative 2 would remove a total of 13,340 acres.
TRA-5	Operation	2	**Substantially affect school bus travel**. The proposed South Road would result in longer travel time to connect the west side of the reservoir with Maxwell, which would substantially affect school bus travel.
AQ-1	Construction	1, 2, & 3	**Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard during construction, or conflict with or obstruct implementation of the applicable air quality plan.** Construction would result in a cumulatively considerable net increase of criteria pollutants for which the region is nonattainment under an applicable federal or state ambient air quality standard and conflict with an applicable air quality plan.

Number	Phase	Alts	Environmental Impact
AQ-2	Operation	1, 2, & 3	**Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard during operations, or conflict with or obstruct implementation of the applicable air quality plan.** Operations would result in emissions that exceed thresholds primarily as a result of recreational boating activity.
AQ-4b	Construction	1, 2, & 3	**Expose sensitive receptors to localized criteria pollutant emissions.** During construction, localized particulate matter emissions would expose sensitive receptors to substantial concentrations of localized criteria pollutants.
CUL-1	Construction	1, 2, & 3	**Cause a substantial adverse change in the significance of a historic built resource.** Construction would impact potentially significant built resources, including 18 potentially significant resources that are located in the reservoir inundation area.
CUL-2	Construction & Operation	1, 2, & 3	**Cause a substantial adverse change in the significance of an archaeological resource.** Construction and operation of the Project would result in impacts on potentially significant archaeological resources by materially altering or destroying them.
CUL-3	Construction & Operation	1, 2, & 3	**Disturb any human remains, including those interred outside of formal cemeteries.** Construction of the Project would disturb human remains interred in known cemeteries within the Sites Reservoir inundation area and could disturb other currently unknown human remains.
TCR-1	Construction & Operation	1, 2, & 3	**Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the lead agency has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.** Tribal cultural resources are within and surrounding the Project footprint and some will be significantly affected by the Project.

Number	Phase	Alts	Environmental Impact
VIS-1	Construction	1, 2, & 3	**Substantially degrade the existing visual character or quality of public views of the site and its surroundings.** Construction of the reservoir and its associated facilities would substantially degrade the existing visual character and visual quality of the area and adversely affect existing viewers at this location.

2. Overriding Considerations Justifying Project Approval

In accordance with CEQA Guidelines Section 15093, the Board has, in determining whether or not to approve the Project, balanced the economic, social, technological, and other project benefits against its unavoidable environmental risks, and finds that each of the benefits of the Project set forth below outweigh the significant adverse environmental effects that are not mitigated to less-than-significant levels. This statement of overriding considerations is based on the Board's review of the Final EIR and other information in the Authority's record of proceedings. Each of the benefits identified below provides a separate and independent basis for overriding the significant environmental effects of the Project. The benefits of the Project are as follows:

- Implementation of the Project will provide water supply benefits by capturing water from major storms and storing the water until it is most needed during dry periods providing:
    - State-wide water supply reliability.
    - State-wide drought resilience.
    - Operational flexibility for the CVP and SWP.
    - Consistency with the Governor's Executive Order N-10-19, which identified the state's current water challenges.
    - Consistency with the 2020 Water Resilience Portfolio, which identifies the need to expand smart surface water storage where it can benefit water supply and the environment.
    - Consistency with CALFED which sought to balance environmental and water supply challenges in our state.
- Implementation of the Project will provide ecosystem benefits through the following:
    - Provide Incremental Level 4 Refuge water supply benefits as identified under the Water Storage Investment Program.

- Provide additional flow into the Yolo Bypass to benefit delta smelt. Deliveries would increase desirable food sources in the late summer and early fall.

- Provides a flexible water asset dedicated to the environment. Tests concepts proposed by the Public Policy Institute of California to better manage water for the needs of the environment in California.

- Involvement on technical and advisory teams (e.g., Sacramento River Temperature Task Group) that would provide opportunities to work collaboratively to achieve species benefits in the Sacramento Valley and the Delta.

- Exchanges and investment by Reclamation have the potential to assist the CVP and SWP in meeting their regulatory obligations, authorized purpose, and improving conditions to protect, restore and enhance fish, wildlife, and associated habitats.

- Increases freshwater habitat for species such as such as bald eagle, dabbling ducks, water birds, along with gull and pelican species.

- Water source for terrestrial species such as elk, deer, and badger.

- Implementation of the Project will provide anadromous fish benefits through:

  - Enhanced opportunity for cold water pool management in Shasta Lake.

  - Enhanced frequency and amount of spring pulse flows in the upper Sacramento River.

  - Better ability to maintain stable river flows in the upper Sacramento River in the fall.

  - Based on modeling conducted by the National Marine Fisheries Service, the Project results in an overall increase in the population of endangered winter-run Chinook salmon.

- <u>The Project will provide the following local and regional benefits:</u>

  - Flood control benefits to:

    - The communities of Maxwell and Colusa, local agricultural lands, rural residences by impounding Funks Creek and Stone Corral Creeks.

    - Regional commerce and emergency services and evaluation routes by impounding Funks Creek and Stone Corral Creeks thereby reducing the frequency and depth of water flooding on Interstate 5.

    - Regional communities by reducing flows in the Sacramento River during high flow events.

- Recreational benefits include two primary recreation areas and a day-use boat ramp providing multiple recreational amenities, including campsites, boat access, horse trails, hiking trails, and vista points.

- Economic benefits:

    - Increase in construction income and jobs are expected to be larger than the decrease in agricultural jobs and income, resulting in an overall beneficial effect on regional economics.

    - A beneficial effect on local economics would result from increased recreational visitors and associated spending.

- Local employment benefits by providing medium-term construction jobs and long-term operations jobs.

- Improved safety and quality of local roadways after construction is complete.

The above list of benefits are documented in the chapters and appendices of the Final EIR and in the agency's record of proceedings and will support the Project's objectives to improve water supply reliability and resiliency, provide public benefits consistent with Proposition 1 of 2014 to improve statewide surface water supply reliability and flexibility and enhance opportunities for habitat and fisheries management, to improve CVP operational flexibility and improve opportunities for cold-water pool management in Shasta Lake to benefit anadromous fish, provide surface water to convey biomass from the floodplain to the Delta to enhance the Delta ecosystem, and to provide local and regional amenities.

E. Record of Proceedings

Various documents and other materials constitute the record of proceedings upon which the Board bases these findings and the approvals contained herein. The location and custodian of these documents and materials is Alicia Forsythe, Sites Project Authority, 122 West Old Highway 99, Maxwell, CA 95955.

F. Mitigation Monitoring and Reporting Program

In accordance with CEQA and the CEQA Guidelines, the Board must adopt a mitigation monitoring program to ensure that the mitigation measures presented in the Final EIR and adopted herein are implemented. The Board hereby adopts the Mitigation Monitoring Program for the Project attached to these findings as Exhibit B.

G. Summary

1. Based on the foregoing findings and the information contained in the record of proceedings, the Board makes the following findings with respect to the significant environmental effects of the Project identified in the Final EIR:

    a) For significant impacts that are reduced to less-than-significance due to one or more mitigation measures, the Board finds that changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effects on the environment.

    b) For significant impacts that remain significant and unavoidable after mitigation, the Board finds that specific economic, social, technological, or other considerations make infeasible any mitigation measures or alternatives identified in the Final EIR that would otherwise avoid or substantially lessen the identified significant environmental effects of the Project.

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

    a) All significant effects on the environment due to approval of the Project have been eliminated or substantially lessened where feasible.

    b) Any remaining significant effects on the environment found unavoidable are acceptable due to the factors described in the Statement of Overriding Considerations in Section II.D, above.

III. RESOLUTION OF APPROVAL

The Board hereby takes the following actions and makes the following approvals:

A. The Board has certified the Final EIR in Section I, above.

B. The Board hereby adopts as conditions of approval all mitigation measures within the responsibility and jurisdiction of the Authority set forth in Section II.B of the findings, above.

C. The Board hereby adopts the Mitigation Monitoring Program for the Project as discussed in Section II.F of the findings, above.

D. The Board hereby adopts these findings in their entirety as its findings for these actions and approvals.

E. Having certified the Final EIR, independently reviewed and analyzed the Final EIR, incorporated mitigation measures, and adopted findings and a Statement of Overriding Considerations, the Board hereby approves the Project which the EIR identified and evaluated as Alternative 3, with the TRR West location.

F. The Board hereby directs the Executive Director to file a Notice of Determination in accordance with the requirements of CEQA and the CEQA Guidelines.

G. The Board authorizes the Executive Director to pay all associated fees.

H. The Board authorizes the Executive Director to certify the CEQA record of proceedings.

Exhibit A
Sites Reservoir Project
Summary of Impacts and Mitigation

November 2023

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1.0 Introduction

The following provides a summary description of the California Environmental Quality Act (CEQA) environmental impacts of the Sites Reservoir Project (Project), describes the applicable mitigation measures identified in the Final Environmental Impact Report (Final EIR) and adopted by the Sites Project Authority's Board of Directors (Board), and states the Board's findings on the significance of each impact after imposition of the adopted mitigation measures. This document does not attempt to describe the full analysis of each CEQA environmental impact contained in the Final EIR. Instead, it provides a summary description of each CEQA impact, describes the applicable mitigation measures identified in the Final EIR and adopted by the Board, and states the Board's findings on the significance of each impact after imposition of the adopted mitigation measures.

2.0 Impact Determinations

The thresholds and criteria used in the Final EIR impact analyses for determining significance are specified in each resource chapter. These criteria were developed in consideration of current regulations, standards (e.g., CEQA Guidelines Appendix G Environmental Checklist Form), and/or consultation with state and federal agencies; professional judgment; knowledge of the Project design and the area that would be affected; and the context and intensity of the environmental effects.

Under CEQA, the impacts of the alternatives are compared to the existing conditions baseline and the No Project Alternative (existing conditions) and are classified as follows:

- No impact—No change in the environment would result from implementing the alternative.
- Less-than-significant impact—No substantial adverse change in the environment would result from implementing the alternative.
- Less than significant with mitigation—The implementation of one or more mitigation measures would reduce the impact from an alternative to a less-than-significant level.
- Significant impact—A potentially substantial adverse change in the physical conditions of the environment would result from implementing the alternative based on the evaluation of project effects using specified significance criteria. Mitigation measures are proposed, when feasible, to reduce effects on the environment.

2.1 Less-Than-Significant Impacts

A number of environmental impacts were analyzed and determined to either have no impact or are less than significant, with no mitigation required. These include:

- Impact HYDRO-1: Reduce water supply for non-Sites Storage Partner water users.
- Impact HYDRO-2: Substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on site or off site.
- Impact HYDRO-3: Impede or redirect flood flows.

- Impact WQ-3: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during maintenance activities.
- Impact WQ-4: Be placed in a flood hazard or seiche zone, risking release of pollutants due to Project inundation.
- Impact WQ-5: Conflict with or obstruct implementation of a water quality control plan.
- Impact WQ-6: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Impact FLV-1: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in a substantial increase or decrease in on- or offsite erosion or siltation.
- Impact FLV-2: Substantially alter natural river geomorphic processes (i.e., flow regime, sediment transport, and bank erosion) and existing river geomorphic characteristics (i.e., sinuosity, channel gradient, substrate composition, channel width and depth, and riparian vegetation).
- Impact FLV-3: Substantially alter the amount of instream woody material, boulders, shaded riverine aquatic habitat, or spawning gravel in Funks and Stone Corral Creeks downstream of Sites Reservoir.
- Impact FLV-4: Substantially alter geomorphic processes upstream of the dam sites.
- Impact GW-1: Violation of water quality standards or waste discharge requirements or otherwise substantial degradation of groundwater quality.
- Impact GW-2: Substantial decrease in groundwater supplies or substantial interference with groundwater recharge that would impede sustainable groundwater management of the basin.
- Impact GW-3: Conflict with or obstruct implementation of a sustainable groundwater management plan.
- Impact VEG-6: Introduction or increased spread of invasive plant species.
- Impact FISH-2: Operations effects on winter-run Chinook salmon.
- Impact FISH-3: Operations effects on spring-run Chinook salmon.
- Impact FISH-4: Operations effects on fall-run/late fall–run Chinook salmon.
- Impact FISH-5: Operations effects on Central Valley steelhead.
- Impact FISH-6: Operations effects on green sturgeon.
- Impact FISH-7: Operations effects on white sturgeon.
- Impact FISH-10: Operations effects on lampreys.

- Impact FISH-11: Operations effects on native minnows (Sacramento splittail, Sacramento hitch, hardhead, and Central California roach).
- Impact FISH-12: Operations effects on starry flounder and northern anchovy.
- Impact FISH-13: Operations effects on striped bass.
- Impact FISH-14: Operations effects on American shad.
- Impact FISH-15: Operations effects on threadfin shad.
- Impact FISH-16: Operations effects on black bass (largemouth bass, smallmouth bass, and spotted bass).
- Impact FISH-17: Operations effects on California bay shrimp.
- Impact FISH-18: Operations effects on reservoir fish species.
- Impact FISH-19: Operations effects on Southern Resident killer whale.
- Impact FISH-20: Maintenance effects on fish and aquatic biological resources.
- Impact GEO-1a: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault.
- Impact GEO-1b: Strong seismic ground shaking.
- Impact GEO-1c: Seismic-related ground failure, including liquefaction.
- Impact GEO-1d: Landslides.
- Impact GEO-2: Result in reservoir-triggered seismicity or be subject to a seiche.
- Impact GEO-3: Result in substantial soil erosion or the loss of topsoil.
- Impact GEO-4: Be located in a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Impact GEO-5: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
- Impact GEO-6: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
- Impact MIN-1: Loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

- Impact MIN-2: Loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.
- Impact LAND-2: Significant environmental impact due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.
- Impact AG-4: Involve other changes in the existing environment, which, due to their location or nature, could result in the conversion of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, as designated under the FMMP of the California Resources Agency or under the federal Farmland Protection Policy Act, to nonagricultural use.
- Impact REC-1: Increased use of existing neighborhood and regional parks or other recreational facilities that would result in new or accelerated substantial physical deterioration of those facilities.
- Impact EN-1: Potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation.
- Impact EN-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
- Impact EN-3: Place a substantial demand on regional energy supply or require substantial additional capacity or substantially increase peak and base period electricity demand.
- Impact TRA-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- Impact TRA-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)
- Impact TRA-3: Substantial increase in hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Impact TRA-4: Result in inadequate emergency access.
- Impact NAV-1: Substantially impair recreational and commercial navigation during construction and operations.
- Impact NOI-1: Generation of a substantial temporary increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Impact NOI-2: Generation of a substantial permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Impact NOI-3: Generation of excessive groundborne vibration or groundborne noise levels.
- Impact AQ-4a: Expose sensitive receptors to toxic air contaminants.
- Impact AQ-4c: Expose sensitive receptors to asbestos, lead-based paint, or fungal spores that cause Valley Fever.

- Impact AQ-5: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

- Impact VIS-2: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

- Impact POP-1: Induce substantial unplanned population growth in an area, either directly or indirectly.

- Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

- Impact UTIL-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, or other public facilities.

- Impact UTIL-2: Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

- Impact UTIL-3: Have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years.

- Impact UTIL-4: Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.

- Impact UTIL-5: Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or othe.rwise impair the attainment of solid waste reduction goals

- Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

- Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

- Impact HAZ-3: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

- Impact HAZ-4: Impair implementation of or physically interfere with adopted emergency response plan or emergency evacuation plan.

- Impact HAZ-5a: Be located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones and substantially impair an adopted emergency response plan or emergency evacuation plan.
- Impact HAZ-5b: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
- Impact HAZ-5c: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
- Impact HAZ-5d: Expose people or structures to a significant risk, loss, injury or death involving wildland fires or significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.
- Impact HAZ-6: Result in an impact on public health related to methylmercury bioaccumulation in fish.
- Impact HAZ-7: Result in an impact on public health due to an increase in harmful algal blooms.
- Impact HAZ-8: Result in substantial exposure of humans to mosquito-borne illnesses.
- Effect SOC-1: Substantial adverse effects on regional economics.
- Effect SOC-2: Substantial adverse effects on local economics (local government fiscal conditions and recreational economics).
- Effect SOC-3: Substantial adverse effects on agricultural economics.
- Effect SOC-4: Substantial adverse effects on municipal and industrial economics.

3.0 Significant Impacts

The following sections provide an overview of the Project's significant impacts, discussed by resource area and alternative. An initial impact statement is followed by a determination of how the resource area would be affected and identification of feasible mitigation to reduce impacts those impacts. Several of the impacts have been found by the Authority to be significant and unavoidable, as these impacts cannot feasibly be mitigated to a less-than-significant level. Significant and unavoidable impact determinations are noted in **bold.**

Table A-1 (attached) also provides a summary list of significant impacts for each alternative, a list of the mitigation measures identified to reduce impacts, and significance before and after mitigation.

3.1 Surface Water Quality

Impact WQ-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during construction

Construction of Project facilities would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality in the study area. Implementation of BMP[1]-11, BMP-12, BMP-13, and BMP-14 would minimize or avoid the potential discharge of pollutants, including sediment, to study area waterbodies.

The initial filling of Sites Reservoir would result in the release of nutrients and dissolved organic carbon to the water column from newly inundated soil and other organic matter in the inundation area. Decomposition of freshly submerged organic matter would consume oxygen and thus temporarily reduce DO in the reservoir. Conditions within the reservoir itself would be effects on the Project, rather than effects from the Project on the surrounding environment. Releases during the initial filling period would not reduce drinking water quality downstream due to nutrients and organic carbon or cause low DO because nutrients and organic carbon in Sites Reservoir releases would be diluted and water would be aerated upon release. Thus, effects from initial filling of Sites Reservoir on downstream conditions with respect to nutrients, organic carbon and DO would be less than significant.

The initial filling of Sites Reservoir would not result in the substantial introduction or spread of invasive aquatic vegetation because these species already exist in the Sacramento River system. Recreational boating activities could be limited during the initial filling period if HABs were also present (Section 2D.3), which would help reduce the substantial introduction or spread of invasive aquatic vegetation. Furthermore, potential effects of invasive aquatic vegetation on water quality would be actively managed and minimized, including through use of approved herbicides, as well as mechanical, biological, and manual removal methods where appropriate (Section 2D.3).

The initial filling of Sites Reservoir would result in temporarily elevated concentrations of nutrients and dissolved organic carbon relative to concentrations in diverted Sacramento River water. Elevated nutrient levels would promote initiation and sustainment of HABs in Sites Reservoir generally in late spring through fall. If cyanobacteria and cyanotoxins were present in reservoir releases, potential downstream effects on water quality would not be expected because concentrations of cyanobacteria and cyanotoxins would be greatly diluted when eventually discharged into the Sacramento River, and cyanotoxins would undergo biodegradation, adsorb to sediment, and photodegrade to some degree. Furthermore, measures including monitoring and restricting in-water recreation based on the presence of cyanobacteria and cyanotoxins, and releasing water from lower in the reservoir if cyanobacteria and cyanotoxins are confirmed near the I/O tower at a level at or exceeding the “Caution” action trigger level, would further reduce any potential for adverse water quality effects (Section 2D.3.1, *Harmful Algal Blooms*). The timing and volume of releases from Sites Reservoir to Funks and Stone Corral Creeks will be determined and adaptively managed to comply with California Fish and Game Code Section 5937. It is anticipated that the flows to these creeks will be managed to reflect the historical hydrograph and seasonal conditions as characterized by the aquatic studies. Sites Reservoir releases will thus likely occur in late fall, winter, and early spring at times when HABs are less likely to occur in the reservoir. Releases

[1] Best management practices (BMPs) are incorporated into the Project and are described in the EIR in Chapter 2, *Project Description and Alternatives*, and in Appendix 2D, *Best Management Practices, Management Plans, and Technical Studies.*

to the creeks could be curtailed if, relative to baseline conditions in the creeks, high concentrations of cyanobacteria or cyanotoxins were present in the reservoir release. Thus, effects from initial filling of Sites Reservoir on downstream conditions would be less than significant with respect to HABs.

In the short term, estimated reservoir total mercury and aqueous methylmercury concentrations would be approximately twice as high as estimated long-term average concentrations. Mercury concentrations in the short-term (within 1–10 years of initial filling) would not exceed the CTR criterion, but methylmercury fish tissue concentrations may exceed the California sport fish objective of 0.2 mg/kg ww. Conditions within the reservoir itself would be effects on the Project, rather than effects from the Project on the surrounding environment.

Sites Reservoir releases to Funks and Stone Corral Creeks would likely increase aqueous and fish tissue methylmercury concentrations in these creeks such that the sport fish tissue objective is exceeded but would not cause aqueous mercury concentrations to exceed the CTR criterion. In the short-term, given the greater mercury and methylmercury concentrations in releases relative to long-term concentrations, methylmercury in Sites Reservoir releases may temporarily increase aqueous and fish tissue methylmercury concentrations in the CBD. This temporary increase could cause exceedances of the sport fish objective because methylmercury concentrations in CBD fish approach the California sport fish objective under the No Project Alternative. Because Funks Creek and Stone Corral Creek are small, intermittent streams and their stream banks are located primarily on private land, it is unlikely that anglers would be fishing these creeks; accordingly, any potential exceedances of the sport fish objective at these locations would not be expected to affect the public. Aqueous mercury and methylmercury in the Yolo Bypass would not increase substantially due to Sites Reservoir releases, and these releases would not cause measurable increases in fish tissue methylmercury. Aqueous and fish tissue methylmercury concentrations in the Sacramento River at Freeport may increase measurably in Dry and Critically Dry Water Years during release periods due to methylmercury in Sites Reservoir releases. The potential methylmercury impact on water quality in the CBD, Funks and Stone Corral Creeks, and the north Delta would be significant. To reduce the magnitude of this impact, Mitigation Measure WQ-1.1, *Methylmercury Management,* would be implemented at Sites Reservoir with the goal of reducing the methylation of mercury in Sites Reservoir. Most of the methylmercury reduction actions under this mitigation measure are recommended actions for new reservoirs by the State Water Board and Regional Water Quality Control Boards , as identified in the *Draft Staff Report for Scientific Peer Review for the Amendment to the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Mercury Reservoir Provisions – Mercury TMDL and Implementation Program for Reservoirs* (State Water Resources Control Board 2017b). The potential to reduce methylmercury concentrations exists based on current research (State Water Resources Control Board 2017b) but may be site specific. As such, the degree of effectiveness of any single methylmercury minimization action or combination of actions to reduce methylmercury in Sites Reservoir during the initial fill period such that there would be no substantial measurable increase in aqueous and fish tissue methylmercury concentrations at the downstream locations due to Sites Reservoir releases is not known at this time. Therefore, this impact would be significant and unavoidable.

Mitigation Measure WQ-1.1: Methylmercury Management

The Authority will implement the following actions as part of the RMP (Section 2D.3) to minimize reservoir methylmercury production and bioaccumulation of methylmercury in reservoir fish so that the average methylmercury concentrations in Sites Reservoir fish do not exceed the 0.2 mg/kg sport fish

objective[2]. Most of these actions are recommended actions for new reservoirs by the State Water Board and Regional Water Quality Control Boards, as identified in the *Draft Staff Report for Scientific Peer Review for the Amendment to the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Mercury Reservoir Provisions – Mercury TMDL and Implementation Program for Reservoirs* (State Water Resources Control Board 2017b). The potential effectiveness of these recommended methylmercury reduction actions is supported by current research (State Water Resources Control Board 2017b) but may be site-specific. Methylmercury reduction actions and fish tissue monitoring will be implemented in coordination with the State Water Board and Central Valley RWQCB, as required.

1. Remove vegetation (e.g., brush, trees) in the inundation area prior to initial Sites Reservoir filling to reduce organic carbon. The decomposition of organic carbon in flooded soil and vegetation fuels the microbial methylation of mercury (Hall et al. 2005; Kelly et al. 1997).
2. Do not stock Sites Reservoir with fish for the first 10 years following its initial filling to reduce the potential for methylmercury bioaccumulation in reservoir fish when methylmercury levels in the reservoir are expected to be highest.
3. Upon completion of the initial filling of Sites Reservoir, implement a fish sampling program to determine whether game fish are present (e.g., due to unauthorized fish stocking) and whether a population has become established (i.e., presence of reproductively mature fish and several year classes). This sampling program would include one or two surveys in spring or early summer using a single electrofishing crew. The survey would include several transects along the shoreline, likely in the vicinity of the boat ramps and campgrounds. Once it has been determined that a population of game fish has established in the reservoir, begin monitoring Sites Reservoir fish tissue methylmercury concentrations (as total mercury) via annual tissue sampling.

Based on results from fish tissue monitoring, and in coordination with the State Water Board, Central Valley RWQCB, and the Office of Environmental Health Hazards Assessment, fish consumption warning signs will be posted in several visible locations around the reservoir if fish tissue concentrations exceed the 0.20 mg/kg ww sport fish objective[3]. As available in the reservoir, tissue from both sport and prey-sized fish from multiple species will be sampled in accordance with the State Water Board's Surface Water Ambient Monitoring Program, Safe to Eat Workgroup protocol (State Water Resources Control Board 2021c, 2022b). Mercury in fish tissues will be analyzed according USEPA's Method 1630 (U.S.

[2] The average methylmercury concentrations shall not exceed 0.2 milligrams per kilogram (mg/kg) fish tissue within a calendar year. The water quality objective must be applied to trophic level 3 (TL3) or trophic level 4 (TL4) fish, whichever is the highest existing trophic level in the water body. The objective applies to the wet weight concentration in skinless fillet. Freshwater TL3 fish are between 150 to 500 millimeters (mm) in total length and TL4 fish are between 200 to 500 mm in total length, or as additionally limited in size in accordance with the "legal size" set for recreational fishing, established by Title 14, California Code of Regulations 14 Sections 1–53.03.

[3] For evaluating compliance with the sport fish objective, monitoring will include representative TL4 fish species, if present, or TL3 fish if no TL4 fish are present in the reservoir. A sample will be considered either an analytical result from individual fish tissue or a composite of tissue from several fish. Sample sets for comparison with the sport fish objective shall include a range of TL3 fish between 150 to 500 mm total length and TL4 fish between 200 to 500 mm total length.

Environmental Protection Agency 1998b, or as updated). The annual reservoir mercury monitoring program will continue for a minimum of 10 years following the first year of regulated reservoir stocking.

4. Manage reservoir water chemistry to control methylmercury production. The scope of water chemistry management actions would be informed by actions proven feasible and effective at reducing mercury methylation in other mercury-impaired reservoirs in the state. Monitoring, including aqueous and fish tissue methylmercury, will be implemented to assess the effectiveness of methylmercury reduction measures.

Water chemistry management actions may include the addition of an oxidant (e.g., DO) to the reservoir bottom waters (near the sediment-water interface) to reduce anoxia when the reservoir is stratified. Oxygen levels can be increased in the hypolimnion of a reservoir using a hypolimnetic oxygenation system (HOS). The use of HOS to reduce hypolimnetic anoxia may suppress mercury methylation and discharge to the hypolimnion in some reservoirs (State Water Resources Control Board 2017b:7-42, 7-43); however, the effectiveness of this method in reducing fish tissue mercury concentrations is not clear based on results from studies to date. Seelos et al. (2021) found that after 4 consecutive years of operation of a HOS in two California reservoirs, Guadalupe and Stevens Creek Reservoirs, there was a significant, albeit modest, decrease in fish tissue mercury and that results suggested that this may have been due to oxygenation mixing nutrients into surface water and enhancing primary productivity, which indirectly affected mercury bioaccumulation by diluting concentrations in phytoplankton, rather than directly lowering methylmercury in the water column. In contrast, in Calero Reservoir, within the same watershed as Guadalupe Reservoir, near-continuous HOS operation during "the 2014 dry season" reduced hypolimnetic methylmercury but did not substantially reduce mercury concentrations in zooplankton or small fish (McCord et al. 2016). McCord et al. (2016) hypothesized that operational factors may have accounted for the lack of reduction in methylmercury bioaccumulation: (1) operation of the HOS after the onset of hypoxia below the epilimnion, which allowed the accumulation of methylmercury in the hypolimnion and metalimnion and subsequent mixing of the accumulated methylmercury into the epilimnion making it available for uptake by phytoplankton; (2) a vertical gap between the oxygen diffuser line and the deepest sediments left an hypoxic zone that acted as an ongoing source of methylmercury to the hypolimnion, which was then mixed into the water column by the bubble plume of the HOS; and (3) the HOS did not overcome the hypoxia in the metalimnion, which may have provided methylmercury to the epilimnion.

If a HOS is implemented at Sites Reservoir, the addition of oxygen would take place annually just prior to the onset of stratification until after reservoir turnover in late fall or early winter. Pilot studies within the reservoir will help inform the design (e.g., sizing, type of oxygenation system) and operation (i.e., design oxygen delivery rate) parameters that result in the most effective reduction of in-reservoir mercury methylation and fish tissue methylmercury concentrations while avoiding potential adverse effects on reservoir water quality. The Authority will retain a qualified water quality specialist and/or fisheries biologist with expertise in methylmercury management to design these studies.

5. Manage reservoir fisheries to reduce in-reservoir fish tissue methylmercury levels. The scope of fisheries management actions would be informed by actions proven feasible and effective at other mercury-impaired reservoirs in the state. Fisheries management actions could include the following.

    a. Intensive fishing to reduce fish populations to provide more food resources for remaining fish. This would increase the growth rate in the remaining fish and reduce their methylmercury body burdens through somatic growth dilution.

b. Stocking the reservoir with low-methylmercury prey fish for stocked predator fish to consume.

c. Stocking more or different sport fish species, including lower trophic level sport fish.

d. Stocking large, old predator fish from hatcheries that supply fish with low methylmercury concentrations.

To assess the effectiveness of methylmercury reduction actions after initial implementation, fish tissue methylmercury concentrations (as total mercury) will be monitored. Young fish will be sampled because they have accumulated methylmercury for a shorter time period relative to older, larger sport fish and therefore will better reflect recent mercury exposure (State Water Resources Control Board 2017b). Fish tissue methylmercury concentrations in young fish will be assessed prior to implementation of any methylmercury reduction action.

To assess the effectiveness of fisheries management actions over the long term, ongoing monitoring of aqueous and fish tissue methylmercury in Sites Reservoir will be implemented per requirements or conditions in a water right order, Section 401 water quality certification issued pursuant to the CWA, or other appropriate order issued by the State Water Board and/or Central Valley RWQCB.

The Authority will coordinate with the Central Valley RWQCB to implement mercury/methylmercury control or reduction measures and monitor and report on fish tissue methylmercury, as required.

Impact WQ-2: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during operation

Except as noted below, operation of Alternatives 1, 2, and 3 would not substantially degrade water quality and would have less than significant effects on water quality with respect to changes in salinity, water temperature at discharge sites, HABs, invasive aquatic vegetation, nutrients, organic carbon, DO, mercury, and, for most locations, pesticides and metals for the following reasons:

- Water Temperature: fisheries resources are the primary designated beneficial use potentially affected by water temperature. As such, most of the potential effects associated with changes in water temperature are discussed in Chapter 11, *Aquatic Biological Resources*. Water temperature is also discussed in Chapter 15, *Agriculture and Forestry Resources*, because it is important for growing rice. The analysis in this chapter focuses on the Central Valley Basin Plan objective for waterbodies designated with the WARM or COLD beneficial use that at no time or place shall the temperature of intrastate waters be increased more than 5°F above natural receiving water temperature. Operation would not increase water temperature more than 5°F at discharge locations, in compliance with the Central Valley Basin Plan.
- Salinity: operation would not result in a substantial increase in salinity or violations of Delta or other water quality objectives due to the relatively low EC of the Sacramento River water used to fill the reservoir, the small volume of local inflows (Salt Pond and creeks), the requirements for salinity monitoring and I/O tower operation (Section 2D.3), dilution of the Sites Reservoir discharge by the Sacramento River, and limited effects of CVP/SWP reoperation on Delta water quality.
- Nutrients, Organic Carbon, Dissolved Oxygen: operation would not reduce drinking water quality downstream due to nutrients and organic carbon or cause low DO because nutrients and

organic carbon in Sites Reservoir releases would be diluted and water would be aerated upon release. Any increases in reservoir nutrient concentrations may benefit fish. Yolo Bypass habitat releases from Sites Reservoir may cause a temporary reduction in DO (below the 5.0 mg/L water quality objective) in the Toe Drain, Tule Canal, and other Yolo Bypass channels, but this would not be substantially different than what occurs historically during non-managed flow pulses under the No Project Alternative. Although habitat releases may stimulate phytoplankton growth, this would be unlikely to be of a magnitude that would result in a nuisance or adversely affect beneficial uses.

- HABs, Invasive Aquatic Vegetation: operation would result in reservoir drawdown, reduced storage volume, and higher water temperatures from late spring through fall, particularly in Dry and Critically Dry Water Years. This would create favorable conditions for the initiation of HABs, and growth of invasive aquatic vegetation. If cyanobacteria and cyanotoxins were present in Sites Reservoir releases, potential downstream effects on water quality and beneficial uses would not be expected because concentrations of cyanobacteria and cyanotoxins would be greatly diluted when eventually discharged into the Sacramento River, and cyanotoxins would undergo biodegradation and, to some degree, photodegradation and adsorption to sediment. Furthermore, measures including monitoring and restricting in-water recreation based on the presence of cyanobacteria and cyanotoxins in Sites Reservoir, and releasing water from lower in the reservoir if cyanobacteria and cyanotoxins are confirmed near the I/O tower at a level at or exceeding the "Caution" action trigger level, as well as other potential management actions (such as hypolimnetic oxygenation) would further reduce any potential for adverse water quality effects (Section 2D.3). In TC Canal, GCID Main Canal, and CBD, where there would be less dilution of Sites Reservoir releases, cyanobacteria and cyanotoxins are expected to have limited effect due to controlled releases from the I/O tower, aquatic algaecides routinely used by TCCA and GCID, lack of HAB-conducive conditions in CBD, and the effect of biotic and abiotic processes to reduce the concentration of cyanotoxins in the water column. In addition, releases to Funks and Stone Corral Creeks will be adaptively managed to ensure that fish in the creeks are kept in good condition in compliance with California Fish and Game Code Section 5937. It is anticipated that the flows to these creeks will be managed to reflect the historical hydrograph. Sites Reservoir releases will thus likely occur in late fall, winter, and early spring at times when HABs are less likely to occur in the reservoir. Releases to the creeks could be curtailed if, relative to baseline conditions in the creeks, high concentrations of cyanobacteria or cyanotoxins were present in the reservoir release. Based on results from the North Delta Food Subsidy studies and hydrologic processes (increased flow in the Yolo Bypass canals and tidal mixing), habitat flows through the Yolo Bypass would not be expected to cause substantial increases in HABs in the canals of the Yolo Bypass or the north Delta. Sites contributions to Sacramento River flow at Freeport would also not be expected to increase HAB formation in the Delta because concentrations of cyanobacteria and cyanotoxins from Sites Reservoir in the lower Sacramento River would be minimal and would represent an insubstantial fraction of the potential cyanobacteria seed supply to the Delta.
- Impacts with respect to invasive aquatic vegetation would be the same as described under Impact WQ-1. Potential effects of invasive aquatic vegetation on water quality would be actively managed and minimized, including through use of approved herbicides, as well as mechanical, biological, and manual removal methods, where appropriate (Section 2D.3). Project operations would not increase HABs in the Delta because water would be diverted during the winter and would not reduce flows (i.e., increase residence time) when HABs typically occur in the Delta (i.e., summer).

- Pesticides: concentrations in Sites Reservoir and Sites releases are expected to be low because source water concentrations are low; operations would not change the overall pesticide load to the Delta as pesticides are already present in the Yolo Bypass; any increase as a result of habitat flows into Yolo Bypass would be reduced by net and tidal flows from the Sacramento River and the California Department of Fish and Wildlife (CDFW) would use habitat flows in the manner most advantageous to ecosystem benefits identified in the WSIP program.
- Mercury and Methylmercury: operation would not cause mercury concentrations to exceed the CTR criterion in Sites Reservoir. Sites Reservoir releases with estimated expected long-term aqueous methylmercury concentrations would be lower than that in the CBD under the No Project Alternative and therefore would not be expected to increase bioaccumulation of methylmercury in CBD fish. Sites Reservoir releases could increase aqueous and fish tissue methylmercury concentrations in the CBD, particularly during Dry and Critically Dry Water Years at estimated long-term worst-case methylmercury concentrations in releases. However, fish tissue methylmercury levels in the CBD would likely return to baseline levels within months following the May–November release period.
- Metals other than Mercury: operation would not cause significant effects on water quality in the CBD, Funks Creek, water used for local agriculture (e.g., arsenic), or the Sacramento River. Discharge of Sites Reservoir water to the CBD would likely reduce metals concentrations in the CBD because metal concentrations in the CBD are generally higher than metals concentrations in the Sacramento River regardless of time of year. Project effects on Funks Creek would be less than significant because (1) exceedances likely already occur under 2020 baseline conditions and the No Project Alternative in the reach of the creek where existing flows would be replaced by reservoir releases; (2) the limited channel length that would be maximally affected by reservoir releases; (3) reductions in total metal concentrations due to settling of suspended sediment; and (4) water would be released to the creek from the I/O Works (i.e., higher in the reservoir away from the bed sediment). Water quality, including metals concentrations, will be monitored in the creeks and adaptive management will occur as necessary to maintain fish in the creeks in good condition in compliance with California Fish and Game Code Section 5937 (Appendix 2D). In the Sacramento River, discharges to the river from Sites Reservoir would occur after reductions in total metal concentrations due to settling of suspended sediment. These discharges would not cause substantial increases in concentration or exceedances or exacerbation of exceedances of water quality standards for metals in the Sacramento River.

Operation of Alternatives 1, 2, or 3 could cause significant water quality impacts related to the following constituents:

- Methylmercury: Sites Reservoir releases may cause measurable long-term degradation of water quality downstream in the north Delta by causing increases in aqueous and fish tissue methylmercury concentrations, relative to the No Project Alternative, in Dry and Critical Water Years, and causing exceedances of the methylmercury TMDL fish tissue objectives to occur more frequently and/or by greater magnitudes during these years and release period. Mercury and methylmercury in reservoir releases to Funks and Stone Corral Creeks would be reflected in the tissue of fish in these creeks and could cause exceedances of the 0.2 mg/kg ww sport fish objective. This would be a significant impact. Mitigation Measure WQ-1.1, *Methylmercury Management,* would be implemented at Sites Reservoir to reduce the magnitude of this impact. Mitigation Measure WQ-1.1 would be implemented to reduce the methylation of mercury in Sites Reservoir. Although the potential to reduce methylmercury concentrations exists based on

current research (State Water Resources Control Board 2017b), the effectiveness of the methylmercury minimization actions to reduce methylmercury concentrations in Sites Reservoir such that there would be no substantial measurable increase in aqueous and fish tissue methylmercury concentrations at downstream locations is not known at this time. Therefore, this impact would be **significant and unavoidable**.

- Metals in Stone Corral Creek: operation could cause elevated concentrations of some metals in Stone Corral Creek because reservoir discharges to Stone Corral Creek would generally come from the bottom of Sites Reservoir, where metal concentrations may be greater than in other parts of the reservoir water column. Mitigation Measure WQ-2.1, *Prevent Metal Impacts in Stone Corral Creek Associated with Sites Reservoir Discharge*, would be implemented if metal concentrations in Stone Corral Creek exceed water quality standards for the protection of aquatic life during the drier parts of the year when exceedances would not be expected. Implementation of Mitigation Measure WQ-2.1 would reduce this impact to less than significant because releases would be controlled and metal concentrations would be reduced.
- Metals and Pesticides in Yolo Bypass: operation could cause elevated concentrations of some metals and pesticides in Yolo Bypass as a result of redirection of some of the CBD water from the Sacramento River to the Yolo Bypass. Mitigation Measure WQ-2.2, *Prevent Net Detrimental Metal and Pesticide Effects Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass*, includes evaluation of metals and pesticide concentrations in Yolo Bypass to ensure net benefits for aquatic communities and discontinuing flows if shown otherwise. Implementation of Mitigation Measure WQ-2.2 would reduce impacts to less than significant because flow would be terminated if needed.

Mitigation Measure WQ-1.1: Methylmercury Management

See Impact WQ-1 for a description of this mitigation measure.

Mitigation Measure WQ-2.1: Prevent Metal Impacts in Stone Corral Creek Associated with Sites Reservoir Discharge

The metals of concern for Project operations include aluminum, copper, iron, and lead. Mercury is considered separately. The effect of the Project on metal concentrations in Stone Corral Creek is uncertain and therefore considered potentially significant without mitigation. To evaluate the potential effect, metal concentrations will be measured in samples collected from Stone Corral Creek approximately half a mile downstream from Sites Dam. Samples will be collected every other month for 1 year prior to construction and every other month after construction for a period sufficient to indicate that any impacts are less than significant, including during periods when the reservoir is at least 75% full. The measurements will include total and dissolved aluminum, copper, iron, lead, and hexavalent chromium. Hexavalent chromium is included because existing data are insufficient to evaluate potential Project effects. Measurements of metal concentrations will be accompanied by measurements of pH, dissolved organic carbon, and hardness because these parameters influence water quality standards for aquatic life protection for some metals. Additional metal measurements are planned for the Stone Corral Creek and Funks Creek Aquatic Study Plan (Section 2D.4).

Under the No Project Alternative, exceedances of standards for the protection of aquatic life for total aluminum, copper, iron, and lead (standards shown in Table 6-9) tend to occur in the Sacramento River and Stone Corral Creek during the rainy season. Stone Corral Creek would be considered as affected by elevated metal concentrations if they were found to exceed thresholds for aquatic life protection during

the drier parts of the year when exceedances would not be expected. For evaluation purposes, this drier part of the year would begin in April or a month after the last diversions to Sites Reservoir storage, whichever is later, and run through November or until the commencement of diversions to storage, whichever is earlier.

If measurements from Stone Corral Creek taken during this dry period indicate that concentration of one or more of these metals is greater than water quality standards for the protection of aquatic life, actions to reduce metal concentrations in Stone Corral Creek will be implemented to reduce concentrations to levels that meet these standards. Mitigative actions may include, but are not limited to, one or more of the following types of measures.

- Modify the flow released to Stone Corral Creek. Changes in release flow could affect metal concentrations in the reservoir discharge by altering the withdrawal zone in the reservoir.
- Release occasional pulses of high flow. Flow pulses could flush away low-quality sediment and water from the bottom of the reservoir adjacent to Sites Dam.
- Add a vertical extension in the reservoir at the withdrawal point. This extension would pull water from higher in the reservoir, where metal concentrations are expected to be lower.
- Pump water from the top of Sites Reservoir for release into Stone Corral Creek. Based on the demonstration of the effect of partial settling of suspended sediment on total metal concentrations in Sites Reservoir and the conservative nature of this assessment, metal concentrations in Sites Reservoir are generally expected to meet water quality standards for metals for the protection of aquatic life during the drier parts of the year in water located above the deepest portions of the reservoir.
- Discontinue or delay releases. The flow regime for Sites Reservoir releases to Stone Corral Creek has not yet been established, but it is likely to be similar to the natural hydrograph. If Sites Reservoir releases to Stone Corral Creek would exceed the objective described above (exceed thresholds for aquatic life protection during the drier parts of the year when exceedances would not be expected), releases could be discontinued in the spring or delayed in the fall, such that the exceedances would not occur, without resulting in substantial deviation from the flow pattern of the natural hydrograph.

Mitigation Measure WQ-2.2: Prevent Net Detrimental Metal and Pesticide Effects Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass

The effect of the Project on metal and pesticide concentrations in the Yolo Bypass due to increased inflow from the CBD is uncertain and therefore considered potentially significant without mitigation. Flow augmentation with other water sources is continuing to be evaluated with oversight from the Delta Coordination Group. The effect of Yolo Bypass flow augmentation on pesticide levels in water and plankton is under investigation by the U.S. Geological Survey and DWR (Orlando et al. 2020:99). This mitigation measure provides for monitoring of metal concentrations in the Yolo Bypass and for cessation of flows from the Project to the Yolo Bypass if needed for avoiding significant impacts.

To monitor metal concentrations, metal concentrations will be measured in samples collected at the downstream end of the CBD and at two locations in the Yolo Bypass, one in the Tule Canal and the other in the Toe Drain. Samples will be collected monthly during June–October to evaluate concentrations before and during the period of CBD discharge to the Yolo Bypass.

If the pesticide studies indicate that flow augmentation would increase pesticide concentrations to a level that could be detrimental to fish or if the metal measurements indicate that the Project habitat flows could cause Yolo Bypass concentrations of metals to exceed water quality standards for aquatic life protection, the potential net effects of these elevated concentrations on aquatic communities will be evaluated. Net effects include additive or synergistic effects, effects on food supply for fish, and direct effects on fish. This evaluation will be part of the ongoing evaluation conducted by CDFW and other agencies to determine net benefits of the Yolo Bypass habitat flows and the Project's funded ecosystem benefits under the WSIP. CDFW would have the discretion to modify WSIP water that is released to Yolo Bypass, depending on the state of the science and fish needs, and flows would cease if there were no net benefit.

3.2 Vegetation and Wetland Resources

Impact VEG-1: Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

Alternative 1 and 3

Construction of Alternative 1 or 3 would result in significant impacts on special-status plant species by reducing the number of occurrences of special-status plants and lowering the quality of occupied habitat for bent-flowered fiddleneck, brittlescale, red-flowered bird's-foot trefoil, and San Joaquin spearscale. Construction could also affect potential habitat for additional special-status plant species, including the federally listed Keck's checkerbloom and palmate-bracted bird's-beak. The Authority will implement BMP-10, BMP-12, BMP-13, BMP-33, BMP-35, and BMP-36 that would limit direct impacts on special-status plants before and during construction. Indirect impacts under Alternative 1 or 3 due to erosion, sedimentation, and contamination from hazardous or petroleum substances into occupied special-status plant habitats located outside of the construction area would be avoided with implementation of BMP-12 and BMP-13. The occurrences of special-status plants in the construction footprint are significant because their loss could substantially decrease genetic diversity for the species, particularly the red-flowered bird's-foot trefoil, which is known from only eight locations. While measures would be implemented before and during construction to avoid and minimize impacts on special-status plants, Alternative 1 or 3 would still result in the loss and habitat quality degradation of their habitats. Additionally, the construction footprint has not been recently or completely surveyed for special-status plants, and there is potential for additional species or locations of the known special-status plant species to occur in the footprint and be subject to construction-related impacts.

The direct, permanent losses of special-status plants would be a significant impact. Implementation of Mitigation Measures VEG-1.1 and VEG-1.2 would reduce the level of impact to less than significant because all locations of special-status plants in and within 300 feet of the Project footprint would be identified, mapped, and avoided, if feasible. If avoidance is not feasible, the acquisition and permanent protection of occupied habitat for each affected species at identified ratios would ensure some of the populations of these species would survive in perpetuity.

Operation impacts on special-status plants would not occur from erosion, sedimentation, or spills of hazardous or petroleum substances because such activities either would not be located in proximity to special-status plant species or potential impacts would be minimized by implementation of BMP-12 and

BMP-13 by the Authority. The Authority will develop and implement the LMP and Recreation Management Plan to further protect special-status plants. Operation impacts on special-status plants from vegetation maintenance activities could result in losses of special-status plants, and this would be a significant impact. Implementation of Mitigation Measure VEG-1.3 would reduce the level of impact to less than significant because all locations of special-status plants in the vegetation maintenance areas would be identified, fenced, and avoided prior to any maintenance activities.

Mitigation Measure VEG-1.1: Conduct Appropriately Timed Surveys for Special-Status Plant Species Prior to Construction Activities

The Authority will require qualified botanists to conduct special-status plant surveys of the Project footprint, including all permanent and temporary construction impact areas and a 250-foot-wide buffer area to encompass areas where indirect effects may occur. The surveys will be conducted in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (California Department of Fish and Wildlife 2018), or the most current protocols, specifically with respect to the number and timing of surveys, use of reference populations, and evaluation of negative findings. Surveys will occur during the seasons that special-status plant species would be evident and identifiable, which generally is during their blooming periods. The surveys will be conducted no more than 3 years prior to the start of ground-disturbing activities. The results of the surveys will be submitted in a report to CDFW and/or USFWS for review no less than 1 year prior to the start of ground-disturbing activities.

The survey report will include the location and description of all work areas and the location and description of all occupied habitat for special-status plant species. The report will also identify locations where effective avoidance measures could be implemented. In areas where no special-status plant species are present, no further mitigation will be required.

Mitigation Measure VEG-1.2: Establish Activity Exclusion Zones Around Special-Status Plants in Temporary Impact Areas and Compensate for Permanent Impacts on Special-Status Plant Species

Where surveys conducted according to Mitigation Measure VEG-1.1 determine that a special-status plant species is present in or adjacent to an area where temporary ground-disturbing activities would take place, the Authority will avoid Project impacts on the species, if feasible, through the establishment of activity exclusion zones, in which no ground-disturbing activities will take place, including construction staging or other temporary work areas. Activity exclusion zones for special-status plant species will be a minimum of 50 feet established around each occupied habitat site, the boundaries of which will be clearly marked with construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 250 feet of the occupied habitat. The size of activity exclusion zones may be reduced below 50 feet through consultation with a qualified biologist and with concurrence from CDFW or, for any federally listed species, from USFWS based on site-specific conditions.

If exclusion zones cannot feasibly be established for avoidance, and construction would result in take of federally listed or state-listed plants or plant parts (roots, shoots, fruit, or seeds), the Authority will apply for take authorization through an Incidental Take Permit from USFWS for any federally listed plant or CDFW for any state-listed plant.

Prior to any construction activities that would result in permanent impacts on special-status plants, the Authority will acquire and permanently protect compensatory mitigation habitat for each affected species at a minimum 2:1 ratio (2 acres preserved for every 1 acre permanently affected), but the final compensation ratios will be based on site-specific information and determined through coordination with the applicable state and/or federal agencies (CDFW, USFWS) during permit processing. The compensation acreage used for the ratio will be based on the area of impact as determined by surveys required under Mitigation Measure VEG-1.1. Compensatory mitigation will be accomplished by procurement of existing onsite or offsite occupied habitat acquired in fee, through conservation easements, or by purchasing credits from a certified conservation bank or mitigation bank. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of the two) would be completed as agreed upon by the Authority, USFWS, and/or CDFW, as appropriate for the species being mitigated. If onsite or offsite occupied habitat is acquired (permittee-responsible mitigation), the habitat will require monitoring by the Authority. If credits are purchased from a certified bank, no further monitoring will be required.

The Authority will monitor any permittee-responsible mitigation habitat annually for a minimum of 5 years, or as required by the regulating agency, to verify that the habitat suitability and extent of species cover are maintained. For these mitigation areas, the Authority will prepare and implement an operations and management plan for each compensation habitat, with funding provided through an endowment. The plan will include requirements to monitor the occupied habitat, including the special-status species absolute and relative cover, cover of other native species, and cover of invasive species. The plan will also be consistent with the LMP and will determine and implement appropriate management measures to maintain the habitat and the plant species cover at the same or greater extent as when the occupied habitat was acquired. Management measures may include removal of invasive plant species. The Authority will submit annual monitoring reports to CDFW or, for any federally listed species to USFWS, for review and verification that the Project remains in compliance with the mitigation requirements.

Mitigation Measure VEG-1.3: Establish Activity Exclusion Zones Around Special-Status Plants Prior to Vegetation Maintenance Activities

Prior to surface-disturbing maintenance or herbicide use, the Authority will use the results of the surveys conducted under Mitigation Measure VEG-1.1 to mark the known locations of special-status plants in or within 50 feet of any maintenance areas. Prior to maintenance requiring surface disturbance or vegetation removal in annual grassland, chaparral, oak woodland and savanna, and wetlands, the Authority will require qualified botanists to conduct special-status plant surveys of the maintenance areas. If any special-status plants are found in or within 50 feet of the maintenance areas, the Authority will fence and avoid the plants that could be affected by surface-disturbing maintenance activities.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that construction of the South Road would result in greater loss of annual grassland, chamise, mixed chaparral, blue oak woodland, oak savanna, and seasonal wetland, and the smaller reservoir would result in somewhat smaller loss of special-status plant habitats. The Authority will implement BMP-10, BMP-12, BMP-13, BMP-33, BMP-35, and BMP-36, which would limit direct impacts on special-status plants before and during construction. Indirect impacts under Alternative 2 due to erosion, sedimentation, and contamination from hazardous or petroleum substances into occupied special-status plant habitats located outside of the construction area would be avoided with implementation of BMP-

12 and BMP-13. As with Alternatives 1 and 3, implementation of Mitigation Measures VEG-1.1 and VEG-1.2 would reduce the level of impact to less than significant. The Authority would minimize operation impacts on special-status plants by implementing BMP-12 and BMP-13. There would be no impact in the recreation areas, but there would be potential impacts in vegetation maintenance areas. As with Alternatives 1 and 3, implementation of BMPs, the LMP, the Recreation Management Plan, and Mitigation Measure VEG-1.3 would reduce the level of impact from vegetation maintenance to less than significant.

Impact VEG-2: Substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

Alternative 1 and 3

Alternative 1 or 3 would result in significant impacts on state-protected sensitive natural communities by direct removal of vegetation in these communities for the regulating reservoirs and conveyance complex, Sites Reservoir, roads, and recreation areas. Implementation of BMP-33, BMP-35, and BMP-36 will avoid and minimize permanent and temporary impacts on sensitive natural communities. Indirect impacts under Alternative 1 or 3 due to erosion, sedimentation, and contamination from hazardous or petroleum substances into sensitive natural communities located outside of the construction area would be avoided with implementation of BMP-12 and BMP-13. The sensitive natural communities in the construction footprint are important because they are rare and/or declining in California and elsewhere. Measures would be implemented before and during construction to avoid and minimize impacts on sensitive natural communities. The construction of Alternative 1 or 3 would still result in the loss of sensitive natural communities and habitat quality degradation. The loss of sensitive natural communities would be significant. Implementation of Mitigation Measures VEG-2.1 and VEG-2.2 would reduce the level of impact because all locations of sensitive natural communities in and within 300 feet of the Project footprint would be identified and mapped, and the acquisition and permanent protection of in-kind communities for each affected sensitive natural community at identified ratios would ensure survival of the affected sensitive natural community in perpetuity. Mitigation for impacts on sensitive communities within annual grassland could be accomplished in one or two seasons because of the relatively rapid growth rate of herbaceous plants. Implementation of mitigation would avoid, minimize, and compensate for loss of sensitive communities within annual grassland and would reduce the level of this impact to less than significant. For upland riparian and oak savanna communities, the removal of mature trees would be a long-term impact because of the length of time that would be required for newly planted trees to reach mature size and fully replace the habitat function and habitat value of the removed trees. This impact would remain **significant and unavoidable** even with mitigation because of the long-term loss of upland riparian and oak savanna habitat.

Operation impacts from vegetation maintenance could result in losses of sensitive natural communities in annual grasslands, oak savanna, oak woodland, or upland riparian, and this would be a significant impact. Operation impacts on sensitive natural communities from erosion, sedimentation, and spills of hazardous or petroleum substances would be avoided by implementing BMP-12 and BMP-13. In addition, the LMP and the Recreation Management Plan would include exclusion practices that would be implemented during the operations phase. Implementation of Mitigation Measure VEG-2.3 would reduce the level of impact to less than significant because sensitive natural communities in vegetation maintenance areas would be identified, fenced, and avoided during vegetation maintenance activities.

Mitigation Measure VEG-2.1: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities

Prior to the start of any Project construction activities, the Authority will retain qualified botanists to conduct surveys of the Project area, including all permanent and temporary impact areas and an additional buffer of 250 feet to encompass potential indirectly affected areas. The surveys will be conducted in accordance with Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (California Department of Fish and Wildlife 2018), or most current protocols. Surveys will occur during the season that plant species would be evident and identifiable, which generally is during their blooming season. Surveys will also include assessment of SRA cover, using standard methods for measuring linear feet and area, in all permanent and temporary impact areas. The surveys will be conducted no more than 3 years prior to the start of ground-disturbing activities.

The results of the survey will be submitted in a report to CDFW and/or USFWS for review no less than 90 days prior to the start of ground-disturbing activities. The report will include the location and description of all work areas and the location and description of all sensitive natural communities and oak woodlands, and it will identify locations where effective avoidance measures could be implemented. In areas where no sensitive natural communities or oak woodlands are present, no further mitigation will be required.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

Where surveys determine that a sensitive natural community is present in or adjacent to an area where temporary ground-disturbing activities would take place, the Authority will avoid Project impacts on the community, if feasible, through the establishment of activity exclusion zones, in which no ground-disturbing activities will take place, including construction staging or other temporary work areas. Activity exclusion zones for sensitive natural communities will be a minimum of 50 feet established around each community site, the boundaries of which will be clearly marked with construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 250 feet of the sensitive natural community. The size of activity exclusion zones may be reduced below 50 feet through consultation with a qualified biologist and with concurrence from CDFW or, for any federally protected communities of concern, from USFWS based on site-specific conditions.

Prior to any activities that would result in permanent impacts on sensitive natural communities, the Authority will acquire and permanently protect compensation habitat for each affected sensitive natural community at a minimum 1:1 ratio (1 acre restored or created for every 1 acre removed), or by an equivalent or greater requirement determined through coordination with state and/or federal agencies (CDFW, USFWS) during permit processing. The compensation acreage used for the ratio will be based on the area of impact as determined by surveys required under Mitigation Measure VEG-2.1. In addition to mitigating the loss of riparian habitat, specific measures will be included, as detailed in Impact FISH-1, to compensate for the loss of SRA cover (area and linear feet), as portions of the affected riparian habitat also provide SRA cover for fish. Loss of SRA cover will be mitigated at a ratio of 3:1 or by an equivalent or greater requirement determined through coordination with state and/or federal agencies (CDFW, USFWS, and NMFS). The mitigation credits for SRA cover mitigation will apply toward riparian habitat mitigation requirements (i.e., the acreage required for compensation will not be duplicated).

Compensation habitat for sensitive natural communities will consist of existing onsite or offsite in-kind habitat acquired in fee, through conservation easements, or from by purchasing credits from a certified conservation bank or mitigation bank. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of the two) would be completed as agreed upon by the Authority, CDFW, USFWS, and/or NMFS, as appropriate for the resource being mitigated. If onsite or offsite habitat is acquired (permittee-responsible mitigation), the habitat will require monitoring by the Authority. If credits are purchased from a certified bank, no further monitoring will be required.

The Authority will monitor any permittee-responsible mitigation areas annually for a period of 10 years for woodland habitats or 5 years for herbaceous habitats or more as required by CDFW or USFWS, to verify that the community suitability is maintained including survival and cover of plantings. For these mitigation areas, the Authority will prepare and implement an operations and management plan for each compensation community, with funding provided through an endowment. The plan will include requirements to monitor the mitigation areas, including comparisons between the mitigation habitat and a reference site of the same habitat retained in the preconstruction survey buffer area. Monitoring criteria may include survival, size, vigor, and percent cover of the dominant tree species for woodland habitats; percent cover of shrubs for riparian habitat and herbaceous species for grassland habitats; percent cover of invasive species for all sensitive community types; and any other relevant performance standards of the permittee-responsible mitigation required by agencies as part of the permits. In any years in which the performance standards are not met, causes for the failure, such as inadequate maintenance, irrigation, or other biotic factors will be assessed; remedial measures will be developed and implemented; and replacement plantings will be installed. The monitoring period for any subsequent plantings will restart from the date of planting. The Authority will submit annual monitoring reports to CDFW or, for any federally protected communities, to USFWS for review and verification that the Project remains in compliance with the mitigation.

Mitigation Measure VEG-2.3: Establish Activity Exclusion Zones Around Sensitive Natural Communities Prior to Vegetation Maintenance Activities

The Authority will retain a qualified botanist to use the results of the surveys conducted under Mitigation Measure VEG-2.1 to mark the locations of sensitive natural communities in vegetation maintenance areas. The Authority will fence and avoid any parts of sensitive natural communities that occur in or within 50 feet of the vegetation maintenance areas that could be affected by surface-disturbing maintenance activities. The 50-foot distance could be reduced if there are existing barriers, such as roads or buildings, between the maintenance area and the sensitive natural community that would prevent movement of soil or any herbicides used for maintenance into the sensitive natural community. The fencing will allow for wildlife movement and the Authority will maintain the fencing throughout the operations period. Alternatively, if sensitive natural communities cannot be completely avoided, the size of the affected area will be minimized to the full extent possible. If the remaining impacts on sensitive natural communities as the result of vegetation maintenance activities added together exceed 0.1 acre, the Authority will implement additional compensatory mitigation based on the same requirements as described in Mitigation Measure VEG-2.2.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that construction of the new South Road under Alternative 2 would result in permanent loss of upland riparian, foothill pine woodland, and oak savanna; the smaller reservoir would result in somewhat smaller loss of sensitive natural communities; and construction of the Sacramento River discharge would

result in permanent loss of upland riparian habitat. The same BMPs as those for Alternatives 1 and 3 would be implemented for construction of Alternative 2. As with Alternatives 1 and 3, implementation of Mitigation Measures VEG-2.1 and VEG-2.2 would reduce the level of impact to less than significant for the loss of sensitive communities in annual grassland. This impact would remain **significant and unavoidable** even with mitigation for foothill pine woodland, upland riparian, and oak savanna.

Operation impacts on sensitive natural communities would be avoided by the implementation of the same BMPs identified for operation of Alternatives 1 and 3, the LMP, and the Recreation Management Plan. There would be no impact in the recreation areas, but there would be potential impacts in vegetation maintenance areas. As with Alternatives 1 and 3, implementation of Mitigation Measure VEG-2.3 would reduce the level of impact from vegetation maintenance to less than significant.

Impact VEG-3: Substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means

Alternative 1 or 3 would result in significant impacts on state- and federally protected wetlands and non-wetland waters by direct removal, filling, hydrological interruption, and other indirect impacts due to erosion and sedimentation into wetlands and non-wetland waters located outside of the construction area. The loss of ditch and canal habitats would be considered significant only where the ditch or canal supports wetland habitat, such as freshwater marsh, scrub-shrub wetland, or seasonal wetland. The Authority will implement BMP-12, BMP-13, BMP-33, BMP-35, and BMP-36 to minimize direct impacts on wetlands and non-wetland waters before and during construction. While BMPs would minimize impacts on wetlands and non-wetland waters, Alternatives 1 or 3 would still result in the permanent loss of wetlands and non-wetland waters and habitat quality degradation. The permanent loss of wetlands and non-wetland waters would be significant. Implementation of Mitigation Measures VEG-3.1, VEG-3.2, and VEG-3.3 would reduce the level of impact to less than significant because all wetlands and non-wetland waters in and within 300 feet of the Project footprint would be identified and mapped, and the acquisition and permanent protection of in-kind wetlands and non-wetland waters for each affected wetland and non-wetland water at identified ratios in Mitigation Measures VEG-3.2 and VEG-3.3 and any additional requirements identified during the permitting process would ensure no net loss of wetlands and non-wetland waters in perpetuity.

Operation impacts on wetlands and non-wetland waters from erosion, sedimentation, and spills of hazardous or petroleum substances would be avoided by implementation of BMP-12 and BMP-13. Development and implementation of the LMP and the Recreation Management Plan would reduce impacts on wetlands and non-wetland waters. Operation impacts on wetlands and non-wetlands waters from vegetation maintenance could result in losses of wetlands and non-wetland waters, and this would be a significant impact. Implementation of Mitigation Measure VEG-3.4 would reduce the level of impact to less than significant, because all locations of wetlands and non-wetland waters within the vegetation maintenance areas would be identified, fenced, and avoided by vegetation maintenance activities.

Mitigation Measure VEG-3.1: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities

To the extent practicable, the Authority will avoid and minimize impacts on wetlands and non-wetland waters during construction by implementing the measures listed below. These measures will be incorporated into contract specifications and implemented by the construction contractor. Compliance will be monitored by a qualified biologist and reported as indicated in BMP-35.

- The roads, pipelines, electrical corridors, and recreation areas will be designed, to the extent practicable, to avoid direct and indirect impacts on wetlands and non-wetland waters.
- In wetlands and non-wetland waters that will be preserved, construction activities will be avoided in saturated or ponded natural wetlands and drainages during the wet season (spring and winter) to the maximum extent feasible. Where such activities are unavoidable, protective practices such as use of padding or vehicles with balloon tires will be employed.
- Exposed drainage banks and levees above drainages will be stabilized immediately following completion of construction activities. Non-wetland waters will be restored in a manner that encourages vegetation to reestablish to its pre-Project condition and reduces the effects of erosion on the drainage system.
- Any trees, shrubs, debris, or soils that are inadvertently deposited below the ordinary high-water mark of streams will be removed in a manner that minimizes disturbance of the drainage bed and bank.
- To the extent feasible, in-stream construction below the ordinary high-water mark of natural drainages will be restricted to the low-flow period (generally April through October).

Where wetlands or non-wetland waters (streams or ponds) are present in or adjacent to an area where temporary ground-disturbing activities would take place, the Authority will avoid Project impacts on wetlands, streams, and ponds through the establishment of activity exclusion zones, in which no ground-disturbing activities will take place, including construction staging or other temporary work areas. Activity exclusion zones will be established around each wetland and at the edges of each stream or pond, the boundaries of which will be clearly marked with construction exclusion fencing. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur in 250 feet of a wetland, stream, or pond. The size of activity exclusion zones may be reduced based on site-specific conditions, such as the presence of hydrologic or topographic barriers, through consultation with a qualified biologist and with concurrence from CDFW and/or State Water Board, for state-regulated wetlands and non-wetland waters or, from USACE for any federally protected wetlands or non-wetland waters. Where temporary impacts on wetlands, streams, or ponds cannot be avoided during construction, the impact will be compensated as a permanent impact, as outlined in Mitigation Measure VEG-3.2.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

For unavoidable temporary and permanent impacts on wetlands, the Authority will compensate for the loss by creation or acquisition and permanent protection of suitable wetland habitat to ensure no net loss of wetland habitat functions and values. Compensation will be provided for all permanent impacts and temporary impacts on wetlands that last longer than 1 year, and mitigation will be implemented immediately following temporary impacts and concurrent with or in advance of permanent impacts. Final compensation acreages will be based on the verified aquatic resources delineation and through the CWA Section 404 and 401 permitting process. Mitigation for temporary impacts will occur on site, if feasible. Compensation will also be in compliance with the Regional Compensatory Mitigation and Monitoring Guidelines for South Pacific Division (U.S. Army Corps of Engineers 2015). Any permanent impact on wetlands will be mitigated by creating or preserving wetlands at a minimum 1:1 ratio (1 acre restored or created for every 1 acre filled), but the final compensation ratios may include additional compensation and will be based on site-specific information and determined through coordination with state and federal agencies (State Water Board, USACE) during permit processing. Where wetland

impacts overlap with listed species impacts, mitigation will be coordinated for both resources and will not be duplicated.

Wetland mitigation will consist of replacement habitat that may be a combination of the following two options, purchase of mitigation bank credits and permittee-responsible mitigation. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of the two) would be completed as agreed upon by the Authority, USACE, State Water Board, and/or CDFW, as appropriate for the resource being mitigated. Purchase of mitigation bank credits will be the preferred compensation method to reduce the risk and uncertainty of mitigation success and avoid temporal losses of wetland function during the establishment phase of wetland creation or restoration.

- The Authority will purchase offsite mitigation bank credits for the affected wetland type (i.e., forested wetland [riparian], freshwater marsh, scrub-shrub wetland [riparian], seasonal wetland) at a USACE-approved and CDFW-approved mitigation bank to allow for economy of scale and higher quality habitat due to large patch size. Preference will also be for a mitigation bank in the same watershed as the affected wetlands. The Authority will provide written evidence to the resource agencies that compensation has been established through the purchase of mitigation credits. The Authority will not be required to monitor mitigation credit wetlands.
- For permittee-responsible mitigation, the Authority will retain a qualified restoration biologist to develop a wetland restoration and monitoring plan that involves creating or enhancing the affected wetland type (i.e., forested wetland [riparian], freshwater marsh, scrub-shrub wetland [riparian], seasonal wetland) in open space in the Project area or at an offsite location. The Authority will coordinate with CDFW, USACE, and the State Water Board for final plan approval prior to the removal of any wetland habitat and will ensure implementation of the wetland restoration plan. The plan will be based on the Project alternative selected and the extent of wetlands at the time of construction. The plan will identify how, where, and when mitigation will occur, monitoring and maintenance activities, success criteria, funding assurances, appropriate long-term management measures, and agency reporting requirements. The plan will include a species list and specify the number of each species, planting locations, and maintenance requirements. Plantings will use an appropriate method (i.e., seed, container plant, or plug) for the best survival potential and cost efficiency. The extent of planting will ensure that the required mitigation ratio will be reached by the end of the monitoring period and that stem density, canopy cover, and species composition requirements are met. Species seeded will be similar to those removed from the Project area and will consist of inoculum taken from the affected wetlands. The survival rates and vegetative cover of wetland plantings and wetland hydrology will be monitored annually for 5 years, or an equivalent or longer period as required in the Project permits and compared with nearby undisturbed reference wetlands. Progress reports will be provided to the USACE and the State Water Board at the completion of each monitoring period. If the percent vegetative cover of wetland plants is equivalent to reference sites at the end of the monitoring period, the revegetation will be considered successful. Planting survival requirements will be 70% at the end of 5 years, or greater, if required by the Project permits. If the survival criterion of 70% is not met in any monitoring year or at the end of the monitoring period, planting and monitoring will be repeated after mortality causes have been identified and remedial measures have been implemented, and the monitoring period will be extended to account for the required number of monitoring years for all plantings. Mitigation sites will be protected in perpetuity in a conservation easement or through deed restriction.

Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters

For unavoidable temporary and permanently affected streams and ponds, the Authority will compensate for the loss by creation or acquisition and permanent protection of suitable open-water habitat to ensure no net loss of stream or pond habitat functions and values. Compensation will be provided for all permanent impacts and temporary impacts on non-wetland waters that last longer than 1 year, and mitigation will be implemented immediately following temporary impacts and concurrent with or in advance of permanent impacts. Final compensation acreages will be based on the verified aquatic resources delineation and through the CWA Section 404 and 401 permitting process. Mitigation for temporary impacts will occur on site, if feasible. Compensation will also be in compliance with the Regional Compensatory Mitigation and Monitoring Guidelines for South Pacific Division (U.S. Army Corps of Engineers 2015). Any permanent effect on open-water habitat will be mitigated by creating or preserving habitat at a 1:1 ratio (1 acre restored or created for every 1 acre filled), or by an equivalent or greater requirement as determined through coordination with state and federal agencies (State Water Board, USACE) during permit processing. Compensation will be provided for all permanent impacts and temporary impacts on non-wetland waters that last longer than 1 year, and mitigation will be implemented concurrent with or in advance of construction-related impacts. Final compensation acreages will be based on the verified aquatic resources delineation and through the CWA Section 404 and 401 permitting process. Where stream or pond impacts overlap with listed species impacts, mitigation will be coordinated for both resources and not be duplicated.

Stream and pond mitigation will consist of replacement habitat that may be a combination of the following two options, which include purchase of mitigation bank credits and permittee-responsible mitigation. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of the two) would be completed as agreed upon by the Authority, USACE, State Water Board, and/or CDFW, as appropriate for the resource being mitigated. Purchase of mitigation bank credits will be the preferred compensation method to reduce the risk and uncertainty of mitigation success and avoid temporal losses of stream and pond functions during the establishment phase of creation or restoration.

- The Authority will purchase offsite mitigation bank credits at a USACE-approved and CDFW-approved mitigation bank. Out-of-kind compensation may be used based for stream or pond, if approved by the regulatory agencies. Preference will also be for a mitigation bank in the same watershed as the affected streams and ponds. The Authority will provide written evidence to the USACE and State Water Board that compensation has been established through the purchase of mitigation credits. The Authority will not be required to monitor mitigation credit non-wetland waters.
- For permittee-responsible mitigation, the Authority will retain a qualified restoration biologist to develop a non-wetland restoration and monitoring plan that involves creating or enhancing the affected water type (i.e., ephemeral, intermittent, or perennial stream, or pond) in open space in the Project area or at an offsite location. The Authority will coordinate with CDFW, USACE, and the State Water Board for final plan approval prior to the removal of any stream or pond habitat and will ensure implementation of the restoration plan. The plan will be based on the Project alternative selected and the extent of streams and ponds at the time of construction. The plan will identify how, where, and when mitigation will occur, monitoring and maintenance activities, success criteria, funding assurances, appropriate long-term management measures, and agency reporting requirements. The plan will include grading specifications and design

information for creation of stream and pond habitat. The bank stability and downcutting of streams and hydrology of ponds will be monitored annually for a minimum of 5 years, or as required in the Project permits. Progress reports will be provided to the USACE and the State Water Board at the completion of each monitoring period. If stream and pond structure and stability are retained at the end of the monitoring period, the mitigation will be considered successful. If the stream stability or pond hydrology is not met in any monitoring year or at the end of the monitoring period, remedial measures will be implemented, and the monitoring period will be extended to account for the required number of monitoring years. Mitigation sites will be protected in perpetuity in a conservation easement or through deed restriction.

Mitigation Measure VEG-3.4: Establish Activity Exclusion Zones Around Wetlands and Non-Wetland Waters Prior to Vegetation Maintenance Activities

The Authority will retain a wetland specialist to mark the boundaries of wetlands and non-wetland waters in vegetation maintenance areas using the verified aquatic resources delineation prepared for Project permitting. If wetlands or non-wetland waters occur in or within 50 feet of the vegetation maintenance areas, the wetlands or non-wetland waters will be fenced and avoided by all surface-disturbing maintenance activities. Alternatively, if wetlands and non-wetland waters cannot be completely avoided, the size of the affected area will be minimized to the full extent possible. The Authority will implement additional compensatory mitigation that is based on the same requirements as those specified in Mitigation Measures VEG-3.2 and VEG-3.3 for any remaining impacts on wetlands or non-wetland waters from vegetation maintenance activities.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3. Construction of the South Road would result in greater loss of forested wetland, seasonal wetland, scrub-shrub wetland, ephemeral stream, and intermittent stream when compared to Alternatives 1 and 3, given the larger footprint. Construction of the smaller reservoir would result in somewhat smaller losses of forested wetland, freshwater marsh, managed wetland, scrub-shrub wetland, and seasonal wetland due to the locations of these resources and the smaller reservoir footprint (Tables 9-4a and 9-4b). The same BMPs as those for Alternatives 1 and 3 would be implemented for construction of Alternative 2. As with Alternatives 1 and 3, implementation of Mitigation Measures VEG-3.1, VEG-3.2, and VEG-3.3 would reduce the level of impact to less than significant.

Operation impacts on wetlands and non-wetland waters would be the same as described for Alternatives 1 and 3, and the same BMPs identified for operation of Alternatives 1 and 3 would be implemented. There would be no impact in the recreation areas, but there would be potential impacts in vegetation maintenance areas. As with Alternatives 1 and 3, implementation of the LMP, the Recreation Management Plan, and Mitigation Measure VEG-3.4 would reduce the level of impact from vegetation maintenance to less than significant.

Impact VEG-4: Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance

Alternative 1 and 3

Alternative 1 or 3 would have significant impacts on sensitive vegetation and wetland resources protected by local general plan policies. The BMPs identified for construction under Impacts VEG-1, VEG-2, and VEG-3 will minimize permanent and temporary impacts on special-status species, sensitive

natural communities, wetlands, and non-wetland waters. Mitigation Measures VEG-1.2, VEG-2.2, VEG-3.1, VEG-3.2, and VEG-3.3 would minimize and compensate for impacts on these protected sensitive resources except blue oak woodland. Oak woodlands are considered important under the state Oak Woodlands Conservation Act and county general plans. Loss of blue oak woodland from construction under Alternative 1 or 3 would be considered significant. Implementation of Mitigation Measures VEG-2.1, VEG-4.1, and VEG-4.2 would reduce the level of impact because all locations of blue oak woodland in and within 300 feet of the construction footprint would be identified and mapped, and the acquisition and permanent protection of blue oak woodland for each affected woodland at ratios identified below in the applicable mitigation measures would ensure survival of blue oak woodland in perpetuity. However, the removal of mature blue oak trees would be a long-term impact due to the length of time required for newly planted trees to reach mature size and fully replace the habitat function and habitat value of the removed trees in the woodland community. Additionally, in accordance with the California Oak Woodland Conservation Act (California Public Resources Code 21083.4), no more than 50% of the blue oak woodland loss could be compensated directly through planting. Therefore, there would be a long-term and permanent loss of blue oak woodland habitat from construction even with mitigation and this impact would remain **significant and unavoidable**.

The Authority will develop and implement the LMP and Recreation Management Plan to protect blue oak woodland with exclusion practices, but operation impacts from vegetation maintenance could result in loss of blue oak woodland, and this would be a significant impact. Implementation of Mitigation Measure VEG-4.3 would reduce the level of impact to less than significant, because all locations of blue oak woodland in the vegetation maintenance areas would be identified, fenced, and avoided during vegetation maintenance activities.

Mitigation Measure VEG-1.2: Establish Activity Exclusion Zones Around Special-Status Plants in Temporary Impact Areas and Compensate for Permanent Impacts on Special-Status Plant Species

See Impact VEG-1 for a description of this mitigation measure.

Mitigation Measure VEG-2.1: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities

See Impact VEG-2 for a description of this mitigation measure.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

See Impact VEG-2 for a description of this mitigation measure.

Mitigation Measure VEG-3.1: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities

See Impact VEG-3 for a description of this mitigation measure.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

See Impact VEG-3 for a description of this mitigation measure.

Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters

See Impact VEG-3 for a description of this mitigation measure.

Mitigation Measure VEG-4.1: Avoid and Minimize Potential Adverse Effects on Oak Woodlands During Construction

Where surveys determine that oak woodlands are present in or adjacent to an area where temporary ground-disturbing activities would take place, the Authority will avoid impacts on oak woodlands through the establishment of activity exclusion zones, within which no ground-disturbing activities will take place, including construction staging or other temporary work areas. Activity exclusion zones for oak woodlands will be established at the edges of oak woodland habitat that is within 50 feet of construction activity, the boundaries of which will be clearly marked with construction exclusion fencing. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 50 feet of an oak woodland.

The following measures will also be implemented during construction of each Project component to protect and minimize effects on retained oak woodland trees that are adjacent to construction activities.

- The potential for long-term loss of woody vegetation will be minimized by pruning vegetation rather than removing entire trees or shrubs in areas where complete removal is not required. Any trees or shrubs that need to be trimmed will be cut at least 1 foot above ground level to leave the root systems intact and allow for more rapid regeneration. Cutting will be limited to the minimum area necessary in the construction zone. To protect nesting birds, no pruning or removal of woody vegetation will be performed between February 1 and August 31 without preconstruction bird surveys conducted in accordance with CDFW and/or USFWS requirements, as described in Mitigation Measures WILD-1.22 and WILD-1.23, Conduct Vegetation Removal During the Non-Breeding Season of Nesting Migratory Birds and Conduct Preconstruction Surveys for Non-Raptor Nesting Migratory Birds and Implement Protective Measures if Found, respectively.
- Operation or parking of vehicles, digging, trenching, slope cuts, soil compaction, grading, paving, or placement of fill will be prohibited within 6 feet of the driplines of retained oak woodland trees.
- Any offsite drainage will be directed in such a way as to prevent drainage into adjacent oak woodlands.

Mitigation Measure VEG-4.2: Compensate for Adverse Effects on Oak Woodlands

Per protection of oak trees in oak woodland in Policy CON 1-9 from the Colusa County General Plan, the Authority, in coordination with Colusa County, will develop a management plan for the protection and enhancement of oak woodlands to offset the loss of oak woodlands. This plan will mitigate the loss of oak woodlands using one or more of the following options:

- Offsite deed restriction or conservation easement acquisition and/or acquisition in fee title by a land conservation organization for purposes of offsite oak woodland conservation;
- In-lieu fee payment to the Oak Woodlands Conservation Fund;

- Replacement planting onsite in an area subject to deed restriction or conservation easement;
- Replacement planting off site in an area subject to a conservation easement; or
- A combination of these options.

The establishment of offsite conservation areas, payment of an in-lieu fee, or onsite or offsite planting areas (or a combination of the options) would be completed as agreed upon by the Authority and Colusa County. Prior to any activities that would result in permanent impacts on oak woodlands, any permanent impacts to oak woodlands will be mitigated by creating or preserving oak woodlands at a 1:1 ratio (1 acre restored or created for every 1 acre removed), or by an equivalent or greater requirement as determined through coordination with Colusa County during permit processing. The compensation acreage used for the ratio will be based on the area of impact as determined by surveys required under Mitigation Measure VEG-2.1. In accordance with requirements of the California Oak Woodland Conservation Act (California Public Resources Code 21083.4), replacement planting will not account for more than 50% of the oak woodland mitigation requirement. Therefore, up to half of the oak woodland impact mitigation requirement will consist of onsite or offsite replacement planting. The replacement planting area must be suitable for tree planting, not conflict with current or planned land uses, and be large enough to accommodate replacement plantings at a density equal to the density of the affected oak woodlands, up to a maximum density of 200 trees per acre. The remaining portion of the oak woodland impact mitigation requirement will be implemented in the form of an in-lieu fee payment to the state or to the county in which the oak woodland is affected.

The Authority will prepare and implement a mitigation and monitoring plan for oak woodlands, with funding provided through an endowment. The plan will include requirements to implement appropriate management measures to maintain the oak woodlands. The Authority will monitor oak woodland plantings annually for at least 5 years to verify that the habitat quality is maintained and meets success criteria. Success criteria for oak woodland plantings may include criteria such as survival of plantings, tree vigor, tree diameter, and tree canopy size. Planting survival requirements will be 70% at the end of 5 years with at least fair or good vigor, or as required by Colusa County. The plan will also coordinate with the LMP and will determine and implement appropriate management measures to maintain the community and meet monitoring performance standards. If the survival and vigor criteria are not met in any monitoring year or at the end of the monitoring period, planting and monitoring will be repeated after mortality or insufficient growth causes have been identified and remedial measures have been implemented, and the monitoring period will be extended to account for the required number of monitoring years for all plantings. Mitigation sites will be protected in perpetuity in a conservation easement or through deed restriction.

Mitigation Measure VEG-4.3: Establish Activity Exclusion Zones Around Blue Oak Woodlands Prior to Vegetation Maintenance Activities

The Authority will retain qualified botanists to mark the locations of blue oak woodlands in vegetation maintenance areas using the results of the surveys conducted under Mitigation Measure VEG-2.1. If blue oak woodland occurs in or within 50 feet of the vegetation maintenance areas, the outer dripline of the woodland canopy will be fenced and avoided by all surface-disturbing maintenance activities. Alternatively, if blue oak woodlands cannot be completely avoided, the size of the affected area will be minimized to the full extent possible. If the remaining impacts on blue oak woodland by vegetation maintenance activities exceed 0.1 acre, the Authority will implement additional compensatory mitigation based on the same requirements as described in Mitigation Measure VEG-4.2.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that the smaller reservoir size would result in a somewhat smaller loss of blue oak woodland. The same BMPs as those for Alternatives 1 and 3 would be implemented for construction of Alternative 2. Implementation of Mitigation Measures VEG-2.1, VEG-4.1, and VEG-4.2 would reduce the level of impact. There would be a long-term and permanent loss of blue oak woodland habitat even with mitigation and this impact would remain **significant and unavoidable**.

As with Alternatives 1 and 3, operation of Alternative 2 would not result in additional impacts in the recreation areas, but there would be potential impacts in vegetation maintenance areas. As with Alternatives 1 and 3, implementation of the BMPs for operation, the LMP, the Recreation Management Plan, and Mitigation Measure VEG-4.3 would reduce the level of impact from vegetation maintenance to less than significant.

Impact VEG-5: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Alternatives 1 and 3

Construction of Alternative 1 or 3 would result in significant impacts on special-status plant species habitats, sensitive natural communities, wetlands, and non-wetland waters through direct removal of vegetation, filling, hydrological interruption, and other indirect impacts as described above under Impacts VEG-2, VEG-3, and VEG-4. The BMPs identified under Impacts VEG-1, VEG-2, and VEG-3 will minimize permanent and temporary impacts on special-status species, sensitive natural communities, wetlands, and non-wetland waters. Implementation of Mitigation Measures VEG-2.1, VEG-2.2, VEG-3.1, VEG-3.2, VEG-3.3, VEG-4.1, and VEG-4.2 would reduce the level of the construction impacts and avoid conflicts with the adopted Yolo County HCP/NCCP and Yolo Bypass Wildlife Area LMP because all locations of special-status species, sensitive natural communities, wetlands, and non-wetland waters in and within 300 feet of the construction footprint under Alternatives 1 and 3 would be identified and mapped, and the acquisition and permanent protection of these resources at identified compensation ratios would ensure survival of special-status plant species, sensitive natural communities, wetlands, and non-wetland waters in perpetuity. Therefore, the level of this impact would be reduced to less than significant with mitigation. Operation of Alternative 1 or 3 would not result in additional impacts.

Mitigation Measure VEG-2.1: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities

See Impact VEG-2 for a description of this mitigation measure.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

See Impact VEG-2 for a description of this mitigation measure.

Mitigation Measure VEG-3.1: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities

See Impact VEG-3 for a description of this mitigation measure.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

See Impact VEG-3 for a description of this mitigation measure.

Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters

See Impact VEG-3 for a description of this mitigation measure.

Mitigation Measure VEG-4.1: Avoid and Minimize Potential Adverse Effects on Oak Woodlands During Construction

See Impact VEG-4 for a description of this mitigation measure.

Mitigation Measure VEG-4.2: Compensate for Adverse Effects on Oak Woodlands

See Impact VEG-4 for a description of this mitigation measure.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3 but slightly greater, due to the extension of the pipeline alignment to the Sacramento River. As with Alternatives 1 and 3, implementation of the BMPs and Mitigation Measures VEG-2.1, VEG-2.2, VEG-3.1, VEG-3.2, VEG-3.3, VEG-4.1, and VEG-4.2 would reduce the level of impact to less than significant.

Under Alternative 2, the impacts related to conflicts with the adopted Yolo County HCP/NCCP or Yolo Bypass Wildlife Area LMP during operation would be as described for Alternatives 1 and 3 and there would be no additional impacts.

Wildlife Resources

Impact WILD-1: Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (*the following impact analysis is subdivided into lettered components, and special-status species are grouped together when they utilize the same land cover types or impacts are similar – Only sig*)

Impact WILD-1a: Vernal Pool Branchiopods

Alternative 1 and 3

Construction of Alternative 1 or 3 would result in significant impacts on vernal pool branchiopods from removal of suitable habitat and loss of individuals. Operational effects on vernal pool branchiopods would be avoided or minimized through implementation of BMP-15, the LMP, and the Recreation Management Plan, and would be less than significant. Construction impacts would be significant because implementation of Alternative 1 or 3 could reduce the local populations of federally listed vernal pool branchiopods through direct mortality and habitat loss.

Implementation of Mitigation Measures WILD-1.1, WILD-1.2, and WILD-1.3 would reduce the level of impact from construction and operation to less than significant because surveys would be conducted to determine occupancy, habitat disturbance would be avoided during the rainy season, the topsoil of vernal pools in permanent impact areas would be removed for use in habitat creation or restoration (if requested by USFWS), and compensation would be provided for impacts on occupied habitat. All modeled habitat would be evaluated, and suitable habitat would be surveyed for the presence of vernal pool branchiopods prior to construction. Direct and indirect impacts on occupied habitat would be mitigated through acquiring and protecting habitat in perpetuity or purchasing mitigation credits in accordance with mitigation ratios and requirements developed during ESA Section 7 consultation with USFWS.

Mitigation Measure WILD-1.1: Assess Habitat Suitability and Survey Suitable Habitat for Vernal Pool Branchiopods

Once property access is granted and prior to the start of construction, the Authority will retain qualified biologists to assess habitat suitability and conduct surveys for vernal pool branchiopods in the Project area and where modeled habitat is within 250 feet of the Project area and indirect effects may occur. Qualified biologists are defined as those who have a recovery permit from USFWS to conduct surveys for listed vernal pool branchiopods. The surveys will be conducted in accordance with the Survey Guidelines for the Listed Large Branchiopods, which recommend surveys at 14-day intervals after initial inundation of habitat until the habitat dries or it has been inundated for a minimum of 90 consecutive days (U.S. Fish and Wildlife Service 2015b). Surveys in accordance with the guidelines take a minimum of 1 year to complete and will be initiated early enough to allow completion before the start of construction. The biologists will submit the results of the surveys in a report to USFWS, per the requirements of the biologists' recovery permits.

Mitigation Measure WILD-1.2: Avoid and Minimize Potential Effects on Vernal Pool Branchiopods and Western Spadefoot

The following steps will be taken to avoid or minimize potential effects on vernal pool branchiopods and western spadefoot.

- Ground disturbance within 250 feet of occupied habitat or suitable habitat that hasn't been surveyed that would not be directly affected will be avoided during the rainy season (approximately October 15 through May 15). Compensation will be provided for habitat occupied by listed vernal pool branchiopods that cannot be avoided during the rainy season (Mitigation Measure WILD-1.3).
- If a portion of occupied vernal pool branchiopod or western spadefoot habitat will be filled (i.e., permanent impacts), the filling will be conducted when the habitat is completely dry.
- If requested by USFWS, the top 3 to 4 inches of soil of pools occupied by listed or unlisted vernal pool branchiopods that would be destroyed or completely filled will be removed and stored in the Project area until ready for placement in created or restored habitat outside of the Project footprint. The topsoil will be covered with tarps or other appropriate material and orange construction barrier fencing or stakes and flagging will be installed around the covered topsoil. A qualified biologist will be on site to monitor the removal and covering of the topsoil during periodic monitoring visits to the Project area. The stored topsoil will be spread over the bottom of created or restored pools prior to the start of the winter rainy season.

Mitigation Measure WILD-1.3: Compensate for Impacts on Occupied Vernal Pool Branchiopod Habitat

The Authority will compensate for direct and indirect effects on occupied vernal pool branchiopod habitat through the purchase of mitigation credits at a USFWS-approved mitigation or conservation bank or through acquiring, creating, restoring and/or protecting habitat in perpetuity at a location approved by USFWS. Direct and indirect effects on occupied habitat will be mitigated by preserving occupied habitat at a 2:1 ratio (habitat preserved: habitat directly or indirectly affected) or by an equivalent or greater amount as determined during ESA Section 7 consultation with USFWS. In addition, direct effects on occupied habitat will be mitigated by creating or preserving occupied habitat at a 1:1 ratio (habitat created: habitat directly affected) or by an equivalent or greater amount as determined during ESA Section 7 consultation with USFWS. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority, Reclamation, and USFWS.

USFWS-approved conservation banks have long-term adaptive management plans with performance standards. Therefore, if mitigation is through a USFWS-approved conservation bank, the bank's performance standards and success criteria will be applied.

If credits are not purchased at a USFWS-approved conservation bank, the Authority will implement standards for long-term management and protection of conservation areas. The Authority will work closely with USFWS during the planning and development of conservation areas. Once established, conservation areas will be surveyed by a USFWS-approved biologist a minimum of two times per year during the wet season (generally November through April). The biologist will survey for the presence of listed vernal pool branchiopods, evaluate the adequacy of site protection (e.g., fencing, signage) and weed control, assess potential threats to vernal pool branchiopods, and take photographs of the site. The biologist will also survey a set of reference pools to compare to the preserved and created/restored pools. The reference pools should be located in proximity to the conservation area and exhibit characteristics similar to the preserved and created/restored pools.

For non-mitigation bank compensation, the performance standard for occupancy of the created/restored pools by listed vernal pool branchiopods is a minimum of 5% of the total number of created/restored pools supporting listed vernal pool branchiopods over a 10-year monitoring period. A pool must be occupied at least once during the 10-year monitoring period to be considered occupied. If the performance standard cannot be achieved, the Authority and Reclamation will consult with USFWS to determine if the standard is not realistic based on data from other vernal pool surveys in the Project region and/or implement an alternative compensatory mitigation approach.

Working closely with USFWS during planning and development of the conservation area, monitoring the conservation area to ensure performance standards are achieved, and applying adaptive management actions when the performance standard is not achieved will ensure that the compensatory mitigation is effective and compensates for the loss of occupied habitat resulting from the Project.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that permanent loss of modeled habitat would be less under Alternative 2 because of the smaller inundation area and fewer permanent impacts on habitat from dams and dikes (Appendix 10C, Table 10C-1). Operation of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that the

additional impermeable surface from South Road could result in potential indirect effects on additional modeled vernal pool branchiopod habitat. Operational effects on vernal pool branchiopods would be avoided or minimized through implementation of BMP-15, the LMP, and the Recreation Management Plan, and would be less than significant. Construction impacts would be significant because the implementation of Alternative 2 could reduce the local populations of federally listed vernal pool branchiopods through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.1, WILD-1.2, and WILD-1.3 would reduce the level of impact to less than significant for reasons discussed above.

Impact WILD-1b: Antioch Dunes Anthicid Beetle and Sacramento Anthicid Beetle

Alternative 2 (Only)

Construction of Alternative 2 would result in the permanent loss and temporary disturbance of potentially suitable habitat for Antioch Dunes anthicid beetle and Sacramento anthicid beetle and could cause mortality of individuals. These impacts would be significant because the construction of Alternative 2 could reduce the local populations of these rare beetles through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.4 and WILD-1.5 would reduce the level of impact from construction to less than significant because potentially suitable habitat would be assessed and surveyed by a qualified entomologist prior to removal or disturbance and suitable habitat that would not be affected would be fenced and avoided during construction. If occupied habitat is removed, an equivalent amount of habitat would be restored or preserved in the vicinity of the affected area. There would be no impact on Antioch Dunes anthicid beetle and Sacramento anthicid beetle from operations under Alternative 2.

Mitigation Measure WILD-1.4: Evaluate and Survey Potential Habitat for Antioch Dunes Anthicid and Sacramento Anthicid Beetles and Implement Protective Measures

The Authority will retain a qualified entomologist (experienced with anthicid beetle identification and habitat suitability) to assess and survey the area of potentially suitable habitat for Antioch Dunes anthicid and Sacramento anthicid beetles prior to the start of construction of the Sacramento River discharge. If suitable habitat is not present or no Antioch Dunes anthicid and Sacramento anthicid beetles are observed and the entomologist concurs that no further surveys are needed, no further actions are required. If either beetle species is observed, the entomologist will relocate the beetles to suitable habitat outside of the impact area. The entomologist will report observations of either beetle species to CDFW and submit occurrence data to the CNDDB. The Authority will protect any suitable habitat in the vicinity of the work area that will not be affected with fencing or stakes and flagging. No construction related foot or vehicle traffic will be allowed in the fenced or flagged area. The Authority will remove fencing when construction of the Sacramento River discharge is complete.

Mitigation Measure WILD-1.5: Compensate for the Loss of Occupied Antioch Dunes Anthicid and Sacramento Anthicid Beetle Habitat

The Authority will compensate for the permanent loss of occupied Antioch Dunes anthicid beetle and/or Sacramento anthicid beetle habitat by restoring disturbed habitat or preserving occupied habitat along the Sacramento River, preferably in the vicinity of the affected area, at a 1:1 ratio (acres restored or preserved: acres of permanent impact). The Authority will retain a qualified entomologist to assess habitat to be restored or preserved and provide guidance on habitat restoration. The Authority will retain a qualified entomologist to monitor the restored or preserved habitat annually for a minimum of

5 years. Monitoring will be conducted at the preserved area to ensure that habitat conditions are maintained at baseline conditions or better, that the habitat has not been degraded, and that it continues to be occupied by the beetle(s). If habitat is restored, the entomologist will conduct monitoring to ensure the restored habitat conditions are maintained, survey for beetle occupancy, and make adaptive management recommendations for habitat improvements. The Authority will submit monitoring reports that include habitat conditions, beetle occupancy information, and photographs to the CDFW annually. If either beetle is observed during habitat monitoring, the entomologist will submit occurrence information to the CNDDB.

Impact WILD-1c: Valley Elderberry Longhorn Beetle

Alternatives 1 and 3

Construction of Alternative 1 or 3 could result in significant impacts on valley elderberry longhorn beetle from removal of suitable habitat and loss of individuals, when compared to baseline conditions. Operation could result in significant impacts on valley elderberry longhorn beetle from altered hydrology, loss of connectivity to adjacent habitat, and disturbance from maintenance activities. These impacts would be significant because the implementation of Alternative 1 or 3 could reduce the local population of this federally listed species through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.6, WILD-1.7, WILD-1.8, and WILD-1.9 would reduce the level of impact from construction and operation to less than significant because surveys would be conducted to determine presence, elderberry shrubs to be protected would be fenced, compensation would be provided for permanent loss of habitat, and specifications for herbicide and pesticide use will be followed to ensure potential effects on valley elderberry longhorn beetle and its habitat would be avoided and minimized.

Mitigation Measure WILD-1.6: Conduct Surveys for Suitable Valley Elderberry Longhorn Beetle Habitat

The Authority will retain qualified biologists or botanists (i.e., with elderberry/valley elderberry longhorn beetle experience) to conduct surveys to identify and map locations of elderberry shrubs in work areas and within 165 feet of the work areas. For shrubs located in non-riparian areas, elderberry stems will be examined for the presence of valley elderberry beetle exit holes. This information will be used to determine the amount of compensation required for the loss of elderberry shrubs in accordance with the Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) (U.S. Fish and Wildlife Service 2017a). The biologist will mark elderberry shrubs in or within 165 feet of work areas with flagging for future removal or protection.

Mitigation Measure WILD-1.7: Fence Elderberry Shrubs to be Protected

Elderberry shrubs in or within 165 feet of work areas that will not be removed will be protected during construction. If not already marked, a qualified biologist will flag the elderberry shrubs that will be protected during construction. The Authority's contractor will install orange construction barrier fencing or stakes and flagging at the edge of the buffer areas established for each shrub and signs indicating the potential for beetle presence and excluding any Project activity within the buffer areas will be posted prior to the start of work. The buffer area distances will be proposed by the biologist and approved by USFWS. No construction activities will be permitted in the buffer area other than those activities necessary to erect the fencing or stakes and flagging without written permission from USFWS.

If orange construction barrier fencing is used, it will be placed such that there is at least a 1-foot gap between the ground and the bottom of the orange construction fencing to minimize the potential for snakes and other ground-dwelling animals to become caught in the fencing. Buffer areas around elderberry shrubs will be inspected periodically by a qualified biologist until Project construction is complete or until the fences or staking/flagging are removed, as approved by the biological monitor and the resident engineer. The Authority's contractor will be responsible for maintaining the buffer area fences around elderberry shrubs throughout construction and removing the fencing or staking and flagging when construction is complete. The biologist's fencing inspection reports will be provided to the Authority.

Mitigation Measure WILD-1.8: Transplant Permanently Affected Elderberry Shrubs and Compensate for Loss of Valley Elderberry Longhorn Beetle and its Habitat

Before construction begins, the Authority will retain a qualified contractor to transplant elderberry shrubs that cannot be avoided to a USFWS-approved mitigation or conservation bank or other approved area in accordance with the Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) (U.S. Fish and Wildlife Service 2017a). Elderberry shrubs that cannot be avoided will be transplanted during the plant's dormant phase (November through the first 2 weeks of February). A qualified biological monitor will remain on site while the shrubs are being transplanted. Additionally, the Authority will compensate for permanent impacts on occupied riparian habitat by creating or preserving habitat at a 3:1 (acres of created or preserved habitat : acres of permanent impact) or by an equivalent or greater amount as determined in consultation with USFWS. The Authority will compensate for permanent impacts on occupied non-riparian habitat by creating or preserving habitat at a ratio of 1:1 for all acres that are permanently affected, or by transplanting affected elderberry shrubs containing valley elderberry longhorn beetle exit holes and providing compensation at a 1:1 ratio for the area of the affected shrubs. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority, Reclamation, and USFWS.

USFWS-approved conservation banks have long-term adaptive management plans with performance standards. If credits are not purchased at a USFWS-approved conservation bank, the Authority will implement standards for long-term management and protection of conservation areas. The Authority will work closely with USFWS during the planning and development of preservation areas. Once established, preservation areas will be surveyed by a USFWS-approved biologist a minimum of two times per year between February 14 and June 30. The biologist will search for valley elderberry longhorn beetle exit holes, evaluate the adequacy of site protection (e.g., fencing, signage) and weed control, assess potential threats to the beetle, take photographs of the site, and evaluate the performance standards below.

1. A minimum of 60% of the initial elderberry and native associate plantings must survive over the first 5 years after the site is established. As much as feasible, elderberry shrubs should be well distributed throughout the site; however, in some instances underlying geologic or hydrologic issues might preclude elderberry establishment over some portion of the site. If significant die-back occurs within the first 3 years, replanting may be used to achieve the 60% performance standard. However, replanting efforts should be concentrated in areas containing surviving elderberry plants. In some instances, overplanting may be used to offset the selection of a less suitable site.

2. After 5 years, the site must show signs of recruitment. A successful site should have evidence of new growth on existing plantings, as well as natural recruitment of elderberry. New growth is characterized as stems 1.2 inches in diameter. If no signs of recruitment are observed, the Authority and Reclamation will discuss possible remedies with the USFWS.
   Following USFWS's interim standards for the long-term management and protection of mitigation sites, working closely with USFWS during planning and development of the preservation area, monitoring the preservation area to ensure performance standards are achieved, and replanting elderberries when the performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the losses resulting from the Project.

Mitigation Measure WILD-1.9: Protect Special-Status Invertebrates and Their Host and Food Plants from Herbicide and Pesticide Use

To minimize impacts on valley elderberry longhorn beetle, monarch butterfly, Crotch bumble bee, and western bumble bee from herbicide drift, herbicide application will be limited to areas immediately adjacent to Project facilities and will be conducted using handheld equipment. Herbicides and pesticides will be applied only by applicators with current licenses and/or certifications from the California Department of Pesticide Regulation. The applicator will follow the herbicide label directions. Spray nozzles will be kept within 24 inches of target vegetation during spraying. The most current information on herbicide toxicity on wildlife will be used to inform future decisions about herbicide and pesticide use during operations.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that permanent habitat loss would be less under Alternative 2 because of the smaller inundation area and reduced impacts from construction of dams and dikes and roads. Temporary habitat loss would be less for construction of Alternative 2 because of less modeled habitat being affected by the regulating reservoirs and conveyance complex, I/O Works, dams, and dikes. Operation of Alternative 2 would result in the same impacts as Alternatives 1 and 3. These impacts would be significant because the implementation of Alternative 2 could reduce the local valley elderberry longhorn beetle population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.6, WILD-1.7, WILD-1.8, and WILD-1.9 would reduce the level of impact from construction and operation to less than significant.

Impact WILD-1d: Monarch Butterfly

Alternatives 1 and 3

Construction of Alternative 1 or 3 would result in significant impacts on monarch butterfly from removal of suitable habitat and loss of individuals. Operation of Alternative 1 or 3 could result in mortality of adult butterflies from vehicle strikes, illness or injury of adults or larvae from pesticide use, or death of nectar plants from herbicide use. Construction and operation impacts would be significant because the implementation of Alternative 1 or 3 could reduce the local monarch butterfly population. Implementation of Mitigation Measures WILD-1.9, WILD-1.10, and WILD-1.11 would reduce the level of impact from construction and operation to less than significant because surveys would be conducted to identify patches of native milkweeds and nectar plants, temporarily disturbed habitat would be restored, permanent loss of habitat containing native milkweeds and/or nectar plants would be

compensated for through either onsite or offsite habitat restoration or preservation, and a measure would be implemented to avoid and minimize potential effects of herbicide and pesticide use on monarch butterfly and its larval host plants and nectar plants.

Mitigation Measure WILD-1.9: Protect Special-Status Invertebrates and Their Host and Food Plants from Herbicide and Pesticide Use

This measure is the same as that described above under Impact WILD-1c for valley elderberry longhorn beetle.

Mitigation Measure WILD-1.10: Assess Habitat Suitability and Survey for Presence of Monarch Butterfly Nectar and Larval Host Plants

No more than 3 years prior to the start of ground-disturbing activities botanists will identify and map locations of milkweed and/or nectar plants using information from https://xerces.org/sites/default/files/publications/19-046_01_MonarchNectarPlants_California_web-3pg.pdf or the most up-to-date information. During special-status plant surveys (Mitigation Measure VEG-1.1), botanists will map actual presence of these plants in areas that would be permanently or temporarily affected by construction.

Mitigation Measure WILD-1.11: Compensate for Loss of Monarch Butterfly Nectar and Larval Host Plants

The Authority will compensate for permanent loss of suitable monarch butterfly habitat (as identified through implementation of Mitigation Measure WILD-1.10) by including native milkweed and nectar plants for monarch butterfly in onsite and/or offsite mitigation plans for sensitive natural communities (Mitigation Measure VEG-2.2). The Authority will compensate for permanent loss of suitable monarch butterfly habitat by planting native milkweed and nectar plants at suitable onsite and/or offsite restoration or preservation areas at a ratio of 1:1 (acres lost : acres planted.). The offsite restoration areas would provide suitable habitat constituents for monarch butterfly (e.g., roosting habitat, nectar plants, native milkweed) and will be preserved through a conservation easement. The establishment of restoration areas would be completed as agreed upon by the Authority, USFWS, and CDFW.

The Authority will compensate for temporary loss of suitable monarch butterfly habitat by including native milkweed and nectar plants in planting palettes for onsite restoration of sensitive natural communities (Mitigation Measure VEG-2.2) or temporarily disturbed grassland, and/or at offsite mitigation areas.

The Authority will utilize monarch butterfly information from The Xerces Society to ensure that mitigation areas provide the suitable habitat constituents described above for monarch butterfly. The Authority will conduct baseline surveys of each onsite and offsite mitigation area to determine the baseline habitat conditions for monarch butterfly prior to implementing habitat improvements (i.e., planting), if applicable. Each area will be surveyed by qualified botanists to determine the extent of naturally occurring milkweed and nectar plants. After onsite restoration is completed at each mitigation area, qualified botanists will conduct surveys during 3 of the next 5 years and evaluate each site to determine if the area and condition of milkweed and nectar plants achieve the performance standards of being at or above baseline conditions.

Methods and results of surveys, and recommendations for adaptive management actions as needed, will be included in annual monitoring reports for each mitigation area (if there is more than one) and will be submitted to USFWS and CDFW.

Using the latest information from The Xerces Society during planning and development of the mitigation areas, monitoring the mitigation areas to ensure performance standards are achieved and implementing adaptive management options when the performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the losses resulting from the Project.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that permanent and temporary impacts on modeled monarch butterfly habitat would be less under Alternative 2 because of the smaller inundation area and reduced impacts from construction of dams and dikes. Operation of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that the increased amount of roadway could result in greater potential for monarch butterflies to be struck by vehicles. These impacts would be significant because the implementation of Alternative 2 could reduce the local population of monarch butterfly through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.9, WILD-1.10, and WILD-1.11 would reduce the level of impact from construction and operation to less than significant.

Impact WILD-1e: Crotch Bumble Bee and Western Bumble Bee

Alternatives 1 and 3

Construction and operation of Alternative 1 or 3 would result in significant impacts on Crotch bumble bee and western bumble bee from removal of potential habitat and loss of individuals. These impacts would be significant because Alternative 1 or 3 could reduce the local populations of these rare bumble bees through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.9, WILD-1.12, and WILD-1.13 would reduce the level of impact from construction and operation to less than significant because surveys would be conducted to identify patches of native food plants, temporarily disturbed habitat would be restored, permanent loss of habitat containing suitable native food plants would be compensated for through offsite habitat restoration or preservation, and a measure would be implemented to avoid and minimize potential effects of herbicide and pesticide use on Crotch bumble bee, western bumble bee, and their food plants.

Mitigation Measure WILD-1.9: Protect Special-Status Invertebrates and Their Host and Food Plants from Herbicide and Pesticide Use

See Impact Impact WILD-1c for a description of this mitigation measure.

Mitigation Measure WILD-1.12: Assess Habitat Suitability and Survey for Presence of Crotch Bumble Bee and Western Bumble Bee Food Plants

No more than 3 years prior to the start of ground-disturbing activities, botanists will identify and map locations of patches of native plants in the taxa most commonly associated with Crotch bumble bee and western bumble bee that would be permanently or temporarily affected by construction during special-status plant surveys (Mitigation Measure VEG-1.1). Native plants of the following genera are appropriate for Crotch bumble bee: *Antirrhinum, Asclepias, Phacelia, Chaenactis, Clarkia, Dendromecon, Eriogonum, Eschscholzia, Lupinus, Medicago, and Salvia*. Native plants of the following taxa are appropriate for

western bumble bee: *Asteraceae, Ceanothus, Centaurea, Chrysothamnus, Cirsium, Eriogonum, Geranium, Grindelia, Lupinus, Melilotus, Monardella, Rubus, Penstemon, Solidago, and Trifolium*.

Mitigation Measure WILD-1.13: Compensate for Loss of Crotch Bumble Bee and Western Bumble Bee Habitat

The Authority will compensate for permanent loss of suitable bumble bee foraging habitat (as identified through implementation of Mitigation Measure WILD-1.12) by including suitable native nectar- and pollen-producing plants commonly used as food sources by Crotch and western bumble bees in onsite and/or offsite mitigation plans for sensitive natural communities (Mitigation Measure VEG-2.2). The Authority will compensate for permanent loss of suitable Crotch and western bumble bee habitat by planting native suitable native nectar- and pollen-producing plants at suitable onsite and/or offsite restoration or preservation areas at a ratio of 1:1 (acres lost : acres planted The Authority will compensate for temporary loss of suitable Crotch and western bumble bee habitat by including native bumble bee food plants in planting palettes for onsite restoration of sensitive natural communities (Mitigation Measure VEG-2.2) or temporarily disturbed grassland and/or at offsite mitigation areas.

Native plants of the following genera are appropriate for Crotch bumble bee: *Antirrhinum, Asclepias, Phacelia, Chaenactis, Clarkia, Dendromecon, Eriogonum, Eschscholzia, Lupinus, Medicago, and Salvia*. Native plants of the following taxa are appropriate for western bumble bee: *Asteraceae, Ceanothus, Centaurea, Chrysothamnus, Cirsium, Eriogonum, Geranium, Grindelia, Lupinus, Melilotus, Monardella, Rubus, Penstemon, Solidago, and Trifolium*. In mitigation areas where these plant genera are present, habitat will be preserved. In mitigation areas where these plant genera are absent, these plant genera will be seeded or planted, as appropriate based on site conditions. Mitigation areas will be placed under a conservation easement.

The Authority will utilize bumble bee conservation information from The Xerces Society to ensure that mitigation areas provide the suitable native nectar- and pollen-producing plants described above for Crotch bumble bee and western bumble bee. The Authority will conduct baseline surveys of each onsite and offsite mitigation area to determine the baseline habitat conditions for Crotch bumble bee and western bumble bee prior to implementing habitat improvements (i.e., planting), if applicable. Each area will be surveyed by qualified botanists to determine the extent of naturally occurring native nectar- and pollen-producing plants. After onsite restoration is completed at each mitigation area, qualified botanists will conduct surveys during 3 of the next 5 years and evaluate each site to determine if the area and condition of native nectar- and pollen-producing plants achieve the performance standards of being at or above baseline conditions.

Methods and results of surveys and recommendations for adaptive management actions as needed will be included in annual monitoring reports for each mitigation area (if there is more than one) and will be submitted to USFWS and CDFW.

Using the latest information from The Xerces Society during planning and development of the mitigation area, monitoring the mitigation area to ensure performance standards are achieved, and implementing adaptive management options when the performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the losses resulting from the Project.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that permanent and temporary impacts on modeled Crotch bumble bee and western bumble bee habitat

would be less under Alternative 2 than under Alternatives 1 and 3 because of the smaller inundation area and reduced impacts from construction of dams and dikes. Operation of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that the increased amount of roadway could result in greater potential for Crotch bumble bee and western bumble bee to be struck by vehicles. These impacts would be significant because the implementation of Alternative 2 could reduce the local populations of Crotch bumble bee and western bumble bee through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.9, WILD-1.12, and WILD-1.13 would reduce the level of impact from construction and operation to less than significant.

Impact WILD-1f: Western Spadefoot

Alternatives 1 and 2

Construction of Alternative 1 or 3 would result in significant impacts on western spadefoot from removal of potential habitat and loss of individuals. Operation of Alternative 1 or 3 would result in significant impacts on western spadefoot because exotic invasive species that prey on or compete with western spadefoot could be introduced at recreation areas and individuals could be killed by being struck by the vehicles of personnel or recreationists. These impacts would be significant because implementation of Alternatives 1 and 3 could reduce the local western spadefoot population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.2, WILD-1.3, WILD-1.14, WILD-1.15, WILD-1.16, VEG-2.2, and VEG-3.2 would reduce the level of impact from construction and operation to less than significant because surveys would be conducted to determine presence, disturbance of seasonal wetlands would be avoided during the rainy season, compensation would be provided for the permanent and temporary losses of occupied vernal pool branchiopod habitat (which would also benefit western spadefoot), and if found to be necessary through a wildlife corridor study, suitable crossings would be installed at appropriate locations to facilitate safe crossings.

Mitigation Measure WILD-1.2: Avoid and Minimize Potential Effects on Vernal Pool Branchiopods and Western Spadefoot

This measure is described above under Impact WILD-1a for vernal pool branchiopods.

Mitigation Measure WILD-1.3: Compensate for Impacts on Vernal Pool Branchiopod Habitat

This measure is described above under Impact WILD-1a for vernal pool branchiopods.

Mitigation Measure WILD-1.14: Assess Habitat Suitability and Survey Suitable Habitat for Western Spadefoot, California Red-legged Frog, and Western Pond Turtle

Once property access is granted and prior to the start of construction, the Authority will retain qualified biologists to assess habitat suitability and conduct surveys for western spadefoot, California red-legged frog, and western pond turtle in the Project area and where potentially suitable habitat is within 300 feet of the Project area where impacts from operation may occur. Qualified biologists are defined as those who have experience evaluating habitat and conducting focused surveys for western spadefoot, California red-legged frog, and western pond turtle. The surveys will be conducted in accordance with the following conditions.

Western spadefoot habitat assessments and surveys of seasonal wetland habitat will be conducted during vernal pool branchiopod habitat assessments and surveys (Mitigation Measure WILD-1.1).

Habitat assessment and surveys for California red-legged frog will be conducted in accordance with the *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog*, which provides direction for site assessments and recommend up to eight surveys that are conducted over a period of 9–12 months (U.S. Fish and Wildlife Service 2005b). Habitat assessment and surveys for western pond turtle and western spadefoot (intermittent streams) will be conducted concurrently with the California red-legged frog surveys.

The qualified biologists will prepare and submit reports describing the methods and results of the habitat assessments and surveys to the Authority, CDFW, and USFWS.

Mitigation Measure WILD-1.15: Design and Construct Wildlife Crossings for New Roadways at Suitable Locations

The Authority will retain a qualified wildlife biologist with expertise in wildlife crossing use and design to conduct a wildlife connectivity and crossing assessment and to determine where suitable wildlife crossing structures would be most effective along North Road, Sites Lodoga Road, South Road, and other roads as determined by the Authority and the wildlife biologist, in coordination with CDFW. Wildlife crossing structures will be designed and constructed at suitable locations to provide habitat connectivity and safe movement for an array of wildlife likely to use the Project area. To ensure that the assessment is inclusive of a variety of species, a wildlife crossing species guild (WCG) approach will be used as detailed in Kintsch et al. (2015). This WCG approach will include ecological and behavioral needs of a variety of species inhabiting the Project area/region. The Authority will also use information from other documents (e.g., Clevenger and Huijser 2011; Langton and Clevenger 2020; Ontario Ministry of Natural Resources and Forestry 2016) when planning and designing corridors for amphibians and reptiles. Wildlife crossing locations and design will be determined based on WCG species inhabiting the Project area/region, habitat features, topography, existing land ownership and use, and the future state of the study area (as shown or described in planning documents) through a wildlife connectivity and crossing assessment. Where possible, wildlife crossings will be located where there is compatible land ownership and use and opportunities for habitat preservation on either side of the wildlife crossing.

Prior to final roadway design for the Project, a wildlife connectivity assessment will be conducted to assess existing and expected wildlife movement and habitat connectivity conditions, evaluate Project-related impacts on connectivity and species movement, and identify appropriate wildlife crossing locations and designs. Other connectivity enhancement strategies such as land acquisition, retrofit of existing structures, habitat enhancement, and traffic control will be considered as part of the connectivity assessment to maintain and enhance connectivity in the area surrounding the reservoir. The assessment will include a landscape-scale and local (Project)-scale assessments. The assessment may use database research, field surveys, photo monitoring, GIS modeling, or a combination thereof to identify existing wildlife species in the Project area, determine how connectivity and species movement may be affected by the Project, and determine the appropriate locations and designs of wildlife crossings.

Wildlife crossings will be located at appropriate frequencies within contiguous suitable habitat and in other locations where crossing structures are warranted (e.g., riparian/riverine crossings) to accommodate a range of species expected to move through the area. For example, for small-bodied animals like amphibians, reptiles, and small mammals, where species habitat and movement needs are present, wildlife crossings may be located no more than 1,000 feet apart or as determined appropriate for specific target species. For medium- and large-bodied animals, such as bobcats, coyotes, tule elk, and deer, wildlife crossings may be located no more than 1 mile apart.

Wildlife crossings will be located where there is suitable habitat on both sides of the roadway. If feasible and depending on the size and ecological and behavioral needs of target species, vegetative cover will be provided near entrances to give animals security and reduce negative effects such as lights and noise associated with the road. Suitable habitat and/or cover will also be provided in the crossing structure wherever feasible. This may be achieved by designing culverts or culvert-like structures to be high enough to allow light for plants to grow, installing rubble piles, stumps, or branches to provide cover for smaller animals in the crossings, and leaving earthen bottoms in crossing structures.

When possible, wildlife crossings will be located away from areas used or dominated by humans, including recreation areas, trails, and lighted areas to avoid reduced wildlife crossing movement function and to prevent human-wildlife conflict.

Wildlife crossings will be designed to optimally facilitate movement for multiple WCG species. When possible, proposed culverts will be constructed to function as multi-use culverts, which are designed to ensure that they facilitate wildlife movement. Multi-use culvert crossings will be designed to be optimally accessible to wildlife movement and will also be designed to require minimal maintenance.

Wildlife fencing will be installed to direct wildlife toward crossings and prevent species' access to roadways and other areas they must be excluded from. Escape opportunities such as jump-out ramps may be provided as appropriate in conjunction with fencing to allow animals to escape from the roadway.

Mitigation Measure WILD-1.16: Monitor and Maintain Wildlife Crossings

Because many wildlife species will avoid or be obstructed by structures with a substantial amount of debris or blockages, the Authority will require a qualified wildlife biologist to regularly monitor crossings and culverts and clear them or oversee the clearing of debris and other blockages. Cameras, roadkill surveys, or other methods will be used to monitor wildlife crossing use. Vegetative cover will be maintained near crossing entrances to provide cover and reduce negative effects such as artificial lighting and noise associated with the road. A monitoring and maintenance plan for wildlife crossings will be developed during design of wildlife crossings (Mitigation Measure WILD-1.15). Plan components will include but are not limited to specifications and methods for documenting postconstruction conditions, the approach for and frequency of monitoring and maintenance, performance standards, reporting requirements, and adaptive management actions to ensure long-term success of crossing structure function.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This mitigation measure is described above for Impact VEG-2.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

This mitigation measure is described above for Impact VEG-3.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that construction of South Road and TRR West would result in additional permanent loss of potential habitat

and the smaller reservoir footprint would reduce the amount of permanent habitat loss under Alternative 2. Overall, permanent and temporary impacts on modeled western spadefoot habitat would be less under Alternative 2 than under Alternatives 1 and 3, except for permanent impacts on modeled aquatic habitat, because of the smaller inundation area and reduced impacts from construction of dams and dikes (Appendix 10C, Table 10C-6). Operation of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that the increased amount of roadway could impede movement over a larger area and result in additional mortality from vehicle strikes. These impacts would be significant because the implementation of Alternative 2 could reduce the local western spadefoot population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.2, WILD-1.3, WILD-1.14, WILD-1.15, WILD-1.16, VEG-2.2, and VEG-3.2 would reduce the level of impact from construction and operation to less than significant.

Impact WILD-1g: California Red-legged Frog

Construction of Alternative 1 or 3 could result in significant impacts on California red-legged frog from removal of modeled habitat and potential loss of individuals. Operation of Alternative 1 or 3 could result in significant impacts on California red-legged frog as a result of new or increased contaminants entering habitat, vehicle strikes, introduction of exotic invasive species that prey on or compete with California red-legged frog, and impeded movement from new roadways. These impacts would be significant because the implementation of Alternative 1 or 3 could reduce the local California red-legged frog population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.14, WILD-1.15, WILD-1.16, WILD-1.17, and WILD-1.18 would reduce the level of impact from construction and operation to less than significant because surveys would be conducted to determine presence, protective measures would be implemented during construction, compensation would be provided for the permanent and temporary losses of suitable habitat, and if found to be necessary through a wildlife corridor study, suitable crossings would be installed at appropriate locations to facilitate safe crossings.

Mitigation Measure WILD-1.14: Assess Habitat Suitability and Survey Suitable Habitat for Western Spadefoot, California Red-legged Frog, and Western Pond Turtle

This mitigation measure is described above under Impact WILD-1f for western spadefoot.

Mitigation Measure WILD-1.15: Design and Construct Wildlife Crossings for New Roadways at Suitable Locations

This mitigation measure is described above under Impact WILD-1f for western spadefoot.

Mitigation Measure WILD-1.16: Monitor and Maintain Wildlife Crossings

This mitigation measure is described above under Impact WILD-1f for western spadefoot.

Mitigation Measure WILD-1.17: Implement California Red-legged Frog Protective Measures

If California red-legged frog is found in the Project area either incidentally or during surveys conducted in accordance with Mitigation Measure WILD-1.14, the Authority will implement the following protective measures. These measures will apply to upland habitat (within 300 feet) and dispersal habitat (within 1 mile) of aquatic habitats that are found to be occupied during surveys.

Occupied aquatic habitat will not be removed or filled until California red-legged frogs have been relocated to suitable habitat outside of disturbance areas or other actions that will avoid mortality of individuals or effects on the population as determined during ESA Section 7 consultation with USFWS.

Occupied aquatic habitat that will not be removed or disturbed will be protected with exclusion fencing along the edge of the work area a minimum of 200 feet from the aquatic habitat. The fencing will be installed to prevent individuals from entering the work area but will not completely enclose the pond or exclude dispersal to and from the pond. The USFWS-approved biologist will assist with preparing the fence plans and will be present during installation. The fencing will be installed to a depth of 6 inches and extended at least 30 inches above grade. The contractor will avoid placing fencing on top of ground squirrel burrows. The fence will be pulled taut at each support to prevent folds or sagging. A USFWS-approved biologist will also walk all fence lines daily to look for individual frogs stranded along fence lines. Fencing will be inspected and maintained in good condition throughout work and will be removed after work is complete and all construction equipment is removed from the work area.

A USFWS-approved biologist will be present during all ground-disturbing work in California red-legged frog upland and dispersal habitats during the rainy season (generally October 15 to May 1) when frogs are dispersing. The biologist will survey work areas for frogs and for rodent burrows in potential upland habitat immediately prior to the start of any ground-disturbing work (including moving equipment into the area). If a California red-legged frog is found, it will be moved out of the work area in accordance with the USFWS biological opinion for the Project. Disturbance of suitable habitat will be minimized to the maximum extent feasible.

In the event a California red-legged frog is trapped, construction within 300 feet of the location will cease until the individual has been removed from the location per a USFWS-approved relocation plan. The plan will include trapping and relocation methods, relocation sites, and post-relocation monitoring. Only USFWS-approved biologists will be allowed to relocate listed species to outside of the construction area.

If ground disturbance or vegetation removal will occur in suitable upland or dispersal habitats during or 24 hours following a rain event between October 15 and May 1, a USFWS-approved biologist will be onsite to monitor the work and ensure that the exclusion fencing is intact. Following a rain event, no work will proceed until a USFWS-approved biologist has inspected the work areas and verified that there are no California red-legged frogs present. A rain event is to be considered precipitation of at least 0.25 inch within a 24-hour period.

Activities within suitable upland/dispersal habitat will cease no less than 30 minutes before sunset and will not begin again prior to no less than 30 minutes after sunrise. Except when necessary for driver or pedestrian safety artificial lighting at a worksite will be prohibited during the hours of darkness when working in suitable California red-legged frog upland/dispersal habitat.

For any night work, the driving path and work area will be surveyed for California red-legged frog immediately prior to work and nighttime work will be monitored by a USFWS-approved biologist.

If work must be conducted at night, all lighting will be directed away and shielded from California red-legged frog habitat outside the work area to minimize light spillover to the greatest extent possible.

Mitigation Measure WILD-1.18: Compensate for Permanent and Temporary Losses of Occupied California Red-legged Frog Aquatic and Upland Habitats

The Authority will compensate for the permanent and temporary losses of occupied California red-legged frog aquatic habitat and associated upland habitat through the purchase of mitigation credits at a USFWS-approved mitigation or conservation bank or through acquiring or preserving and protecting habitat in perpetuity at a location approved by USFWS. Permanent impacts on habitat will be mitigated by restoring or preserving habitat at a 2:1 ratio (habitat restored or preserved : habitat affected) or by an equivalent or greater amount as determined during Section 7 ESA consultation with USFWS. Temporary impacts on habitat will be mitigated by restoring or preserving habitat at a 1:1 ratio (habitat restored or preserved: habitat affected), or by an equivalent or greater amount as determined during Section 7 ESA consultation with USFWS for the Project. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority, Reclamation, and USFWS.

USFWS-approved conservation banks have long-term adaptive management plans with performance standards. Therefore, if mitigation occurs through a USFWS-approved conservation bank, the bank's performance standards and success criteria will be applied.

If credits are not purchased at a USFWS-approved conservation bank, the Authority will implement standards for long-term management and protection of conservation areas. The Authority will work closely with USFWS during the planning and development of conservation areas. Conservation areas will have suitable aquatic and upland habitat. Once established, conservation areas will be surveyed by a USFWS-approved biologist a minimum of two times between January 1 and June 30. The biologist will survey aquatic habitat for California red-legged frog, evaluate the adequacy of site protection (e.g., fencing, signage), assess potential threats to the frog, and take photographs of the site. The biologist will also survey a set of reference ponds or other aquatic habitat known to be occupied by California red-legged frog to compare to the preserved and created/restored aquatic habitat. The reference ponds/habitat should be located within proximity to the conservation area and exhibit characteristics similar to the preserved and created/restored habitat.

Performance standards for management of non-mitigation bank ponds are as follows: (1) > 10% of the shoreline is vegetated; (2) 30%–60% of the pond has emergent vegetation; and (3) 40%–70% of the pond is open water. Performance standards are not included for California red-legged frog occupancy since the objective of the Project mitigation is to establish compensatory suitable habitat rather than to ensure occupancy. Therefore, the successful establishment of aquatic and upland habitats based on the floristic, physical, and hydrologic components of the habitats will be used to evaluate the success of offsite California red-legged frog habitat compensatory mitigation. If the performance standards cannot be achieved, the Authority and Reclamation will consult with USFWS to implement an alternative compensatory mitigation approach.

Working closely with USFWS during planning and development of the conservation area and monitoring the conservation area to ensure performance standards are achieved and adaptive management actions are applied when the performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the losses resulting from the Project.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that permanent impacts on modeled California red-legged frog habitat would be less under Alternative 2 than under Alternatives 1 and 3 because of the smaller inundation area and reduced impacts from construction of dams and dikes (Appendix 10C, Table 10C-7). A net decrease in the amount of habitat removed would also decrease the potential for individuals to be crushed or buried by equipment or struck by vehicles and equipment traveling along access roads. The operation impacts of Alternative 2 would be similar to those for Alternatives 1 and 3 except that the increased amount of roadway could impede movement over a larger area and result in additional mortality from vehicle strikes. These impacts would be significant because the implementation of Alternative 2 could reduce the local California red-legged frog population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.14, WILD-1.15, WILD-1.16, WILD-1.17, and WILD-1.18 would reduce the level of impact from construction and operation to less than significant.

Impact WILD-1h: Western Pond Turtle

Alternative 1 and 3

Construction of Alternative 1 or 3 would result in significant impacts on western pond turtle from removal of potential habitat and potential loss of individuals. Operation of Alternative 1 or 3 could result in significant impacts on western pond turtle as a result of new or increased contaminants entering habitat, vehicle strikes, and new roads creating impediments to movement. These impacts would be significant because the implementation of Alternative 1 or 3 could reduce the local western pond turtle population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.14, WILD-1.15, WILD-1.16, WILD-1.19, VEG-2.2, VEG-3.1, VEG-3.2, and VEG-3.3 would reduce the level of impact from construction and operation to less than significant because surveys would be conducted to identify suitable habitat, qualified biologists would conduct preconstruction surveys and monitor initial work in suitable aquatic habitat, compensation would be provided for the permanent and temporary losses of suitable habitat, and if found to be necessary through a wildlife corridor study, suitable crossings would be installed at appropriate locations to facilitate safe crossings.

Mitigation Measure WILD-1.14: Assess Habitat Suitability and Survey Suitable Habitat for Western Spadefoot, California Red-legged Frog, and Western Pond Turtle

This measure is described above under Impact WILD-1f for western spadefoot.

Mitigation Measure WILD-1.15: Design and Construct Wildlife Crossings for New Roadways at Suitable Locations

This mitigation measure is described above under Impact WILD-1f for western spadefoot.

Mitigation Measure WILD-1.16: Monitor and Maintain Wildlife Crossings

This mitigation measure is described above under Impact WILD-1f for western spadefoot.

Mitigation Measure WILD-1.19: Conduct Preconstruction Surveys for Western Pond Turtle and Monitor Initial In-Water Work

The Authority will retain qualified biologists (i.e., experienced in the identification of and knowledge of the life history and habitats of western pond turtle) to conduct preconstruction surveys within 24 hours of the start of activities that disturb occupied or suitable western pond turtle aquatic habitat. The biologist will survey the aquatic habitat and adjacent marsh, riparian, and grassland habitat in the construction area. If in-water work does not start immediately, the biologist will return to the construction site immediately prior to the start of in-water work to conduct another preconstruction survey. The biologist will remain onsite until initial in-water work is complete. If a turtle becomes trapped during initial in-water work, a biologist who is CDFW-approved to capture and relocate turtles during construction of the Project will relocate the individual to suitable aquatic habitat upstream or downstream of the construction area. The construction crew will be instructed to notify the crew foreman who will contact the biologist if a turtle is found trapped in the construction area. Work in the area where the turtle is trapped will stop until the biologist arrives and removes and relocates the turtle. The biologist will report their activities to CDFW within 24 hours of relocating any turtle.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This mitigation measure is described above under Impact VEG-2.

Mitigation Measure VEG-3.1: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities

This mitigation measure is described above under Impact VEG-3.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

This mitigation measure is described above under Impact VEG-3.

Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters

This mitigation measure is described above under Impact VEG-3.

Alternative 2

Construction of Alternative 2 would result in similar impacts to Alternatives 1 and 3 except that permanent and temporary impacts on modeled western pond turtle aquatic habitat would be greater under Alternative 2 because of the construction of South Road and TRR West and permanent and temporary impacts on modeled western pond turtle upland habitat would be less under Alternative 2 because of the smaller inundation area and reduced impacts from construction of dams, and dikes. A net increase in the amount of modeled aquatic habitat removed would also increase the potential for individuals to be crushed or buried by equipment. Operation of Alternative 2 would be the same as Alternatives 1 and 3 except that the increased amount of roadway would impede movement over a larger area and result in additional mortality from vehicle strikes. These impacts would be significant because the implementation of Alternative 2 could reduce the local western pond turtle population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.14, WILD-

1.15, WILD-1.16, WILD-1.19, VEG-2.2, VEG-3.1, VEG-3.2, and VEG-3.3 would reduce the level of impact from construction and operation to less than significant.

Impact WILD-1i: Giant Gartersnake

Alternatives 1 and 2

Construction of Alternative 1 or 3 would result in significant impacts on giant gartersnake from removal of suitable habitat and potential loss of individuals. Operation of Alternative 1 or 3 could result in significant impacts on giant gartersnakes if individuals are injured or killed during maintenance of waterway structures or are struck by vehicles during maintenance activities. These impacts would be significant because the implementation of Alternative 1 or 3 could reduce the local giant gartersnake population through direct mortality and habitat loss. Implementation of Mitigation Measure WILD-1.20 would reduce the level of impact from construction and operation to less than significant because construction in suitable habitat would be conducted during this species' active period to the extent feasible, surveys would be conducted to determine presence of giant gartersnake, construction would be suspended if giant gartersnakes are observed in work areas, exclusion fencing would be installed along the edge of the construction area where suitable habitat is present, and additional measures would be implemented to avoid causing giant gartersnake injury and mortality. Furthermore, implementation of Mitigation Measures VEG-2.2, VEG-3.2, VEG-3.3, and WILD-1.21 would reduce the level of impact to less than significant because temporarily disturbed aquatic and upland habitats would be restored and compensation would be provided for the permanent and temporary losses of suitable aquatic and upland habitat. The Authority will also implement measures specified in the biological opinion from USFWS and the incidental take permit from CDFW for the Project.

Mitigation Measure WILD-1.20: Implement Protective Measures for Giant Gartersnake

The Authority will implement the following protective measures when working in or near giant gartersnake habitat.

When possible, all construction activity in suitable giant gartersnake aquatic habitat, and upland habitat within 200 feet of suitable aquatic habitat, will be conducted during the snake's active period (between May 1 and October 1). For work that cannot be conducted between May 1 and October 1, additional protective measures, such as installing exclusion fencing or additional biological monitoring, or other measures determined during consultation with USFWS and CDFW, will be implemented.

Any dewatered habitat will remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.

The movement of heavy equipment within 200 feet of the banks of potential giant gartersnake aquatic habitat will be confined to designated haul routes to minimize habitat disturbance.

Vegetation clearing within 200 feet of the banks of suitable giant gartersnake aquatic habitat will be limited to the minimum area necessary. Avoided giant gartersnake habitat in or adjacent to the Project area will be flagged and designated as an activity exclusion zone, to be avoided by all construction personnel.

To reduce the likelihood of snakes entering the construction area, exclusion fencing will be installed along the edge of the construction area that is within 200 feet of suitable aquatic habitat. The exclusion fencing will be installed during the active period for giant gartersnakes (May 1 to October 1) to reduce

the potential for injury and mortality during this activity. The exclusion fencing will consist of 3-foot-tall silt fencing buried 4 to 6 inches below ground level.

A USFWS- and CDFW-approved biologist will conduct a preconstruction survey of work areas within 200 feet of suitable giant gartersnake habitat no more than 24 hours before the start of work in that area.

Prior to construction activities each morning, construction personnel will inspect exclusion and orange barrier fencing to ensure they are both in good working order. If any snakes are observed in the construction area during this inspection or at any other time during construction, the USFWS- and CDFW-approved biologist will be contacted to survey the site for snakes. The work area will be re-inspected and surveyed whenever a lapse in construction activity of 2 weeks or more has occurred. If a snake (believed to be a giant gartersnake) is encountered during construction, activities will cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed.

The Authority will prepare a giant gartersnake relocation plan for review and approval by USFWS and CDFW prior to Project implementation. The plan will include trapping and relocation methods, relocation sites, and post-relocation monitoring. If a giant gartersnake becomes trapped, construction will cease until the individual has been relocated to an appropriate location as described in the approved relocation plan. Only USFWS and CDFW-approved biologists will conduct surveys and move listed species in accordance with the approved relocation plan.

Mitigation Measure WILD-1.21: Compensate for Permanent and Temporary Losses of Giant Gartersnake Aquatic and Upland Habitats

The Authority will compensate for the permanent and temporary losses of suitable giant gartersnake aquatic habitat and associated upland habitat through the purchase of mitigation credits at a USFWS- and CDFW-approved mitigation or conservation bank or through acquiring and protecting habitat in perpetuity at a location approved by USFWS and CDFW. Permanent impacts on habitat will be mitigated by restoring or preserving habitat at a 3:1 ratio (habitat restored or preserved: habitat affected) or by an equivalent or greater amount as determined through consultation with USFWS or CDFW. Temporary impacts on habitat will be mitigated by restoring or preserving habitat at a 1:1 ratio (habitat restored or preserved: habitat affected), or by an equivalent or greater amount as determined during consultation with USFWS or CDFW. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority, Reclamation, USFWS, and CDFW.

USFWS and CDFW-approved conservation/mitigation banks have long-term adaptive management plans with performance standards. If mitigation occurs through a USFWS and CDFW-approved conservation/ mitigation bank, the bank's performance standards and success criteria will be applied.

If credits are not purchased at a USFWS and CDFW-approved conservation bank, the Authority will implement standards for long-term management and protection of conservation areas. The Authority will work closely with USFWS and CDFW during the planning and development of conservation areas. Conservation areas will have suitable aquatic and upland habitat. Once established, conservation areas will be surveyed annually by a USFWS- and CDFW- approved biologist. The biologist will assess the aquatic and upland habitat conditions, evaluate the adequacy of site protection (e.g., fencing, signage), assess potential threats to giant gartersnake, and take photographs of the site. The biologist will prepare

monitoring reports that will include methods and results of monitoring and recommendations for adaptive management actions as needed.

Performance standards for non-mitigation bank aquatic and upland habitat compensation will provide the basis for monitoring parameters and will help determine the need for possible remedial actions after Project implementation. General performance standards for management of non-mitigation bank giant gartersnake habitat are as follows: (1) protected habitat is supplied with a reliable source of clean water from March through November or at a minimum, through the critical active summer months; (2) a sufficient amount of upland habitat is adjacent to aquatic habitat and is not inundated during the active season (May 1 through October 1); (3) the site provides available and abundant bankside vegetative cover (i.e., tule, cattail) for cover; and (4) permanent shelter, such as bankside cracks or crevices, holes, or small mammal burrows and upland winter refugia (areas that do not flood) must be present and maintained. During planning and development of the mitigation area, additional or more refined performance standards may be developed in coordination with USFWS and CDFW. Performance standards are not included for giant gartersnake occupancy since the objective of the Project mitigation is to establish compensatory suitable habitat rather than to ensure occupancy. Therefore, the successful establishment of aquatic and upland habitats based on the floristic, physical, and hydrologic components of the habitats will be used to evaluate the success of offsite giant gartersnake habitat compensatory mitigation.

Working closely with USFWS and CDFW during planning and development of the conservation area, monitoring the conservation area to ensure performance standards are achieved, and applying adaptive management actions when the performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the losses resulting from the Project.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This mitigation measure is described above under Impact VEG-2.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

This mitigation measure is described above under Impact VEG-3.

Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters

This mitigation measure is described above under Impact VEG-3.

Alternative 2

Construction of Alternative 2 would result in similar impacts to those under Alternatives 1 and 3 except that permanent impacts on modeled upland habitat would be less under Alternative 2 because of reduced impacts from construction of TRR West and temporary impacts on modeled aquatic and upland habitat would be greater under Alternative 2 because of the extended Dunnigan Pipeline and construction of the Sacramento River discharge. Operation of Alternative 2 could also result in additional potential for injury or mortality of giant gartersnakes from maintenance activities at the Sacramento River discharge. These impacts would be significant because the implementation of Alternative 2 could reduce the local giant gartersnake population through direct mortality and habitat

loss. Implementation of Mitigation Measures WILD-1.20, WILD-1.21, VEG-2.2, VEG-3.2, and VEG-3.3 would reduce the level of impact from construction and operation to less than significant.

Impact WILD-1j: Northern Harrier and Burrowing Owl

Alternatives 1 and 3

Construction of Alternative 1 or 3 would result in significant impacts on northern harrier and burrowing owl from removal of modeled habitat and potential loss or disturbance of active nests. Operation of Alternative 1 or 3 could result in disturbance of northern harrier and burrowing owl from human-generated noise and disturbance at recreation areas and near the reservoir, or illness or mortality of northern harrier or burrowing owl from ingestion of rodents that have consumed rodenticide. Collision with new transmission lines could cause injury or death of individuals from the collision impact or electrocution. New or widened roadways and additional vehicles traveling on roadways could increase the potential for injury or mortality of northern harrier and burrowing owl from vehicle strikes. These impacts would be significant because the implementation of Alternative 1 or 3 could reduce the local northern harrier and burrowing owl populations through direct mortality and habitat loss.

Implementation of Mitigation Measures WILD-1.22, WILD-1.23, WILD-1.24, WILD-1.25, WILD-1.26, WILD-1.27, VEG-2.2, and VEG-3.2 would reduce the level of impact from construction and operation to less than significant because vegetation would be removed during the non-breeding season, surveys would be conducted to determine if northern harrier and burrowing owl are nesting (or for burrowing owl, wintering) in or near work areas, no-disturbance buffers would be established around active nest (or wintering) sites, rodenticides would be used minimally and appropriately, transmission lines would be fitted with protective devices, and impacts on sensitive natural communities in which northern harriers or burrowing owls may nest or forage would be compensated for through habitat restoration or protection.

Mitigation Measure WILD-1.22: Conduct Vegetation Removal During the Non-Breeding Season of Nesting Migratory Birds

The Authority will, to the maximum extent feasible, remove trees, shrubs, and herbaceous vegetation during the non-breeding season for most migratory birds (generally between September 1 and January 31) to remove nesting substrate and avoid potential delays in construction caused by the presence of nesting birds. If vegetation cannot be removed between September 1 and January 31, or if ground cover re-establishes in areas where vegetation has been removed, the affected area will be surveyed for nesting birds, as discussed in Mitigation Measure WILD-1.23.

Mitigation Measure WILD-1.23: Conduct Preconstruction Surveys for Non-Raptor Nesting Migratory Birds and Implement Protective Measures if Found

For special-status species where survey protocols have been established by CDFW, USFWS, or technical advisory committees, those survey protocols will supersede this measure (i.e., Mitigation Measures WILD-1.24, WILD-1.28, and WILD-1.29 for burrowing owl, golden eagle/bald eagle, and Swainson's hawk/white-tailed kite). The Authority will retain qualified wildlife biologists with knowledge of the relevant species to conduct non-raptor nesting bird surveys no more than 14 days prior to the start of construction. Where suitable habitat is present to support bank swallow, yellow-breasted chat, tricolored blackbird, yellow warbler, and song sparrow (Modesto population), wildlife biologists will thoroughly survey habitat and listen for calls and songs of these species. Surveys for non-raptor nesting

migratory birds will include examining all potential nesting habitat in and within 50 feet of work areas on foot and/or using binoculars. Surveys for nesting raptors will be conducted during Swainson's hawk/white-tailed kite surveys. If no active nests are detected during these surveys, no additional measures are required. During all nesting bird surveys, the biologist will document any special-status bird species detected in the survey area.

If an active nest is found in the survey area, a no-disturbance buffer will be established around the nest site to avoid disturbance or destruction of the site until the end of the breeding season (August 31) or until after a qualified wildlife biologist determines that the young have fledged and moved out of the Project area (this date varies by species). The extent of these buffers will be determined by the biologist in coordination with USFWS and CDFW and will depend on the species, level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. If it is determined that the no-disturbance buffer cannot be maintained, the Authority and the qualified biologist will consult with USFWS and CDFW about implementing a reduced buffer but requiring full-time nest monitoring by a qualified biologist to watch for signs of stress. If behaviors indicating stress or potential nest abandonment (e.g., visible or audible agitation, leaving the nest at an unusual time or for an unusual length of time), the biologist will have the authority to stop work until the bird has returned to the nest or otherwise shows signs of recovery from the stress.

For federally and state-listed species, the above protective measures will be implemented, and the Authority will contact CDFW and USFWS to discuss the need for take authorization if the Authority does not already have such authorization.

Mitigation Measure WILD-1.24: Conduct Surveys for Western Burrowing Owl Prior to Construction and Implement Avoidance and Minimization Measures if Found

The Authority will retain qualified biologists (experienced at identification of burrowing owls and their habitat) to conduct burrowing owl surveys in accordance with CDFW's *2012 Staff Report on Burrowing Owl Mitigation* (2012 Staff Report) (California Department of Fish and Game 2012). Biologists will conduct four surveys during the breeding season as follows: (1) one survey between February 15 and April 15, and (2) a minimum of three surveys at least 3 weeks apart between April 15 and July 15, with at least one survey after June 15. Biologists will also conduct four surveys spread evenly throughout the non-breeding season (September 1 to January 31). A report describing the methods and results of the survey will be submitted to CDFW within 30 days of completing the surveys.

The Authority will retain qualified biologists to conduct preconstruction take avoidance surveys for active burrows according to methodology in the 2012 Staff Report. If burrowing owls are found during any of the surveys, the Authority will implement Mitigation Measure WILD-1.25, which requires habitat to be replaced at a conservation area before permanent impacts occur. Because ample lead time is necessary to acquire and protect replacement habitat, these efforts should begin as soon as possible after presence of burrowing owls is determined.

Regardless of results from the surveys described above, if suitable habitat is present in the Project area, take avoidance (preconstruction) surveys will be conducted in the Project area (i.e., the area of ground disturbance and surrounding 500 feet) no less than 14 days prior to and 24 hours before initiating ground-disturbing activities (i.e., two surveys). If suitable habitat within 500 feet of ground disturbance is not accessible because of landowner restrictions, then the survey will extend to the edge of where access is allowed. Because burrowing owls may re-colonize a site after a few days, subsequent surveys

will be conducted if more than 48 hours pass between Project activities. If no burrowing owls are found, no further mitigation is required. If burrowing owls are found, the Authority will implement the following measures summarized from the 2012 Staff Report.

Occupied burrows will not be disturbed during the breeding season (February 1–August 31).

Depending on the time of year and level of disturbance, a 164-foot to 1,640-foot-wide buffer area will be established around occupied burrows. No construction will be authorized within the buffer unless a qualified biologist determines through non-invasive methods that egg laying and incubation have not begun or that juveniles are foraging independently and are capable of independent survival.

To the maximum extent possible, burrows occupied during the non-breeding season by migratory or non-migratory resident burrowing owls will be avoided.

To the maximum extent possible, destruction of unoccupied burrows in temporary impact areas will be avoided, and visible markers will be placed near burrows to ensure they are not collapsed.

Occupied burrows that cannot be avoided will have exclusion devices installed and be collapsed. Burrow exclusion will be conducted only by qualified biologists during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty by site surveillance and/or scoping.

Qualified biologists will conduct additional take avoidance surveys, as described above.

Qualified biologists will monitor the Project site for burrowing owls during Project construction activities.

Impacts on burrowing owls and their habitat will be minimized by using buffer areas, visual screens, and other measures during Project construction activities. Recommended buffer distances in the 2012 Staff Report will be used or site-specific buffers and visual screens will be determined through information collected during site-specific monitoring and consultation with CDFW.

Mitigation Measure WILD-1.25: Restore Temporarily Disturbed Habitat and Compensate for the Permanent Loss of Occupied Burrowing Owl Habitat

If burrowing owls have been documented to occupy burrows at the Project site in the last 3 years, CDFW considers the site occupied and mitigation is required (California Department of Fish and Game 2012:6).

The Authority will restore temporarily disturbed areas to pre-Project conditions. The Authority will mitigate for permanent impacts on occupied burrowing owl habitat in accordance with the 2012 Staff Report Permanent impacts will be mitigated by creating or preserving habitat at a 1:1 ratio (habitat created or preserved : habitat permanently affected) or by an equivalent or greater amount as determined in coordination with CDFW. Replacement habitat will be established through onsite mitigation, offsite mitigation, and/or credits purchased at a CDFW-approved mitigation or conservation bank. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority and CDFW.

CDFW-approved mitigation banks have long-term adaptive management plans with performance standards. If mitigation occurs through a CDFW-approved conservation/ mitigation bank, the bank's performance standards and success criteria will be applied.

If credits are not purchased at a CDFW-approved conservation bank, the Authority will implement standards for long-term management and protection of mitigation areas. A conservation easement would be placed on offsite mitigation land. A mitigation monitoring plan will be prepared for onsite and offsite mitigation to ensure the long-term success of the habitat. The mitigation monitoring plan will describe the requirements for monitoring and maintaining the site, performance standards, adaptive management techniques, and reporting requirements.

The Authority will work closely with CDFW during the planning and development of onsite and offsite mitigation areas. Mitigation areas will provide suitable nesting and foraging habitat. Once established, mitigation areas will be periodically monitored by a CDFW-approved biologist. The biologist will survey the site for presence of western burrowing owl, assess the suitability of the site in providing nesting and foraging habitat (including the abundance of prey), evaluate the adequacy of site protection (e.g., fencing, signage), assess potential threats to burrowing owls, and take photographs of the site. The biologist should determine the number of adult burrowing owls and pairs, and if the numbers are maintained between monitoring years. The frequency of monitoring will be determined based on site-specific conditions in coordination with CDFW and will be included in the mitigation monitoring plan.

Performance standards for management of burrowing owl habitat will be based on site-specific conditions and included in the mitigation monitoring plan. Performance standards may include managing vegetation height to between 4.7 and 13 centimeters through grazing or mowing (California Department of Fish and Game 2012) and maintaining conditions that promote or support natural prey distribution and abundance, especially in proximity to occupied burrows. The successful establishment or maintenance of suitable breeding and foraging habitat based on the vegetation height and prey abundance will be used to evaluate the success of the burrowing owl habitat compensatory mitigation.

Working closely with CDFW during planning and development of the conservation area, monitoring the conservation area to ensure performance standards are achieved, and applying adaptive management when performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the permanent habitat loss resulting from the Project.

Mitigation Measure WILD-1.26: Protect Special-Status Wildlife from Rodenticide Use

To minimize the potential for wildlife to be poisoned by ingesting rodenticide, use of rodenticides will be minimized to the maximum extent feasible and limited to areas immediately surrounding Project facilities. Facilities will be maintained in a manner to reduce the potential for nuisance rodents, including sealing openings in structures, securely storing trash bins, and installing signage at recreation areas discouraging feeding of wildlife and encouraging disposal of food and other trash in designated containers. Signage will include text from the California Code of Regulations that states it is illegal to feed big game mammals and that feeding of wildlife is considered harassment and should not be done under any circumstances.

Wherever feasible, alternatives to rodenticide will be used for rodent eradication, such as traps, if they can be used safely around other wildlife. Additionally, to minimize the risk to non-target species from directly ingesting rodenticides, anticoagulant and non-anticoagulant rodenticides will not be broadcast. The Authority will consult with California Department of Pesticide Regulation’s PRESCRIBE database (https://www.cdpr.ca.gov/docs/endspec/prescint.htm) prior to any vertebrate pest control activity. The database incorporates section by section coordination with CDFW's Biogeographic Information and Observation System and the CNDDB to provide species-specific use restrictions that are not on pesticide labels, including use of modified bait stations and what those modifications must be.

Mitigation Measure WILD-1.27: Construct Overhead Power Lines and Associated Equipment Following Suggested Practices to Reduce Bird Collisions with Power Lines

The Authority will ensure that new transmission lines and associated equipment will be properly fitted with wildlife protective devices to isolate and insulate structures to prevent injury or mortality of birds. Protective measures shall follow the guidelines provided in *Reducing Avian Collisions with Power Lines: The State of the Art* (Avian Power Line Interaction Committee 2012), or the current Avian Power Line Interaction Committee guidelines in place at the time the transmission lines are installed, and will include insulating hardware or conductors against simultaneous contact, using poles that minimize impacts to birds, and increasing the visibility of conductors or wires to prevent or minimize bird collisions.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This mitigation measure is described above under Impact VEG-2.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

This mitigation measure is described above under Impact VEG-3.

Alternative 2

Construction of Alternative 2 would result in impacts similar to those under Alternatives 1 and 3 except that permanent and temporary impacts on burrowing owl habitat and permanent impacts on northern harrier habitat would be less under Alternative 2 and temporary impacts on northern harrier habitat would be greater under Alternative 2. Operation of Alternative 2 would result in similar impacts as those described above for Alternatives 1 and 3 except that the greater amount of roadway could increase the potential for northern harrier and burrowing owl to be struck by vehicles of workers traveling to operations facilities or visitors traveling to recreation areas. These impacts would be significant because the implementation of Alternative 2 could reduce the local northern harrier and burrowing owl populations through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.22, WILD-1.23, WILD-1.24, WILD-1.25, WILD-1.26, WILD-1.27, VEG-2.2, and VEG-3.2 would reduce the level of impact from construction and operation to less than significant.

Impact WILD-1k: Golden Eagle and Bald Eagle

Alternatives 1 and 3

Implementation of Alternative 1 or 3 would have the beneficial effects of providing new bald eagle foraging habitat (Sites Reservoir) and new nesting sites or wintering habitat because of the proximity to the new foraging habitat (12 to 20 years after reservoir filling begins). Construction of Alternative 1 or 3 would result in significant impacts on golden eagle and bald eagle from removal of suitable habitat and potential loss or disturbance of active nests. Operation of Alternative 1 or 3 may result in disturbance of bald eagle and golden eagle if nesting or foraging at or near recreation areas and the use of rodenticides could cause illness, injury, or mortality of bald eagle or golden eagle if rodenticides are ingested. Collision with new transmission lines could cause injury or death of individuals from the collision impact or electrocution. Consumption of fish that have bioaccumulated methylmercury could cause illness or

mortality of bald eagle. These impacts would be significant because the implementation of Alternative 1 or 3 could reduce the local golden eagle and bald eagle populations through direct mortality and habitat loss.

Implementation of Mitigation Measures WILD-1.22, WILD-1.26, WILD-1.27, WILD-1.28, WILD-1.29, VEG-2.2, VEG-3.2, VEG-3.3, VEG-4.1, VEG-4.2, and WQ-1.1 would reduce the level of impact on bald eagle from construction and operation to less than significant because vegetation would be removed during the non-breeding season, surveys would be conducted to determine if bald eagle are nesting in or near work areas, no-disturbance buffers would be established around active nest sites, rodenticides would be used minimally and appropriately, transmission lines would be fitted with protective devices; steps would be taken to reduce, monitor, and manage mercury in the reservoir and fish population; and impacts on sensitive natural communities in which bald eagles may nest or forage would be compensated for through habitat restoration and preservation. Implementation of Mitigation Measures WILD-1.22, WILD-1.26, VEG-2.2, VEG-3.2, VEG-3.3, VEG-4.1, and VEG-4.2 would reduce the level of construction impacts on golden eagle; however, the removal of mature trees within blue oak woodland, foothill pine, and oak savanna communities would be a long-term impact on golden eagle because of the length of time that would be required for newly planted trees to reach mature size and fully replace the habitat function and habitat value of the removed trees. This impact on golden eagle would remain **significant and unavoidable** even with mitigation because of the long-term loss of blue oak woodland, foothill pine, and oak savanna habitat. Implementation of Mitigation Measures WILD-1.27 and WILD-1.28 would reduce the level of impact on golden eagle from operation to less than significant because rodenticides would be used minimally and appropriately, and transmission lines would be fitted with protective devices. The Authority will also implement measures specified in an Eagle Conservation Plan, which will be prepared in coordination with USFWS and CDFW to address Project impacts on bald eagle and golden eagle.

Mitigation Measure WILD-1.22: Conduct Vegetation Removal During the Non-Breeding Season of Nesting Migratory Birds

This measure is described above under Impact WILD-1j for northern harrier and burrowing owl.

Mitigation Measure WILD-1.26: Protect Special-Status Wildlife from Rodenticide Use

This measure is described above under Impact WILD-1j for northern harrier and burrowing owl.

Mitigation Measure WILD-1.27: Construct Overhead Power Lines and Associated Equipment Following Suggested Practices to Reduce Bird Collisions with Power Lines

This measure is described above under Impact WILD-1j for northern harrier and burrowing owl.

Mitigation Measure WILD-1.28: Conduct Focused Surveys for Golden Eagle and Bald Eagle and Implement Protective Measures if Found

Prior to the start of construction, the Authority will retain qualified wildlife biologists (experienced with raptor identification and behaviors) to conduct focused surveys for golden eagle and bald eagle nests in suitable habitat in the Project area and within a 2-mile radius of the Project area.

The surveys will be conducted in accordance with the Interim Golden Eagle Inventory and Monitoring Protocols; and other Recommendations (Pagel et al. 2010), Protocol for Evaluating Bald Eagle Habitat and Populations in California (Jackman and Jenkins 2004), Bald Eagle Breeding Survey Instructions

(California Department of Fish and Wildlife 2017) and Updated Eagle Nest Survey Protocol (U.S. Fish and Wildlife Service 2020b).

Prior to conducting surveys, existing survey reports and other known breeding area records will be reviewed, and a map of potential nest sites will be created using GIS mapping of suitable nesting habitat. If feasible, an initial survey will be conducted during the fall or winter, prior to the initial occupancy survey, to identify existing nest sites. Nest locations will be mapped using GPS software and will be used during the occupancy surveys.

For golden eagle, based on the results of the initial survey, aerial (helicopter) or ground surveys will be conducted to assess nest occupancy. A minimum of two aerial surveys or ground observation periods lasting at least 4 hours each will be conducted in a single breeding season (January 1 through August 31) to confirm presence/absence of golden eagle. Each survey will be conducted at least 30 days apart. Surveys will be conducted in the morning during favorable weather conditions.

For bald eagle, based on the results of the initial survey, a minimum of three surveys will be conducted during the bald eagle nesting season (January 1 to July 31) in the year that construction will begin, and each year during the construction period, to look for new nests. The first survey will be conducted in the early breeding period in early March, and additional surveys will be conducted in mid-nesting season (late April or early May) and late in the season (mid-June). Surveys will be conducted in the morning, if feasible, during favorable weather conditions.

For both species, the final survey methods and survey area boundaries will be determined based on coordination with USFWS and CDFW, and all survey results will be submitted to these agencies.

No active bald eagle or golden eagle nest trees will be removed during the nesting season. If an occupied golden eagle or bald eagle nest is identified in the survey area, a no-disturbance buffer will be established around the nest site to avoid disturbance or destruction of the site, consistent with the USFWS's *Recommended Buffer Zones for Human Activities around Nesting Sites of Bald Eagles in California and Nevada* and the USFWS *Recommended Buffer Zones for Ground-based Human Activities around Nesting Sites of Golden Eagles in California and Nevada* (U.S. Fish and Wildlife Service 2017c, 2020c). If it is determined that the no-disturbance buffer cannot be maintained, the Authority and the qualified biologist will consult with USFWS and CDFW about implementing a reduced buffer but requiring full-time nest monitoring by a qualified biologist to watch for signs of stress. If behaviors indicating stress or potential nest abandonment (e.g., visible or audible agitation, leaving the nest at an unusual time or for an unusual length of time), the biologist will have the authority to stop work until the bird has returned to the nest or otherwise shows signs of recovery from the stress. Work will be delayed as long as necessary to ensure that nest abandonment does not occur.

Mitigation Measure WILD-1.29: Compensate for the Loss of Eagle Nest Trees

Prior to the start of construction, the Authority will prepare an Eagle Conservation Plan in consultation with USFWS, which will ensure that the loss of eagle nest trees results in a less-than-significant impact. Based on the results of the Eagle Conservation Plan and eagle nest surveys (Mitigation Measure WILD-1.28), the Authority will purchase compensatory mitigation credits from the Bald Eagle and Golden Eagle Electrocution Prevention In-lieu Fee Program for the loss of eagle nest trees. The number of credits necessary to offset the permitted level of eagle take is determined by the permittee and USFWS during the consultation process. As such, the number of credits purchased to offset the effects of the Project will be specified in the Eagle Take Permit issued by USFWS.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This mitigation measure is described above under Impact VEG-2.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

This mitigation measure is described above under Impact VEG-3.

Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters

This mitigation measure is described above under Impact VEG-3.

Mitigation Measure VEG-4.1: Avoid and Minimize Potential Adverse Effects on Oak Woodlands During Construction

This mitigation measure is described above under Impact VEG-4.

Mitigation Measure VEG-4.2: Compensate for Adverse Effects on Oak Woodlands

This mitigation measure is described above under Impact VEG-4.

Mitigation Measure WQ-1.1: Methylmercury Management

This mitigation measure is described above under Impact WQ-1.

Alternative 2

Construction of Alternative 2 would result in impacts similar to those for Alternatives 1 and 3 except permanent and temporary impacts on golden eagle nesting and foraging habitats would be less under Alternative 2 and permanent impacts on bald eagle nesting and foraging habitat would be greater under Alternative 2. A net increase in the amount of suitable bald eagle nesting habitat removed would also increase the potential for destruction of nests or nest abandonment, which could cause injury or mortality of eggs or nestlings. Operation of Alternative 2 would result in similar impacts as those described above for Alternatives 1 and 3 except that the completed reservoir under Alternative 2 would provide new but smaller bald eagle foraging habitat than Alternatives 1 and 3 and could result in new nesting sites or wintering habitat because of the proximity to new foraging habitat. These impacts would be significant because the implementation of Alternative 2 could reduce the local golden eagle and bald eagle populations through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.22, WILD-1.26, WILD-1.27, WILD-1.28, WILD-1.29, VEG-2.2, VEG-3.2, VEG-3.3, VEG-4.1, and VEG-4.2 would reduce the level of construction and operation impacts on bald eagle to less than significant.

Implementation of Mitigation Measures WILD-1.22, WILD-1.26, WILD-1.27, WILD-1.28, WILD-1.29, VEG-2.2, VEG-3.2, VEG-3.3, VEG-4.1, and VEG-4.2 would reduce the level of construction and operations impacts on golden eagle; however, the removal of mature trees within blue oak woodland, foothill pine, and oak savanna communities would be a long-term impact on golden eagle because of the length of time that would be required for newly planted trees to reach mature size and fully replace the habitat function and habitat value of the removed trees. This impact on golden eagle would remain **significant**

and unavoidable even with mitigation because of the long-term loss of blue oak woodland, foothill pine, and oak savanna habitat. The Authority will also implement measures specified in an Eagle Conservation Plan, which will be prepared in coordination with USFWS to address Project impacts on bald eagle and golden eagle.

Impact WILD-1l: Swainson's Hawk and White-tailed Kite

Alternatives 1 and 2

Construction of Alternative 1 or 3 would result in significant impacts on Swainson's hawk and white-tailed kite from removal of suitable habitat and potential loss or disturbance of active nests. Operation of Alternative 1 or 3 may result in disturbance of Swainson's hawk and white-tailed kite if nesting or foraging at or near recreation areas, and the use of rodenticides could cause illness, injury, or mortality of Swainson's hawk and white-tailed kite if rodenticides are ingested. Collision with new transmission lines could cause injury or death of individuals from the collision impact or electrocution. These impacts would be significant because the implementation of Alternative 1 or 3 could reduce the local Swainson's hawk and white-tailed kite populations through direct mortality and habitat loss.

Implementation of Mitigation Measures WILD-1.22, WILD-1.26, WILD-1.27, WILD-30, WILD-1.31, VEG-2.2, VEG-4.1, and VEG-4.2 would reduce the level of impact from construction and operation to less than significant because vegetation would be removed during the non-breeding season, surveys would be conducted to determine if Swainson's hawk or white-tailed kite is nesting in or near work areas, no-disturbance buffers would be established around active nest sites, rodenticides would be used minimally and appropriately, transmission lines would be fitted with protective devices, and impacts on foraging habitat and other sensitive natural communities in which Swainson's hawk or white-tailed kite may nest or forage would be mitigated through habitat restoration and preservation. Mitigation Measure WILD-1.29 would ensure that mitigation lands fulfill both the foraging and nesting requirements for Swainson's hawk, and that they support nesting Swainson's hawks at equal or greater densities than the habitat lost. Mitigation Measures VEG-2.2 and VEG-4.2 would further mitigate the loss of nesting habitat through restoration or creation of riparian and oak woodland at a ratio of at least 1:1. Mitigation of riparian and oak woodland at a 1:1 ratio in conjunction with Swainson's hawk foraging habitat mitigation (Mitigation Measure WILD-1.31) is more than sufficient to reduce impacts on Swainson's hawk and white-tailed kite habitat to less than significant.

Mitigation Measure WILD-1.22: Conduct Vegetation Removal During the Non-Breeding Season of Nesting Migratory Birds

This measure is described above under Impact WILD-1j for northern harrier and burrowing owl.

Mitigation Measure WILD-1.26: Protect Special-Status Wildlife from Rodenticide Use

This measure is described above under Impact WILD-1j for northern harrier and burrowing owl.

Mitigation Measure WILD-1.27: Construct Overhead Power Lines and Associated Equipment Following Suggested Practices to Reduce Bird Collisions with Power Lines

This measure is described above under Impact WILD-1j for northern harrier and burrowing owl.

Mitigation Measure WILD-1.30: Conduct Focused Surveys for Nesting Swainson's Hawk, White-tailed Kite, and Other Raptors Prior to Construction and Implement Protective Measures During Construction

The Authority will retain qualified wildlife biologists (experienced with raptor identification and behaviors) to conduct focused surveys for Swainson's hawk, white-tailed kite, and other raptor nesting areas before construction begins. Survey methodology will follow the Swainson's Hawk Technical Advisory Committee's methodology (Swainson's Hawk Technical Advisory Committee 2000). A minimum of six surveys will be conducted during the appropriate timeframes discussed in the methodology. If needed, the qualified biologists will coordinate with CDFW regarding the extent and number of surveys. Surveys will generally be conducted from February to July. Survey methods and results will be reported to CDFW within 30 days of the completion of the surveys.

Because the area surrounding the Project area is largely undeveloped, focused surveys for Swainson's hawk and white-tailed kite will be conducted in the Project area and in a buffer area up to 0.5 mile around the Project area. The survey area for other nesting raptors will encompass potential habitat within 500 feet of work areas. The portions of the Swainson's hawk/white-tailed kite buffer area containing unsuitable nesting habitat and/or with an obstructed line of sight to the Project area will not be surveyed.

No active Swainson's hawk or white-tailed kite nest trees will be removed during the nesting season. If the biologists find an active Swainson's hawk or white-tailed kite nest, the contractor will maintain a 0.25-mile no-work buffer between construction activities and the active nest(s) until it has been determined that the young have fledged. The biologists will mark the no-work buffer with stakes and signs and will check the location at least weekly to ensure that the signs are in place and the buffer is being maintained. No work will be authorized within the buffer except for vehicle travel. If a 0.25-mile buffer around the nest cannot be maintained, the Authority and a qualified biologist will consult with CDFW about implementing alternative protective measures that are sufficient to minimize the risk of disturbance, such as a reduced buffer with full-time nest monitoring by a qualified biologist. If nesting raptors exhibit agitated behavior indicating stress, the biological monitor will have the authority to stop construction in that area until they determine that the young have fledged.

For active nests of other raptors, no-disturbance buffers will be established around the nest sites to avoid disturbance or destruction of the sites until the end of the breeding season (August 31) or until after a qualified wildlife biologist determines that the young have fledged and moved out of the Project area (this date varies by species). The extent of these buffers will be determined by the biologist in coordination with USFWS and CDFW and will depend on the species, level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers.

Mitigation Measure WILD-1.31: Compensate for the Permanent Loss of Foraging Habitat for Swainson's Hawk and White-tailed Kite

The Authority will compensate for permanent loss of suitable Swainson's hawk and white-tailed kite foraging habitat by restoring or preserving habitat onsite or offsite at a 1:1 ratio (habitat restored or preserved: habitat affected) for foraging habitat within 10 miles of an active Swainson's hawk nest (i.e., determined active during current surveys or within the last 5 years based on available data from prior surveys, if any). Onsite or offsite mitigation lands will provide suitable foraging habitat and sufficient potential nesting trees to support Swainson's hawk (including protected trees or planted trees, or both),

as determined by a qualified biologist, in an area with Swainson's hawk nesting densities equal to or greater than nesting densities in the Project area. The Authority may purchase mitigation credits for Swainson's hawk habitat from a CDFW-approved mitigation or conservation bank in lieu of or in addition to onsite or offsite habitat preservation. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority and CDFW.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This mitigation measure is described above under Impact VEG-2.

Mitigation Measure VEG-4.1: Avoid and Minimize Potential Adverse Effects on Oak Woodlands During Construction

This mitigation measure is described above under Impact VEG-4.

Mitigation Measure VEG-4.2: Compensate for Adverse Effects on Oak Woodlands

This mitigation measure is described above under Impact VEG-4.

Alternative 2

Construction of Alternative 2 would result in impacts similar to those for Alternatives 1 and 3 except that permanent and temporary impacts on Swainson's hawk and white-tailed kite nesting and foraging habitats would be less under Alternative 2. Operation of Alternative 2 would result in similar impacts to those described above for Alternatives 1 and 3 except that the greater amount of roadway could increase the potential for Swainson's hawk and white-tailed kite to be struck by vehicles of workers traveling to operations facilities or visitors traveling to recreation areas. These impacts would be significant because the implementation of Alternative 2 could reduce the local Swainson's hawk and white-tailed kite populations through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.22, WILD-1.26, WILD-1.27, WILD-1.30, WILD-1.31, VEG-2.2, VEG-4.1, and VEG-4.2 would reduce the level of construction and operation impacts to less than significant.

Impact WILD-1m: Mountain Plover

Alternatives 1 and 3

Construction of Alternatives 1 and 3 would result in significant impacts on mountain plover from removal of suitable wintering habitat. Operation of Alternative 1 or 3 could result in significant impacts if mountain plovers are injured or die from electrocution from colliding with new transmission lines or electrocution. These impacts would be significant because Alternative 1 or 3 could affect the local wintering mountain plover population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.27, VEG-2.2, VEG-3.2, and AG-1.1 would reduce the level of impact from construction and operation to less than significant because permanent loss of sensitive natural communities in which mountain plover may forage would be compensated for through habitat restoration or preservation and purchasing conservation easements on Important Farmland (defined in Chapter 15, *Agriculture and Forestry Resources*).

Mitigation Measure WILD-1.27: Construct Overhead Power Lines and Associated Equipment Following Suggested Practices to Reduce Bird Collisions with Power Lines

This measure is described above under Impact WILD-1j for northern harrier and burrowing owl.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This mitigation measure is described above under Impact VEG-2.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

This mitigation measure is described above under Impact VEG-3.

Mitigation Measure AG-1.1: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland

This mitigation measure is described below under Impact AG-1.

Alternative 2

Construction of Alternative 2 would result in impacts similar to those for Alternatives 1 and 3 except that permanent and temporary impacts on modeled wintering habitat would be less under Alternative 2. Operation of Alternative 2 would result in similar impacts to those described above for Alternatives 1 and 3 except that the greater amount of roadway could increase the potential for mountain plover to be struck by vehicles of workers traveling to operations facilities or visitors traveling to recreation areas. These impacts would be significant because Alternative 2 could affect the local wintering mountain plover population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.27, VEG-2.2, VEG-3.2, and AG-1.1 would reduce the level of construction and operation impacts to less than significant.

Impact WILD-1n: Western Yellow-billed Cuckoo, Yellow-breasted Chat, Yellow Warbler, and Song Sparrow (Modesto Population)

Alternatives 1 and 2

Construction and operation of Alternative 1 or 3 would have no impact on western yellow-billed cuckoo. Construction of Alternative 1 or 3 would result in significant impacts on yellow-breasted chat, yellow warbler, and song sparrow from removal of modeled habitat and potential loss or disturbance of active nests. Operation of Alternative 1 or 3 could result in impacts on yellow-breasted chat, yellow warbler, and song sparrow from disturbance during the nesting season if nesting or foraging at or near recreation areas, injury or mortality from vehicle strikes, and changes in communication or behavior from new or increased roadway noise. Vehicle strikes are anticipated to be infrequent and road noise is not anticipated to substantially affect populations, if present. Construction impacts would be significant because Alternative 1 or 3 could reduce the local yellow-breasted chat, yellow warbler, and song sparrow populations through direct mortality and habitat loss.

Implementation of Mitigation Measures WILD-1.22, WILD-1.23, VEG-2.2, VEG-3.2, and VEG-3.3 would reduce the level of impact from construction to less than significant for yellow-breasted chat, yellow

warbler, and song sparrow because vegetation would be removed during the non-breeding season, preconstruction surveys for nesting birds would be conducted, no-disturbance buffers would be established around active nest sites, and impacts on sensitive natural communities in which yellow-breasted chat, yellow warbler, and song sparrow may nest or forage would be compensated for through habitat restoration. The completed reservoir would also benefit yellow-breasted chat, yellow warbler, and song sparrow by providing additional insect prey.

Mitigation Measure WILD-1.22: Conduct Vegetation Removal During the Non-Breeding Season of Nesting Migratory Birds

This measure is described above for northern harrier and burrowing owl.

Mitigation Measure WILD-1.23: Conduct Preconstruction Surveys for Non-Raptor Nesting Migratory Birds and Implement Protective Measures if Found

This measure is described above under Impact WILD-1j for northern harrier and burrowing owl.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This mitigation measure is described above under Impact VEG-2.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

This mitigation measure is described above under Impact VEG-3.

Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters

This mitigation measure is described above under Impact VEG-3.

Alternative 2

Construction and operation of Alternative 2 would have no adverse effect on western yellow-billed cuckoo. Construction of Alternative 2 would result in impacts similar to those for Alternatives 1 and 3 except that permanent impacts on modeled yellow-breasted chat, yellow warbler, and song sparrow habitat would be greater under Alternative 2 as a result of greater permanent impacts associated with new and widened roads. A net increase in the amount of modeled habitat removed would also increase the potential for destruction of nests or nest abandonment, which could cause injury or mortality of eggs or nestlings. Operation of Alternative 2 would result similar impacts to those described for Alternatives 1 and 3 except that the greater amount of roadway could increase the potential for yellow-breasted chat, yellow warbler, and song sparrow to be struck by vehicles of workers traveling to operations facilities or visitors traveling to recreation areas and new or increased roadway noise could affect yellow-breasted chat, yellow warbler, and song sparrow communication and behaviors over a larger area. Vehicle strikes are anticipated to be infrequent and road noise is not anticipated to substantially affect populations, if present. Construction impacts would be significant for yellow-breasted chat, yellow warbler, and song sparrow because Alternative 2 could reduce the local populations through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-

1.22, WILD-1.23, VEG-2.2, VEG-3.2, and VEG-3.3 would reduce the level of impact from construction to less than significant.

Impact WILD-1o: Bank Swallow

Alternatives 1 and 2

Construction of Alternatives 1 and 3 could result in significant impacts on bank swallow from removal of suitable foraging habitat. Operation of Alternative 1 or 3 could result in disturbance of bank swallow foraging activities from human-generated noise and disturbance at recreation areas and near the reservoir, but these impacts would not be significant. Construction impacts would be significant because Alternatives 1 and 3 could affect the local bank swallow population through loss of foraging habitat. Implementation of Mitigation Measures WILD-1.23, VEG-2.2, VEG-3.2, and VEG-3.3 would reduce the level of impact for construction to less than significant because surveys for nesting bank swallows would be conducted and impacts on sensitive natural communities in which bank swallow may forage would be compensated for through habitat restoration and preservation.

Mitigation Measure WILD-1.23: Conduct Preconstruction Surveys for Non-Raptor Nesting Migratory Birds and Implement Protective Measures if Found

This measure is described above under Impact WILD-1j for northern harrier and burrowing owl.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This measure is described above under Impact VEG-2.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

This measure is described above under Impact VEG-3.

Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters

This measure is described above under Impact VEG-3.

Alternative 2

Construction of Alternative 2 would result in impacts similar to those for Alternatives 1 and 3 except that permanent impacts on modeled bank swallow foraging habitat would be less under Alternative 2 because of the reduced inundation area and fewer construction impacts from dams and dikes and the regulating reservoirs and conveyance complex. Temporary impacts on modeled foraging habitat would be greater under Alternative 2 because of greater impacts from conveyance to the Sacramento River and new and widened roads. Operation of Alternative 2 would result in the same impacts as those described above for Alternatives 1 and 3 and there would be no adverse effect on bank swallow. Construction impacts would be significant because Alternative 2 could affect the local bank swallow population through loss of foraging habitat. Implementation of Mitigation Measures WILD-1.23, VEG-2.2, VEG 3.2, and VEG-3.3 would reduce the level of impact from construction to less than significant.

Impact WILD-1p: Tricolored Blackbird

Alternatives 1 and 3

Construction of Alternatives 1 and 3 could result in significant impacts on tricolored blackbird from removal of suitable habitat and potential loss or disturbance of active nests. Operation of Alternative 1 or 3 could result in impacts on tricolored blackbird from injury or mortality from vehicle strikes and changes in communication or behavior from new or increased roadway noise. Vehicle strikes are anticipated to be infrequent and road noise is not anticipated to substantially affect populations, if present. Construction impacts would be significant because they could reduce the local tricolored blackbird population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.22, WILD-1.23, WILD-1.31, VEG-2.2, VEG-3.2, and VEG-3.3 would reduce the level of impact from construction to less than significant because vegetation would be removed during the non-breeding season, surveys would be conducted to determine if tricolored blackbird is nesting in or near work areas, no-disturbance buffers would be established around active nest sites, and impacts on sensitive natural communities in which tricolored blackbird may nest or forage would be compensated for through habitat restoration and preservation. Implementation of Mitigation Measures VEG-2.2, VEG-3.2, and VEG-3.3 would avoid and compensate for permanent loss of potential tricolored blackbird nesting habitat. Annual grassland foraging habitat would be preserved at a minimum 1:1 ratio though implementation of Mitigation Measures WILD-1.31 and VEG-2.2. Implementation of Mitigation Measure AG-1.1 would compensate for the loss of agricultural foraging habitat through preservation and purchasing conservation easements on Regional Important Farmland (defined in Chapter 15). The completed reservoir would also benefit tricolored blackbird by providing additional insect prey.

Mitigation Measure WILD-1.22: Conduct Vegetation Removal During the Non-Breeding Season of Nesting Migratory Birds

This measure is described above under Impact WILD-1j for northern harrier and burrowing owl.

Mitigation Measure WILD-1.23: Conduct Preconstruction Surveys for Non-Raptor Nesting Migratory Birds and Implement Protective Measures if Found

This measure is described above under Impact WILD-1j for northern harrier and burrowing owl.

Mitigation Measure WILD-1.31: Compensate for the Permanent Loss of Foraging Habitat for Swainson's Hawk and White-tailed Kite

This measure is described above under Impact WILD-1j for Swainson's hawk and white-tailed kite.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This measure is described above under Impact VEG-2.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

This measure is described above under Impact VEG-3.

Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters

This measure is described above under Impact VEG-3.

Mitigation Measure AG-1.1: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland

This measure is described below under Impact AG-1.

Alternative 2

Construction of Alternative 2 would result in impacts similar to those for Alternatives 1 and 3 except that permanent impacts on nesting habitat and temporary impacts on foraging habitat would be greater under Alternative 2 and permanent impacts on tricolored blackbird foraging habitat and temporary impacts on nesting habitat would be less under Alternative 2. A net increase in the amount of nesting habitat removed would also increase the potential for destruction of nests or nest abandonment, which could cause injury or mortality of eggs or nestlings. Operation of Alternative 2 would result in similar impacts to those described above for Alternative 1 or 3 except that the greater amount of roadway could increase the potential for tricolored blackbird to be struck by vehicles of workers traveling to operations facilities or visitors traveling to recreation areas and new or increased roadway noise could affect tricolored blackbird communication and behaviors over a larger area. Vehicle strikes are anticipated to be infrequent and road noise is not anticipated to substantially affect populations, if present. Impacts from construction would be significant because they could reduce the local tricolored blackbird population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.22, WILD-1.23, WILD-1.31, VEG-2.2, VEG-3.2, VEG-3.3, and AG-1.1 would reduce the level of impact from construction to less than significant.

Impact WILD-1q: Pallid Bat, Townsend's Big-eared Bat, Silver-haired Bat, Western Red Bat, Hoary Bat, Long-eared Myotis and Colonies of Non-special-status Roosting Bats

Alternatives 1 and 3

Construction of Alternatives 1 and 3 would result in significant impacts on special-status bats from removal of suitable habitat and potential loss or disturbance of active roosts and displacement of bats from roost sites. Impacts from construction would be significant because they could reduce the local populations of these special-status bats through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.32, WILD-1.33, WILD-1.34, VEG-2.2, VEG-3.2, VEG-4.1, and VEG-4.2 would reduce the level of impact from construction to less than significant because surveys for special-status bats would be conducted, protective measures would be implemented, roosting habitat that is permanently lost would be replaced and protected onsite or at an offsite preservation area, impacts on oak woodland would be minimized, and impacts on sensitive natural communities in which special-status bats may roost or forage would be compensated for through habitat restoration and preservation. Operation of Alternative 1 or 3 may result in disturbance of roosting or foraging bats but is not anticipated to result in destruction of habitat. Consumption of insects contaminated with methylmercury could cause illness or mortality of bats. Implementation of Mitigation Measure WQ-1.1 would reduce the impact from operation to less than significant because steps would be taken to reduce, monitor, and manage mercury in the reservoir. Ingestion of HABs by bats either through drinking water or eating insects contaminated with the toxins could cause illness or death of bats. The

water quality monitoring program and a HABs action plan described under *Harmful Algal Blooms* in the Reservoir Management Plan in Appendix 2D, *Best Management Practices, Management Plans, and Technical Studies*, would minimize the potential for HABs to be present and ingested by bats. The completed reservoir would also benefit special-status bats by providing a new drinking water source and additional insect prey.

Mitigation Measure WILD-1.32: Conduct Surveys and Implement Protection Measures for Special-Status Bat Species Prior to Building/Structure Demolition

Prior to building/structure demolition, the Authority will retain a qualified biologist (defined below) to conduct preconstruction surveys and implement protective measures for pallid bat, Townsend's big-eared bat, silver-haired bat, long-eared myotis, and other bats that roost in or on buildings and structures. At least 30 days prior to the demolition of the existing buildings and structures, qualified biologists will conduct an initial daytime survey to assess the buildings/structures for potential bat roosting habitat, and to look for bats and indications of bat use. The qualified biologists will have knowledge of the natural history of the species that may be present, have sufficient experience determining bat occupancy, and be familiar with bat survey techniques. The qualified biologist will examine both the inside and outside of the buildings/structures for potential roosting habitat, as well as routes of entry to the building and structures. Locations of any roosting bats, signs of bat use, and entry and exit points will be noted and mapped on a drawing of the buildings and structures. Roost sites will also be photographed as feasible. Depending on the results of the habitat assessment, the Authority will ensure the following steps are taken:

If the building and structures can be assessed (i.e., sufficient areas of the buildings and structures can be examined) and no habitat or limited potential habitat for roosting bats is present and no signs of bat use are present, the building may be demolished within 24 hours. If the building is not demolished within 24 hours, another survey of the interior and exterior of the buildings/structure by a qualified biologist will be conducted within 24 hours of the scheduled demolition.

If moderate or high potential habitat for roosting bats is present and habitat can be thoroughly surveyed, the structure may be demolished within 24 hours. If there are no signs of bat use but the habitat cannot be thoroughly surveyed, measures will be implemented under the guidance of the qualified biologists to exclude bats from using the buildings and structures as a roost site to the extent feasible given the conditions of the structures, such as sealing off entry points. Prior to installing exclusion measures, the qualified biologists will re-survey the buildings and structures to ensure that no bats are present. In addition, a preconstruction survey of the interior and exterior of the buildings and structures will be conducted within 24 hours of demolition to confirm that no bats are present.

If moderate or high potential habitat is present and bats or bat sign are observed, exclusion measures are not installed as described above, or the buildings or structures provide suitable habitat but cannot be fully assessed, the Authority will implement the following protective measures:

Prior to initiating demolition activities, follow-up surveys will be conducted to determine if bats are present and the species of bats present. The qualified biologists will develop a survey plan (number, timing, and type of surveys) and conduct surveys using night vision goggles and/or active acoustic monitoring using full spectrum bat detectors will be conducted.

The qualified biologist will develop a plan to discourage or exclude bat use of buildings/structures prior to demolition based on the timing of demolition, extent of evidence of bat use or occupied habitat, and

species present. The plan may include modifying the structure to be less appealing for roosting without causing harm to bats, installing exclusion measures, or using light or other means to deter bats from using the buildings and structures to roost. The plan will be submitted to CDFW for review and comment.

A preconstruction survey of the interior and exterior of the building and structures will be conducted within 24 hours of demolition to confirm that no bats are present.

Depending on the species of bats present, size of the bat roost, and timing of the demolition, the Authority will implement the following additional protective measures as applicable:

To avoid impacts on maternity colonies and/or hibernating bats, buildings/structures where bats are confirmed to be present will not be demolished during the maternity season (generally assumed to be between April 15 and August 15 for this Project) or the hibernation season (generally from November 1 to March 1). Removal of occupied roosting habitat will be conducted only following the maternity season and prior to hibernation, generally between August 16 and October 31, unless exclusionary devices are first installed. Other measures, such as using lights to deter bat roosting, may be used as developed by the qualified biologist and as approved by CDFW, if applicable.

Installation of exclusion devices will be conducted only before maternity colonies establish (generally after March 1) or after they disperse (generally August 15 to October 31) to prevent bats from occupying a roost site during demolition to the extent feasible. Exclusionary devices will be installed by or under the supervision of a qualified biologist.

Mitigation Measure WILD-1.33: Conduct Surveys and Implement Protection Measures for Special-Status Bat Species Prior to Tree Trimming and Removal

Prior to tree trimming or removal, the Authority will retain a qualified biologist to conduct preconstruction surveys and implement protective measures for pallid bat, Townsend's big-eared bat, silver-haired bat, western red bat, hoary bat, long-eared myotis, and other tree-roosting bats. Prior to initiating tree trimming or removal, a qualified biologist will examine the trees to be removed or trimmed to identify suitable bat roosting habitat. Because of the limited timeframe for tree removal (September 15 to October 31), the tree habitat assessment should be conducted early enough to provide information to inform tree removal planning. The biologists will identify high-quality habitat features (e.g., large tree cavities, basal hollows, loose or peeling bark, larger snags), and the area around these features will be searched for bats and indications of bat use. If the tree can be assessed and no habitat for roosting bats is present, no further actions are necessary and tree removal or trimming may commence. Because signs of bat use are not easily found, and trees cannot be completely surveyed for bat roosts, the Authority will implement the following protective measures listed below for trees containing potential roosting habitat.

Trimming or removal of trees with potentially suitable bat roosting habitat will be avoided during the maternity season (generally between April 1 and July 31) and the hibernation season (generally from November 1 to March 1).

Removal of trees providing bat roosting habitat will be conducted only before maternity colonies establish (generally after March 1) or after they disperse (generally August 1 to October 31).

If a maternity roost is found, the roost will be protected until July 31or until the qualified biologist has determined the maternity roost is no longer active. Appropriate no-work buffers around the roost will

be established under direction of the qualified biologist. Buffer distances may vary depending on the species and activities being conducted.

Trimming and removal of trees (between July 31 and October 31) with suitable roosting habitat will be monitored by a qualified biologist. Tree trimming and removal will be conducted using a two-phase removal process conducted over two consecutive days. In the afternoon on the first day, limbs and branches will be removed using chainsaws only. Only branches or limbs without cavities, crevices, or deep bark fissures will be removed; branches and limbs with these features will be avoided. On the second day, the entire tree will be removed. The qualified biologist will search through downed vegetation for injured or dead bats. Observation of injured or dead special-status bats will be reported to CDFW.

Mitigation Measure WILD-1.34: Compensate for Permanent Impacts on Occupied Roosting Habitat

The Authority will compensate for the permanent loss of occupied roosting habitat by constructing and/or installing suitable replacement habitat onsite or at an offsite preservation area. The roosting habitat type and design will be developed in coordination with CDFW. A monitoring plan will be prepared to ensure the replacement habitat is maintained and functions as intended. Annual reports will be submitted to CDFW to document compliance with monitoring requirements.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This measure is described above under Impact VEG-2.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

This measure is described above under Impact VEG-3.

Mitigation Measure VEG-4.1: Avoid and Minimize Potential Adverse Effects on Oak Woodlands During Construction

This measure is described above under Impact VEG-4.

Mitigation Measure VEG-4.2: Compensate for Adverse Effects on Oak Woodlands

This measure is described above under Impact VEG-4.

Mitigation Measure WQ-1.1: Methylmercury Management

This measure is described above under Impact WQ-1.

Alternative 2

Construction of Alternative 2 would result in impacts similar to those for Alternatives 1 and 3 except that permanent impacts on bat roosting/foraging habitat and temporary impacts on foraging habitat would be greater under Alternative 2 and permanent impacts on bat foraging habitat and temporary impacts on roosting/foraging habitat would be less under Alternative 2. A net increase in the amount of suitable roosting habitat removed would also increase the potential for destruction of roosts or roost

abandonment, which could cause injury or mortality of individuals, including non-volant pups. Operation of Alternative 2 would result in similar impacts to Alternatives 1 and 3. These impacts would be significant because Alternative 2 could reduce the local special-status bat populations through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.32, WILD-1.33, WILD-1.34, VEG-2.2, VEG-3.2, VEG-4.1, VEG-4.2, and WQ-1.1 would reduce the level of impact from construction and operation to less than significant.

Impact WILD-1r: American Badger

Alternatives 1 and 3

Construction of Alternative 1 or 3 would result in significant impacts on American badger from removal of suitable habitat and potential loss or disturbance of active dens. Operation of Alternative 1 or 3 could result in significant impacts if American badger denning sites at or near recreation areas are disturbed or if the use of rodenticides causes illness, injury, or mortality of individuals from ingestion of rodenticides. These impacts would be significant because Alternative 1 or 3 could reduce the local American badger population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.15, WILD-1.16, WILD-1.26, WILD-1.35, and VEG-2.2 would reduce the level of impact from construction and operation to less than significant because surveys would be conducted to determine if suitable or occupied dens are present in or near work areas, no-disturbance buffers would be established around potentially active and active den sites, impacts on sensitive natural communities in which American badger may den or forage would be compensated for through offsite habitat restoration and preservation, and if found to be necessary through a wildlife corridor study, suitable crossings would be installed at appropriate locations to facilitate safe crossings.

Mitigation Measure WILD-1.15: Design and Construct Wildlife Crossings for New Roadways at Suitable Locations

This mitigation measure is described above under Impact WILD-1f for western spadefoot.

Mitigation Measure WILD-1.16: Monitor and Maintain Wildlife Crossings

This mitigation measure is described above under Impact WILD-1f for western spadefoot.

Mitigation Measure WILD-1.26: Protect Special-Status Wildlife from Rodenticide Use

This measure is described above under Impact WILD-1f for northern harrier and burrowing owl.

Mitigation Measure WILD-1.35: Implement Protective Measures to Avoid and Minimize Potential Impacts on American Badger

Where suitable habitat is present for American badger in and within 200 feet of work areas where ground disturbance will occur, the Authority will implement the following protective measures.

The Authority will retain qualified biologists (experienced with the identification of suitable badger dens) to conduct a preconstruction survey for active badger dens prior to temporary or permanent ground disturbance. The preconstruction survey will be conducted no less than 14 days and no more than 30 days before the beginning of ground disturbance. The biologists will conduct den searches by systematically walking transects through the area to be disturbed and a 200-foot buffer area. Transect distance should be based on the height of vegetation such that 100% visual coverage of the disturbance

area is achieved. If a suitable or occupied den is found during the survey, the biologist will record the den dimensions, the shape of the den entrance, presence of tracks, scat, or prey remains, den occupancy (i.e., suitable, potentially occupied, or occupied), recent excavations at the den site, and the den location.

To the maximum extent feasible, disturbance or destruction of suitable dens for American badger in temporary impact areas will be avoided.

Any occupied or potentially occupied American badger den will be avoided by establishing an exclusion zone around the den. For potentially occupied dens, a 50-foot exclusion zone will be applied around the den; for occupied dens, a 100-foot exclusion zone will be applied around the den. The width of exclusion zones around maternity dens may exceed 100 feet, will be determined through coordination with CDFW, and will remain in place throughout the pup-rearing season (February 15 through July 1). Any adjustments to buffers will require prior written approval by CDFW. If the den cannot be avoided, the Authority will contact CDFW for direction on additional steps to be taken.

Unoccupied suitable dens that would be destroyed by construction may be removed by hand excavation by a biologist or under the supervision of a biologist; a mini excavator may be used to facilitate excavation of dens.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This measure is described above under Impact VEG-2.

Alternative 2

Construction of Alternative 2 would result in impacts similar to those for Alternatives 1 and 3 except that permanent and temporary impacts on modeled habitat for badger would be less under Alternative 2 than Alternatives 1 and 3 because of the smaller inundation area and reduced impacts from construction of dams and dikes. Operation impacts under Alternative 2 would be similar to those under Alternative 1 or 3 except that the increased amount of roadway would impede movement over a larger area and could result in additional mortality from vehicle strikes. These impacts would be significant because Alternative 2 could reduce the local American badger population through direct mortality and habitat loss. Implementation of Mitigation Measures WILD-1.15, WILD-1.16, WILD-1.26, WILD-1.35, and VEG-2.2 would reduce the level of impact from construction and operation to less than significant.

Impact WILD-2: Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites

Alternatives 1 and 3

Construction of Alternative 1 or 3 would create barriers to or impede wildlife movement within existing natural landscape blocks and essential connectivity areas. Fragmentation and loss of natural landscape blocks and essential connectivity areas would result in a significant impact on wildlife movement and wildlife corridors. Construction of Alternative 1 or 3 would also result in removal or disturbance of nursery sites. Operation of Alternative 1 or 3 would result in additional vehicles on roadways and fencing that would create barriers to or impede wildlife movement. These impediments would also result in a significant impact on wildlife movement. Maintenance activities and human activity at

facilities and recreation areas could cause disturbance of breeding sites or cause wildlife to avoid these areas as breeding sites. Implementation of mitigation measures discussed in Impact WILD-1 (including Mitigation Measures WILD-1.15 and WILD-1.16) would reduce construction and operation impacts on nursery sites, wildlife movement, and the loss of habitat connectivity within existing habitat blocks, but they would not mitigate the substantial barrier created by Sites Reservoir. Impacts on wildlife movement and habitat connectivity after mitigation would remain **significant and unavoidable**.

Alternative 2

Construction of Alternative 2 would create barriers to or impede wildlife movement within existing natural landscape blocks and essential connectivity areas. Under Alternative 2, the length of new roadway would be substantially longer (more than 10 miles) than under Alternatives 1 and 3. Fragmentation and loss of natural landscape blocks and essential connectivity areas would result in a significant impact on wildlife movement and wildlife corridors. Construction of Alternative 2 would also result in removal or disturbance of nursery sites. Operation of Alternative 2 would result in additional vehicles on roadways and fencing that would create barriers to or impede wildlife movement. These impediments would also result in a significant impact on wildlife movement. Maintenance activities and human activity at facilities and recreation areas could cause disturbance of breeding sites or cause wildlife to avoid these areas as breeding sites. Implementation of mitigation measures discussed in Impact WILD-1 (including Mitigation Measures WILD-1.15 and WILD-1.16) would reduce construction and operation impacts on nursery sites, wildlife movement, and the loss of natural landscape blocks and essential connectivity areas, but they would not mitigate the substantial barrier created by Sites Reservoir. Impacts on wildlife movement and habitat connectivity after mitigation would remain **significant and unavoidable**.

Impact WILD-3: Conflict with any local policies or ordinances protecting wildlife resources

Alternatives 1, 2 and 3

Construction and operation of Alternative 1, 2, or 3 would conflict with policies and local ordinances protecting wildlife resources and would result in a significant impact. Implementation of mitigation measures discussed under Impacts WILD-1 would require habitat assessments and focused surveys for special-status wildlife, avoidance and minimization measures to reduce impacts on special-status wildlife and their habitats during construction and operation, replacement of permanently lost habitat, and reduction of new impediments to wildlife movement through design, construction, monitoring, and the maintenance of wildlife crossings at strategic locations. With the implementation of these measures, Alternatives 1, 2, and 3 would not conflict with the goals and policies in the Tehama County, Glenn County, Colusa County, and Yolo County General Plans, and impacts would be reduced to a less-than-significant level.

Impact WILD-4: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Construction and operation of Alternative 1, 2, or 3 would not conflict with provisions of the Yolo Bypass Wildlife Area LMP but would conflict with provisions of the Yolo County HCP/NCCP. The conflict of Alternatives 1, 2, and 3 with the provisions of the Yolo County HCP/NCCP would be a significant impact. Implementation of mitigation measures discussed under Impact WILD-1 would avoid, minimize, and compensate for impacts on special-status wildlife included in the Yolo County HCP/NCCP. With

implementation of these measures, Alternatives 1, 2, and 3 would not conflict with the provisions of the Yolo County HCP/NCCP, and impacts would be reduced to a less-than-significant level.

3.3 Aquatic Biological Resources

Impact FISH-1: Construction Effects on Special-Status Fish

Construction of Alternative 1, 2, or 3 would result in ground-disturbance activities, the use of heavy equipment and hazardous materials, in-water construction (including pile driving), stream diversion and dewatering, removal of riparian and stream-side vegetation (including vegetation supporting SRA cover), and the filling of Sites Reservoir. Under Alternatives 1 and 3, and all components of Alternative 2 with the exception of construction of the energy dissipation structure for the Sacramento River discharge, these activities would result in temporary impacts on special-status fish during construction activities. These activities would also result in permanent impacts from placement of facilities and the conversion of stream habitat to open-water habitat from the filling of Sites Reservoir. These temporary and permanent impacts would not affect any ESA-listed fish species as construction activities would occur on the upstream streams of the Sacramento River which do not support listed species.

Under Alternative 2, construction of the energy dissipation structure for the Sacramento River discharge would result in ground-disturbance activities, in-water construction (including pile driving and coffer dam installation), dewatering, and the removal of riparian and stream-side vegetation (including vegetation supporting SRA cover). These activities would result in temporary impacts on state and federally listed fish and other special-status fish in the Sacramento River during construction activities, and permanent impacts from the removal of riparian vegetation and SRA cover. Underwater noise generated by pile driving associated with the installation of sheet piles for the coffer dam and pipe piles for the work platforms would be of most concern because of the potential for underwater noise to injure fish.

The Authority will implement BMPs during construction of Alternatives 1, 2, and 3 to avoid and minimize permanent and temporary impacts on state and federally listed fish and other special-status fish species. Implementation of BMP-12, BMP-13, and BMP-14 would control storm water runoff with physical and procedural means to reduce or avoid degradation of water quality in watercourses downstream of the construction sites that could have both short- and long-term effects on fish populations and aquatic habitat. All in-water construction activities would be limited to allowable in-water work windows as part of BMP-35 and the Authority or its contractors would manage the salvage, stockpiling, and replacement of topsoil as part of BMP-10 for the protection of fish, wildlife, and plant species. As a result, the construction would not result in increased or contaminated stormwater runoff or violations of water quality standards that would adversely affect fish populations and habitat.

The Authority will also implement BMP-34 to avoid and minimize the potential for direct physical injury and mortality of trapped fish by removing fish from harm's way prior to initiating in-water activities and dewatering.

Pile driving would be performed in accordance with BMP-23 to reduce the potential for injury to fish from exposure to impact pile driving noise because hydroacoustic monitoring would be conducted during impact pile driving to ascertain compliance with established objectives (e.g., distances to cumulative noise thresholds) and identify corrective actions to be taken should the predicted threshold distances be exceeded. In addition, this BMP would restrict all pile driving (impact or vibratory) to specific seasonal periods and daily (7:00 a.m. to 7:00 p.m.) timing limitations, where appropriate, to

minimize and avoid the primary periods when sensitive life stages or species are present and to limit the daily exposure of fish to underwater noise.

In addition, the Authority will implement various mitigation measures that will also benefit special-status fish or compensate for impacts on state and federally listed fish and other special-status fish and their habitat. For example, Mitigation Measures VEG-2.1 and VEG-2.2 will minimize or avoid, and compensate for the permanent loss of riparian habitat, including SRA cover. Mitigation Measure VEG-3.2 will compensate for permanent impacts on wetlands, including forested wetland (riparian) and freshwater marsh. Mitigation Measure VEG-3.3 will compensate for temporary and permanent impacts on state or federally protected non-wetland waters by creating or acquiring and permanently protecting suitable open-water habitat to ensure no net loss of stream or pond habitat functions and values.

Construction of Alternative 1, 2, or 3 would not have a substantial adverse effect, either directly or through habitat modifications, on state or federally listed fish or other special-status fish species or interfere substantially with the movement of any native resident or migratory fish species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Construction of Alternative 1, 2, or 3 would be less than significant with mitigation.

Mitigation Measure VEG-2.1: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities

This mitigation measure is described above under Impact VEG-2.

Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities

This measure is described above under Impact VEG-2.

Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands

This measure is described i above under Impact VEG-3.

Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters

This measure is described above under Impact VEG-3.

Impact FISH-8: Operations Effects on Delta Smelt

Operations impacts of Alternatives 1, 2, and 3 on delta smelt include small differences assessed for flow-related zooplankton prey and other flow-related habitat attributes during spring, summer, and fall; no increase in south Delta entrainment risk because south Delta exports of Sites Reservoir water do not occur during times of the year when delta smelt are susceptible to entrainment; small reductions in suspended sediment to the Delta, addressed by the Sediment Technical Studies Plan and Adaptive Management for Sacramento River; and potential positive effects from summer/fall Sites Reservoir releases to move foodweb materials into the lower Yolo Bypass and Cache Slough Complex, as well as potential positive effects on prey from greater summer/fall Delta outflow. These impacts would be less than significant.

Impacts on delta smelt would be significant due to uncertainty associated with DO and temperature effects from Sites Reservoir releases (see *Effects from Reservoir Releases to CBD/Yolo Bypass* above) and the population status of delta smelt (Appendix 11A). Mitigation Measure FISH-8.1 will reduce this significant impact by preventing detrimental DO and water temperature effects associated with moving CBD water through the Yolo Bypass. DO and temperature levels suitable to delta smelt would be maintained and would not exceed recognized critical physiological thresholds through implementation of Mitigation Measure FISH-8.1; therefore, impacts would be reduced to less than significant. There is uncertainty in the potential for negative effects from Sites habitat flows redirecting CBD water relatively high in pesticides downstream to the lower Yolo Bypass where delta smelt occur. This potential effect would be addressed by Mitigation Measure WQ-2.2. Operation of Alternative 1, 2, or 3 would not have a substantial adverse effect, either directly or through habitat modifications, on delta smelt compared to the NAA. Operational impacts for Alternatives 1, 2, and 3 on delta smelt would be less than significant with mitigation.

Mitigation Measure FISH-8.1: Prevent Detrimental Dissolved Oxygen and Water Temperature Effects on Fish Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass

To evaluate potential water quality effects, when Project releases are made via the Dunnigan Pipeline to the Yolo Bypass DO and water temperature will be measured at 15-minute intervals within 50 feet of the Project discharge location at the Dunnigan Pipeline, at existing California Data Exchange Center stations at the upstream end of the Yolo Bypass at Ridge Cut Slough, and at the downstream end at Lisbon Weir. Measurements of DO and water temperature will occur before and during the period of CBD discharge to the Yolo Bypass, the same as is described for Mitigation Measure WQ-2.2.

Downstream DO and temperature measurements, together with water quality measurements of water released from Sites Reservoir, will be evaluated to determine whether habitat flow releases from Sites Reservoir would lower DO and increase temperatures in the Yolo Bypass Toe Drain and Cache Slough Complex to a level that could be detrimental to delta smelt inhabiting these areas. Dissolved oxygen and temperature criteria for determining effects will be developed in collaboration with the fishery agencies and will maintain existing DO and temperature levels suitable to delta smelt that will not exceed recognized critical physiological thresholds. This evaluation will be part of ongoing monitoring to determine benefits of the Yolo Bypass habitat flows and the Project's funded ecosystem benefits under WSIP. CDFW would have the discretion to modify WSIP water that is released to Yolo Bypass, depending on best available science and fish needs. If measurements indicate DO or temperature criteria are exceeded in the Yolo Bypass Toe Drain and Cache Slough Complex as a result of Project releases and these criteria cannot be maintained for delta smelt, actions to improve DO concentration and temperature will be implemented. Mitigative actions may include, but are not limited to one or more of the following types of measures:

- Use of engineered actions (e.g., installation of aerators) to prevent exceedance of critical physiological thresholds for delta smelt.
- Cessation of releases of flow to the Yolo Bypass until temperature and DO concentration do not exceed critical physiological thresholds for delta smelt.

Mitigation Measure WQ-2.2: Prevent Net Detrimental Metal and Pesticide Effects Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass

This measure is described above under Impact WQ-2.

Impact FISH-9: Operations Effects on Longfin Smelt

The analyses of potential impacts of Alternatives 1, 2, and 3 on longfin smelt suggested that entrainment risk under Alternatives 1, 2, and 3 would be similar to entrainment risk under the NAA. The analyses of flow-related effects (differences in Delta outflow/X2) suggested the potential for small negative effects under Alternatives 1, 2, and 3, albeit with uncertainty given the appreciably greater variability of longfin smelt abundance index estimates for a given alternative relative to the difference from the NAA. As identified in Section 11.3, *Methods of Analysis*, operations resulting from Alternatives 1, 2, and 3 would be consistent with all applicable regulations to limit the potential for negative effects on fish and aquatic resources, including the existing spring outflow measures required by the CDFW (2020) State ITP for the SWP. In order to achieve a less-than-significant impact, mitigation would be required for the small, uncertain negative outflow-related effect of Alternatives 1, 2, and 3 in consideration of longfin smelt's CESA-listed status. Implementation of Mitigation Measure FISH-9.1 would provide tidal habitat restoration mitigation. Tidal habitat restoration would expand the diversity, quantity, and quality of longfin smelt rearing and refuge habitat consistent with recent tidal habitat mitigation required for outflow impacts on the species (California Department of Fish and Wildlife 2020:112). As shown by multiple recent tidal habitat restoration projects in the Delta[4], there are potential feasible opportunities for tidal habitat restoration directly applicable to longfin smelt. Operational impacts for Alternatives 1, 2, and 3 on longfin smelt would be less than significant with mitigation.

Mitigation Measure FISH-9.1: Tidal Habitat Restoration for Longfin Smelt

Tidal habitat restoration mitigation for longfin smelt was calculated based on the same method recently applied by DWR (2019d:5-5). The method is described in more detail in Appendix 11F, Section 11F.7, *Tidal Habitat Restoration Mitigation Calculations for Longfin Smelt*. The mitigation requirement for each alternative varies between 5.1 and 9.7 acres (Table 11-89). The mitigation will consist of tidal wetland habitat within the Delta/Suisun Marsh and will be completed prior to commencement of Project operations.

Table 11-89. Tidal Habitat Restoration Mitigation for Longfin Smelt (Acres)

Alt 1A	Alt 1B	Alt 2	Alt 3
5.1	8.3	5.1	9.7

[4] See, for example, the California EcoRestore program's summary of recent projects (California Department of Water Resources 2023).

3.4 Geology and Soils

Impact GEO-7: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Alternative 1 and 3

Under Alternative 1 or 3, construction activities that would have a less-than-significant impact on paleontological resources are those that would occur in geologic units not sensitive for paleontological resources (Holocene units and the Great Valley sequence, including the Boxer and Cortina Formations) and involve small or shallow ground-disturbing activities, such as GCID Main Canal improvements and road improvements. In addition, the Worker Environmental Awareness Program (WEAP) BMP, which requires training construction workers to recognize paleontological resources and stopping work if paleontological resources are encountered, would be in place should fossils be unexpectedly encountered during construction activities.

Construction activities that would have a significant impact on paleontological resources are those that involve excavation in sensitive units, such as most construction in the regulating reservoir complex and trenching and staging for the Dunnigan Pipeline.

Overall construction impacts would be significant. For most activities, implementation of Mitigation Measures GEO 7.1–GEO-7.5 would reduce this impact by requiring that a qualified paleontologist be retained and design a paleontological resources monitoring and mitigation plan (PRMMP) so that fossils in the construction areas would be preserved.

For soil amendment under the TRR East, the use of CDSM could destroy fossils in the Riverbank and Modesto Formations. The ground disturbance would be deep, and a paleontological monitor would not be able to observe the disturbance or halt construction. Therefore, this impact would be **significant and unavoidable**.

Under Alternative 1 or 3 operations, wave action along the reservoir shoreline would cause a less-than-significant impact. No other operations would cause an impact.

Mitigation Measure GEO-7.1: Retain a Qualified Paleontological Resource Specialist Prior to the Start of Construction

The Authority will retain a qualified Paleontological Resource Specialist once the construction footprint can be accessed and the engineering design is at sufficient level of detail but at least 90 days prior to the start of construction. The Paleontological Resource Specialist will meet the minimum or equivalent qualifications for a paleontological resources manager, as described in the SVP guidelines (2010).

The Authority will retain qualified Paleontological Resource Monitors with the assistance of the Paleontological Resource Specialist to monitor construction activities, as described in the PRMMP. Paleontological Resource Monitors will have the equivalent of the following qualifications:

- Bachelor of Science or Bachelor of Arts degree in geology or paleontology and 1 year of experience monitoring in California
- Associate of Science or Associate of Arts degree in geology, paleontology, or biology and 4 years of experience monitoring in California

- Enrollment in upper-division classes pursuing a degree in the fields of geology or paleontology and 2 years of monitoring experience in California

Mitigation Measure GEO-7.2: Consultation with the Paleontological Resource Specialist Prior to and During Project Construction

At least 30 days prior to the start of construction, the Authority will provide maps or drawings to the Paleontological Resource Specialist that show the planned construction footprint. Maps will identify all areas where ground disturbance is anticipated during Project implementation. The plan drawings will show the location, depth, and extent of all ground disturbances affecting paleontologically sensitive sediment. If construction proceeds in phases, maps and drawings may be submitted prior to the start of each phase. In addition, the proposed schedule of each Project phase will be provided to the Paleontological Resource Specialist. Before work commences on affected phases, the Authority will notify the Paleontological Resource Specialist of any construction phase scheduling changes.

Mitigation Measure GEO-7.3: Prepare and Implement a Paleontological Resources Monitoring and Mitigation Plan

Once the construction footprint can be accessed and the engineering design is at sufficient level of detail, the Authority will prepare a PRMMP to identify general and specific measures to minimize potential effects on significant paleontological resources. Approval of the PRMMP by the Authority will occur prior to any ground disturbance. The PRMMP will function as the formal guide for paleontological resources monitoring, collecting, and sampling activities, and may be modified by the Authority to accommodate new data or changes to the Project. This document will be used as the basis of discussion when onsite decisions or changes are proposed. Copies of the PRMMP will reside with the Authority, Paleontological Resource Specialist, each Paleontological Resource Monitor, and the Authority's onsite manager.

The PRMMP will be developed in accordance with professional guidelines and be consistent with those issued by SVP (2010) and will include the following:

Procedures for the performance and sequence of resource-related tasks, such as any literature searches, preconstruction surveys, appropriate worker environmental training module, construction monitoring, mapping and data recovery, discovery situations, fossil preparation and collection, identification and inventory, preparation of final reports, transmittal of materials for curation, and final report will be provided in the PRMMP, including:

- A discussion of the geologic units expected to be encountered, the location and depth of the units relative to the Project footprint, when known, and the known paleontological sensitivity of those units.
- A discussion of the locations of where the monitoring of construction activities is deemed necessary, and a proposed plan for monitoring and sampling.
- An explanation of why, how, and how much sampling is expected to take place and in what units, including descriptions of different sampling procedures that may be used.
- A discussion of procedures to be followed in the event of a significant fossil discovery, diverting construction away from a find, resuming construction, and how notifications will be performed.

- A discussion of equipment and supplies necessary for collection of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits.
- Procedures for inventory, preparation, and delivery for curation into a retrievable storage collection in a repository or museum, which meet SVP standards and requirements for the curation of paleontological resources.
- Identification of the institution(s) that will be approached to receive data and fossil materials collected, and requirements or specifications for materials delivered for curation.

The PRMMP will also provide guidance for preparation of a Paleontological Resources Report by the designated Paleontological Resource Specialist at the conclusion of ground-disturbing activities that may affect paleontological resources. The Paleontological Resources Report will include an analysis of the collected fossil materials and related information, including a description and inventory of recovered fossil materials, a map showing the location of paleontological resources encountered, determinations of sensitivity and significance, and a statement by the Paleontological Resource Specialist that effects on paleontological resources have been mitigated to be not adverse.

Mitigation Measure GEO-7.4: Conduct Monitoring During Project Construction and Prepare Monthly Reports

The Authority will ensure that the Paleontological Resource Specialist and Paleontological Resource Monitor(s) monitor construction excavations consistent with the PRMMP in areas where potential fossil-bearing materials have been identified, both at reservoir sites and along any constructed linear facilities associated with the Project.

The Authority will ensure that the Paleontological Resource Specialist and Paleontological Resource Monitor(s) have the authority to halt or redirect construction if paleontological resources are encountered. The Authority will ensure that there is no interference with monitoring activities, as directed by the Paleontological Resource Specialist.

The Authority will ensure that the Paleontological Resource Specialist prepares and submits monthly summaries of monitoring and other paleontological resources management activities. The summary will include the name(s) of the Paleontological Resource Specialist or Paleontological Resource Monitor(s) active during the month; general descriptions of training and monitored construction activities; and general locations of excavations, grading, and other activities. A section of the report will include the geologic units or subunits encountered, descriptions of samplings, if any, and a list of identified fossils. A final section of the report will address any issues or concerns about the Project relating to paleontological resources mitigation activities, including any incidents of non-compliance or any changes to the monitoring plan by the Paleontological Resource Specialist. If no monitoring took place during the month, the report will include an explanation as to why monitoring was not conducted.

Mitigation Measure GEO-7.5: Ensure Implementation of the Paleontological Resources Monitoring and Mitigation Plan

The Authority, through the designated Paleontological Resource Specialist, will ensure that all components of the PRMMP are performed during construction.

Alternative 2

Most construction impacts would be the same under Alternative 2 as under Alternative 1 or 3 because most components would the same.

The CDSM required for construction of the TRR East under Alternative 1 or 3, which would result in a **significant and unavoidable** impact, would not be required for construction of the TRR West under Alternative 2. Although more extensive excavation would be required for the Main and Extension reservoirs that comprise TRR West, all ground-disturbing activities could be accessed by paleontological monitors. Therefore, implementation of Mitigation Measures GEO-7.1–GEO-7.5 would reduce the impacts of excavation related to TRR West construction on paleontological resources to a less-than-significant level.

Although two impacts that would differ would be for the Dunnigan Pipeline and the Sites Lodoga Road and South Road, the finding of less than significant with mitigation would remain the same. For the Dunnigan Pipeline, the finding remains less than significant because the additional excavation would occur in the same geologic units. Implementation of Mitigation Measures GEO-7.1–GEO-7.5 would reduce these impacts to a less-than-significant level. For the Sites Lodoga Road and South Road, the excavation would still occur in geologic units not sensitive for paleontological resources.

3.5 Land Use

Impact LAND-1: Physical division of an established community

Alternative 1 and 3

Construction and operation of Alternatives 1 and 3 would not result in the physical division of established communities. While the Sites community would be inundated and displaced, the community would not be physically divided. There would be no physical division between the communities of Lodoga and Maxwell because a bridge would be built under Alternatives 1 and 3 that would connect Lodoga to Maxwell. No other components would create physical divisions within established communities because there are none where these components would be constructed. This impact would be less than significant.

Alternative 2

Construction and operation of Alternative 2 would result in the physical division of established communities. While the Sites community would be inundated and displaced, the community would not be physically divided. There would be a physical division for the community of Lodoga, even though the South Road would connect Lodoga to Maxwell, because the new access route would substantially increase travel time. There are no feasible mitigation measures for this impact. This impact would be **significant and unavoidable**.

3.6 Agriculture and Forestry Resources

Impact AG-1: Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to nonagricultural use

Ground disturbance on Important Farmland as a result of construction-related activities associated with Alternative 1, 2, or 3 includes staging, vegetation removal, excavation, and grading. A total of 134 acres of Important Farmland would be temporarily disturbed under Alternative 1 or 3 and 232 acres under Alternative 2. Implementing BMP-10, BMP-13, and BMP-36 would result in restoration of Important Farmland disturbed during construction to preconstruction conditions. Accordingly, impacts from temporary use of Important Farmland during construction would be less than significant.

Permanent placement of underground Project facilities associated with Alternative 1, 2, or 3 on Important Farmland would not result in permanent conversion to nonagricultural uses in Glenn, Colusa, or Yolo Counties. Placement of aboveground Project facilities associated with the three alternatives would result in permanent conversion of Important Farmland as a result of direct placement on Important Farmland. A total of 152 acres of Important Farmland would be permanently converted to nonagricultural uses by Alternative 1 or 3 and 17 acres by Alternative 2. A total of 0.2 acre of Important Farmland would be permanently converted to nonagricultural uses as a result of remnant parcels due to road construction under Alternatives 1 and 3. Alternative 2 would not create remnant parcels of Important Farmland. Overall, Alternatives 1 and 3 would result in direct permanent conversion of approximately 0.02% of the total Important Farmland as classified under FMMP in the study area, and Alternative 2 would result in permanent conversion of less than 0.01%. Although the percentage of land affected by alternatives is small and the magnitude of the impact small, because the alternatives would result in permanent conversion of Important Farmland to nonagricultural uses, this impact would be significant.

Implementation of Mitigation Measure AG-1.1 for Alternatives 1, 2, and 3 would reduce impacts as a result of permanent conversion of Important Farmland to nonagricultural uses. This mitigation measure would require the Authority to fund acquisition of agricultural conservation easements in the same agricultural region (i.e., Glenn, Colusa, and Yolo Counties) in which the impacts occur. Purchasing agricultural conservation easements or donating to mitigation fees[5] to preserve regional important farmland would only ensure continued productivity and preservation of existing Important Farmland. It is consistent with the Project objectives to support agriculture and provide a reliable water supply to agriculture. The measure would not replace or restore the acres of Important Farmland permanently converted to nonagricultural uses under each alternative. Therefore, while this measure is feasible and

[5] The proposed conservancy program to receive mitigation fees for the Project is the California Farmland Conservancy Program (see Mitigation Measure AG-1.1). The California Farmland Conservancy Program is a statewide grant program under the auspices of the DOC. The program provides funding across California to protect agricultural lands under threat of conversion to nonagricultural uses through the acquisition of voluntary, permanent agricultural conservation easements. The program also provides funding for the improvement of lands protected by existing California Farmland Conservancy Program agricultural conservation easements or of lands protected by other qualified conservation easement programs, if the improvement will directly benefit lands protected by California Farmland Conservancy Program easements.

would partially mitigate the impact, it would not reduce impacts to less than significant. The impact would remain **significant and unavoidable** under all alternatives.

It is infeasible to restore Important Farmland converted as a result of facilities as a mitigation measure because the Project consists of permanent facilities that, once in place, cannot be easily removed. There is no ability to restore land used for this type of water infrastructure project like there is for other infrastructure projects, such as solar farms or oil and gas development. Once the use of the land as a solar farm or oil and gas well ceases after a period of time (e.g., 25 years), the majority of land can be restored to its previous agriculture use if the landowner decides and depending on the terms and conditions of lease agreements. There is no ability to contemplate such restoration under Alternative 1, 2, or 3.

Restoring existing vacant nonagricultural lands offsite from the Project that have been out of agricultural production into Important Farmland would replace the lost Important Farmland due to permanent footprints of facilities. However, Important Farmland restoration is infeasible as a mitigation measure due to several factors, including lack of available land, the price of land, and different socioeconomic decisions. In the last decade, it has become a trend of investors to purchase agricultural land in the hopes of selling to developers at a profit. Other investors see agribusiness as a stable long-term investment due to the fact that arable farmland per capita has decreased by nearly half over the last 50 years. These and other factors have caused the average price of farmland nationwide to double over the last 10 years. In Glenn and Colusa Counties, the price of productive farmland has risen to approximately $9,000 and $8,000 per acre, respectively (U.S. Department of Agriculture 2017). Further, unlike restoration/preservation for biological purposes, retaining or restoring agricultural land is dependent upon a multitude of socioeconomic decisions. The counties cannot mandate that restored agricultural mitigation land be farmed. Rather, the individual farmers/landowners make decisions based on crop prices, availability of labor, input prices (seed, fuel, pesticides, fertilizer), the price and availability of water, land productivity, and a host of other factors. In addition, while finding productive agricultural land is driven by the market, soils, and water availability, there are several other trends that are working against keeping land in agricultural production. After peaking at 6.8 million farms in 1935, the number of U.S. farms fell sharply until the early 1970s (U.S. Department of Agriculture 2021). Mirroring the reduction in farms is a trend downward in young farmers entering the industry; resulting in a corresponding upward trend in the average age of farmers, which has increased 7 years over the last 30 years (U.S. Department of Agriculture 2017). Further, during the same time period, mid-sized farms (50–999 acres) have largely disappeared, reflecting a trend toward consolidation and large corporate farms. Another trend is returns (profits) to farm operators (after expenses), which, adjusted for inflation, reached a peak in the mid-to-late 1940s but has generally trended downward from the 1950s through the 1990s. During the 1980s in particular, returns were approximately one-third of the peak in the late 1940s. These barriers to entry mean that there are no feasible methods to guarantee that farmland could be restored (as mitigation) and put into production at a point where farmers could profitably produce. It is equally as likely that restored land would be purchased and held by investors as a long-term investment or for sale to developers (Ecology Center 2015). Given the factors described above, restoration of existing nonvacant land to Important Farmland is infeasible as a mitigation measure.

Mitigation Measure AG-1.1: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland

Prior to the commencement of any Project activities that would result in the permanent conversion of Important Farmland, the Authority will enter into an agreement with the DOC California Farmland Conservancy Program to mitigate for the permanent conversion of Important Farmland through

purchase of agricultural easements. The Authority will fund the California Farmland Conservancy Program to enable them to (1) identify suitable agricultural land for mitigation of Project impacts and (2) fund the purchase of agricultural conservation easements from willing sellers. The Authority will coordinate with the California Farmland Conservancy Program to identify suitable lands and purchase agricultural conservation easements from willing sellers at a ratio of at least 1:1 to preserve Important Farmland in an amount commensurate with the quantity and quality of converted farmlands.

Impact AG-2: Conflict with existing zoning for agricultural use or a Williamson Act contract

Placement of underground pipelines on land zoned for agricultural use or in Williamson Act contracts would not result in a permanent change of land use from agricultural use. No impact would occur under construction and operations.

Placement of aboveground Project facilities on some land zoned for agricultural use would result in a permanent change of land use. As discussed in Chapter 14, *Land Use*, prior to the start of Project construction, coordination between the Authority and Glenn and Colusa Counties would occur regarding zoning ordinances. This land would not create an indirect impact through conflicts with zoning on adjacent parcels zoned for agricultural use because the new uses would be compatible with adjacent agriculture. Therefore, construction and operations impacts would be less than significant.

Placement of aboveground Project facilities on land under Williamson Act contract would result in removal of this land from contract and would also create remnant parcels. As shown in Table 15-17, Alternative 1 or 3 would remove a total of 13,868 acres from Williamson Act contract as a result of direct impact, and Alternative 2 would remove a total of 13,340 acres. This acreage of direct impact for Alternative 1 or 3 accounts for 1.37% of the land under Williamson Act contract in the study area. This acreage of direct impact for Alternative 2 accounts for 1.31% of the land under Williamson Act contract in the study area. In addition, placement of aboveground Project facilities could result in creation of remnant parcels of land under Williamson Act that are smaller than county requirements for such contracts, resulting in contract nonrenewal or cancellation for affected parcels. As shown in Table 15-18, Alternative 1 or 3 would create a total of 1,220 acres of remnant parcels of land currently under Williamson Act contract, and Alternative 2 would create a total of 1,299 acres of remnant parcels of land currently under Williamson Act contract. Alternative 2 would affect more acres than Alternative 1. Finally, some of this land is also Important Farmland as identified under Impact AG-1. Construction and operation of Alternative 1, 2, or 3 would both remove land from Williamson Act contract and create remnant parcels too small to remain under contract. Impacts would be significant.

As discussed under Impact AG-1, Alternatives 1, 2, and 3 are meant to increase water reliability to Storage Partners, including Reclamation, as evidenced by CEQA OBJ-1 and OBJ-3. Increased water supply reliability would allow some lands currently in Williamson Act contracts to remain in production during times it may have otherwise been fallowed or taken out of production for longer periods because of lack of water. However, this effect cannot be quantified, nor would it fully reduce permanent impacts on lands experiencing Williamson Act cancellation because the water could not be used on lands anticipated to experience Williamson Act cancellations.

Implementation of Mitigation Measure AG-2.1 would minimize impacts relating to Williamson Act contract nonrenewal or cancellation by requiring the Authority to comply with Government Code Section 51290–51293, including notifying the DOC of proposed acquisition and completed acquisition. Furthermore, implementation of Mitigation Measure AG-1.1 would minimize impacts on lands that are both Williamson Act and Important Farmland by requiring the Authority to fund acquisition of

agricultural conservation easements in the same agricultural region in which the impacts occur or donate mitigation fees, as discussed under Impact AG-1. With implementation of Mitigation Measure AG-2.1, the permanent removal of these lands from contracts, both directly and indirectly through contract cancellation, would occur over thousands of acres. In addition, as discussed under Impact AG-1, impacts would remain **significant and unavoidable** with implementation of Mitigation Measure AG-1.1. Therefore, impacts would remain **significant and unavoidable** under Alternative 1, 2, or 3 after the implementation of Mitigation Measures AG-2.1 and AG-1.1. There are no other feasible mitigation measures to address this impact for a project of this nature and magnitude because the lands are needed for the Project to be constructed and to operate.

Mitigation Measure AG-2.1: Minimize Impacts on Williamson Act–Contracted Lands, Comply with Government Code Sections 51290–51293, and Coordinate with Landowners and Agricultural Operators

To reduce impacts on lands under Williamson Act contract, the Authority will implement the measures below.

- The Authority will comply with Government Code Sections 51290–51293 with respect to acquiring lands under Williamson Act contract.
- Sections 51290(a)–51290(b) state 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.
- Whenever it appears that land within a preserve or under contract may be required for a public improvement, DOC and the local jurisdiction responsible for administering the preserve must be notified (Section 51291(b)).
- Within 30 days of being notified, DOC and the local jurisdiction will forward comments to the Authority, which the Authority must consider (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 51921(a) and 51921(b)).
- The contract will be terminated when land is acquired by eminent domain or in lieu of eminent domain (Section 51295).
- The Authority will notify DOC within 10 working days upon completion of the acquisition (Section 51291(c)).
- The Authority will notify DOC and the local jurisdiction before completion of any proposed substantial changes to the public improvement (Section 51291(d)).
- If, after acquisition, the Authority determines that the property will not be used for the proposed public improvement, DOC and the local jurisdiction administering the involved preserve will be notified before the land is returned to private ownership. The land would 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 Authority will coordinate with landowners and agricultural operators to sustain existing agricultural operations, at the landowners' discretion, within the study area until the individual agricultural parcels are needed for Project construction.

3.7 Navigation, Transportation and Traffic

Impact TRA-5: Substantially affect school bus travel

Alternatives 1 and 3

Based on qualitative analysis to verify that adequate school bus travel is maintained for Maxwell Unified School District throughout construction and during permanent operations, Alternative 1 or 3 would result in a less-than-significant impact.

Alternative 2

During construction, school bus travel would be maintained for Maxwell Unified School District as a result of the use of temporary construction roads and the use of existing roads that would remain open during construction. Construction impacts would be less-than-significant. Operations would result in longer travel time, which would substantially affect school bus travel. One potential measure to lessen this impact would be to shorten the length of the South Road; however, that is already presented in Alternatives 1 and 3 as the bridge crossing the Sites Reservoir. Another potential measure that was considered was the use of a ferry service that would connect both sides of Sites Reservoir to avoid the travel along the South Road for students and other users. However, it was determined that the reservoir is not expected to maintain a consistent water level year-round. Due to unforeseeable fluctuating water levels, the potential mitigation was considered unfeasible. There are no feasible mitigation measures and operation impacts would be **significant and unavoidable**.

3.8 Air Quality

Impact AQ-1: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard during construction, or conflict with or obstruct implementation of the applicable air quality plan

Alternatives 1 and 3

Construction of Alternatives 1 and 3 would result in an exceedance of the applicable thresholds for CCAPCD and GCAPCD for NO_X and PM10 for multiple years. Additionally, construction would result in an exceedance of the applicable YSAQMD threshold for PM10 for multiple years. BMP-27 will minimize air quality impacts through application of onsite controls such as Tier 4 engines and 2010 or newer model year trucks to reduce construction emissions. Equipment with Tier 4 engines and 2010 or newer model year trucks are lower emitting than equipment and trucks without these characteristics, because they are manufactured in accordance with stricter emissions standards. Thus, the use of equipment and trucks with these characteristics would result in lower emissions for the same amount of use relative to older equipment and trucks. Impacts associated with fugitive dust emissions would be minimized through implementation of BMP-28, which would involve using soil stabilizers on unpaved road surfaces and watering visibly dry surfaces to control dust. The use of soil stabilizers and watering on road

surfaces would result in substantial reductions in fugitive PM emissions by causing dust particles to stick together and thus reducing the amount of loose dust that can be propelled from the ground into the air when trucks and equipment pass by. Reducing the amount of unpaved road surface is a strategy that can reduce fugitive dust-related emissions for some projects; however, because most of the road surfaces for Alternatives 1 and 3 are located in the inundation area, it is not feasible to use road paving to reduce emissions. Exhaust-related pollutants would be reduced through use of Tier 4 diesel engines in most equipment and the use of on-road engines from 2010 or newer. Other measures included in BMP-27 would reduce emissions, but these were not explicitly quantified and may include minimizing equipment idling time, maintaining all construction equipment in proper working condition, and any other components of the plan that are developed by the Authority in the future. Even with BMPs, exceedances of the applicable thresholds used by CCAPCD and GCAPCD for NO_X and PM10 would occur, and exceedances of the PM10 threshold would occur in YSAQMD as well. As such, Alternatives 1 and 3 would contribute a significant level of regional NO_X and particulate matter pollution in the SVAB.

To further reduce emissions from construction, implementation of Mitigation Measure AQ-1.1 would require that construction contractors use zero emission (ZE) or near zero emission (NZE) technology for construction vehicles and equipment to the maximum extent feasible. The use of such technology would reduce exhaust-related emissions from construction; however, the commercial availability of future electric equipment and vehicles is unknown, and thus emissions reductions achieved by Mitigation Measure AQ-1.1 cannot currently be quantified or included in the analysis. The best available equipment that is currently widely available (i.e., equipment with Tier 4 engines), as noted above, has been included in the modeling as noted in *Mass Emissions of Criteria Pollutants* in Section 20.3.1, *Construction*.

After implementation of Mitigation Measure AQ-1.1, implementation of Mitigation Measure AQ-1.2 would partially mitigate remaining NO_X and PM10 emissions through offsets. The significance thresholds were established to prevent emissions from new projects from contributing to CAAQS or NAAQS violations. Offsetting emissions in sufficient quantities (i.e., below the thresholds) would prevent a project from contributing to a significant level of air pollution such that regional air quality within the air districts would be degraded. There are several current uncertainties with respect to the use of offsets and the ability to fully reduce emissions below thresholds. First, the air districts where most emissions will occur (CCAPCD and GCAPCD) do not currently have established offsets programs for indirect sources or for CEQA purposes (Ryan pers. comm.; Ledbetter pers. comm). Second, because there is no established program for indirect sources of emissions, it is unknown if the quantity of offsets potentially available in these two air districts would be sufficient to fully mitigate impacts. Currently established offsets programs in other air districts in the SVAB could be used to mitigate impacts because the Project's mass emissions affect and disperse within the entire SVAB and not just CCAPCD and GCAPCD. However, it is uncertain if other air districts in the SVAB with limited to no Project-related emissions would be amenable to offsetting emissions for a project not located within their jurisdiction. Further, it is anticipated that such an arrangement would require approval from that air district's board of directors, which would be at the discretion of individual board members and is thus uncertain. Because this would be an unconventional arrangement in addition to the other uncertainties discussed above, there is no assurance that emissions could be sufficiently reduced and thus mitigated through offsets.

Mitigation Measure AQ-1.2 would nevertheless be implemented to the maximum extent feasible, which would help reduce emissions. Mitigation Measure AQ-1.2 would first facilitate emissions reductions within the communities in close proximity to the study area because the Authority's first priority for implementing this mitigation would be to reduce emissions and improve public health in those nearby communities. This could include the Authority sponsoring the replacement of internal combustion

engine vehicles owned by municipal governments, school districts, nonprofits, or other community members with nonemitting or cleaner alternatives, such as electric vehicles. The Authority could also sponsor the replacement of older agricultural equipment with cleaner equipment because of the extent of agricultural land in the study area. The potential magnitude from emissions reductions projects is unknown, however, given the uncertainties discussed above.

Construction of Alternatives 1 and 3 would result in a cumulatively considerable net increase of criteria pollutants for which the region is nonattainment under an applicable federal or state ambient air quality standard. Construction of Alternatives 1 and 3 would also conflict with an applicable air quality plan. Construction impacts of Alternatives 1 and 3 would be **significant and unavoidable**, even with the implementation of Mitigation Measures AQ-1.1 and AQ-1.2.

Mitigation Measure AQ-1.1: Zero Emission and/or Near Zero Emission Vehicles and Off-Road Equipment

This mitigation measure will reduce the impact of Project construction emissions from on-road vehicles and off-road equipment through the following commitments.

- The Authority will require that all construction contractors use ZE or NZE technology for all light-duty on-road vehicles (e.g., passenger cars, light-duty trucks) associated with the Project to the maximum extent feasible.
- The Authority will require that all construction contractors use ZE or NZE technology for heavy-duty on-road vehicles (e.g., for hauling, material delivery and soil import/export) associated with the Project to the maximum extent feasible.
- The Authority will require that all Project construction contractors use ZE or NZE vehicles for off-road construction equipment use associated with the Project to the maximum extent feasible.

For all the above requirements, the Authority will require that construction contractors provide documentation to the Authority, on an annual basis at minimum, showing the percentage of vehicles and equipment that are ZE or NZE. Based on this reporting, the Authority will require that all construction contractors are meeting minimum percentages of ZE or NZE vehicles and equipment, and those minimum percentages will be determined at the time of construction. If local or state regulations mandate a faster transition to using ZE and/or NZE vehicles at the time of construction, the more stringent regulations will be applied. It is possible that such new regulations will be adopted; Executive Order N-79-20, issued by California Governor Newsom on September 23, 2020, states the following objectives:

- Light duty and passenger car sales be 100% zero-emission vehicles (ZEV) by 2035
- Full transition to ZEV short haul/drayage trucks by 2035
- Full transition to ZEV heavy-duty long-haul trucks, where feasible, by 2045
- Full transition to ZE off-road equipment by 2035, where feasible.

Mitigation Measure AQ-1.2: Offset Construction-Generated Criteria Pollutants in CCAPCD, GCAPCD, and YSAQMD.

Prior to issuance of construction contracts, the Authority will enter into a memorandum or multiple memoranda of understanding (MOU) with CCAPCD, GCAPCD, YSAQMD, TCAPCD, or other air district

located in the SVAB (collectively referred to as the Air Districts), to reduce NO_X and PM10. Emissions above the CEQA thresholds will be reduced to the extent practicable and feasible, per the following criteria:

- The Authority will identify emissions offsets in geographies closest to the Project first (Maxwell, Willows, Colusa County, Glenn County) and only go to larger geographies (i.e., other counties in the SVAB) if adequate offsets cannot be found in closer geographies or the procurement of such offsets would create an undue financial burden. All offsets must occur within the SVAB. The Authority will provide the following justification for not using offsets in closer geographies in terms of either availability or cost prohibition.
- No mechanism or program will be available in the reasonably foreseeable future to track the quantity of offsets available in closer geographies, or it is otherwise not possible to accurately verify and account for the exchange of offsets.
- Lack of enough offsets available in closer geographies.
- Prohibitively costly offsets in closer geographies as defined by the Authority.
- Offsets in any geography within the SVAB would be infeasible based on these criteria as well (lack of enough offsets and/or prohibitively costly as defined above).

The mitigation offset fee amount will be determined at the time of mitigation to fund emissions reduction projects within the SVAB. The Air Districts may require an additional administrative fee to cover staff time, and that fee will be determined in the MOU(s). The mitigation offset fee will be determined by the Authority and the Air Districts based on the type of projects available at the time of mitigation. The fee is intended to fund emissions reduction projects to achieve reductions. Documentation of payment will be provided to the Authority or its designated representative.

The MOU will include details for the annual calculation of required offsets the Authority must achieve, funds to be paid, administrative fee, and the timing of the emissions reduction projects. Acceptance of this fee by the Air Districts will serve as an acknowledgment and commitment by Air Districts to: (1) implement an emissions reduction project(s) within a timeframe to be determined based on the type of project(s) selected after receipt of the mitigation fee designed to achieve the emission reduction objectives; and (2) provide documentation to the Authority or its designated representative describing the project(s) funded by the mitigation fee, including the amount of emissions reduced (tons per year) in the SVAB from the emissions reduction project(s). To qualify under this mitigation measure, the specific emissions reduction project(s) must result in emission reductions in the SVAB that are real, surplus, quantifiable, enforceable, and will not otherwise be achieved through compliance with existing regulatory requirements or any other legal requirement. Funding will need to be received prior to contracting with participants and should allow enough time to receive and process applications to fund and implement offsite reduction projects prior to commencement of Project activities being reduced. This will roughly equate to 1 year prior to the required mitigation; additional lead time may be necessary depending on the level of offsite emission reductions required for a specific year. Because all of the Air Districts where Project activities would occur are located in the SVAB, the offsets do not need to occur within the same Air District as the emissions exceedances.

Alternative 2

Construction of Alternative 2 would result in an exceedance of the applicable thresholds for CCAPCD and GCAPCD for NO_X and PM10, and by YSAQMD for PM10. Additionally, construction of Alternative 2 would result in substantial air pollutant emissions that could result in a conflict with applicable air quality plans.

Impacts associated with fugitive dust emissions would be minimized through implementation of BMP-28, which would include the use of soil stabilizers to reduce fugitive PM10 emissions from unpaved roads. Exhaust-related pollutants would be reduced through use of Tier 4 diesel engines in most equipment and on-road engines from 2010 or newer, and other measures. Even with implementation of this BMP, exceedances of the applicable thresholds for CCAPCD, GCAPCD, and YSAQMD would occur, and Alternative 2 would contribute a significant level of regional NO_X and particulate matter pollution within the SVAB. As with Alternatives 1 and 3, Mitigation Measure AQ-1.1 would require that construction contractors use ZE or NZE technology for construction vehicles and equipment to the maximum extent feasible, but the commercial availability of future electric equipment and vehicles is unknown, and thus emissions reductions achieved by Mitigation Measure AQ-1.1 cannot currently be quantified or included in the analysis. Mitigation Measure AQ-1.2 would partially mitigate remaining NO_X and PM10 emissions through offsets. However, the same uncertainties with respect to the implementation of offsets discussed for Alternatives 1 and 3 would also apply to Alternative 2. Construction of Alternative 2 would result in a cumulatively considerable net increase of criteria pollutants for which the region is nonattainment under an applicable federal or state ambient air quality standard. Construction of Alternative 2 would also conflict with applicable air quality plans. Construction impacts of Alternative 2 would be **significant and unavoidable**, even with implementation of Mitigation Measures AQ-1.1 and AQ-1.2.

Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard during operations, or conflict with or obstruct implementation of the applicable air quality plan

Alternatives 1 and 3

Operation would result in an exceedance of the applicable thresholds for CCAPCD for ROG. The net increase in emissions would result in a cumulatively considerable net increase of a criteria pollutant. Although emissions in GCAPCD would be below the applicable threshold, this analysis conservatively concludes that the impact would be significant in GCAPCD because of the reservoir's location on the border of CCAPCD and GCAPCD. Implementation of Mitigation Measure AQ-2.1 would reduce emissions by implementing strategies to minimize the effects of boating activity.

Per Mitigation Measure AQ-2.1, the establishment of a recreational boat emissions minimization plan would outline strategies for the Authority to reduce ROG emissions from boats. The Authority would implement strategies to encourage users to minimize emissions from their boats. The effectiveness of the strategies cannot be quantified, however, and given the magnitude of the exceedance, this mitigation would not likely reduce emissions sufficiently to be below the applicable threshold. Mitigation Measure AQ-2.2 would be required to offset boating-related emissions to a level that is below the threshold. However, for the reasons discussed in Impact AQ-1 for Mitigation Measure AQ-1.1, there are considerable uncertainties with respect to the implementation of offsets in the study area. Given these uncertainties, there is no assurance that sufficient offsets could be obtained to fully mitigate the emissions generated during operations. Operation of Alternatives 1 and 3 would result in a

cumulatively considerable net increase of criteria pollutants for which the region is nonattainment under an applicable federal or state ambient air quality standard. Operation of Alternatives 1 and 3 would also conflict with applicable air quality plans. Operations impacts of Alternatives 1 and 3 would be **significant and unavoidable**, even with the implementation of Mitigation Measures AQ-2.1 and AQ-2.2.

Mitigation Measure AQ-2.1: Recreational Boat Emissions Minimization Plan

To reduce ROG emissions from recreational boats at the reservoir, the Authority will develop and implement an emissions reduction plan. The plan will include strategies that the Authority will implement during the operational lifetime of the recreational area at the reservoir that are likely to reduce emissions. The plan will be part of the Recreation Management Plan (Section 2D.8) and thus approved at the same time as the Recreation Management Plan. The strategies that the Authority could implement to reduce boat emissions include but are not limited to the following.

- Provide free or reduced launch fees for low-emitting or electric boats, to incentivize boats that are alternatively fueled.
- Post signage near launch areas encouraging users to turn off the boat engines when not in use.
- Track boat usage and type (i.e., motorized, electric, nonmotorized) at the reservoir on an annual basis by maintaining records of the number and types of boats operated at the reservoir. To maintain these records, the Authority will operate staffed kiosks at the reservoir, and boat users will be required to check in at these kiosks prior to launching their boats. Emissions from boat usage will be quantified based on the Authority's records, and the effectiveness of the minimization plan will be assessed based on the quantification results and relative to the applicable air district threshold at the time of operations.

Mitigation Measure AQ-2.2: Offset Operation-Generated Criteria Pollutants in CCAPCD and GCAPCD.

Prior to issuance of the commencement of recreational boating activities, the Authority will enter into a memorandum or multiple MOUs with CCAPCD, GCAPCD, YSAQMD, TCAPCD, or other air district located in the SVAB (collectively referred to as the Air Districts), to reduce ROG. Per Mitigation Measure AQ-2.1, the emissions from recreational boat use will be quantified. The emissions in excess of the applicable air district thresholds at the time of operations, including the total of all operations-related activity (e.g., boat use, maintenance activities, recreational visitor vehicle trips) will be offset to the maximum extent possible. Emissions above the CEQA thresholds will be reduced as much as possible, per the following criteria.

- The Authority will identify emissions offsets in geographies closest to the Project first (Maxwell, Willows, Colusa County, Glenn County) and only go to larger geographies (i.e., other counties in the SVAB) if adequate offsets cannot be found in closer geographies or the procurement of such offsets would create an undue financial burden. All offsets must occur within the SVAB. The Authority will provide the following justification for not using offsets in closer geographies in terms of either availability or cost prohibition.
    - No mechanism or program will be available in the reasonably foreseeable future to track the quantity of offsets available in closer geographies, or it is otherwise not possible to accurately verify and account for the exchange of offsets.
    - Lack of enough offsets available in closer geographies.

- Prohibitively costly offsets in closer geographies as defined by the Authority.
- Offsets in any geography within the SVAB would be infeasible based on these criteria as well (lack of enough offsets and/or prohibitively costly as defined above).

- The mitigation offset fee amount will be determined at the time of mitigation to fund emissions reduction projects within the SVAB. The Air Districts may require an additional administrative fee to cover staff time, and that fee will be determined in the MOU(s). The mitigation offset fee will be determined by the Authority and the Air Districts based on the type of projects available at the time of mitigation. The fee is intended to fund emissions reduction projects to achieve reductions. Documentation of payment will be provided to the Authority or its designated representative.
- The MOU will include details for the annual calculation of required offsets the Authority must achieve, funds to be paid, administrative fee, and the timing of the emissions reduction projects. Acceptance of this fee by the Air Districts will serve as an acknowledgment and commitment by Air Districts to: (1) implement an emissions reduction project(s) within a timeframe to be determined based on the type of project(s) selected after receipt of the mitigation fee designed to achieve the emission reduction objectives; and (2) provide documentation to the Authority or its designated representative describing the project(s) funded by the mitigation fee, including the amount of emissions reduced (tons per year) in the SVAB from the emissions reduction project(s). To qualify under this mitigation measure, the specific emissions reduction project(s) must result in emission reductions in the SVAB that are real, surplus, quantifiable, enforceable, and will not otherwise be achieved through compliance with existing regulatory requirements or any other legal requirement. Funding will need to be received prior to contracting with participants and should allow enough time to receive and process applications to fund and implement offsite reduction projects prior to commencement of Project activities being reduced. This will roughly equate to 1 year prior to the required mitigation; additional lead time may be necessary depending on the level of offsite emission reductions required for a specific year. Because all of the Air Districts where Project activities would occur are located in the SVAB, the offsets do not need to occur within the same Air District as the emissions exceedances.

Alternative 2

Operation of Alternative 2 would result in an exceedance of the applicable thresholds for CCAPCD for ROG. The net increase in emissions would resulting in a cumulatively considerable net increase of a criteria pollutant. The impact is conservatively assumed to be significant in GCAPCD as well, because of the reservoir's location on the border of CCAPCD and GCAPCD. As with Alternatives 1 and 3, implementation of Mitigation Measure AQ-2.1 could reduce emissions by implementing strategies to minimize the effects of boating activity but not sufficiently to be below the applicable threshold. Mitigation Measure AQ-2.2 would be required to offset emissions from the boats to be below the threshold. However, for the reasons discussed in Impact AQ-1 for Mitigation Measure AQ-1.1, there are considerable uncertainties with respect to the implementation of offsets in the study area. Given these uncertainties, there is no assurance that sufficient offsets could be obtained to fully mitigate the emissions generated during operations. Operation of Alternative 2 would result in a cumulatively considerable net increase of criteria pollutants for which the region is nonattainment under an applicable federal or state ambient air quality standard. Operation of Alternative 2 would also conflict with applicable air quality plans. Operation impacts of Alternatives 2 would be **significant and unavoidable**, even with the implementation of Mitigation Measures AQ-2.1 and AQ-2.2.

Impact AQ-4b: Expose sensitive receptors to localized criteria pollutant emissions

Alternatives 1 and 3

Construction of Alternatives 1 and 3 would contribute substantially to existing PM violations of the CAAQS and NAAQS and would cause a new violation of the NAAQS. The modeling results shown in Table 20-17 reflect that fugitive dust emissions would be minimized through implementation of BMP-28, which would involve using soil stabilizers on unpaved road surfaces and watering visibly dry surfaces. As noted above, the use of soil stabilizers and watering on road surfaces would result in substantial reductions in fugitive PM emissions. However, given the magnitude of unpaved road travel that would be required for construction, the fugitive PM emissions would result in several localized impacts even with the implementation of BMP-28 to reduce dust. Mitigation Measure AQ-1.2 would result in the purchase of emissions offsets, but this measure, which would mitigate regional impacts associated with PM, would not mitigate localized impacts from PM. Sensitive receptors and/or other members of the public could be exposed to the concentrations shown in Table 20-17, regardless of whether an equal amount of emissions is offset somewhere else in the SVAB. As a result, the localized PM impacts cannot be mitigated, and the Project would expose sensitive receptors to substantial concentrations of localized criteria pollutants. This impact would be **significant and unavoidable**.

Operations of Alternative 1 and 3 would not expose sensitive receptors to substantial concentrations of localized criteria pollutants, because emissions, particularly PM emissions, would be substantially less than construction. Maintenance and recreational activities would result in emissions of local criteria pollutants that are below the applicable thresholds, and thus localized exceedances of the NAAQS or CAAQS are not anticipated. This impact would be less than significant.

Alternative 2

Construction of Alternative 2 would contribute substantially to existing PM violations of the CAAQS and NAAQS and would cause a new violation of the NAAQS. The modeling results shown in Table 20-18 reflect the implementation of BMP-28 to reduce fugitive dust emissions. Nevertheless, Alternative 2 would result in several localized impacts even with this BMP that will be implemented to reduce dust. Mitigation Measure AQ-1.2 would result in the purchase of emissions offsets, but, as noted above, this measure would not mitigate localized impacts from PM. As a result, the localized PM impacts cannot be mitigated, and Alternative 2 would expose sensitive receptors to substantial concentrations of localized criteria pollutants. This impact would be **significant and unavoidable**.

Operation of Alternative 2 would not expose sensitive receptors to substantial concentrations of localized criteria pollutants, because emissions, particularly PM emissions, would be substantially less than construction. Maintenance and recreational activities would result in emissions of local criteria pollutants that are below the applicable thresholds, and thus localized exceedances of the NAAQS or CAAQS are not anticipated. This impact would be less than significant.

3.9 Greenhouse Gases

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

Alternative 1

The impact would be significant for Alternative 1, because construction and operations emissions would generate substantial emissions of GHGs that constitute a net increase in emissions and thus do not meet the carbon-neutral threshold. The net increase in emissions could also conflict with the State's plans to reduce GHG emissions, resulting in a potentially significant impact with respect to the Project conflicting with plans or policies adopted for the purpose of reducing GHG emissions. Implementation of Mitigation Measure GHG-1.1 would reduce or offset these emissions to net zero through a GHG Reduction Plan.

Per Mitigation Measure GHG-1.1, the Authority would develop and implement a GHG Reduction Plan that would reduce the Project's GHG emissions to net zero. First, the Authority would implement these strategies to reduce GHG emissions, which would reduce emissions by utilizing electric power instead of generators; developing a Project-specific ride share program for employees; and using electric or alternatively fueled equipment instead of diesel equipment. For emissions that would not be reduced through these strategies, Mitigation Measure GHG-1.1 provides additional methods for achieving the net-zero goal.

For emissions that cannot otherwise be reduced, the Authority would offset those emissions so that there is no net increase in GHG emissions from construction or operations activities of Alternative 1. Mitigation Measure GHG-1.1 specifies the requirements for using GHG credits for CEQA purposes.

This measure ensures Alternative 1 GHG emissions would not result in a significant GHG impact, because there would be no net increase in emissions. Further, with implementation of Mitigation Measure GHG-1.1, Alternative 1 would not conflict with any plans adopted for the purpose of reducing GHG emissions, because there would be no net increase in emissions. Accordingly, this impact would be less than significant with mitigation.

Mitigation Measure GHG-1.1: Achieve Net-Zero Emissions Through a GHG Reduction Plan

To achieve net-zero emissions, the Authority will develop a GHG Reduction Plan to reduce Project emissions from onsite and offsite sources. The Authority will retain a qualified consultant to develop a GHG Reduction Plan to reduce GHG emissions resulting from construction and operational activities to net zero. Net additional GHG emissions from the construction period and annual emissions from operations have been quantified as part of this analysis. Construction emissions total to 348,648 to 351,362 metric tons of CO_2e depending on the alternative and variant of the Project. Annual operational emissions could be a maximum of 72,736 metric tons CO_2e, which corresponds to Alternative 1A, but are expected to continually decrease in future years as the electric power sector transitions to more renewable sources of energy. This yields a reduction commitment of up to 351,362 metric tons CO_2e total for construction and up to 72,736 metric tons of CO_2e annually needed to meet the net-zero performance standard. These maximum values of 72,736 metric tons CO_2e and 351,362 metric tons CO_2e correspond to Alternatives 1A and 2, respectively. Table 21-6 summarizes the reduction by alternative.

Table 21-6 Summary of Metric Ton Reduction (metric tons CO2e)

Year	Alternatives 1A		Alternative 1B		Alternative 2		Alternative 3	
	Variant 1[a]	Variant 2[b]	Variant 1	Variant 2	Variant 1	Variant 2	Variant 1	Variant 2
Total Construction Emissions Commitment	348,648	348,796	348,648	348,796	351,317	351,362	348,648	348,796
Maximum Annual Operational Emissions Commitment (Long-Term Average)	60,610	60,610	59,573	59,573	59,003	59,003	56,613	56,613
Maximum Annual Operational Emissions Commitment (Dry and Critically Dry)	72,736	72,736	72,070	72,070	71,056	71,056	67,778	67,778

Notes:
CO_2e = carbon dioxide equivalent.
[a] Variant 1 assumes the Project would connect to existing Western Area Power Administration utility infrastructure.
[b] Variant 2 assumes the Project would connect to existing Pacific Gas and Electric utility infrastructure.

As noted in the text of this measure, below, the net-zero performance standard may be achieved based on actual emission calculations, and thus the Authority's reduction commitment may differ from the values included in this analysis.

The GHG Reduction Plan will include the following content and adhere to the following requirements.

1) *Emissions Quantities and Reduction Commitments*: GHG emissions from construction and operations must be reduced to net zero on a continual basis throughout construction and operations. Advanced planning for GHG reductions will be necessary to ensure that the net effect of Project emissions and this mitigation is that the Project will not result in any increase in GHG emissions relative to the No Project Alternative throughout the construction and operational period. The Authority will thus need to proactively assess upcoming construction activity and implement early investment in GHG reduction efforts prior to construction (to ensure that the emissions that are being mitigated through other measures are only those that are unavoidable).
   Since some of the planning will be reliant on the estimated GHG reduction value of future actions during construction and operation (as discussed below) there may be an emissions credit debt if emissions are higher than expected or if certain measures do not achieve the reductions that were anticipated. Conversely, if emissions are lower than expected or measures achieve higher reductions than expected, the Authority may bank credits for the next year of construction and/or operations.

2) *Plan Development:* The GHG Reduction Plan will identify the amount of GHG emissions anticipated during each construction phase. Amendments to the GHG Reduction Plan may be made during the construction period for the purpose of giving the Authority flexibility to adapt to changing technologies that have increasing effectiveness at reducing emissions and/or changes in expected construction emissions or available mitigation approaches. For operations, the GHG Reduction Plan may be developed and implemented in 5-year increments and can be amended to include more cost effective or environmentally beneficial technologies. This analysis presents an estimate of annual GHG emissions generated by Project construction and operations. Although the emissions provided in this analysis could be used to inform the required mitigation commitment, the methods used to quantify emissions are conservative. This analysis does not account for any GHG reduction measures that may be implemented by the Authority pursuant to this measure. Accordingly, this EIR likely overestimates actual GHG emissions that would be generated by the Project. The Authority may therefore reanalyze GHG emissions for construction and/or operation of the Project to update the required reduction commitment to achieve net zero.

   Updated emissions analysis conducted for the GHG Reduction Plan will be performed using approved emissions models and methods available at the time of that analysis. Updated emissions analysis conducted for the GHG Reduction Plan will, at a minimum, consider the categories and types of emission sources included in this Final EIR/EIS; additional categories and types of emission sources should be considered for inclusion based on then-available scientific information. The analysis must use the latest available engineering data for the Project, inclusive of any required BMPs or GHG emissions reduction measures. Consistent with the methodology used in this analysis, emission factors may account for enacted regulations that will influence future year emissions intensities (e.g., fuel efficiency standards for on-road vehicles). Net emissions from changes in operations emissions will be quantified using approved methods at the time of analysis and applicable activity data for each component of operations (such as maintenance activities, recreational vehicle trips, recreational boating, public services and utilities, water conveyance, and land use, including water storage).

3) *GHG Reduction Strategies*: The construction component and each operational increment in the GHG Reduction Plan will identify the GHG reduction measures that will be implemented during that period to achieve the net-zero performance standard. GHG reduction measures must be verifiable and feasible to implement. The GHG Reduction Plan will identify the entity responsible for implementing each measure and the estimated GHG reduction that will be achieved by implementation of the measure. If the selected measures are shown to result in reductions that exceed total net emissions of that period, the estimated surplus can be applied as a credit for future periods.

   The constituent measures in the GHG Reduction Plan are summarized in this section. Implementation of BMP-29 is a required Project design feature that must be incorporated into the GHG Reduction Plan. The Authority will prioritize strategies to reduce emissions in the following order (1) onsite measures for construction or operations that are not already part of BMP-29, (2) offsite measures, and (3) carbon credits. The order of priority for the location of selected measures will be (1) within the Project footprint, (2) within communities in the vicinity of the Project site, (3) in the Sacramento Valley Air Basin, (4) in the State of California, and (5) in the United States. If the GHG Reduction Plan proposes GHG reduction strategies that do not conform to the priorities outlined above, it must present substantial

evidence to justify the deviation or explain why higher priority locations were deemed infeasible as defined under CEQA. In addition, the Authority will seek opportunities to implement GHG reduction measures in environmental justice communities (as defined in this Final EIR/EIS) in and near the Project site and report on the effort and outcomes in the annual reporting required in this measure.

The Authority will be responsible for determining the measures necessary to ensure the performance standard to mitigate the significant GHG impact is met.

The list of measures presented in this section is not exclusive. The Authority may include additional measures to reduce GHG emissions to the extent that the measures become commercially available, have documented reliability in real-world conditions and become cost effective. This may include new equipment and vehicle systems (e.g., autonomous construction equipment, fuel-cells), new energy systems (e.g., battery storage), or other technologies (e.g., carbon capture and storage).

a. Construction Best Management Practices and Other Onsite Measures. The Authority will reduce onsite GHG emissions as much as feasible through implementation of the measures identified below. These measures include a list of strategies to reduce GHG emissions from construction. Two measures that have a higher potential to reduce emissions include the use of electric equipment and vehicles instead of diesel-powered vehicles and the use of vehicles that use alternative fuels, such as compressed natural gas, liquified natural gas, propane, or biodiesel. These measures are not reflected in the emissions modeling results, because the future availability of electric-powered construction equipment and vehicles and alternative fuels in the California market is uncertain. As such, a mandate to use all-electric equipment and vehicles and alternative fuels cannot be made at this time. The Authority and its construction contractors will prioritize the use of electric or hybrid-electric off-road construction equipment and vehicles over diesel equipment. These measures, or other equivalent measures, will be implemented by the Authority and their construction contractors prior to or during construction. The Authority would review all designs and plans to ensure incorporation of these measures or the equivalent. In addition, the Authority will deploy a construction monitor during construction to monitor implementation of the required measures. Construction monitors will report regularly (at least quarterly) to the Authority on contractor compliance and will record inspection records in the Project file.

    i. Preconstruction and Final Design Considerations: Preconstruction and final design considerations would be designed to ensure unique characteristics of facility construction are taken into consideration when determining if specific equipment, procedures, or material requirements are feasible and efficacious for reducing GHG emissions. Examples of requirements and considerations are identified below.

        - Consider Project characteristics, including location, Project workflow, site conditions, and equipment performance requirements, to determine whether specifications of the use of equipment with repowered engines, electric drive trains, or other high efficiency technologies are appropriate and feasible for the Project or specific elements of the Project.

- Ensure that all economically feasible avenues have been explored for providing an electrical service drop to the construction site for temporary construction power. When generators must be used, consider use of alternative fuels, such as propane or solar, to power generators to the maximum extent feasible, as specified in construction contracts.
- Minimize idling time by requiring that equipment be shut down after 3 minutes when not in use (5 minutes required by the State airborne toxics control measure [Title 13, Section 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and provide a plan for the enforcement of this requirement.
- Maintain all construction equipment in proper working condition and perform all preventive maintenance. Required maintenance includes compliance with all manufacturer's recommendations, proper upkeep and replacement of filters and mufflers, and maintenance of all engine and emissions systems in proper operating condition. Maintenance schedules shall be detailed in an Air Quality Control Plan prior to commencement of construction.
- Implement a tire inflation program on each jobsite to ensure that equipment tires are correctly inflated. Check tire inflation when equipment arrives onsite and every 2 weeks for equipment that remains onsite. Check vehicles used for hauling materials offsite weekly for correct tire inflation. Procedures for the tire inflation program shall be documented in an Air Quality Management Plan prior to commencement of construction.
- Develop a Project-specific ride share program to encourage carpools and shuttle vans.
- Reduce electricity use in temporary construction offices by using high efficiency lighting and requiring that heating and cooling units be Energy Star compliant. Require that all contractors implement procedures for turning off computers, lights, air conditioners, heaters, and other equipment each day at close of business, wherever feasible.
- For material deliveries to Project sites where the haul distance exceeds 100 miles and a heavy-duty class 7 or class 8 semi-truck or 53-foot or longer box type trailer is used for hauling, a SmartWay26 certified truck will be used to the maximum extent feasible.
- Develop a Project-specific construction debris recycling and diversion program to achieve a documented 50% diversion of construction waste.
- During all activities, diesel-fueled portable equipment with maximum power greater than 25 horsepower shall be registered under the CARB's Statewide Portable Equipment Registration Program.

b. Offsite Measures. For GHG emissions that cannot be reduced through the construction BMPs and other onsite measures discussed above, the Authority will reduce emissions as much as feasible through offsite measures. The GHG Reduction Plan will identify

offsite measures that are suitable to reduce emissions. Offsite strategies include those that reduce emissions from an emissions source(s) that is not located in the Project area and may or may not be associated with the Project.

i. For construction electricity and water conveyance–related energy, the Authority will increase the proportion of renewable energy purchases for the Project's electricity needs to the highest amount that is feasible. The Authority is planning on purchasing 60% of the Project's power needs from renewable, carbon-free sources starting in 2030. To fully reduce the emissions from construction electricity and water conveyance electricity, the Authority would need to purchase 100% of energy needs from carbon-free sources. If the Authority determines that it is infeasible to purchase 100% carbon-free energy for construction and/or operations, carbon credits would be required to reduce the remaining emissions.

ii. The GHG Reduction Plan may identify other strategies that reduce emissions from sources that are not affiliated with the Project. The Authority can take credit for reductions that result from projects it sponsors, to achieve the net-zero goal. For example, the Authority could directly sponsor emissions-reducing projects, such as the following.

- replacing diesel school buses with electric buses.
- planting trees in local communities.
- providing support to local businesses or homeowners to install solar photovoltaic systems, other renewable energy projects, or energy efficiency improvements. Energy efficient improvements could include installing energy efficient appliances and cool roofs on buildings.
- working with local communities to implement transportation-related emissions-reducing projects. These may include sponsoring bike- or car-share programs, providing support to public transit systems, or contributing to infrastructure and streetscape improvements for pedestrians and bicycles.

c. Carbon Credits. For all emissions that cannot otherwise be reduced through onsite or offsite measures, the purchase and retirement of carbon credits would be required. A carbon credit enables development projects to compensate for their GHG emissions and associated environmental impacts by financing reductions in GHG emissions elsewhere. GHG credits derived from completed prior actions are referred to as "GHG offsets" or "carbon offsets." GHG credits derived from future contracted actions are referred to as "GHG future credits" or GHG (future mitigation units [FMUs]). Carbon credits are classified as either compliance or voluntary. Compliance credits can be purchased by covered entities subject to the cap-and-trade regulation to meet predetermined regulatory targets. Voluntary credits are not associated with the cap-and-trade regulation and are purchased with the intent to voluntarily meet carbon-neutral or other environmental obligations.

The Authority may purchase carbon credits from a voluntary GHG credit provider that has an established protocol that requires projects generating GHG credits to

demonstrate that the reduction of GHG emissions is real, permanent, quantifiable, verified, enforceable, and additional (per the definition in California Health & Saf. Code §§ 38562(d)(1) and (2)). Definitions for these terms are as follows.

i. **Real**. Estimated GHG reductions should not be an artifact of incomplete or inaccurate emissions accounting. Methods for quantifying emission reductions should be conservative to avoid overstating a project's effects. The effects of a project on GHG emissions must be comprehensively accounted for, including unintended effects (often referred to as "leakage").[6]

ii. **Additional**. GHG reductions must be additional to any that would have occurred in the absence of the Climate Action Reserve or of a market for GHG reductions generally. "Business as usual" reductions (i.e., those that would occur in the absence of a GHG reduction market) should not be eligible for registration.

iii. **Permanent**. To function as GHG credits, GHG reductions must effectively be "permanent." This means, in general, that any net reversal in GHG reductions must be fully accounted for and compensated through the achievement of additional reductions.

iv. **Quantifiable**. The ability to accurately measure and calculate GHG reductions or GHG removal enhancements relative to a project baseline in a reliable and replicable manner for all GHG emission sources, GHG sinks, or GHG reservoirs included within the credit project boundary, while accounting for uncertainty, activity-shifting leakage, and market-shifting leakage.

v. **Verified**. GHG reductions must result from activities that have been verified. Verification requires third-party review of monitoring data for a project to ensure the data are complete and accurate.

vi. **Enforceable.** The emission reductions from credits must be backed by a legal instrument or contract that defines exclusive ownership, and the legal instrument can be enforced within the legal system in the country in which the credit project occurs or through other compulsory means. Please note that per this mitigation measure, only credits originating within the United States are allowed.

Carbon credits must also meet the following requirements:

i. Carbon credits may be in the form of GHG offsets for prior reductions of GHG emissions verified through protocols or forecasted mitigation units for future committed GHG emissions meeting protocols.

ii. All credits will be documented per protocols functionally equivalent in terms of stringency to CARB's protocol for offsets in the cap-and-trade program. If using credits not from CARB protocols, the Authority must provide the protocols from

[6] To ensure that GHG reductions are real, CARB requires the reduction be "a direct reduction within a confined project boundary."

the credit provider and must document why the protocols are functionally equivalent in terms of stringency to CARB protocols.

iii. The Authority will identify carbon credits in geographies closest to the Project first and only go to larger geographies (i.e., California, United States) if adequate credits cannot be found in closer geographies or the procurement of such credits would create an undue financial burden. The Authority will provide the following justification for not using credits in closer geographies in terms of either availability or cost prohibition.

- Lack of enough credits available in closer geographies (e.g., Northern Sacramento Valley).
- Prohibitively costly credits in closer geographies defined as credits costing more than 300% the amount of the current costs of credits in the regulated CARB offset market or of the current costs of credits in the Compliance Offset Program, which is part of CARB's broader cap-and-trade program.

iv. Documentation submitted supporting carbon credit proposals will be prepared by individuals qualified in GHG credit development and verification, and such individuals will certify the following:

- Proposed credits meet the criteria in California Health and Safety Code Sections 38562(d)(1) and (d)(2).
- Proposed credits meet the definitions for the criteria provided in this measure.
- The protocols used for the credits meet or exceed the standards for stringency used in CARB protocols for offsets under the California cap-and-trade system.

Monitoring, reporting, and enforcement requirements for implementation of the GHG Reduction Plan will include the following components.

1) *Phased Analysis and Plan Amendments:* As described above, the GHG Reduction Plan may be developed and implemented over five-year increments for Project operations. Prior to the start of each five-year increment, the Authority will update the GHG Reduction Plan to calculate the amount of GHG emissions anticipated in the upcoming five-year period, as well as emissions from prior periods (if needed to cover any deficits) and the projected total net emissions of the Project. The GHG Reduction Plan will identify the specific GHG reduction measures that will be implemented to meet the net-zero performance standard for the upcoming five-year period and include quantification of the expected reductions that will be achieved by each measure. All emissions and reductions will be quantified in accordance with the requirements outlined in *Plan Development* above.
   The Authority will retain a third-party expert to assist with the review and approval of the GHG Reduction Plan. Subsequent amendments to the GHG Reduction Plan will identify reductions that have been achieved during prior phases and determine if those reductions exceed emissions generated by the Project. If the GHG reduction measures implemented by

the Authority result in a surplus of reductions above the net-zero performance standard, the balance of those reductions may be credited to subsequent phases.

2) *Timing and Execution:* The Authority will prepare the GHG Reduction Plan prior to issuance of the first construction or grading permit for the Project. For Project operations, the GHG Reduction Plan will be prepared prior to the end of construction and prior to the start of the next five-year phase of operations. The Authority Board of Directors will formally adopt the completed GHG Reduction Plan and make it publicly available on its website prior to its adoption.

   BMPs and selected onsite construction measures will be included in construction-permits and contractor bid packages and/or agreements. Offsite measures that the Authority chooses to implement will be completed or in progress before completion of construction or before the end of the calendar year (for Project operations) in which the measure(s) are intended to reduce emissions. If GHG credits are purchased, the Authority will enter the necessary contract(s) to purchase credits prior to the start of construction or prior to the start of the calendar year (for Project operations). All credits must be retired before completion of construction or the calendar year (for Project operations).

3) *Monitoring and Reporting:* The Authority will retain a third-party expert to assist with review and approval of annual reports. Through the third-party expert, the Authority will conduct annual monitoring and reporting to ensure that the reduction measures included in the plan achieve sufficient emission reductions to reduce Project emissions to net zero. Each annual report should describe the GHG reduction strategies that were implemented over the prior year; summarize past, current, and anticipated Project phasing; document compliance with GHG Reduction Plan requirements; and identify corrective actions needed to ensure that the GHG Reduction Plan achieves the net-zero performance standard. If GHG credits have been purchased to reduce emissions for the reporting year, the annual report must include copies of the credit retirement verification.
   The reports will be finalized and posted in a publicly accessible location online by December 31st of the following year.

Alternative 2

Alternative 2 would result in greater construction GHG emissions than Alternative 1, because of South Road construction. For operations, Alternative 2 would result in less emissions than Alternative 1A and Alternative 1B for all water year types. The water conveyance and land use change emissions are the dominant sources of emissions for operations, so the relative level of emissions between alternatives is primarily governed by the amount of energy consumed for water conveyance and the difference in land use change emissions, which are based on the alternatives' surface areas. Because Alternative 2 would have a smaller surface area than Alternative 1, it would result in less land use change emissions and thus less emissions overall. Construction and operation of Alternative 2 would result in both direct and indirect GHG emissions that would be a potentially substantial net increase in emissions to the atmosphere, and this impact would be potentially significant. The net increase in emissions could also conflict with the State's plans to reduce GHG emissions, resulting in a potentially significant impact with respect to the Project conflicting with plans or policies adopted for the purpose of reducing GHG emissions.

Mitigation Measure GHG-1.1 would ensure that Alternative 2 GHG emissions would not result in a significant GHG impact, because there would be no net increase in emissions. Further, Alternative 2 would not conflict with any plans adopted for the purpose of reducing GHG emissions, because there would be no net increase in emissions. Accordingly, this impact would be less than significant with mitigation.

Alternative 3

Alternative 3 would result in the same construction GHG emissions as Alternative 1, because the construction footprint would be the same. For operations, Alternative 3 would result in the lowest emissions of all alternatives, because the water conveyance emissions, a dominant source of emissions, would be the lowest. Therefore, construction GHG impacts for Alternative 3 would be the same as those for Alternative 1 and less than those for Alternative 2. Alternative 3 would result in operations GHG emissions lower than Alternative 1 or 2. Construction and operation of the Alternative 3 would result in both direct and indirect GHG emissions that would be a potentially substantial net increase in emissions to the atmosphere, and this impact would be potentially significant. The net increase in emissions could also conflict with the State's plans to reduce GHG emissions, resulting in a significant impact with respect to conflicting with plans or policies adopted for the purpose of reducing GHG emissions.

Mitigation Measure GHG-1.1 would ensure Alternative 3 GHG emissions would not result in a significant GHG impact, because there would be no net increase in emissions. Further, the Alternative 3 would not conflict with any plans adopted for the purpose of reducing GHG emissions, because there would be no net increase in emissions. Accordingly, this impact would be less than significant with mitigation.

3.10 Cultural Resources

Impact CUL-1: Cause a substantial adverse change in the significance of a historic built resource

Alternatives 1 and 3

Construction activities in the Sites Reservoir and TRR East inundation areas for Alternatives 1 and 3 would result in impacts on potentially NRHP-/CRHR-eligible historic built resources including 18 potentially NRHP-/CRHR-eligible resources. These areas would be inundated, and any resources located in these areas would be destroyed. The Authority will implement Mitigation Measure CUL-1.1 to evaluate the NRHP/CRHR eligibility of historic built resources located in the inundation areas and describe their current conditions so that the qualities that may convey their significance may be treated. If historic built resources are determined to be NRHP-/CRHR-eligible, the Authority will implement Mitigation Measure CUL-1.4 to perform resource-specific treatment procedures for the NRHP-/CRHR-eligible historic built resources. This measure will preserve some historical values of the resources, for instance by recording architectural data or relocating structures. Implementing Mitigation Measure CUL-1.4 would reduce the impact from Project construction on NRHP-/CRHR-eligible historic built resources in the inundation areas, but the impact would remain significant because resources identified as NRHP-/CRHR-eligible per Mitigation Measure CUL-1.1 would be destroyed.

Construction activities for Alternatives 1 and 3 that would occur outside the inundation areas for Sites Reservoir and TRR East would result in impacts on the GCID Historic District's Main Canal, the CVP Historic District's TC Canal and Funks Reservoir, and potentially NRHP-/CRHR-eligible historic built resources (including 62 known potentially NRHP-/CRHR-eligible resources). These areas would not be

inundated, and the resources would not be destroyed. Construction activities have the potential to physically change these resources or their settings and to materially alter the qualities that may convey their significance. The Authority will implement Mitigation Measure CUL-1.1 to evaluate the NRHP/CRHR eligibility of historic built resources located outside the inundation areas for Sites Reservoir and TRR East and describe their current conditions so that the qualities that may convey their significance may be avoided, protected, or treated.

If NRHP-/CRHR-eligible historic built resources are determined to be present outside the inundation areas through application of Mitigation Measure CUL-1.1, the Authority will implement Mitigation Measure CUL-1.2 to incorporate feasible avoidance measures in the design of Alternatives 1 and 3 (e.g., moving a new road alignment) to avoid NRHP-/CRHR-eligible historic built resources. Avoidance is the primary means of mitigating impacts on NRHP-/CRHR-eligible historic built resources located outside of the inundation areas, and application of this measure would reduce the impact on NRHP/CRHR-eligible built resources located outside of the inundation areas to less than significant.

If NRHP-/CRHR-eligible historic built resources outside the inundation areas cannot be feasibly avoided through the application of Mitigation Measure CUL-1.2, the Authority will apply Mitigation Measure CUL-1.3 to implement feasible resource-specific protection measures for NRHP-/CRHR-eligible historic built resources, such as installing exclusion fencing around them during construction. Protection is the secondary means of mitigating impacts on NRHP-/CRHR-eligible historic built resources located outside of the inundation areas, and application of this measure would reduce the impact on NRHP/CRHR-eligible built resources located outside of the inundation areas to less than significant because the qualities that qualify a resource as an NRHP-/CRHR-eligible historic built resource would be protected and would not be impaired.

For NRHP-/CRHR-eligible historic built resources outside the inundation areas, if after implementation of Mitigation Measures CUL-1.1 through CUL-1.3, the qualities that qualify a resource as an NRHP-/CRHR-eligible historic built resource would still be impaired, the Authority will implement Mitigation Measure CUL-1.4. The resource-specific treatment procedures would preserve some historical values of the NRHP/CRHR-eligible built resource, for instance by recording architectural data or interpreting historical information for the public. Application of Mitigation Measure CUL-1.4 would reduce the impact on resources located outside of the inundation areas to less than significant because the qualities that would be impaired by the Project would be captured and made available for continued public understanding of the resource.

Operation of Alternative 1 or 3 would have no impact on historic built resources because operations would not change the qualities that convey the historical significance of the GCID Historic District or the CVP Historic District and would not physically change any of the potentially NRHP/CRHR-eligible built resources in the study area. Impacts would not occur during the operation of Alternative 1 or 3.

Mitigation Measure CUL-1.1: Identify NRHP/CRHR-Eligible Built Resources

The Authority will implement NRHP/CRHR-eligible built resources identification in the study area. The work will be conducted by an SOI-qualified architectural historian, and the actions listed below will be completed prior to construction. The Authority will document the results in a confidential technical study.

- Relocate and map previously recorded potentially NRHP-/CRHR-eligible historic built resources.

- Locate and map potentially NRHP-/CRHR-eligible historic built resources in areas that have not been accessible previously.
- Evaluate the NRHP/CRHR eligibility of recorded historic built resources.
- Assess resource-specific impacts on significant historic built resources for resources that are NRHP/CRHR eligible and would be affected.

Mitigation Measure CUL-1.2: Avoid NRHP/CRHR-Eligible Built Resources

The Authority will avoid NRHP/CRHR-eligible built resources in the study area by performing the tasks listed below. The work will be conducted in consultation with an SOI-qualified architectural historian.

- The Authority will develop feasible Project design specifications to avoid NRHP-/CRHR-eligible historic built resources.
- The Authority will develop and implement feasible Project construction protocols to avoid NRHP-/CRHR-eligible historic built resources, including workers' cultural resources sensitivity training, prior to and during construction activities.
- The Authority will develop and implement feasible Project operations protocols that avoid NRHP-/CRHR-eligible historic built resources during operation activities.

Mitigation Measure CUL-1.3: Protect NRHP/CRHR-Eligible Built Resources

The Authority will develop and implement protocols to protect NRHP/CRHR-eligible built resources in the study area. The work will be conducted in consultation with an SOI-qualified architectural historian.

- The Authority will develop feasible protection measures for NRHP-/CRHR-eligible historic built resources prior to and during construction activities and during operation activities.
- The Authority will develop resource-specific protection plans that involve measures such as designating NRHP/CRHR-eligible built resources to be protected as Environmentally Sensitive Areas, installing exclusion fencing, conducting historic built resource monitoring where construction or operations would be in the vicinity of a known NRHP/CRHR-eligible built resource, and treating impairments that may be identified through monitoring.

Mitigation Measure CUL-1.4: NRHP/CRHR-Eligible Built Resources Treatment

The Authority will develop and implement NRHP/CRHR-eligible built resources treatments in the study area. Prior to construction, the Authority will develop resource-specific treatment plans in consultation with interested parties who are associated with or identify with the NRHP-/CRHR-eligible historic built resources and with an SOI-qualified architectural historian. These resource-specific treatment plans may be Historic American Buildings Survey recordation, interpretive exhibits at recreation areas, educational modules for public schools, NRHP/CRHR nominations, or relocation of historic structures.

The Authority will implement the treatment plans prior to and during construction, and following construction, depending on the details of the resource-specific treatment, in consultation with an SOI-qualified architectural historian. Resource-specific treatments may require ongoing work during and after construction.

Alternative 2

Alternative 2 would result in construction impacts on the potentially NRHP/CRHR-eligible built resources including 18 potentially NRHP-/CRHR-eligible resources that are located in the reservoir inundation areas, and the impacts would be similar to Alternatives 1 and 3 because the types of resources are the similar and the total number of resources is the same. Application of Mitigation Measures CUL-1.1 through CUL-1.4 would reduce the impacts, but impacts would remain significant on those resources identified as NRHP-/CRHR-eligible per Mitigation Measure CUL-1.1 because they would be destroyed. Impacts would be **significant and unavoidable**.

Alternative 2 would result in construction impacts on historic built resources that are located outside of the reservoir inundation areas, including the GCID Historic District, CVP Historic District, and potentially NRHP/CRHR-eligible built resources including 67 potentially NRHP-/CRHR-eligible resources, and the impacts would be similar to Alternatives 1 and 3 because the types of resources are the same and would be affected in similar ways. Significant impacts would be reduced to less than significant with Mitigation Measures CUL-1.1 through CUL-1.4 because the resources would not be inundated and would not be destroyed.

In contrast to Alternatives 1 and 3, Alternative 2 would also result in construction impacts on the Sacramento River Levees because construction activities would physically alter the levee structure. The Authority will implement Mitigation Measure CUL-1.1 to evaluate and describe the resource's current conditions so that the qualities that convey its significance may be avoided, protected, or treated. The Authority will implement Mitigation Measure CUL-1.2 to incorporate feasible avoidance measures in the design of Alternative 2 (e.g., moving a new road alignment) to avoid the resource. Avoidance is the primary means of mitigating impacts on NRHP-/CRHR-eligible historic built resources located outside of the inundation areas, and application of this measure would potentially reduce the impact to less than significant. If the resource cannot be feasibly avoided through the application of Mitigation Measure CUL-1.2, the Authority will apply Mitigation Measure CUL-1.3 to implement feasible resource-specific protection measures, such as installing exclusion fencing around the resource during construction. Protection is the secondary means of mitigating impacts on NRHP-/CRHR-eligible historic built resources located outside of the inundation areas, and application of this measure would potentially reduce the impact to less than significant. If the resource cannot be feasibly avoided or protected, the Authority will implement Mitigation Measure CUL-1.4. The resource-specific treatment procedures would preserve some historical values of the resource, for instance by recording architectural data. Application of Mitigation Measure CUL-1.4 would reduce the impact to the resource to less than significant because the resource would not be destroyed.

Operation of Alternative 2 would have no impact on historic built resources because operations would not change the qualities that convey the historical significance of the GCID Historic District or the CVP Historic District or the Sacramento River Levees and would not physically change any of the potentially NRHP/CRHR-eligible built resources in the study area. Impacts would not occur during the operation of Alternative 2.

Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource

Alternatives 1 and 3

Construction associated with the inundation areas of Sites Reservoir and TRR East and operations associated with the fluctuating WSE on potentially NRHP-/CRHR-eligible archaeological resources within the inundation areas would destroy or otherwise render resources unavailable under Alternative 1 or 3. Construction impacts on archaeological resources outside of the reservoir inundation areas consist of ground disturbance from construction of new facilities for Alternatives 1 and 3.

Construction and operation of Alternative 1 or 3 would result in impacts on potentially NRHP-/CRHR-eligible archaeological resources by materially altering or destroying them. Altering or destroying these resources would reduce or eliminate their potential to yield information useful in archaeological research, and the basis for the significance of these resources, through excavation and disruption of the spatial associations that contain meaningful information. These resources may also be significant under other register criteria; indirect effects such as introduction of new elements or inconsistent changes to the setting may also diminish the significance of these resources. Implementation of Mitigation Measures CUL-2.1, CUL-2.2, CUL-2.3, and CUL-2.4 would reduce impacts on known and previously unknown potentially NRHP-/CRHR-eligible archaeological resources outside the inundation areas. Mitigation Measure CUL-2.1 requires identification of NRHP-/CRHR-eligible archaeological resources. For those archaeological resources identified as NRHP-/CRHR-eligible, Mitigation Measure CUL-2.2 requires avoidance. For those archaeological resources identified as NRHP-/CRHR-eligible under Mitigation Measure CUL-2.1 that cannot be avoided, implementation of Mitigation Measures CUL-2.3 and 2.4 will protect and treat them, respectively. Although Mitigation Measures CUL-2.1 to CUL-2.4 would reduce impacts on archaeological resources identified to be NRHP-/CRHR-eligible, it is not known whether avoidance is feasible in all cases and thus impacts would remain **significant and unavoidable**.

Mitigation Measures CUL-2.2 through CUL-2.4 would be implemented to reduce impacts on NRHP-/CRHR-eligible archaeological resources in the reservoir inundation areas for Sites Reservoir and TRR East, and any as-of-yet to be identified resources. However, implementation of these mitigation measures would not fully reduce or avoid impacts for NRHP-/CRHR-eligible archaeological resources in the reservoir inundation areas identified under Mitigation Measure CUL-2.1 to a less-than-significant level because they would be altered or destroyed due to inundation and fluctuating WSE. Construction and operation impacts on potentially NRHP-/CRHR-eligible archaeological resources would be **significant and unavoidable**.

Mitigation Measure CUL-2.1: Identify NRHP/CRHR-Eligible Archaeological Resources

The Authority will identify NRHP-/CRHR-eligible archaeological resources in the study area. The work will be conducted by a Registered Professional Archaeologist. The following will occur as part of the identification.

- Relocate and map previously recorded archaeological resources that are potentially NRHP/CRHR-eligible. Upon access to previously inaccessible areas, all previously recorded archaeological resources will be located and their boundaries mapped with sub-meter accuracy Global Positioning System (GPS) units to identify their exact location in relation to Project components that have the potential to affect the resources.

- Locate and map archaeological resources that are potentially NRHP/CRHR-eligible in areas that have not been accessible previously. Upon access to previously inaccessible areas, pedestrian surveys will be conducted to identify archaeological resources that are potentially NRHP/CRHR-eligible. The surveys will be conducted using transects spaced no greater than 94 feet (30 meters) apart. All newly identified archaeological resources will be recorded on applicable DPR 523-series forms and resource boundaries, features, and diagnostic artifacts outside of features or concentrations will be recorded using sub-meter accuracy GPS units to identify their exact location in relation to Project components that have the potential to impact the resources.
- Evaluate the NRHP/CRHR eligibility of recorded archaeological resources. Once all previously and newly recorded archaeological resources have been documented, each resource will be evaluated for NRHP and CRHR eligibility. As discussed in Appendix 4A, *Regulatory Requirements*, cultural resources are eligible for the NRHP and CRHR if they have integrity and meet one or more of the four criteria as defined in the regulations for the NRHP (Section 4A.18.1.3, *National Register of Historic Places*) and CRHR (Section 4A.18.2.2, *California Register of Historical Resources*). Eligibility will be assessed using a combination of (but not limited to) archival, ethnographic, and tribal research, including tribal coordination and assistance, resource condition assessment, subsurface testing, and laboratory analysis. If the resource is evaluated as not eligible, no further action is required, and avoidance is preferred.
- Assess impacts on NRHP-/CRHR-eligible archaeological resources. NRHP-/CRHR-eligible archaeological resources will be individually analyzed in relation to the Project components within or near those NRHP-/CRHR-eligible resources. Thresholds of significance identified in Section 22.3.1 will be applied.

Mitigation Measure CUL-2.2: Avoid NRHP/CRHR-Eligible Archaeological Resources

The Authority will avoid NRHP/CRHR-eligible archaeological resources in the study area by performing the tasks listed below. The work will be conducted by a Registered Professional Archaeologist.

- The Authority will develop feasible Project design specifications to avoid NRHP/CRHR-eligible archaeological resources. If Project design allows modification, design changes will be implemented to avoid NRHP-/CRHR-eligible archaeological resources or avoid impacts on significant values of the resources (features, artifacts, or any other elements of the resource which make the resource NRHP-/CRHR-eligible).
- The Authority will develop and implement feasible Project construction protocols to avoid NRHP-/CRHR-eligible archaeological resources, including workers' cultural resources sensitivity training. Prior to construction activities in the vicinity of NRHP-/CRHR-eligible archaeological resources, the Authority will require a qualified archaeologist to provide a cultural resources sensitivity training tailboard to all construction personnel working in the vicinity of the resources. The training will identify the sensitivity, nature, and components of the resource, and inform the construction personnel of necessary protocol in the case of an unanticipated discovery. Tribes will also be invited to participate in and lead part of the workers' cultural resources sensitivity training.
- The Authority will develop and implement feasible Project operations protocols that avoid NRHP-/CRHR-eligible archaeological resources. Similar to the workers' cultural resources sensitivity training during construction activities, all personnel in charge of managing the operations will be required to have cultural resources sensitivity training for the resources near Project facilities and have a familiarity with the resource locations and identifications so that

future operations or changes in operations can avoid those resources. Tribes will also be invited to participate in and lead part of the cultural resources sensitivity training.

Mitigation Measure CUL-2.3: Protect NRHP/CRHR-Eligible Archaeological Resources

The Authority will develop feasible Project protection of NRHP/CRHR-eligible archaeological resources during construction and operations.

- The Authority will develop protections protocols to ensure that qualified staff perform monitoring during Project-related ground disturbance to protect known resources, to identify any unanticipated discoveries, and to implement the Post-Review Discovery Procedure.
- The Authority will develop resource-specific protection plans considering at a minimum Environmentally Sensitive Area delineation and physical fencing, and requiring archaeological monitoring where construction or operation would be in the vicinity of a known NRHP-/CRHR-eligible archaeological resource. The resource-specific protection plans will establish the methods and standards for when and how Environmentally Sensitive Area delineations will be required and when archaeological monitoring activities will be conducted for specific types of sites that will need to be protected. The resource-specific protection plans will establish the methods and standards for when Tribal monitoring activities will be invited and conducted for specific activities and/or types of sites that will need to be protected. The plans will also identify the roles and responsibilities of monitors and construction crews and specify communication protocols and reporting requirements.

Mitigation Measure CUL-2.4: NRHP/CRHR-Eligible Archaeological Resources Treatment

The Authority will develop and implement resource-specific treatment plans in consultation with Tribes and other interested parties who are associated with or identify with the resource. The resource-specific archaeological treatment plans will ensure that all NRHP-/CRHR-eligible archaeological resources potentially affected by the Project will be treated according to best practices and professional standards, in a traditionally and culturally sensitive manner, and that treatment options will include a range of interventions from avoidance and minimization of impacts to mitigation for the loss of the physical resource. Treatment may include, but would not be limited to, data recovery, site capping, analysis of existing artifact collections, or interpretive displays, among other things. Appropriate treatment will be determined based on resource type, resource location, types of impacts on the resource, and results of consultation with Tribes, interested parties, and agencies.

Alternative 2

The construction impacts in the inundation zone would be of a similar character as the impacts for Alternatives 1 and 3, but fewer potentially NRHP-/CRHR-eligible archaeological resources would be affected due to the smaller size of the reservoir facilities under Alternative 2. The construction impacts outside the inundation zone also would be of a similar character as the impacts for Alternatives 1 and 3, but a greater number of archaeological resources would be affected due to construction of Project facilities under Alternative 2 that are not part of Alternatives 1 and 3, namely the South Road and the Dunnigan Pipeline facilities. As with Alternatives 1 and 3, Alternative 2 also poses the potential for encountering currently unknown resources during ground-disturbing activities that are not visible from the ground surface.

As with Alternatives 1 and 3, the operations impacts of Alternative 2 would be significant and would therefore require mitigation, as specified in Mitigation Measures CUL-2.1, CUL-2.2, CUL-2.3, and CUL-

2.4. Implementation of these mitigation measures would reduce impacts to less than significant to resources outside the new reservoir inundation areas. However, the mitigation measures would not prevent permanent destruction of NRHP-/CRHR-eligible archaeological resources in the reservoir inundation areas and would not reduce impacts to a less-than-significant level and thus the impacts would be **significant and unavoidable**.

Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries

Construction of Alternatives 1, 2, and 3 would disturb human remains interred in known cemeteries within the Sites Reservoir inundation area. Furthermore, construction of Alternatives 1, 2, and 3 could disturb currently unknown human remains interred within the Sites Reservoir inundation area. Implementation of Mitigation Measures CUL-3.1 would reduce this impact; however, the impacts would remain **significant and unavoidable**. Operations of Alternative 1, 2, or 3 could disturb unknown human remains within the Sites Reservoir inundation area within the fluctuation zone. Implementation of Mitigation Measures CUL-3.1 and CUL-3.2 would reduce this impact; however, the impact would remain **significant and unavoidable**.

Mitigation Measure CUL-3.1: Cemetery Relocation Plan

The Authority will develop a Cemetery Relocation Plan for relocating two known, dedicated cemeteries located in the inundation area. This will be part of Reclamation's Programmatic Historic Properties Management Plan that would be prepared in consultation with SHPO.

Avoidance of the disturbance and/or inundation of two known cemeteries is not expected to be feasible except under the No Project Alternative. The Cemetery Relocation Plan will ensure that all remains in these two cemeteries are treated with respect and in accordance with the wishes of identifiable descendants. The Cemetery Relocation Plan will also ensure that state and county health and safety codes are followed for those interments that are relocated.

Two dedicated cemeteries in the inundation area will be relocated to a site or sites approved for interment of human remains per requirements of the California Health and Safety Code (Sections 7500–7527). This procedure will be developed through consultation and coordination with descendants and other parties with demonstrated interest in the occupants of the cemeteries. The procedure will outline legal requirements, such as acquiring a written order from the local health department or county superior court before human remains may be moved, and other rules and regulations adopted by the board of health or health officer of the county.

Mitigation Measure CUL-3.2: Avoid, Protect, and Treat Human Remains

The Authority will avoid and protect any human remains encountered during pre-construction, construction, post-construction, operations, and maintenance. The Authority will follow appropriate state guidelines for halting Project activities at the discovery location, contacting the appropriate county coroner to report the discovery, and proceeding with implementation of Project policies regarding Native American consultation or implementation of a burial treatment plan. See Appendix 4A, *Regulatory Resources,* Sections 4A.18.1, *Federal Policies and Regulations,* and 4A.18.2, *State Policies and Regulations*.

The Authority and its qualified contractors will prepare a plan for treating human remains and/or grave goods encountered during archaeological investigations, Project construction, or Project operations. The

Burial Treatment Plan will identify ways to avoid or reduce the likelihood of encountering as yet unidentified remains.

The Burial Treatment Plan will ensure that the Authority and its contractors respond to unanticipated discovery of human remains with respect and in accordance with the wishes of identifiable descendants. The Burial Treatment Plan will also ensure that state and county health and safety codes are followed for those interments that are relocated.

This procedure will identify legal requirements and best practices for treating Native American and non-Native American remains encountered outside of a dedicated cemetery. The Native American portion of the Burial Treatment Plan will be developed in consultation with consulting Tribes and may include individual Tribes' burial treatment plans.

The Authority and its qualified contractors will complete preparation of the Burial Treatment Plan within 6 months of issuance of the NOD/ROD, adopt the plan prior to selection of the construction contractor, and fully implement the plan prior to any soil disturbance within 500 feet of remains.

3.11 Tribal Cultural Resources

Impact TCR-1: Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the Authority has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

Modifications to existing Sacramento River diversion facilities and conveyances to regulating reservoirs would have no impact because these facilities are already in place. Operation of Alternative 1 or 3 would generally not result in substantial changes in river flows and flows would be within the historical range experienced by the rivers; therefore, most impacts related to river flows would be less than significant. Impacts related to juvenile salmonid rearing and/or migration habitat would be limited through pulse flow protection measures applied to precipitation-generated pulse flow events from October through May, a fish monitoring program to inform real-time operational adjustments, and a minimum flow criterion at Wilkins Slough. Accordingly, impacts on juvenile salmonids would be less than significant with mitigation incorporated under Alternative 1 or 3.

Construction of the reservoir and new facilities under Alternatives 1 and 3 would result in disturbance or destruction of tribal cultural resources. Implementing mitigation measures, such as those described below, could reduce some, but not all, impacts of construction and operation of Alternative 1 or 3 to a less-than-significant level. Mitigation Measures TCR-1.2 and TCR-1.3 reflect measures described in the *Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Yocha Dehe Wintun Nation* and will be applied to any tribal cultural resource identified by any Tribe. Known cemeteries and habitation sites that are tribal cultural resources would be permanently altered or destroyed by inundation of the reservoir or construction of other facilities. Impacts would be **significant and unavoidable**.

Mitigation Measure TCR-1.1: Implement Mitigation Measures Recommended in Public Resources Code Section 21084.3 to Avoid Damaging Effects on Tribal Cultural Resources

(1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural

context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

(2) Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
   (A) Protecting the cultural character and integrity of the resource.

   (B) Protecting the traditional use of the resource.

   (C) Protecting the confidentiality of the resource.

(3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

Mitigation Measure TCR-1.2: Tribal Monitoring

Tribal monitors will be permitted to observe all ground-disturbing activities.

Mitigation Measure TCR-1.3: Implement Agreed-Upon Protocol for the Treatment of Human Remains and Cultural Items

If unanticipated discoveries of National Register of Historic Places (NRHP)/CRHR-eligible resources occur on federal land, the federal land manager will be immediately contacted, and the federal agency will follow its own process for complying with the federal Native American Graves Protection and Repatriation Act and other federal obligations, as directed under Title 43 of Code of Federal Regulations, Part 10.

If NRHP/CRHR-eligible sites or cultural items, other than human remains, are discovered on non-federal land, the Authority will work with the consulting Tribes to determine affiliation and develop appropriate treatment.

If human remains or associated grave goods are discovered during or after environmental review, the Authority will provide for the following actions:

- Immediately notify the County coroner and cease ground-disturbing activities in that location.
- If the County coroner determines the remains are those of a Native American, the coroner will notify the NAHC to establish the most likely descendant and contact the culturally affiliated Tribe.
- Allow the designated Tribal member(s) to inspect the site of the discovery and determine how the human remains and grave goods should be treated with appropriate dignity and respect.
- The location of a reburial will be recorded with the California Historic Resources Inventory System.
- The Authority, its contractors and consultants, and the coroner will not disclose the location of the original burial or reburial site.
- Treatment of all cultural items, including ceremonial items and archaeological items will reflect the religious beliefs, customs, and practices of the culturally affiliated Tribe. All cultural items, including ceremonial items and archaeological items, discovered during Project construction and

operation will be turned over to the Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. The Authority will waive any and all claims to ownership of Tribal cultural items, including ceremonial items and archaeological items that may be found.

- Work of Tribal monitors and treatment of human remains will proceed in accordance with treatment plans developed in consultation with the most likely descendant of the culturally affiliated Tribe as identified by the NAHC.

The following mitigation measures above under Impacts CUL-2 and CUL-3, would also be implemented and would apply to tribal cultural resources.

Mitigation Measure CUL-2.1: Identify NRHP/CRHR-Eligible Archaeological Resources

Mitigation Measure CUL-2.2: Avoid NRHP/CRHR-Eligible Archaeological Resources

Mitigation Measure CUL-2.3: Protect NRHP/CRHR-Eligible Archaeological Resources

Mitigation Measure CUL-2.4: NRHP/CRHR-Eligible Archaeological Resources Treatment

Mitigation Measure CUL-3.1: Cemetery Relocation Plan

Mitigation Measure CUL-3.2: Avoid, Protect, and Treat Human Remains

3.12 Visual Resources

Impact VIS-1: Substantially degrade the existing visual character or quality of public views of the site and its surroundings

Alternatives 1 and 3

Construction of most of the features associated with either Alternative 1 or 3 would blend with the existing landscape, would not affect sensitive viewers, or would include implementation of BMP-17 to minimize visual changes. However, although the Sites Reservoir would eventually serve as a visual amenity to the region for future viewer groups, it is conservatively assumed that the construction of the reservoir and its associated facilities under either Alternative 1 or 3 would substantially degrade the existing visual character and visual quality of the area and adversely affect existing viewers at this location. This degradation is because existing viewer groups associated with the site may be highly sensitive to changes that would occur at the site. These viewers may respond negatively to the demolition of residential and ranch structures, removal of oak woodlands, and alteration of the visual character of the foothill environment in a manner that would replace such features and transform the existing visual character to a reservoir and associated features even though the reservoir would serve as a visual amenity to the region for future viewer groups. Such a transformation in the visual character of the study area as a result of the central feature of Alternatives 1 and 3 cannot be mitigated. Therefore, impacts to the existing visual character and quality resulting from construction would be **significant and unavoidable**. No feasible mitigation is available to reduce the visual impacts from a new reservoir facility of this nature and magnitude.

Operation of either Alternative 1 or 3 would not result in a notable change to the visual environment because activities associated with operations and maintenance would not be visible, would not affect

sensitive viewers, would blend with activities already occurring at or near the Alternatives 1 and 3 facilities, or would be within historical operational ranges for water levels at existing facilities. Therefore, impacts to the existing visual character and quality resulting from operation would be less than significant.

Alternative 2

Visual impacts from construction of Alternative 2 would be similar to the visual impacts from construction of Alternatives 1 and 3, with several distinctions. First, the maximum water surface elevation of the reservoir under Alternative 2 would be approximately 20 feet lower than for Alternatives 1 and 3. This would not be a notable difference and the overall perceived scale of the reservoir and the resulting degree of visual impact to the landscape would be the same under Alternative 2 compared to Alternatives 1 and 3. As with Alternatives 1 and 3, it is conservatively assumed that construction of the reservoir and associated facilities would result in a **significant and unavoidable** visual impact. No feasible mitigation is available to address the visual impacts of a reservoir facility of this nature and magnitude.

Access roads for Alternative 2 would be similar to those for Alternatives 1 and 3. However, Huffmaster Road and Sites Lodoga Road would be realigned, and the South Road would be constructed around the southern end of Sites Reservoir instead of a bridge being constructed over the reservoir. New roads would provide visual access to high quality views of oak woodland and grassland areas where no public access currently exists. Improvements to existing roadways would be limited to shoulder improvements, intersection widening, and structural improvements that would not be substantial and would blend with the existing roadway corridors, largely retaining their rural character. Therefore, impacts resulting from roadway construction and roadway improvements would be less than significant.

In addition, Alternative 2 would involve the Sacramento River discharge, and associated clearing of vegetation and installation of riprap, that are not part of Alternative 1 or 3. This would constitute a notable change to the Sacramento River and result in a **significant and unavoidable** visual impact from construction under Alternative 2. No mitigation is available to reduce the visual impacts from the nature and size of this feature.

Operation of Alternative 2 would be very similar to Alternatives 1 and 3 and therefore would not result in a notable change to the visual environment. The activities associated with operations and maintenance would not be visible, would not affect sensitive viewers, would blend with activities already occurring at or near the Alternative 2 facilities, or would be within historical operational ranges for water levels at existing facilities. Therefore, impacts to the existing visual character and quality of the study area resulting from operation would be less than significant.

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Table A-1. Summary of Significant Impacts with CEQA Determinations and Mitigation Measures

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
Surface Water Quality				
Impact WQ-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during construction				
Construction	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure WQ-1.1**: Methylmercury Management	SU
Impact WQ-2: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during operation				
Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure WQ-1.1**: Methylmercury Management **Mitigation Measure WQ-2.1:** Prevent Metal Impacts in Stone Corral Creek Associated with Sites Reservoir Discharge **Mitigation Measure WQ-2.2**: Prevent Net Detrimental Metal and Pesticide Effects Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass	SU
Vegetation and Wetland Resources				
Impact VEG-1: Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service				
Construction	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure VEG-1.1**: Conduct Appropriately Timed Surveys for Special-Status Plant Species Prior to Construction Activities **Mitigation Measure VEG-1.2**: Establish Activity Exclusion Zones Around Special-Status Plants in Temporary Impact Areas and Compensate for Permanent Impacts on Special-Status Plant Species	LTSM
Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure VEG-1.3**: Establish Activity Exclusion Zones Around Special-Status Plants Prior to Vegetation Maintenance Activities	LTSM

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
Impact VEG-2: Substantial adverse effect (i.e., loss or removal) on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service				
Construction	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure VEG-2.1**: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities **Mitigation Measure VEG-2.2**: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities	SU
Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure VEG-2.3**: Establish Activity Exclusion Zones Around Sensitive Natural Communities Prior to Vegetation Maintenance Activities	LTSM
Impact VEG-3: Substantial adverse effect (i.e., loss or removal) on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means				
Construction	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure VEG-3.1**: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities **Mitigation Measure VEG-3.2**: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands **Mitigation Measure VEG-3.3**: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters	LTSM
Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure VEG-3.4:** Establish Activity Exclusion Zones Around Wetlands and Non-Wetland Waters Prior to Vegetation Maintenance Activities	LTSM
Impact VEG-4: Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance				
Construction	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure VEG-1.2**: Establish Activity Exclusion Zones Around Special-Status Plants in Temporary Impact Areas and Compensate for	SU (oak woodlands) LTSM (all others)

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
			Permanent Impacts on Special-Status Plant Species **Mitigation Measure VEG-2.1**: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities **Mitigation Measure VEG-2.2**: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities **Mitigation Measure VEG-3.1**: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities **Mitigation Measure VEG-3.2**: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands **Mitigation Measure VEG-3.3**: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters **Mitigation Measure VEG-4-1**: Avoid and Minimize Potential Adverse Effects on Oak Woodlands During Construction **Mitigation Measure VEG-4.2**: Compensate for Adverse Effects on Oak Woodlands	
Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure VEG-4.3**: Establish Activity Exclusion Zones Around Blue Oak Woodlands Prior to Vegetation Maintenance Actovities	LTSM
Impact VEG-5: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan				
Construction	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure VEG-2.1**: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities **Mitigation Measure VEG-2.2**: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities **Mitigation Measure VEG-3.1**: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities	LTSM

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
			Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands **Mitigation Measure VEG-3.3**: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters **Mitigation Measure VEG-4.1**: Avoid and Minimize Potential Adverse Effects on Oak Woodlands During Construction **Mitigation Measure VEG-4.2**: Compensate for Adverse Effects on Oak Woodlands	
Wildlife Resources				
Impact WILD-1: Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.				
Construction	No Project	NI	-	-
	1, 3	S	**Mitigation Measure WILD-1.1**: Assess Habitat Suitability and Survey Suitable Habitat for Vernal Pool Branchiopods **Mitigation Measure WILD-1.2**: Avoid and Minimize Potential Effects on Vernal Pool Branchiopods and Western Spadefoot **Mitigation Measure WILD-1.3**: Compensate for Impacts on Occupied Vernal Pool Branchiopod Habitat **Mitigation Measure WILD-1.6**: Conduct Surveys for Suitable Valley Elderberry Longhorn Beetle Habitat **Mitigation Measure WILD-1.7**: Fence Elderberry Shrubs to be Protected **Mitigation Measure WILD-1.8**: Transplant Permanently Affected Elderberry Shrubs and Compensate for Loss of Valley Elderberry Longhorn Beetle and its Habitat **Mitigation Measure WILD-1.10**: Assess Habitat Suitability and Survey for Presence of Monarch Butterfly Nectar and Larval Host Plants **Mitigation Measure WILD-1.11**: Compensate for Loss of Monarch Butterfly Nectar and Larval Host Plants **Mitigation Measure WILD-1.12**: Assess Habitat Suitability and Survey for Presence of Crotch	SU (golden eagle) LTSM (other species)

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
			Bumble Bee and Western Bumble Bee Food Plants **Mitigation Measure WILD-1.13**: Compensate for Loss of Crotch Bumble Bee and Western Bumble Bee Habitat **Mitigation Measure WILD-1.14**: Assess Habitat Suitability and Survey Suitable Habitat for Western Spadefoot, California Red-legged Frog, and Western Pond Turtle **Mitigation Measure VEG-2.2**: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities **Mitigation Measure VEG-3.2**: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands **Mitigation Measure WILD-1.17**: Implement California Red-legged Frog Protective Measures **Mitigation Measure WILD-1.18**: Compensate for Permanent and Temporary Losses of Occupied California Red-legged Frog Aquatic and Upland Habitats **Mitigation Measure WILD-1.19**: Conduct Preconstruction Surveys for Western Pond Turtle and Monitor Initial In-Water Work **Mitigation Measure VEG-3.1**: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities **Mitigation Measure VEG-3.3**: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters **Mitigation Measure WILD-1.20**: Implement Protective Measures for Giant Gartersnake **Mitigation Measure WILD-1.21**: Compensate for Permanent and Temporary Losses of Giant Gartersnake Aquatic and Upland Habitats **Mitigation Measure WILD-1.22**: Conduct Vegetation Removal During the Non-Breeding Season of Nesting Migratory Birds **Mitigation Measure WILD-1.23**: Conduct Preconstruction Surveys for Non-Raptor Nesting Migratory Birds and Implement Protective Measures if Found	

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
			Mitigation Measure WILD-1.24: Conduct Surveys for Western Burrowing Owl Prior to Construction and Implement Avoidance and Minimization Measures if Found **Mitigation Measure WILD-1.25**: Restore Temporarily Disturbed Habitat and Compensate for the Permanent Loss of Occupied Burrowing Owl Habitat **Mitigation Measure WILD-1.28**: Conduct Focused Surveys for Golden Eagle and Bald Eagle and Implement Protective Measures if Found **Mitigation Measure WILD-1.29**: Compensate for the Loss of Eagle Nest Trees **Mitigation Measure VEG-4.1**: Avoid and Minimize Potential Adverse Effects on Oak Woodlands During Construction **Mitigation Measure VEG-4.2**: Compensate for Adverse Effects on Oak Woodlands **Mitigation Measure WILD-1.30**: Conduct Focused Surveys for Nesting Swainson's Hawk, White-tailed Kite, and Other Raptors Prior to Construction and Implement Protective Measures During Construction **Mitigation Measure WILD-1.31**: Compensate for the Permanent Loss of Foraging Habitat for Swainson's Hawk **Mitigation Measure AG-1.1**: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland **Mitigation Measure WILD-1.32**: Conduct Surveys and Implement Protection Measures for Special-Status Bat Species Prior to Building/Structure Demolition **Mitigation Measure WILD-1.33**: Conduct Surveys and Implement Protection Measures for Special-Status Bat Species Prior to Tree Trimming and Removal **Mitigation Measure WILD-1.34**: Compensate for Permanent Impacts on Occupied Roosting Habitat **Mitigation Measure WILD-1.35**: Implement Protective Measures to Avoid and Minimize Potential Impacts on American Badger	

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
	2	S	Same as Alternative 1, plus: **Mitigation Measure WILD-1.4**: Evaluate and Survey Potential Habitat for Antioch Dunes Anthicid and Sacramento Anthicid Beetles and Implement Protective Measures **Mitigation Measure WILD-1.5**: Compensate for the Loss of Occupied Antioch Dunes Anthicid and Sacramento Anthicid Beetle Habitat	SU (golden eagle), LTSM (other species)
Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure WILD-1.9**: Protect Special-Status Invertebrates and Their Host and Food Plants from Herbicide and Pesticide Use **Mitigation Measure WILD-1.15**: Design and Construct Wildlife Crossings for New Roadways at Suitable Locations **Mitigation Measure WILD-1.16**: Monitor and Maintain Wildlife Crossings **Mitigation Measure WILD-1.26**: Protect Special-Status Wildlife from Rodenticide Use **Mitigation Measure WILD-1.27**: Construct Overhead Power Lines and Associated Equipment Following Suggested Practices to Reduce Bird Collisions with Power Lines **Mitigation Measure WQ-1.1**: Methylmercury Management	LTSM
Impact WILD-2: Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites				
Construction	No Project	NI	-	-
	1, 3	S	Same as for **Impact WILD-1**	SU
	2	S	Same as for **Impact WILD-1**	SU
Operation	No Project	NI	-	-
	1, 2, 3	S	Same as for **Impact WILD-1**	SU
Impact WILD-3: Conflict with any local policies or ordinances protecting wildlife resources				
Construction	No Project	NI	-	-
	1, 3	S	Same as for **Impact WILD-1** and **WILD-2**	LTSM
	2	S	Same as for **Impacts WILD-1** and **WILD-2**	LTSM
Operation	No Project	NI	-	-
	1, 2, 3	S	Same as for **Impacts WILD-1** and **WILD-2**	LTSM

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
Impact WILD-4: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan				
Construction	No Project	NI	-	-
	1, 3	S	Same as for **Impact WILD-1**	LTSM
	2	S	Same as for **Impact WILD-1**	LTSM
Operation	No Project	NI	-	-
	1, 2, 3	S	Same as for **Impact WILD-1**	LTSM
Aquatic Biological Resources				
Impact FISH-1: Construction effects on special-status fish				
Construction	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure VEG-2.1**: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities **Mitigation Measure VEG-2.2**: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities **Mitigation Measure VEG-3.2**: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands **Mitigation Measure VEG-3.3**: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters	LTSM
Impact FISH-8: Operations effects on delta smelt				
Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure FISH-8.1**: Prevent Detrimental Dissolved Oxygen and Water Temperature Effects on Fish Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass **Mitigation Measure WQ-2.2**: Prevent Net Detrimental Metal and Pesticide Effects Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass	LTSM
Impact FISH-9: Operations effects on longfin smelt				
Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure FISH-9.1**: Tidal Habitat Restoration for Longfin Smelt	LTSM

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
Geology and Soils				
Impact GEO-7: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature				
Construction	No Project	NI	-	-
	1, 3	S	**Mitigation Measure GEO-7.1**: Retain a Qualified Paleontological Resource Specialist Prior to the Start of Construction **Mitigation Measure GEO-7.2**: Consultation with the Paleontological Resource Specialist Prior to and During Project Construction **Mitigation Measure GEO-7.3**: Prepare and Implement a Paleontological Resources Monitoring and Mitigation Plan **Mitigation Measure GEO-7.4**: Conduct Monitoring During Project Construction and Prepare Monthly Reports **Mitigation Measure GEO-7.5**: Ensure Implementation of the Paleontological Resources Monitoring and Mitigation Plan	SU
	2	S	Same as Alternative 1	LTSM
Land Use				
Impact LAND-1: Physical division of an established community				
Construction and Operation	No Project	NI	-	-
	1, 3	LTS	-	-
	2	S	No feasible mitigation measures identified	SU
Agriculture and Forestry Resources				
Impact AG-1: Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.				
Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure AG-1.1**: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland	SU
Impact AG-2: Conflict with existing zoning for agricultural use or a Williamson Act contract				
	No Project	NI	-	-

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
Construction and Operation	1, 2, 3	S	**Mitigation Measure AG-1.1**: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland **Mitigation Measure AG-2.1**: Minimize Impacts on Williamson Act-Contracted Lands, Comply with Government Code Sections 51290–51293, and Coordinate with Landowners and Agricultural Operators	SU
Navigation, Transportation, and Traffic				
Impact TRA-5: Substantially affect school bus travel				
Operation	No Project	NI	-	-
	1, 3	LTS	-	-
	2	S	No feasible mitigation measures identified	SU
Air Quality				
Impact AQ-1: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard during construction, or conflict with or obstruct implementation of the applicable air quality plan				
Construction	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure AQ-1.1**: Zero Emission and/or Near Zero Emission Vehicles and Off-Road Equipment **Mitigation Measure AQ-1.2**: Offset Construction-Generated Criteria Pollutants in CCAPCD, GCAPCD, and YSAQMD	SU
Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard during operations, or conflict with or obstruct implementation of the applicable air quality plan				
Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure AQ-2.1**: Recreational Boat Emissions Minimization Plan **Mitigation Measure AQ-2.2**: Offset Operation-Generated Criteria Pollutants in CCAPCD and GCAPCD	SU
Impact AQ-4b: Expose sensitive receptors to localized criteria pollutant emissions				
Construction	No Project	NI	-	-
	1, 2, 3	S	No feasible mitigation measures identified	SU
Greenhouse Gas Emissions				
Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases				

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
Construction and Operation	No Project	NI/NE	-	-
	1, 2, 3	S	**Mitigation Measure GHG-1.1**: Achieve Net-Zero Emissions Through a GHG Reduction Plan	LTSM
Cultural Resources				
Impact CUL-1: Cause a substantial adverse change in the significance of a historic built resource				
Construction	No Project	NI/NE	-	-
	1, 2, 3	S	**Mitigation Measure CUL-1.1**: Identify NRHP/CRHR-Eligible Built Resources **Mitigation Measure CUL-1.2**: Avoid NRHP/CRHR-Eligible Built Resources **Mitigation Measure CUL-1.3**: Protect NRHP/CRHR-Eligible Built Resources **Mitigation Measure CUL-1.4**: NRHP/CRHR-Eligible Historic Built Resources Treatment	SU
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource				
Construction and Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure CUL-2.1**: Identify NRHP/CRHR-Eligible Archaeological Resources **Mitigation Measure CUL-2.2**: Avoid NRHP/CRHR-Eligible Archaeological Resources **Mitigation Measure CUL-2.3**: Protect NRHP/CRHR-Eligible Archaeological Resources **Mitigation Measure CUL-2.4**: NRHP/CRHR-Eligible Archaeological Resources Treatment	SU
Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries				
Construction and Operation	No Project	NI	-	-
	1, 2, 3	S	**Mitigation Measure CUL-3.1**: Cemetery Relocation Plan **Mitigation Measure CUL-3.2**: Avoid, Protect, and Treat Human Burials	SU
Tribal Cultural Resources				
Impact TCR-1: Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the Authority has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.				
	No Project	NI	-	-

Impact	Alternative	CEQA Finding	Mitigation Measure	Finding with Mitigation
Construction and Operation	1, 2, 3	S	**Mitigation Measure TCR-1.1**: Implement Mitigation Measures Recommended in Public Resources Code Section 21084.3 to Avoid Damaging Effects on Tribal Cultural Resources **Mitigation Measure TCR-1.2**: Tribal Monitoring **Mitigation Measure TCR-1.3**: Implement Agreed-Upon Protocol for the Treatment of Human Remains and Cultural Items **Mitigation Measure CUL-2.1**: Identify NRHP/CRHR-Eligible Archaeological Resources **Mitigation Measure CUL-2.2**: Avoid NRHP/CRHR-Eligible Archaeological Resources **Mitigation Measure CUL-2.3**: Protect NRHP/CRHR-Eligible Archaeological Resources **Mitigation Measure CUL-2.4**: NRHP/CRHR-Eligible Archaeological Resources Treatment **Mitigation Measure CUL-3.1**: Cemetery Relocation Procedure **Mitigation Measure CUL-3.2**: Avoid, Protect, and Treat Human Burials	SU
Visual Resources				
Impact VIS-1: Substantially degrade the existing visual character or quality of public views of the site and its surroundings				
Construction	No Project	NI	-	-
	1, 2, 3	S	No feasible mitigation measures identified	SU

Notes:

CCAPCD = Colusa County Air Pollution Control District
GCAPCD = Glenn County Air Pollution Control District
YSAQMD = Yolo-Solano Air Quality Management District
GHG = greenhouse gas
NI = CEQA determination of no impact
LTS = CEQA determination of less-than-significant impact
LTSM = CEQA determination of less than significant with mitigation
S = CEQA determination of significant impact
SU = CEQA determination of **significant and unavoidable**

Exhibit B
Sites Reservoir Project
Mitigation Monitoring and Reporting Program

November 2023

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1.0 INTRODUCTION

In November 2023, the Sites Project Authority (Authority), as the state lead agency pursuant to the California Environmental Quality Act (CEQA), and the Bureau of Reclamation (Reclamation), as the federal lead agency pursuant to the National Environmental Policy Act (NEPA), issued a Final Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) for the Sites Reservoir Project (Project).[1] The Final EIR/EIS satisfies the requirements of CEQA and NEPA and is the basis for the Authority and Reclamation's selection of the Preferred Alternative (Alternative 3). Reclamation will ultimately make a decision on which alternative is selected in any Record of Decision issued.

Section 21081.6 of the California Public Resources Code and Sections 15091(d) and 15097 of the State CEQA Guidelines require public agencies to "adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects." A Mitigation Monitoring and Reporting Program (MMRP) is required for the Project because the Authority has identified potentially significant adverse effects related to the construction and implementation of the Project and the Authority has identified mitigation measures to reduce those impacts in the Final EIR/EIS. This MMRP has been prepared for the Preferred Alternative. This MMRP will be adopted by the Sites Authority Board of Directors if the Board approves the Project. This MMRP has been prepared to ensure that all of the mitigation measures are implemented, completed, and documented in a satisfactory measure during the Project's design, construction, and implementation. The MMRP may be modified by the Authority during Project implementation in response to changing conditions or Project modifications. Table 1 of the MMRP describes mitigation measures from the Final EIR/EIS that will mitigate the adverse environmental impacts of the Preferred Alternative. These measures were developed by the Authority and Reclamation in consultation with appropriate agencies, as well as input from the public, to meet the requirements of CEQA and NEPA. The mitigation measures in Table 1 are conditions of approval that the Authority is required to comply with as it implements the Preferred Alternative.

Five cooperating agencies are part of the NEPA review process: Western Area Power Administration, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and U.S. Army Corps of Engineers. The following responsible agencies are included as part of the CEQA process.

- California Department of Fish and Wildlife
- State Water Resources Control Board
- Central Valley Regional Water Quality Control Board, Central Valley Region 1
- Central Valley Flood Protection Board
- California Department of Water Resources
- California Water Commission
- Sites Storage Partners
- Tehama-Colusa Canal Authority and Glenn-Colusa Irrigation District (in their role as conveyance partners)

[1] Sites Project Authority and Bureau of Reclamation. 2023. *Sites Reservoir Project Final Environmental Impact Report/Environmental Impact Statement*. May. Sacramento CA. Available: https://sitesproject.org/environmental-review/.

Key legal requirements the Preferred Alternative is subject to are described for the following resource areas in Appendix 4A, *Regulatory Requirements*, in Volume 2 of the Final EIR/EIS.

- Surface Water Resources—Section 4A.1
- Surface Water Quality—Section 4A.2
- Fluvial Geomorphology—Section 4A.3
- Groundwater Resources—Section 4A.4
- Vegetation and Wetland Resources—Section 4A.5
- Wildlife Resources—Section 4A.6
- Aquatic Biological Resources—Section 4A.7
- Geology and Soils—Section 4A.8
- Minerals—Section 4A.9
- Land Use—Section 4A.10
- Agriculture and Forestry Resources—Section 4A.11
- Recreation Resources—Section 4A.12
- Energy—Section 4A.13
- Navigation, Transportation, and Traffic—Section 4A.14
- Noise—Section 4A.15
- Air Quality—Section 4A.16
- Greenhouse Gas Emissions—Section 4A.17
- Cultural Resources—Section 4A.18
- Tribal Cultural Resources—Section 4A.19
- Visual Resources—Section 4A.20
- Population and Housing—Section 4A.21
- Public Services and Utilities—Section 4A.22
- Public Health and Environmental Hazards—Section 4A.23
- Climate Change—Section 4A.24
- Indian Trust Assets—Section 4A.25
- Environmental Justice and Socioeconomics—Section 4A.26
- Cumulative Impacts—Section 31.1

The MMRP adheres to the Council on Environmental Quality's (CEQ) regulations (40 Code of Federal Regulations [C.F.R.] § 1505[2]) and was prepared based on the CEQ finalized guidance entitled *Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact* (CEQ January 14, 2011). The CEQ guidance assists NEPA lead agencies in developing mitigation programs that provide effective documentation, implementation, and monitoring of mitigation commitments.

[2] The NOI for which the Final EIS and Record of Decision is issued was published before September 14, 2020. Therefore, all references to CEQ regulations are to those regulations at 40 C.F.R. Parts 1500–1508 in existence as of the date the NOI was published in the Federal Register on November 9, 2001.

2.0 MITIGATION MONITORING AND REPORTING PROGRAM

The environmental effects of the Preferred Alternative will result in impacts considered significant under CEQA and in effects considered significant under NEPA. Mitigation measures that will reduce or eliminate potential adverse environmental impacts are described in Chapters 6 through 23 of Volume 1 of the Final EIR/EIS. The specific provisions contained in this MMRP are presented as a table and include mitigation measures identified in the Final EIR/EIS, organized by environmental issue and topical areas addressed in the Final EIR/EIS. In collaboration with the appropriate agencies, the Authority may refine the means by which it will implement a mitigation measure, as long as the alternative means will be equally or more effective. This MMRP describes implementation and monitoring procedural guidance, responsibilities, and timing for each mitigation measure identified in the Final EIR/EIS. Components include the following.

- **Mitigation Measure(s):** Provides the mitigation measure and monitoring requirements as identified in the Final EIR/EIS.
- **Impact Number and Impact Title:** Provides the impact number and description of the impact requiring mitigation as identified in the Final EIR/EIS.
- **Phase:** Provides the phase during which the mitigation measure will be implemented.
    - **Preconstruction—**Activities that directly precede the construction and serve as clearance for construction to begin.
    - **Construction—**Activities that occur during construction.
    - **Postconstruction—**Activities that directly follow construction or as a result of construction, and that do not relate to ongoing operations.
    - **Operations—**Activities related to the long-term operation and management of the reservoir, buildings or features, or surrounding land after the completion of construction.
- **Implementation Action:** Identifies the actions required to implement the measures, including any required agreements and/or conditions.
- **Implementation Responsibility:** Except as noted, identifies the entity that will be responsible for directly implementing the mitigation measures, monitoring, and reporting. Implementation can be the responsibility of the Authority or its Contractor. Monitoring will generally be the responsibility of the Contractor, with oversight provided by the Authority during construction. Long-term mitigation monitoring responsibilities will be the responsibility of the Authority.
- **Reporting Schedule:** Identifies the stage of the Project and the frequency that reporting is to occur, if reporting is required.
- **Record of Implementation:** Column for record keeping after implementation.

2.1 Roles and Responsibilities

As the CEQA lead agency and proponent of this Project, the Authority will implement the mitigation measures through its own actions, those of its Contractors, and actions taken in cooperation with other agencies and entities. The Authority is ultimately accountable for the overall administration of the MMRP and for assisting relevant individuals and parties in their oversight and reporting responsibilities. The responsibilities of mitigation implementation, monitoring, and reporting will be extended to several entities as discussed above; however, the Authority will bear the primary responsibility for verifying that the mitigation measures are implemented. When Project work is undertaken by the Authority's Contractor, the Contractor shall implement the mitigation measures that are pertinent to its scope of work. The Contractor shall monitor construction activities to ensure that the mitigation measures are being properly implemented and accurately report its activity and results to the Authority. The Authority will periodically check the Contractor's activity, reports, and effectiveness of mitigation activities.

- **Authority—**While the Authority retains responsibility for the implementation and reporting on mitigation measures as specified in this MMRP, activities may be delegated to an Authority representative or an Authority-approved contractor. Authority responsibilities may also include certain measures outside of the scope of the Contractor such as future studies or operations-phase implementation. In addition, oversight of implementation and reporting may be provided by Authority contractors or representatives as lead agency representatives to facilitate regulatory oversight, agency coordination and compliance during implementation and reporting.

- **Contractor—**The Contractor(s) (or the environmental team provided by the Contractor) will be responsible for implementing or monitoring mitigation measures as specified in this MMRP. This may include any of the following technical roles.

    - **Mitigation Manager—**The Mitigation Manager is responsible for overseeing their environmental team's implementation and reporting of environmental commitments, including onsite or offsite habitat for compensatory mitigation. The Mitigation Manager will be the principal agent in direct implementation of the MMRP and compliance assurance and will be responsible for reporting the status of each mitigation measure to the Authority in accordance with this MMRP.

    - **Paleontological Resources Specialist**—The Paleontological Resources Specialist is responsible for implementing mitigation measures related to paleontological resources in compliance with the terms and conditions outlined in the MMRP and the Paleontological Resource Monitoring and Mitigation Plan (PRMMP), including direction of the Paleontological Resource Monitor.

    - **Qualified Botanist**—The Qualified Botanist is responsible for implementing mitigation measures related to plants in compliance with the terms and conditions outlined in the MMRP. The Qualified Botanist will be responsible for direct implementation of the MMRP and compliance assurance by surveying and identification of resources. The Qualified Botanist may be required to possess specific expertise, education, or agency approval.

- **Qualified Biologist—**The Qualified Biologist is responsible for implementing mitigation measures related to biological resources in compliance with the terms and conditions outlined in the MMRP. The Qualified Biologist will be responsible for direct implementation of the MMRP and compliance assurance by surveying, identification and monitoring of resources. The Qualified Biologist may be required to possess specific expertise, education, or agency approval.

- **Qualified Entomologist—**The Qualified Entomologist is responsible for implementing mitigation measures related to insects in compliance with the terms and conditions outlined in the MMRP. The Qualified Entomologist will be responsible for direct implementation of the MMRP and compliance assurance by surveying, identification, and monitoring of resources. The Qualified Entomologist may be required to possess specific expertise, education, or agency approval.

- **Qualified Paleontological Resources Monitor—**The Qualified Paleontological Resources Monitor will be approved by and report directly to the Paleontological Resources Specialist. The Paleontological Resources Monitor will be present onsite within a reasonable monitoring distance during ground-disturbing activities in areas indicated as resource sensitive and will be the principal agent in the direct implementation of the MMRP and the PRMMP, and compliance assurance as directed by the Paleontological Resources Specialist. Paleontological Resource Monitors will have the equivalent of the following qualifications: Bachelor of Science or Bachelor of Arts degree in geology or paleontology and 1 year of experience monitoring in California; Associate of Science or Associate of Arts degree in geology, paleontology, or biology and 4 years of experience monitoring in California; or enrollment in upper-division classes pursuing a degree in the fields of geology or paleontology and 2 years of monitoring experience in California.

- **Secretary of Interior (SOI)-Qualified Architectural Historian—**The SOI-Qualified Architectural Historian is responsible for implementing mitigation measures related to National Register of Historic Places (NRHP) and/or the California Register of Historic Resources (CRHR) eligible built resources in compliance with the terms and conditions outlined in the MMRP.

- **Registered Professional Archaeologist—**The Registered Professional Archaeologist is responsible for implementing mitigation measures related to archaeological resources in compliance with the terms and conditions outlined in the MMRP.

- **Tribal Monitor—**The Tribal Monitor will be permitted onsite within a reasonable monitoring distance during ground-disturbing activities in areas indicated as culturally sensitive.

3.0 ENVIRONMENTAL MITIGATION MANAGEMENT AND ASSESSMENT SYSTEM

The Authority will implement an Environmental Mitigation Management and Assessment (EMMA) system consisting of strategic planning, policies, and procedures; organizational structure; staffing and responsibilities; milestones; schedule; and resources devoted to achieving the Authority's environmental commitments. The EMMA system will also include a component that tracks the implementation of mitigation measures (as well as Best Management Practices [BMPs]) and can produce reports on compliance. Authority staff will receive periodic reports on compliance and may request additional reports as necessary to ensure that the MMRP is fully implemented. This system will rely on data provided by the Contractor, its consultants, and others to produce status reports regarding construction status, permitting activities, monitoring, inspections, and other compliance activities.

Table 1. Sites Reservoir Project: Mitigation Monitoring and Reporting Program

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
Surface Water Quality						
WQ-1.1: Methylmercury Management The Authority will implement the following actions as part of the RMP (Section 2D.3) to minimize reservoir methylmercury production and bioaccumulation of methylmercury in reservoir fish so that the average methylmercury concentrations in Sites Reservoir fish do not exceed the 0.2 mg/kg sport fish objective[3]. Most of these actions are recommended actions for new reservoirs by the State Water Board and Regional Water Quality Control Boards, as identified in the *Draft Staff Report for Scientific Peer Review for the Amendment to the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Mercury Reservoir Provisions – Mercury TMDL and Implementation Program for Reservoirs* (State Water Resources Control Board 2017b). The potential effectiveness of these recommended methylmercury reduction actions is supported by current research (State Water Resources Control Board 2017b) but may be site-specific. Methylmercury reduction actions and fish tissue monitoring will be implemented in coordination with the State Water Board and Central Valley RWQCB, as required. 1. Remove vegetation (e.g., brush, trees) in the inundation area prior to initial Sites Reservoir filling to reduce organic carbon. The decomposition of organic carbon in flooded soil and vegetation fuels the microbial methylation of mercury (Hall et al. 2005; Kelly et al. 1997). 2. Do not stock Sites Reservoir with fish for the first 10 years following its initial filling to reduce the potential for methylmercury bioaccumulation in reservoir fish when methylmercury levels in the reservoir are expected to be highest. 3. Upon completion of the initial filling of Sites Reservoir, implement a fish sampling program to determine whether game fish are present (e.g., due to unauthorized fish stocking) and whether a population has become established (i.e., presence of reproductively mature fish and several year classes). This sampling program would include one or two surveys in spring or early summer using a single electrofishing crew. The survey would include several transects along the shoreline, likely in the vicinity of the boat ramps and campgrounds. Once it has been determined that a population of game fish has established in the reservoir, begin monitoring Sites Reservoir fish tissue methylmercury concentrations (as total mercury) via annual tissue sampling. Based on results from fish tissue monitoring, and in coordination with the State Water Board, Central Valley RWQCB, and the Office of Environmental Health Hazards Assessment, fish consumption warning signs will be posted in several visible locations around the reservoir if fish tissue concentrations exceed the 0.20 mg/kg ww sport fish objective[4]. As available in the reservoir, tissue from both sport and prey-sized fish from multiple species will be sampled in accordance with the State Water Board's Surface Water Ambient Monitoring Program, Safe to Eat Workgroup protocol (State Water	**Impact WQ-1:** Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during construction **Impact WQ-2:** Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during operation **Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	Preconstruction; construction; operations	Contract requirements; compliance reporting; monitoring	As needed	Authority; Contractor	Date: _____ Action Taken:

[3] The average methylmercury concentrations shall not exceed 0.2 milligrams per kilogram (mg/kg) fish tissue within a calendar year. The water quality objective must be applied to trophic level 3 (TL3) or trophic level 4 (TL4) fish, whichever is the highest existing trophic level in the water body. The objective applies to the wet weight concentration in skinless fillet. Freshwater TL3 fish are between 150 to 500 millimeters (mm) in total length and TL4 fish are between 200 to 500 mm in total length, or as additionally limited in size in accordance with the "legal size" set for recreational fishing, established by Title 14, California Code of Regulations 14 Sections 1–53.03.

[4] The average methylmercury concentrations shall not exceed 0.2 milligrams per kilogram (mg/kg) fish tissue within a calendar year. The water quality objective must be applied to trophic level 3 (TL3) or trophic level 4 (TL4) fish, whichever is the highest existing trophic level in the water body. The objective applies to the wet weight concentration in skinless fillet. Freshwater TL3 fish are between 150 to 500 millimeters (mm) in total length and TL4 fish are between 200 to 500 mm in total length, or as additionally limited in size in accordance with the "legal size" set for recreational fishing, established by Title 14, California Code of Regulations 14 Sections 1–53.03.

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
Resources Control Board 2021c, 2022b). Mercury in fish tissues will be analyzed according USEPA's Method 1630 (U.S. Environmental Protection Agency 1998b, or as updated). The annual reservoir mercury monitoring program will continue for a minimum of 10 years following the first year of regulated reservoir stocking. 4. Manage reservoir water chemistry to control methylmercury production. The scope of water chemistry management actions would be informed by actions proven feasible and effective at reducing mercury methylation in other mercury-impaired reservoirs in the state. Monitoring, including aqueous and fish tissue methylmercury, will be implemented to assess the effectiveness of methylmercury reduction measures. Water chemistry management actions may include the addition of an oxidant (e.g., DO) to the reservoir bottom waters (near the sediment-water interface) to reduce anoxia when the reservoir is stratified. Oxygen levels can be increased in the hypolimnion of a reservoir using a hypolimnetic oxygenation system (HOS). The use of HOS to reduce hypolimnetic anoxia may suppress mercury methylation and discharge to the hypolimnion in some reservoirs (State Water Resources Control Board 2017b:7-42, 7-43); however, the effectiveness of this method in reducing fish tissue mercury concentrations is not clear based on results from studies to date. Seelos et al. (2021) found that after 4 consecutive years of operation of a HOS in two California reservoirs, Guadalupe and Stevens Creek Reservoirs, there was a significant, albeit modest, decrease in fish tissue mercury and that results suggested that this may have been due to oxygenation mixing nutrients into surface water and enhancing primary productivity, which indirectly affected mercury bioaccumulation by diluting concentrations in phytoplankton, rather than directly lowering methylmercury in the water column. In contrast, in Calero Reservoir, within the same watershed as Guadalupe Reservoir, near-continuous HOS operation during "the 2014 dry season" reduced hypolimnetic methylmercury but did not substantially reduce mercury concentrations in zooplankton or small fish (McCord et al. 2016). McCord et al. (2016) hypothesized that operational factors may have accounted for the lack of reduction in methylmercury bioaccumulation: (1) operation of the HOS after the onset of hypoxia below the epilimnion, which allowed the accumulation of methylmercury in the hypolimnion and metalimnion and subsequent mixing of the accumulated methylmercury into the epilimnion making it available for uptake by phytoplankton; (2) a vertical gap between the oxygen diffuser line and the deepest sediments left an hypoxic zone that acted as an ongoing source of methylmercury to the hypolimnion, which was then mixed into the water column by the bubble plume of the HOS; and (3) the HOS did not overcome the hypoxia in the metalimnion, which may have provided methylmercury to the epilimnion. If a HOS is implemented at Sites Reservoir, the addition of oxygen would take place annually just prior to the onset of stratification until after reservoir turnover in late fall or early winter. Pilot studies within the reservoir will help inform the design (e.g., sizing, type of oxygenation system) and operation (i.e., design oxygen delivery rate) parameters that result in the most effective reduction of in-reservoir mercury methylation and fish tissue methylmercury concentrations while avoiding potential adverse effects on reservoir water quality. The Authority will retain a qualified water quality specialist and/or fisheries biologist with expertise in methylmercury management to design these studies. 5. Manage reservoir fisheries to reduce in-reservoir fish tissue methylmercury levels. The scope of fisheries management actions would be informed by actions proven feasible						

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
and effective at other mercury-impaired reservoirs in the state. Fisheries management actions could include the following. a. Intensive fishing to reduce fish populations to provide more food resources for remaining fish. This would increase the growth rate in the remaining fish and reduce their methylmercury body burdens through somatic growth dilution. b. Stocking the reservoir with low-methylmercury prey fish for stocked predator fish to consume. c. Stocking more or different sport fish species, including lower trophic level sport fish. d. Stocking large, old predator fish from hatcheries that supply fish with low methylmercury concentrations. To assess the effectiveness of methylmercury reduction actions after initial implementation, fish tissue methylmercury concentrations (as total mercury) will be monitored. Young fish will be sampled because they have accumulated methylmercury for a shorter time period relative to older, larger sport fish and therefore will better reflect recent mercury exposure (State Water Resources Control Board 2017b). Fish tissue methylmercury concentrations in young fish will be assessed prior to implementation of any methylmercury reduction action. To assess the effectiveness of fisheries management actions over the long term, ongoing monitoring of aqueous and fish tissue methylmercury in Sites Reservoir will be implemented per requirements or conditions in a water right order, Section 401 water quality certification issued pursuant to the CWA, or other appropriate order issued by the State Water Board and/or Central Valley RWQCB.						
WQ-2.1: Prevent Metal Impacts in Stone Corral Creek Associated with Sites Reservoir Discharge The metals of concern for Project operations include aluminum, copper, iron, and lead. Mercury is considered separately. The effect of the Project on metal concentrations in Stone Corral Creek is uncertain and therefore considered potentially significant without mitigation. To evaluate the potential effect, metal concentrations will be measured in samples collected from Stone Corral Creek approximately half a mile downstream from Sites Dam. Samples will be collected every other month for 1 year prior to construction and every other month after construction for a period sufficient to indicate that any impacts are less than significant, including during periods when the reservoir is at least 75% full. The measurements will include total and dissolved aluminum, copper, iron, lead, and hexavalent chromium. Hexavalent chromium is included because existing data are insufficient to evaluate potential Project effects. Measurements of metal concentrations will be accompanied by measurements of pH, dissolved organic carbon, and hardness because these parameters influence water quality standards for aquatic life protection for some metals. Additional metal measurements are planned for the Stone Corral Creek and Funks Creek Aquatic Study Plan (Section 2D.4). Under the No Project Alternative, exceedances of standards for the protection of aquatic life for total aluminum, copper, iron, and lead (standards shown in Table 6-9) tend to occur in the Sacramento River and Stone Corral Creek during the rainy season. Existing conditions of Stone Corral Creek without the Project would be considered as affected by elevated metal concentrations if they were found to exceed thresholds for aquatic life protection during the drier parts of the year when exceedances would not be expected. For evaluation purposes, this drier part of the year would begin in April or a month after the last diversions	**Impact WQ-2:** Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during operation	Preconstruction; postconstruction; operations	Compliance reporting; monitoring	Every other month	Authority; Contractor	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
to Sites Reservoir storage, whichever is later, and run through November or until the commencement of diversions to storage, whichever is earlier. If measurements from Stone Corral Creek taken during this dry period indicate that concentration of one or more of these metals is greater than water quality standards for the protection of aquatic life, actions to reduce metal concentrations in Stone Corral Creek will be implemented to reduce concentrations to levels that meet these standards. Mitigative actions may include, but are not limited to, one or more of the following types of measures. • Modify the flow released to Stone Corral Creek. Changes in release flow could affect metal concentrations in the reservoir discharge by altering the withdrawal zone in the reservoir. • Release occasional pulses of high flow. Flow pulses could flush away low-quality sediment and water from the bottom of the reservoir adjacent to Sites Dam. • Add a vertical extension in the reservoir at the withdrawal point. This extension would pull water from higher in the reservoir, where metal concentrations are expected to be lower. • Pump water from the top of Sites Reservoir for release into Stone Corral Creek. Based on the demonstration of the effect of partial settling of suspended sediment on total metal concentrations in Sites Reservoir and the conservative nature of this assessment, metal concentrations in Sites Reservoir are generally expected to meet water quality standards for metals for the protection of aquatic life during the drier parts of the year in water located above the deepest portions of the reservoir. • • Discontinue or delay releases. The flow regime for Sites Reservoir releases to Stone Corral Creek has not yet been established, but it is likely to be similar to the natural hydrograph. If Sites Reservoir releases to Stone Corral Creek exceed the objective described above (exceed thresholds for aquatic life protection during the drier parts of the year when exceedances would not be expected), releases could be discontinued in the spring or delayed in the fall without substantial deviation from the flow pattern of the natural hydrograph.						
WQ-2.2: Prevent Net Detrimental Metal and Pesticide Effects Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass The effect of the Project on metal and pesticide concentrations in the Yolo Bypass due to increased inflow from the CBD is uncertain and therefore considered potentially significant without mitigation. Flow augmentation with other water sources is continuing to be evaluated with oversight from the Delta Coordination Group. The effect of Yolo Bypass flow augmentation on pesticide levels in water and plankton is under investigation by the U.S. Geological Survey and DWR (Orlando et al. 2020:99). This mitigation measure provides for monitoring of metal concentrations in the Yolo Bypass and for cessation of flows from the Project to the Yolo Bypass if needed for avoiding significant impacts. To monitor metal concentrations, metal concentrations will be measured in samples collected at the downstream end of the CBD and at two locations in the Yolo Bypass, one in the Tule Canal and the other in the Toe Drain. Samples will be collected monthly during June–October to evaluate concentrations before and during the period of CBD discharge to the Yolo Bypass. If the pesticide studies indicate that flow augmentation would increase pesticide concentrations to a level that could be detrimental to fish or if the metal measurements	**Impact WQ-2:** Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during operation **Impact FISH-8:** Operations effects on delta smelt	Operations	Compliance reporting; monitoring	As needed	Authority	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
indicate that the Project habitat flows could cause Yolo Bypass concentrations of metals to exceed water quality standards for aquatic life protection, the potential net effects of these elevated concentrations on aquatic communities will be evaluated. Net effects include additive or synergistic effects, effects on food supply for fish, and direct effects on fish. This evaluation will be part of the ongoing evaluation conducted by CDFW and other agencies to determine net benefits of the Yolo Bypass habitat flows and the Project's funded ecosystem benefits under the WSIP. CDFW would have the discretion to modify WSIP water that is released to Yolo Bypass, depending on the state of the science and fish needs, and flows would cease if there were no net benefit.						
Vegetation and Wetland Resources						
VEG-1.1: Conduct Appropriately Timed Surveys for Special-Status Plant Species Prior to Construction Activities The Authority will require qualified botanists to conduct special-status plant surveys of the Project footprint, including all permanent and temporary construction impact areas and a 250-foot-wide buffer area to encompass areas where indirect effects may occur. The surveys will be conducted in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (California Department of Fish and Wildlife 2018), or the most current protocols, specifically with respect to the number and timing of surveys, use of reference populations, and evaluation of negative findings. Surveys will occur during the seasons that special-status plant species would be evident and identifiable, which generally is during their blooming periods. The surveys will be conducted no more than 3 years prior to the start of ground-disturbing activities. The results of the surveys will be submitted in a report to CDFW and/or USFWS for review no less than 1 year prior to the start of ground-disturbing activities. The survey report will include the location and description of all work areas and the location and description of all occupied habitat for special-status plant species. The report will also identify locations where effective avoidance measures could be implemented. In areas where no special-status plant species are present, no further mitigation will be required.	**Impact VEG-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	Preconstruction	Contract requirements; compliance reporting; surveys	No less than 1 year prior to the start of ground-disturbing activities	Authority; Contractor; Qualified Botanist	Date: _____ Action Taken:
VEG-1.2: Establish Activity Exclusion Zones Around Special-Status Plants in Temporary Impact Areas and Compensate for Permanent Impacts on Special-Status Plant Species Where surveys conducted according to Mitigation Measure VEG-1.1 determine that a special-status plant species is present in or adjacent to an area where temporary ground-disturbing activities would take place, the Authority will avoid Project impacts on the species, if feasible, through the establishment of activity exclusion zones, in which no ground-disturbing activities will take place, including construction staging or other temporary work areas. Activity exclusion zones for special-status plant species will be a minimum of 50 feet established around each occupied habitat site, the boundaries of which will be clearly marked with construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 250 feet of the occupied habitat. The size of activity exclusion zones may be reduced below 50 feet through consultation with a qualified biologist and with concurrence from CDFW or, for any federally listed species, from USFWS based on site-specific conditions. If exclusion zones cannot feasibly be established for avoidance, and construction would result in take of federally listed or state-listed plants or plant parts (roots, shoots, fruit, or	**Impact VEG-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service **Impact VEG-4:** Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance	Preconstruction; construction; operations	Contract requirements; compliance reporting; surveying; monitoring; exclusion fencing	Annually	Authority; Contractor; Mitigation Manager; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
seeds), the Authority will apply for take authorization through an Incidental Take Permit from USFWS for any federally listed plant or CDFW for any state-listed plant. Prior to any construction activities that would result in permanent impacts on special-status plants, the Authority will acquire and permanently protect compensatory mitigation habitat for each affected species at a minimum 2:1 ratio (2 acres preserved for every 1 acre permanently affected), but the final compensation ratios will be based on site-specific information and determined through coordination with the applicable state and/or federal agencies (CDFW, USFWS) during permit processing. The compensation acreage used for the ratio will be based on the area of impact as determined by surveys required under Mitigation Measure VEG-1.1. Compensatory mitigation will be accomplished by procurement of existing onsite or offsite occupied habitat acquired in fee, through conservation easements, or by purchasing credits from a certified conservation bank or mitigation bank. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of the two) would be completed as agreed upon by the Authority, USFWS, and/or CDFW, as appropriate for the species being mitigated. If onsite or offsite occupied habitat is acquired (permittee-responsible mitigation), the habitat will require monitoring by the Authority. If credits are purchased from a certified bank, no further monitoring will be required. The Authority will monitor any permittee-responsible mitigation habitat annually for a minimum of 5 years, or as required by the regulating agency, to verify that the habitat suitability and extent of species cover are maintained. For these mitigation areas, the Authority will prepare and implement an operations and management plan for each compensation habitat, with funding provided through an endowment. The plan will include requirements to monitor the occupied habitat, including the special-status species absolute and relative cover, cover of other native species, and cover of invasive species. The plan will also be consistent with the LMP and will determine and implement appropriate management measures to maintain the habitat and the plant species cover at the same or greater extent as when the occupied habitat was acquired. Management measures may include removal of invasive plant species. The Authority will submit annual monitoring reports to CDFW or, for any federally listed species to USFWS, for review and verification that the Project remains in compliance with the mitigation requirements.						
VEG-1.3: Establish Activity Exclusion Zones Around Special-Status Plants Prior to Vegetation Maintenance Activities Prior to surface-disturbing maintenance or herbicide use, the Authority will use the results of the surveys conducted under Mitigation Measure VEG-1.1 to mark the known locations of special-status plants in or within 50 feet of any maintenance areas. Prior to maintenance requiring surface disturbance or vegetation removal in annual grassland, chaparral, oak woodland and savanna, and wetlands, the Authority will require qualified botanists to conduct special-status plant surveys of the maintenance areas. If any special-status plants are found in or within 50 feet of the maintenance areas, the Authority will fence and avoid the plants that could be affected by surface-disturbing maintenance activities.	**Impact VEG-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	Operations	Surveys; exclusion fencing	None	Authority; Contractor; Qualified Botanist	Date: _____ Action Taken:
VEG-2.1: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities Prior to the start of any Project construction activities, the Authority will retain qualified botanists to conduct surveys of the Project area, including all permanent and temporary impact areas and an additional buffer of 250 feet to encompass potential indirectly affected areas. The surveys will be conducted in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*	**Impact VEG-2:** Substantial adverse effect (i.e., loss or removal) on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	Preconstruction; construction	Compliance reporting; surveys	No less than 90 days prior to the start of ground-disturbing activities	Authority; Contractor; Qualified Botanist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
(California Department of Fish and Wildlife 2018), or most current protocols. Surveys will occur during the season that plant species would be evident and identifiable, which generally is during their blooming season. Surveys will also include assessment of SRA cover, using standard methods for measuring linear feet and area, in all permanent and temporary impact areas. The surveys will be conducted no more than 3 years prior to the start of ground-disturbing activities. The results of the survey will be submitted in a report to CDFW and/or USFWS for review no less than 90 days prior to the start of ground-disturbing activities. The report will include the location and description of all work areas and the location and description of all sensitive natural communities and oak woodlands, and it will identify locations where effective avoidance measures could be implemented. In areas where no sensitive natural communities or oak woodlands are present, no further mitigation will be required.	**Impact VEG-4:** Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance **Impact VEG-5:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan **Impact FISH-1:** Construction effects on special-status fish					
VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities Where surveys determine that a sensitive natural community is present in or adjacent to an area where temporary ground-disturbing activities would take place, the Authority will avoid Project impacts on the community, if feasible, through the establishment of activity exclusion zones, in which no ground-disturbing activities will take place, including construction staging or other temporary work areas. Activity exclusion zones for sensitive natural communities will be a minimum of 50 feet established around each community site, the boundaries of which will be clearly marked with construction exclusion fencing or its equivalent. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 250 feet of the sensitive natural community. The size of activity exclusion zones may be reduced below 50 feet through consultation with a qualified biologist and with concurrence from CDFW or, for any federally protected communities of concern, from USFWS based on site-specific conditions. Prior to any activities that would result in permanent impacts on sensitive natural communities, the Authority will acquire and permanently protect compensation habitat for each affected sensitive natural community at a minimum 1:1 ratio (1 acre restored or created for every 1 acre removed), or by an equivalent or greater requirement determined through coordination with state and/or federal agencies (CDFW, USFWS) during permit processing. The compensation acreage used for the ratio will be based on the area of impact as determined by surveys required under Mitigation Measure VEG-2.1. In addition to mitigating the loss of riparian habitat, specific measures will be included, as detailed in Impact FISH-1, to compensate for the loss of SRA cover (area and linear feet), as portions of the affected riparian habitat also provide SRA cover for fish. Loss of SRA cover will be mitigated at a ratio of 3:1 or by an equivalent or greater requirement determined through coordination with state and/or federal agencies (CDFW, USFWS, and NMFS). The mitigation credits for SRA cover mitigation will apply toward riparian habitat mitigation requirements (i.e., the acreage required for compensation will not be duplicated). Compensation habitat for sensitive natural communities will consist of existing onsite or offsite in-kind habitat acquired in fee, through conservation easements, or from by purchasing credits from a certified conservation bank or mitigation bank. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of the two) would be completed as agreed upon by the Authority, CDFW, USFWS, and/or NMFS, as appropriate for the resource being mitigated. If onsite or offsite habitat is acquired (permittee-responsible mitigation), the habitat will require monitoring	**Impact VEG-2:** Substantial adverse effect (i.e., loss or removal) on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service **Impact VEG-4:** Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance **Impact VEG-5:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan **Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites	Preconstruction; construction; postconstruction	Surveys; contract requirements; compliance reporting; exclusion fencing; monitoring; acquisition/ funding	Annually	Authority; Contractor; Mitigation Manager; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
by the Authority. If credits are purchased from a certified bank, no further monitoring will be required. The Authority will monitor any permittee-responsible mitigation areas annually for a period of 10 years for woodland habitats or 5 years for herbaceous habitats or more as required by CDFW or USFWS, to verify that the community suitability is maintained including survival and cover of plantings. For these mitigation areas, the Authority will prepare and implement an operations and management plan for each compensation community, with funding provided through an endowment. The plan will include requirements to monitor the mitigation areas, including comparisons between the mitigation habitat and a reference site of the same habitat retained in the preconstruction survey buffer area. Monitoring criteria may include survival, size, vigor, and percent cover of the dominant tree species for woodland habitats; percent cover of shrubs for riparian habitat and herbaceous species for grassland habitats; percent cover of invasive species for all sensitive community types; and any other relevant performance standards of the permittee-responsible mitigation required by agencies as part of the permits. In any years in which the performance standards are not met, causes for the failure, such as inadequate maintenance, irrigation, or other biotic factors will be assessed; remedial measures will be developed and implemented; and replacement plantings will be installed. The monitoring period for any subsequent plantings will restart from the date of planting. The Authority will submit annual monitoring reports to CDFW or, for any federally protected communities, to USFWS for review and verification that the Project remains in compliance with the mitigation.	**Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan **Impact FISH-1:** Construction effects on special-status fish					
VEG-2.3: Establish Activity Exclusion Zones Around Sensitive Natural Communities Prior to Vegetation Maintenance Activities The Authority will retain a qualified botanist to use the results of the surveys conducted under Mitigation Measure VEG-2.1 to mark the locations of sensitive natural communities in vegetation maintenance areas. The Authority will fence and avoid any parts of sensitive natural communities that occur in or within 50 feet of the vegetation maintenance areas that could be affected by surface-disturbing maintenance activities. The 50-foot distance could be reduced if there are existing barriers, such as roads or buildings, between the maintenance area and the sensitive natural community that would prevent movement of soil or any herbicides used for maintenance into the sensitive natural community. The fencing will allow for wildlife movement and the Authority will maintain the fencing throughout the operations period. Alternatively, if sensitive natural communities cannot be completely avoided, the size of the affected area will be minimized to the full extent possible. If the remaining impacts on sensitive natural communities as the result of vegetation maintenance activities added together exceed 0.1 acre, the Authority will implement additional compensatory mitigation based on the same requirements as described in Mitigation Measure VEG-2.2.	**Impact VEG-2:** Substantial adverse effect (i.e., loss or removal) on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	Operations	Contract requirements; compliance reporting; exclusion fencing; acquisition/ funding	As needed	Authority; Contractor; Mitigation Manager; Qualified Botanist	Date: _____ Action Taken:
VEG-3.1: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities To the extent practicable, the Authority will avoid and minimize impacts on wetlands and non-wetland waters during construction by implementing the measures listed below. These measures will be incorporated into contract specifications and implemented by the construction contractor. Compliance will be monitored by a qualified biologist and reported as indicated in BMP-35. • The roads, pipelines, electrical corridors, and recreation areas will be designed, to the extent practicable, to avoid direct and indirect impacts on wetlands and non-wetland waters.	**Impact VEG-3:** Substantial adverse effect (i.e., loss or removal) on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means **Impact VEG-4:** Conflict with any local policies or ordinances protecting vegetation resources (including wetlands	Construction	Contract requirements; compliance reporting; design; monitoring; exclusion fencing; funding/ acquisition	As needed	Authority; Contractor; Mitigation Manager; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
• In wetlands and non-wetland waters that will be preserved, construction activities will be avoided in saturated or ponded natural wetlands and drainages during the wet season (spring and winter) to the maximum extent feasible. Where such activities are unavoidable, protective practices such as use of padding or vehicles with balloon tires will be employed. • Exposed drainage banks and levees above drainages will be stabilized immediately following completion of construction activities. Non-wetland waters will be restored in a manner that encourages vegetation to reestablish to its pre-Project condition and reduces the effects of erosion on the drainage system. • Any trees, shrubs, debris, or soils that are inadvertently deposited below the ordinary high-water mark of streams will be removed in a manner that minimizes disturbance of the drainage bed and bank. • To the extent feasible, in-stream construction below the ordinary high-water mark of natural drainages will be restricted to the low-flow period (generally April through October). Where wetlands or non-wetland waters (streams or ponds) are present in or adjacent to an area where temporary ground-disturbing activities would take place, the Authority will avoid Project impacts on wetlands, streams, and ponds through the establishment of activity exclusion zones, in which no ground-disturbing activities will take place, including construction staging or other temporary work areas. Activity exclusion zones will be established around each wetland and at the edges of each stream or pond, the boundaries of which will be clearly marked with construction exclusion fencing. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur in 250 feet of a wetland, stream, or pond. The size of activity exclusion zones may be reduced based on site-specific conditions, such as the presence of hydrologic or topographic barriers, through consultation with a qualified biologist and with concurrence from CDFW and/or State Water Board, for state-regulated wetlands and non-wetland waters or, from USACE for any federally protected wetlands or non-wetland waters. Where temporary impacts on wetlands, streams, or ponds cannot be avoided during construction, the impact will be compensated as a permanent impact, as outlined in Mitigation Measure VEG-3.2.	and non-wetland waters), such as a tree preservation policy or ordinance **Impact VEG-5:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan **Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands For unavoidable temporary and permanent impacts on wetlands, the Authority will compensate for the loss by creation or acquisition and permanent protection of suitable wetland habitat to ensure no net loss of wetland habitat functions and values. Compensation will be provided for all permanent impacts and temporary impacts on wetlands that last longer than 1 year, and mitigation will be implemented immediately following temporary impacts and concurrent with or in advance of permanent impacts. Final compensation acreages will be based on the verified aquatic resources delineation and through the CWA Section 404 and 401 permitting process. Mitigation for temporary impacts will occur on site, if feasible. Compensation will also be in compliance with the *Regional Compensatory Mitigation and Monitoring Guidelines for South Pacific Division* (U.S. Army Corps of Engineers 2015). Any permanent impact on wetlands will be mitigated by creating or preserving wetlands at a minimum 1:1 ratio (1 acre restored or created for every 1 acre filled), but the final compensation ratios may include additional compensation and will be based on site-specific information and determined through coordination with	**Impact VEG-3:** Substantial adverse effect (i.e., loss or removal) on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means **Impact VEG-4:** Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance **Impact VEG-5:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved	Construction; postconstruction	Compliance reporting; funding/ acquisition; design	At the completion of each monitoring period	Authority; Mitigation Manager; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
state and federal agencies (State Water Board, USACE) during permit processing. Where wetland impacts overlap with listed species impacts, mitigation will be coordinated for both resources and will not be duplicated. Wetland mitigation will consist of replacement habitat that may be a combination of the following two options, purchase of mitigation bank credits and permittee-responsible mitigation. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of the two) would be completed as agreed upon by the Authority, USACE, State Water Board, and/or CDFW, as appropriate for the resource being mitigated. Purchase of mitigation bank credits will be the preferred compensation method to reduce the risk and uncertainty of mitigation success and avoid temporal losses of wetland function during the establishment phase of wetland creation or restoration. • The Authority will purchase offsite mitigation bank credits for the affected wetland type (i.e., forested wetland [riparian], freshwater marsh, scrub-shrub wetland [riparian], seasonal wetland) at a USACE-approved and CDFW-approved mitigation bank to allow for economy of scale and higher quality habitat due to large patch size. Preference will also be for a mitigation bank in the same watershed as the affected wetlands. The Authority will provide written evidence to the resource agencies that compensation has been established through the purchase of mitigation credits. The Authority will not be required to monitor mitigation credit wetlands. • For permittee-responsible mitigation, the Authority will retain a qualified restoration biologist to develop a wetland restoration and monitoring plan that involves creating or enhancing the affected wetland type (i.e., forested wetland [riparian], freshwater marsh, scrub-shrub wetland [riparian], seasonal wetland) in open space in the Project area or at an offsite location. The Authority will coordinate with CDFW, USACE, and the State Water Board for final plan approval prior to the removal of any wetland habitat and will ensure implementation of the wetland restoration plan. The plan will be based on the Project alternative selected and the extent of wetlands at the time of construction. The plan will identify how, where, and when mitigation will occur, monitoring and maintenance activities, success criteria, funding assurances, appropriate long-term management measures, and agency reporting requirements. The plan will include a species list and specify the number of each species, planting locations, and maintenance requirements. Plantings will use an appropriate method (i.e., seed, container plant, or plug) for the best survival potential and cost efficiency. The extent of planting will ensure that the required mitigation ratio will be reached by the end of the monitoring period and that stem density, canopy cover, and species composition requirements are met. Species seeded will be similar to those removed from the Project area and will consist of inoculum taken from the affected wetlands. The survival rates and vegetative cover of wetland plantings and wetland hydrology will be monitored annually for 5 years, or an equivalent or longer period as required in the Project permits and compared with nearby undisturbed reference wetlands. Progress reports will be provided to the USACE and the State Water Board at the completion of each monitoring period. If the percent vegetative cover of wetland plants is equivalent to reference sites at the end of the monitoring period, the revegetation will be considered successful. Planting survival requirements will be 70% at the end of 5 years, or greater, if required by the Project permits. If the survival criterion of 70% is not met in any monitoring year or at the end of the monitoring period, planting and monitoring will be repeated after mortality causes have been identified and remedial measures have been implemented, and the monitoring period will be extended to account for the required number of	local, regional, or state habitat conservation plan **Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan **Impact FISH-1:** Construction effects on special-status fish					

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
monitoring years for all plantings. Mitigation sites will be protected in perpetuity in a conservation easement or through deed restriction.						
VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters For unavoidable temporary and permanently affected streams and ponds, the Authority will compensate for the loss by creation or acquisition and permanent protection of suitable open-water habitat to ensure no net loss of stream or pond habitat functions and values. Compensation will be provided for all permanent impacts and temporary impacts on non-wetland waters that last longer than 1 year, and mitigation will be implemented immediately following temporary impacts and concurrent with or in advance of permanent impacts. Final compensation acreages will be based on the verified aquatic resources delineation and through the CWA Section 404 and 401 permitting process. Mitigation for temporary impacts will occur on site, if feasible. Compensation will also be in compliance with the *Regional Compensatory Mitigation and Monitoring Guidelines for South Pacific Division* (U.S. Army Corps of Engineers 2015). Any permanent effect on open-water habitat will be mitigated by creating or preserving habitat at a 1:1 ratio (1 acre restored or created for every 1 acre filled), or by an equivalent or greater requirement as determined through coordination with state and federal agencies (State Water Board, USACE) during permit processing. Compensation will be provided for all permanent impacts and temporary impacts on non-wetland waters that last longer than 1 year, and mitigation will be implemented concurrent with or in advance of construction-related impacts. Final compensation acreages will be based on the verified aquatic resources delineation and through the CWA Section 404 and 401 permitting process. Where stream or pond impacts overlap with listed species impacts, mitigation will be coordinated for both resources and not be duplicated. Stream and pond mitigation will consist of replacement habitat that may be a combination of the following two options, which include purchase of mitigation bank credits and permittee-responsible mitigation. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of the two) would be completed as agreed upon by the Authority, USACE, State Water Board, and/or CDFW, as appropriate for the resource being mitigated. Purchase of mitigation bank credits will be the preferred compensation method to reduce the risk and uncertainty of mitigation success and avoid temporal losses of stream and pond functions during the establishment phase of creation or restoration. • The Authority will purchase offsite mitigation bank credits at a USACE-approved and CDFW-approved mitigation bank. Out-of-kind compensation may be used based for stream or pond, if approved by the regulatory agencies. Preference will also be for a mitigation bank in the same watershed as the affected streams and ponds. The Authority will provide written evidence to the USACE and State Water Board that compensation has been established through the purchase of mitigation credits. The Authority will not be required to monitor mitigation credit non-wetland waters. • For permittee-responsible mitigation, the Authority will retain a qualified restoration biologist to develop a non-wetland restoration and monitoring plan that involves creating or enhancing the affected water type (i.e., ephemeral, intermittent, or perennial stream, or pond) in open space in the Project area or at an offsite location. The Authority will coordinate with CDFW, USACE, and the State Water Board for final plan approval prior to the removal of any stream or pond habitat and will ensure implementation of the restoration plan. The plan will be based on the Project	**Impact VEG-3:** Substantial adverse effect (i.e., loss or removal) on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means **Impact VEG-4:** Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance **Impact VEG-5:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan **Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan **Impact FISH-1:** Construction effects on special-status fish	Construction; postconstruction	Compliance reporting; funding/ acquisition; monitoring	At the completion of each monitoring period	Authority; Mitigation Manager	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
alternative selected and the Extent of streams and ponds at the time of construction. The plan will identify how, where, and when mitigation will occur, monitoring and maintenance activities, success criteria, funding assurances, appropriate long-term management measures, and agency reporting requirements. The plan will include grading specifications and design information for creation of stream and pond habitat. The bank stability and downcutting of streams and hydrology of ponds will be monitored annually for a minimum of 5 years, or as required in the Project permits. Progress reports will be provided to the USACE and the State Water Board at the completion of each monitoring period. If stream and pond structure and stability are retained at the end of the monitoring period, the mitigation will be considered successful. If the stream stability or pond hydrology is not met in any monitoring year or at the end of the monitoring period, remedial measures will be implemented, and the monitoring period will be extended to account for the required number of monitoring years. Mitigation sites will be protected in perpetuity in a conservation easement or through deed restriction.						
VEG-3.4: Establish Activity Exclusion Zones Around Wetlands and Non-Wetland Waters Prior to Vegetation Maintenance Activities The Authority will retain a wetland specialist to mark the boundaries of wetlands and non-wetland waters in vegetation maintenance areas using the verified aquatic resources delineation prepared for Project permitting. If wetlands or non-wetland waters occur in or within 50 feet of the vegetation maintenance areas, the wetlands or non-wetland waters will be fenced and avoided by all surface-disturbing maintenance activities. Alternatively, if wetlands and non-wetland waters cannot be completely avoided, the size of the affected area will be minimized to the full extent possible. The Authority will implement additional compensatory mitigation that is based on the same requirements as those specified in Mitigation Measures VEG-3.2 and VEG-3.3 for any remaining impacts on wetlands or non-wetland waters from vegetation maintenance activities.	**Impact VEG-3:** Substantial adverse effect (i.e., loss or removal) on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means	Operations	Contract requirements; compliance reporting; exclusion fencing; acquisition/ funding	At the completion of each monitoring period, if necessary	Authority; Contractor; Mitigation Manager; Qualified Biologist	Date: _____ Action Taken:
VEG-4.1: Avoid and Minimize Potential Adverse Effects on Oak Woodlands During Construction Where surveys determine that oak woodlands are present in or adjacent to an area where temporary ground-disturbing activities would take place, the Authority will avoid impacts on oak woodlands through the establishment of activity exclusion zones, within which no ground-disturbing activities will take place, including construction staging or other temporary work areas. Activity exclusion zones for oak woodlands will be established at the edges of oak woodland habitat that is within 50 feet of construction activity, the boundaries of which will be clearly marked with construction exclusion fencing. The establishment of activity exclusion zones will not be required if no construction-related disturbances will occur within 50 feet of an oak woodland. The following measures will also be implemented during construction of each Project component to protect and minimize effects on retained oak woodland trees that are adjacent to construction activities. • The potential for long-term loss of woody vegetation will be minimized by pruning vegetation rather than removing entire trees or shrubs in areas where complete removal is not required. Any trees or shrubs that need to be trimmed will be cut at least 1 foot above ground level to leave the root systems intact and allow for more rapid regeneration. Cutting will be limited to the minimum area necessary in the construction zone. To protect nesting birds, no pruning or removal of woody vegetation will be performed between February 1 and August 31 without preconstruction bird surveys	**Impact VEG-4:** Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance **Impact VEG-5:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan **Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Construction	Contract requirements; exclusion fencing	None	Authority; Contractor	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
conducted in accordance with CDFW and/or USFWS requirements, as described in Mitigation Measures WILD-1.22 and WILD-1.23, Conduct Vegetation Removal During the Non-Breeding Season of Nesting Migratory Birds and Conduct Preconstruction Surveys for Non-Raptor Nesting Migratory Birds and Implement Protective Measures if Found, respectively. • Operation or parking of vehicles, digging, trenching, slope cuts, soil compaction, grading, paving, or placement of fill will be prohibited within 6 feet of the driplines of retained oak woodland trees. • Any offsite drainage will be directed in such a way as to prevent drainage into adjacent oak woodlands.	**Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
VEG-4.2: Compensate for Adverse Effects on Oak Woodlands Per protection of oak trees in oak woodland in Policy CON 1-9 from the Colusa County General Plan, the Authority, in coordination with Colusa County, will develop a management plan for the protection and enhancement of oak woodlands to offset the loss of oak woodlands. This plan will mitigate the loss of oak woodlands using one or more of the following options: • Offsite deed restriction or conservation easement acquisition and/or acquisition in fee title by a land conservation organization for purposes of offsite oak woodland conservation; • In-lieu fee payment to the Oak Woodlands Conservation Fund; • Replacement planting onsite in an area subject to deed restriction or conservation easement; • Replacement planting off site in an area subject to a conservation easement; or • A combination of these options. The establishment of offsite conservation areas, payment of an in-lieu fee, or onsite or offsite planting areas (or a combination of the options) would be completed as agreed upon by the Authority and Colusa County. Prior to any activities that would result in permanent impacts on oak woodlands, any permanent impacts to oak woodlands will be mitigated by creating or preserving oak woodlands at a 1:1 ratio (1 acre restored or created for every 1 acre removed), or by an equivalent or greater requirement as determined through coordination with Colusa County during permit processing. The compensation acreage used for the ratio will be based on the area of impact as determined by surveys required under Mitigation Measure VEG-2.1. In accordance with requirements of the California Oak Woodland Conservation Act (California Public Resources Code 21083.4), replacement planting will not account for more than 50% of the oak woodland mitigation requirement. Therefore, up to half of the oak woodland impact mitigation requirement will consist of onsite or offsite replacement planting. The replacement planting area must be suitable for tree planting, not conflict with current or planned land uses, and be large enough to accommodate replacement plantings at a density equal to the density of the affected oak woodlands, up to a maximum density of 200 trees per acre. The remaining portion of the oak woodland impact mitigation requirement will be implemented in the form of an in-lieu fee payment to the state or to the county in which the oak woodland is affected.	**Impact VEG-4:** Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance **Impact VEG-5:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan **Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved	Construction; postconstruction	Contract requirements; compliance reporting; design; acquisition/ funding	Annually	Authority; Mitigation Manager	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
The Authority will prepare and implement a mitigation and monitoring plan for oak woodlands, with funding provided through an endowment. The plan will include requirements to implement appropriate management measures to maintain the oak woodlands. The Authority will monitor oak woodland plantings annually for at least 5 years to verify that the habitat quality is maintained and meets success criteria. Success criteria for oak woodland plantings may include criteria such as survival of plantings, tree vigor, tree diameter, and tree canopy size. Planting survival requirements will be 70% at the end of 5 years with at least fair or good vigor, or as required by Colusa County. The plan will also coordinate with the LMP and will determine and implement appropriate management measures to maintain the community and meet monitoring performance standards. If the survival and vigor criteria are not met in any monitoring year or at the end of the monitoring period, planting and monitoring will be repeated after mortality or insufficient growth causes have been identified and remedial measures have been implemented, and the monitoring period will be extended to account for the required number of monitoring years for all plantings. Mitigation sites will be protected in perpetuity in a conservation easement or through deed restriction.	local, regional, or state habitat conservation plan					
VEG-4.3: Establish Activity Exclusion Zones Around Blue Oak Woodlands Prior to Vegetation Maintenance Activities The Authority will retain qualified botanists to mark the locations of blue oak woodlands in vegetation maintenance areas using the results of the surveys conducted under Mitigation Measure VEG-2.1. If blue oak woodland occurs in or within 50 feet of the vegetation maintenance areas, the outer dripline of the woodland canopy will be fenced and avoided by all surface-disturbing maintenance activities. Alternatively, if blue oak woodlands cannot be completely avoided, the size of the affected area will be minimized to the full extent possible. If the remaining impacts on blue oak woodland by vegetation maintenance activities exceed 0.1 acre, the Authority will implement additional compensatory mitigation based on the same requirements as described in Mitigation Measure VEG-4.2.	**Impact VEG-4:** Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance	Operations	Contract requirements; compliance reporting; exclusion fencing; acquisition/ funding	Annually, if required	Authority; Qualified Botanists	Date: _____ Action Taken:
Wildlife Resources						
WILD-1.1: Assess Habitat Suitability and Survey Suitable Habitat for Vernal Pool Branchiopods Once property access is granted and prior to the start of construction, the Authority will retain qualified biologists to assess habitat suitability and conduct surveys for vernal pool branchiopods in the Project area and where modeled habitat is within 250 feet of the Project area and indirect effects may occur. Qualified biologists are defined as those who have a recovery permit from USFWS to conduct surveys for listed vernal pool branchiopods. The surveys will be conducted in accordance with the *Survey Guidelines for the Listed Large Branchiopods*, which recommend surveys at 14-day intervals after initial inundation of habitat until the habitat dries or it has been inundated for a minimum of 90 consecutive days (U.S. Fish and Wildlife Service 2015b). Surveys in accordance with the guidelines take a minimum of 1 year to complete and will be initiated early enough to allow completion before the start of construction. The biologists will submit the results of the surveys in a report to USFWS, per the requirements of the biologists' recovery permits.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources	Preconstruction	Compliance reporting; surveying	Following completion of survey	Authority; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
	Impact WILD-4: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
WILD-1.2: Avoid and Minimize Potential Effects on Vernal Pool Branchiopods and Western Spadefoot The following steps will be taken to avoid or minimize potential effects on vernal pool branchiopods and western spadefoot. • Ground disturbance within 250 feet of occupied habitat or suitable habitat that has not been surveyed that would not be directly affected will be avoided during the rainy season (approximately October 15 through May 15). Compensation will be provided for habitat occupied by listed vernal pool branchiopods that cannot be avoided during the rainy season (Mitigation Measure WILD-1.3). • If a portion of occupied vernal pool branchiopod or western spadefoot habitat will be filled (i.e., permanent impacts), the filling will be conducted when the habitat is completely dry. • If requested by USFWS, the top 3 to 4 inches of soil of pools occupied by listed or unlisted vernal pool branchiopods that would be destroyed or completely filled will be removed and stored in the Project area until ready for placement in created or restored habitat outside of the Project footprint. The topsoil will be covered with tarps or other appropriate material and orange construction barrier fencing or stakes and flagging will be installed around the covered topsoil. A qualified biologist will be on site to monitor the removal and covering of the topsoil during periodic monitoring visits to the Project area. The stored topsoil will be spread over the bottom of created or restored pools prior to the start of the winter rainy season.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Construction	Contract requirements; compliance reporting; monitoring; exclusion fencing; acquisition/ funding	As needed	Authority; Mitigation Manager; Qualified Biologist	Date: _____ Action Taken:
WILD-1.3: Compensate for Impacts on Occupied Vernal Pool Branchiopod Habitat The Authority will compensate for direct and indirect effects on occupied vernal pool branchiopod habitat through the purchase of mitigation credits at a USFWS-approved mitigation or conservation bank or through acquiring, creating, restoring and/or protecting habitat in perpetuity at a location approved by USFWS. Direct and indirect effects on occupied habitat will be mitigated by preserving occupied habitat at a 2:1 ratio (habitat preserved : habitat directly or indirectly affected) or by an equivalent or greater amount as determined during ESA Section 7 consultation with USFWS. In addition, direct effects on occupied habitat will be mitigated by creating or preserving occupied habitat at a 1:1 ratio (habitat created : habitat directly affected) or by an equivalent or greater amount as determined during ESA Section 7 consultation with USFWS. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority, Reclamation, and USFWS. USFWS-approved conservation banks have long-term adaptive management plans with performance standards. Therefore, if mitigation is through a USFWS-approved conservation bank, the bank's performance standards and success criteria will be applied.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites	Construction; postconstruction	Compliance reporting; surveying; acquisition/ funding	As needed	Authority; Mitigation Manager; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
If credits are not purchased at a USFWS-approved conservation bank, the Authority will implement standards for long-term management and protection of conservation areas. The Authority will work closely with USFWS during the planning and development of conservation areas. Once established, conservation areas will be surveyed by a USFWS-approved biologist a minimum of two times per year during the wet season (generally November through April). The biologist will survey for the presence of listed vernal pool branchiopods, evaluate the adequacy of site protection (e.g., fencing, signage) and weed control, assess potential threats to vernal pool branchiopods, and take photographs of the site. The biologist will also survey a set of reference pools to compare to the preserved and created/restored pools. The reference pools should be located in proximity to the conservation area and exhibit characteristics similar to the preserved and created/restored pools. For non-mitigation bank compensation, the performance standard for occupancy of the created/restored pools by listed vernal pool branchiopods is a minimum of 5% of the total number of created/restored pools supporting listed vernal pool branchiopods over a 10-year monitoring period. A pool must be occupied at least once during the 10-year monitoring period to be considered occupied. If the performance standard cannot be achieved, the Authority and Reclamation will consult with USFWS to determine if the standard is not realistic based on data from other vernal pool surveys in the Project region and/or implement an alternative compensatory mitigation approach. Working closely with USFWS during planning and development of the conservation area, monitoring the conservation area to ensure performance standards are achieved, and applying adaptive management actions when the performance standard is not achieved will ensure that the compensatory mitigation is effective and compensates for the loss of occupied habitat resulting from the Project.	**Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
WILD-1.4: Evaluate and Survey Potential Habitat for Antioch Dunes Anthicid and Sacramento Anthicid Beetles and Implement Protective Measures The Authority will retain a qualified entomologist (experienced with anthicid beetle identification and habitat suitability) to assess and survey the area of potentially suitable habitat for Antioch Dunes anthicid and Sacramento anthicid beetles prior to the start of construction of the Sacramento River discharge. If suitable habitat is not present or no Antioch Dunes anthicid and Sacramento anthicid beetles are observed and the entomologist concurs that no further surveys are needed, no further actions are required. If either beetle species is observed, the entomologist will relocate the beetles to suitable habitat outside of the impact area. The entomologist will report observations of either beetle species to CDFW and submit occurrence data to the CNDDB. The Authority will protect any suitable habitat in the vicinity of the work area that will not be affected with fencing or stakes and flagging. No construction related foot or vehicle traffic will be allowed in the fenced or flagged area. The Authority will remove fencing when construction of the Sacramento River discharge is complete.	Alternative 2 only: **Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved	Preconstruction; construction; postconstruction	Contract requirements; compliance reporting; surveying; remedial action; exclusion fencing	As needed	Authority; Contractor; Qualified Entomologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
	local, regional, or state habitat conservation plan					
WILD-1.5: Compensate for the Loss of Occupied Antioch Dunes Anthicid and Sacramento Anthicid Beetle Habitat The Authority will compensate for the permanent loss of occupied Antioch Dunes anthicid beetle and/or Sacramento anthicid beetle habitat by restoring disturbed habitat or preserving occupied habitat along the Sacramento River, preferably in the vicinity of the affected area, at a 1:1 ratio (acres restored or preserved : acres of permanent impact). The Authority will retain a qualified entomologist to assess habitat to be restored or preserved and provide guidance on habitat restoration. The Authority will retain a qualified entomologist to monitor the restored or preserved habitat annually for a minimum of 5 years. Monitoring will be conducted at the preserved area to ensure that habitat conditions are maintained at baseline conditions or better, that the habitat has not been degraded, and that it continues to be occupied by the beetle(s). If habitat is restored, the entomologist will conduct monitoring to ensure the restored habitat conditions are maintained, survey for beetle occupancy, and make adaptive management recommendations for habitat improvements. The Authority will submit monitoring reports that include habitat conditions, beetle occupancy information, and photographs to the CDFW annually. If either beetle is observed during habitat monitoring, the entomologist will submit occurrence information to the CNDDB.	Alternative 2 only: **Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Construction; postconstruction	Contract requirements; compliance reporting; surveying; monitoring; acquisition	Annually	Authority; Qualified Entomologist	Date: _____ Action Taken:
WILD-1.6: Conduct Surveys for Suitable Valley Elderberry Longhorn Beetle Habitat The Authority will retain qualified biologists or botanists (i.e., with elderberry/valley elderberry longhorn beetle experience) to conduct surveys to identify and map locations of elderberry shrubs in work areas and within 165 feet of the work areas. For shrubs located in non-riparian areas, elderberry stems will be examined for the presence of valley elderberry beetle exit holes. This information will be used to determine the amount of compensation required for the loss of elderberry shrubs in accordance with the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)* (U.S. Fish and Wildlife Service 2017a). The biologist will mark elderberry shrubs in or within 165 feet of work areas with flagging for future removal or protection.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat	Preconstruction; construction	Contract requirements; compliance reporting; surveying; exclusion fencing	As needed	Authority; Qualified Biologist/Botanist/ Entomologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
	Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
WILD-1.7: Fence Elderberry Shrubs to be Protected Elderberry shrubs in or within 165 feet of work areas that will not be removed will be protected during construction. If not already marked, a qualified biologist will flag the elderberry shrubs that will be protected during construction. The Authority's contractor will install orange construction barrier fencing or stakes and flagging at the edge of the buffer areas established for each shrub and signs indicating the potential for beetle presence and excluding any Project activity within the buffer areas will be posted prior to the start of work. The buffer area distances will be proposed by the biologist and approved by USFWS. No construction activities will be permitted in the buffer area other than those activities necessary to erect the fencing or stakes and flagging without written permission from USFWS. If orange construction barrier fencing is used, it will be placed such that there is at least a 1-foot gap between the ground and the bottom of the orange construction fencing to minimize the potential for snakes and other ground-dwelling animals to become caught in the fencing. Buffer areas around elderberry shrubs will be inspected periodically by a qualified biologist until Project construction is complete or until the fences or staking/flagging are removed, as approved by the biological monitor and the resident engineer. The Authority's contractor will be responsible for maintaining the buffer area fences around elderberry shrubs throughout construction and removing the fencing or staking and flagging when construction is complete. The biologist's fencing inspection reports will be provided to the Authority.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Preconstruction; construction; postconstruction	Contract requirements; compliance reporting; monitoring; exclusion fencing	As needed	Authority; Contractor; Qualified Biologist	Date: _____ Action Taken:
WILD-1.8: Transplant Permanently Affected Elderberry Shrubs and Compensate for Loss of Valley Elderberry Longhorn Beetle and its Habitat Before construction begins, the Authority will retain a qualified contractor to transplant elderberry shrubs that cannot be avoided to a USFWS-approved mitigation or conservation bank or other approved area in accordance with the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)* (U.S. Fish and Wildlife Service 2017a). Elderberry shrubs that cannot be avoided will be transplanted during the plant's dormant phase (November through the first 2 weeks of February). A qualified biological monitor will remain on site while the shrubs are being transplanted. Additionally, the Authority will compensate for permanent impacts on occupied riparian habitat by creating or preserving habitat at a 3:1 (acres of created or preserved habitat : acres of permanent impact) or by an equivalent or greater amount as determined in consultation with USFWS. The Authority will compensate for permanent impacts on occupied non-riparian habitat by creating or preserving habitat at a ratio of 1:1 for all acres that are permanently affected, or by transplanting affected elderberry shrubs containing valley elderberry longhorn beetle exit holes and providing compensation at a 1:1 ratio for the area of the affected shrubs. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority, Reclamation, and USFWS.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources	Preconstruction; construction; postconstruction	Contract requirements; compliance reporting; acquisition/ funding; remedial action; monitoring	As needed	Authority; Contractor; Mitigation Manager; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
USFWS-approved conservation banks have long-term adaptive management plans with performance standards. If credits are not purchased at a USFWS-approved conservation bank, the Authority will implement standards for long-term management and protection of conservation areas. The Authority will work closely with USFWS during the planning and development of preservation areas. Once established, preservation areas will be surveyed by a USFWS-approved biologist a minimum of two times per year between February 14 and June 30. The biologist will search for valley elderberry longhorn beetle exit holes, evaluate the adequacy of site protection (e.g., fencing, signage) and weed control, assess potential threats to the beetle, take photographs of the site, and evaluate the performance standards below. 1. A minimum of 60% of the initial elderberry and native associate plantings must survive over the first 5 years after the site is established. As much as feasible, elderberry shrubs should be well distributed throughout the site; however, in some instances underlying geologic or hydrologic issues might preclude elderberry establishment over some portion of the site. If significant die-back occurs within the first 3 years, replanting may be used to achieve the 60% performance standard. However, replanting efforts should be concentrated in areas containing surviving elderberry plants. In some instances, overplanting may be used to offset the selection of a less suitable site. 2. After 5 years, the site must show signs of recruitment. A successful site should have evidence of new growth on existing plantings, as well as natural recruitment of elderberry. New growth is characterized as stems 1.2 inches in diameter. If no signs of recruitment are observed, the Authority and Reclamation will discuss possible remedies with the USFWS. Following USFWS's interim standards for the long-term management and protection of mitigation sites, working closely with USFWS during planning and development of the preservation area, monitoring the preservation area to ensure performance standards are achieved, and replanting elderberries when the performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the losses resulting from the Project.	**Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
WILD-1.9: Protect Special-Status Invertebrates and Their Host and Food Plants from Herbicide and Pesticide Use To minimize impacts on valley elderberry longhorn beetle, monarch butterfly, Crotch bumble bee, and western bumble bee from herbicide drift, herbicide application will be limited to areas immediately adjacent to Project facilities and will be conducted using handheld equipment. Herbicides and pesticides will be applied only by applicators with current licenses and/or certifications from the California Department of Pesticide Regulation. The applicator will follow the herbicide label directions. Spray nozzles will be kept within 24 inches of target vegetation during spraying. The most current information on herbicide toxicity on wildlife will be used to inform future decisions about herbicide and pesticide use during operations.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources	Operations	Compliance requirements	None	Authority	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
	Impact WILD-4: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
WILD-1.10: Assess Habitat Suitability and Survey for Presence of Monarch Butterfly Nectar and Larval Host Plants No more than 3 years prior to the start of ground-disturbing activities botanists will identify and map locations of milkweed and/or nectar plants using information from https://xerces.org/sites/default/files/publications/19-046_01_MonarchNectarPlants_California_web-3pg.pdf or the most up-to-date information. During special-status plant surveys (Mitigation Measure VEG-1.1), botanists will map actual presence of these plants in areas that would be permanently or temporarily affected by construction.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Preconstruction; construction	Compliance reporting; surveying	Following completion of assessment	Authority; Qualified Biologist	Date: _____ Action Taken:
WILD-1.11: Compensate for Loss of Monarch Butterfly Nectar and Larval Host Plants The Authority will compensate for permanent loss of suitable monarch butterfly habitat (as identified through implementation of Mitigation Measure WILD-1.10) by including native milkweed and nectar plants for monarch butterfly in onsite and/or offsite mitigation plans for sensitive natural communities (Mitigation Measure VEG-2.2). The Authority will compensate for permanent loss of suitable monarch butterfly habitat by planting native milkweed and nectar plants at suitable onsite and/or offsite restoration or preservation areas at a ratio of 1:1 (acres lost : acres planted). The offsite restoration areas would provide suitable habitat constituents for monarch butterfly (e.g., roosting habitat, nectar plants, native milkweed) and will be preserved through a conservation easement. The establishment of restoration areas would be completed as agreed upon by the Authority, USFWS, and CDFW. The Authority will compensate for temporary loss of suitable monarch butterfly habitat by including native milkweed and nectar plants in planting palettes for onsite restoration of sensitive natural communities (Mitigation Measure VEG-2.2) or temporarily disturbed grassland, and/or at offsite mitigation areas.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites	Construction; postconstruction	Compliance reporting; surveys; monitoring; acquisition/ funding	Annually	Authority; Qualified Botanist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
The Authority will utilize monarch butterfly information from The Xerces Society to ensure that mitigation areas provide the suitable habitat constituents described above for monarch butterfly. The Authority will conduct baseline surveys of each onsite and offsite mitigation area to determine the baseline habitat conditions for monarch butterfly prior to implementing habitat improvements (i.e., planting), if applicable. Each area will be surveyed by qualified botanists to determine the extent of naturally occurring milkweed and nectar plants. After onsite restoration is completed at each mitigation area, qualified botanists will conduct surveys during 3 of the next 5 years and evaluate each site to determine if the area and condition of milkweed and nectar plants achieve the performance standards of being at or above baseline conditions. Methods and results of surveys, and recommendations for adaptive management actions as needed, will be included in annual monitoring reports for each mitigation area (if there is more than one) and will be submitted to USFWS and CDFW. Using the latest information from The Xerces Society during planning and development of the mitigation areas, monitoring the mitigation areas to ensure performance standards are achieved and implementing adaptive management options when the performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the losses resulting from the Project.	**Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
WILD-1.12: Assess Habitat Suitability and Survey for Presence of Crotch Bumble Bee and Western Bumble Bee Food Plants No more than 3 years prior to the start of ground-disturbing activities, botanists will identify and map locations of patches of native plants in the taxa most commonly associated with Crotch bumble bee and western bumble bee that would be permanently or temporarily affected by construction during special-status plant surveys (Mitigation Measure VEG-1.1). Native plants of the following genera are appropriate for Crotch bumble bee: *Antirrhinum, Asclepias, Phacelia, Chaenactis, Clarkia, Dendromecon, Eriogonum, Eschscholzia, Lupinus, Medicago, and Salvia. Native plants of the following taxa are appropriate for western bumble bee: Asteraceae, Ceanothus, Centaurea, Chrysothamnus, Cirsium, Eriogonum, Geranium, Grindelia, Lupinus, Melilotus, Monardella, Rubus, Penstemon, Solidago*, and *Trifolium*.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Preconstruction; construction	Compliance reporting; surveys; monitoring	Following completion of assessment	Authority; Qualified Botanist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
WILD-1.13: Compensate for Loss of Crotch Bumble Bee and Western Bumble Bee Habitat The Authority will compensate for permanent loss of suitable bumble bee foraging habitat (as identified through implementation of Mitigation Measure WILD-1.12) by including suitable native nectar- and pollen-producing plants commonly used as food sources by Crotch and western bumble bees in onsite and/or offsite mitigation plans for sensitive natural communities (Mitigation Measure VEG-2.2). The Authority will compensate for permanent loss of suitable Crotch and western bumble bee habitat by planting native suitable native nectar- and pollen-producing plants at suitable onsite and/or offsite restoration or preservation areas at a ratio of 1:1 (acres lost : acres planted The Authority will compensate for temporary loss of suitable Crotch and western bumble bee habitat by including native bumble bee food plants in planting palettes for onsite restoration of sensitive natural communities (Mitigation Measure VEG-2.2) or temporarily disturbed grassland and/or at offsite mitigation areas. Native plants of the following genera are appropriate for Crotch bumble bee: *Antirrhinum, Asclepias, Phacelia, Chaenactis, Clarkia, Dendromecon, Eriogonum, Eschscholzia, Lupinus, Medicago, and Salvia. Native plants of the following taxa are appropriate for western bumble bee: Asteraceae, Ceanothus, Centaurea, Chrysothamnus, Cirsium, Eriogonum, Geranium, Grindelia, Lupinus, Melilotus, Monardella, Rubus, Penstemon, Solidago*, and *Trifolium*. In mitigation areas where these plant genera are present, habitat will be preserved. In mitigation areas where these plant genera are absent, these plant genera will be seeded or planted, as appropriate based on site conditions. Mitigation areas will be placed under a conservation easement. The Authority will utilize bumble bee conservation information from The Xerces Society to ensure that mitigation areas provide the suitable native nectar- and pollen-producing plants described above for Crotch bumble bee and western bumble bee. The Authority will conduct baseline surveys of each onsite and offsite mitigation area to determine the baseline habitat conditions for Crotch bumble bee and western bumble bee prior to implementing habitat improvements (i.e., planting), if applicable. Each area will be surveyed by qualified botanists to determine the extent of naturally occurring native nectar- and pollen-producing plants. After onsite restoration is completed at each mitigation area, qualified botanists will conduct surveys during 3 of the next 5 years and evaluate each site to determine if the area and condition of native nectar- and pollen-producing plants achieve the performance standards of being at or above baseline conditions. Methods and results of surveys and recommendations for adaptive management actions as needed will be included in annual monitoring reports for each mitigation area (if there is more than one) and will be submitted to USFWS and CDFW. Using the latest information from The Xerces Society during planning and development of the mitigation area, monitoring the mitigation area to ensure performance standards are achieved, and implementing adaptive management options when the performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the losses resulting from the Project.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Construction; postconstruction	Contract requirements; compliance reporting; acquisition/ funding surveying; monitoring	Annually	Authority; Mitigation Manager; Qualified Botanist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
WILD-1.14: Assess Habitat Suitability and Survey Suitable Habitat for Western Spadefoot, California Red-legged Frog, and Western Pond Turtle Once property access is granted and prior to the start of construction, the Authority will retain qualified biologists to assess habitat suitability and conduct surveys for western spadefoot, California red-legged frog, and western pond turtle in the Project area and where potentially suitable habitat is within 300 feet of the Project area where impacts from operation may occur. Qualified biologists are defined as those who have experience evaluating habitat and conducting focused surveys for western spadefoot, California red-legged frog, and western pond turtle. The surveys will be conducted in accordance with the following conditions. • Western spadefoot habitat assessments and surveys of seasonal wetland habitat will be conducted during vernal pool branchiopod habitat assessments and surveys (Mitigation Measure WILD-1.1). • Habitat assessment and surveys for California red-legged frog will be conducted in accordance with the *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog*, which provides direction for site assessments and recommend up to eight surveys that are conducted over a period of 9–12 months (U.S. Fish and Wildlife Service 2005b). Habitat assessment and surveys for western pond turtle and western spadefoot (intermittent streams) will be conducted concurrently with the California red-legged frog surveys. The qualified biologists will prepare and submit reports describing the methods and results of the habitat assessments and surveys to the Authority, CDFW, and USFWS.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Preconstruction	Compliance reporting; surveying	As needed	Authority; Qualified Biologist	Date: _____ Action Taken:
WILD-1.15: Design and Construct Wildlife Crossings for New Roadways at Suitable Locations The Authority will retain a qualified wildlife biologist with expertise in wildlife crossing use and design to conduct a wildlife connectivity and crossing assessment and to determine where suitable wildlife crossing structures would be most effective along North Road, Sites Lodoga Road, South Road, and other roads as determined by the Authority and the wildlife biologist, in coordination with CDFW. Wildlife crossing structures will be designed and constructed at suitable locations to provide habitat connectivity and safe movement for an array of wildlife likely to use the Project area. To ensure that the assessment is inclusive of a variety of species, a wildlife crossing species guild (WCG) approach will be used as detailed in Kintsch et al. (2015). This WCG approach will include ecological and behavioral needs of a variety of species inhabiting the Project area/region. The Authority will also use information from other documents (e.g., Clevenger and Huijser 2011; Langton and Clevenger 2020; Ontario Ministry of Natural Resources and Forestry 2016) when planning and designing corridors for amphibians and reptiles. Wildlife crossing locations and design will be determined based on WCG species inhabiting the Project area/region, habitat features, topography, existing land ownership and use, and the future state of the study area (as shown or described in planning documents) through a wildlife connectivity and crossing assessment. Where possible, wildlife crossings will be located where there is compatible land ownership and use and opportunities for habitat preservation on either side of the wildlife crossing. Prior to final roadway design for the Project, a wildlife connectivity assessment will be conducted to assess existing and expected wildlife movement and habitat connectivity conditions, evaluate Project-related impacts on connectivity and species movement, and	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved	Preconstruction	Contract requirements; compliance reporting; surveying; design	As needed	Authority; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
identify appropriate wildlife crossing locations and designs. Other connectivity enhancement strategies such as land acquisition, retrofit of existing structures, habitat enhancement, and traffic control will be considered as part of the connectivity assessment to maintain and enhance connectivity in the area surrounding the reservoir. The assessment will include a landscape-scale and local (Project)-scale assessments. The assessment may use database research, field surveys, photo monitoring, GIS modeling, or a combination thereof to identify existing wildlife species in the Project area, determine how connectivity and species movement may be affected by the Project, and determine the appropriate locations and designs of wildlife crossings. Wildlife crossings will be located at appropriate frequencies within contiguous suitable habitat and in other locations where crossing structures are warranted (e.g., riparian/riverine crossings) to accommodate a range of species expected to move through the area. For example, for small-bodied animals like amphibians, reptiles, and small mammals, where species habitat and movement needs are present, wildlife crossings may be located no more than 1,000 feet apart or as determined appropriate for specific target species. For medium- and large-bodied animals, such as bobcats, coyotes, tule elk, and deer, wildlife crossings may be located no more than 1 mile apart. Wildlife crossings will be located where there is suitable habitat on both sides of the roadway. If feasible and depending on the size and ecological and behavioral needs of target species, vegetative cover will be provided near entrances to give animals security and reduce negative effects such as lights and noise associated with the road. Suitable habitat and/or cover will also be provided in the crossing structure wherever feasible. This may be achieved by designing culverts or culvert-like structures to be high enough to allow light for plants to grow, installing rubble piles, stumps, or branches to provide cover for smaller animals in the crossings, and leaving earthen bottoms in crossing structures. When possible, wildlife crossings will be located away from areas used or dominated by humans, including recreation areas, trails, and lighted areas to avoid reduced wildlife crossing movement function and to prevent human-wildlife conflict. Wildlife crossings will be designed to optimally facilitate movement for multiple WCG species. When possible, proposed culverts will be constructed to function as multi-use culverts, which are designed to ensure that they facilitate wildlife movement. Multi-use culvert crossings will be designed to be optimally accessible to wildlife movement and will also be designed to require minimal maintenance. Wildlife fencing will be installed to direct wildlife toward crossings and prevent species' access to roadways and other areas they must be excluded from. Escape opportunities such as jump-out ramps may be provided as appropriate in conjunction with fencing to allow animals to escape from the roadway.	local, regional, or state habitat conservation plan					
WILD-1.16: Monitor and Maintain Wildlife Crossings Because many wildlife species will avoid or be obstructed by structures with a substantial amount of debris or blockages, the Authority will require a qualified wildlife biologist to regularly monitor crossings and culverts and clear them or oversee the clearing of debris and other blockages. Cameras, roadkill surveys, or other methods will be used to monitor wildlife crossing use. Vegetative cover will be maintained near crossing entrances to provide cover and reduce negative effects such as artificial lighting and noise associated with the road. A monitoring and maintenance plan for wildlife crossings will be developed during design of wildlife crossings (Mitigation Measure WILD-1.15). Plan components will include but are not limited to specifications and methods for documenting postconstruction conditions, the approach for and frequency of monitoring and maintenance, performance	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident	Operations	Contract requirements; monitoring; design	As needed	Authority; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
standards, reporting requirements, and adaptive management actions to ensure long-term success of crossing structure function.	or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
WILD-1.17: Implement California Red-legged Frog Protective Measures If California red-legged frog is found in the Project area either incidentally or during surveys conducted in accordance with Mitigation Measure WILD-1.14, the Authority will implement the following protective measures. These measures will apply to upland habitat (within 300 feet) and dispersal habitat (within 1 mile) of aquatic habitats that are found to be occupied during surveys. • Occupied aquatic habitat will not be removed or filled until California red-legged frogs have been relocated to suitable habitat outside of disturbance areas or other actions that will avoid mortality of individuals or effects on the population as determined during ESA Section 7 consultation with USFWS. • Occupied aquatic habitat that will not be removed or disturbed will be protected with exclusion fencing along the edge of the work area a minimum of 200 feet from the aquatic habitat. The fencing will be installed to prevent individuals from entering the work area but will not completely enclose the pond or exclude dispersal to and from the pond. The USFWS-approved biologist will assist with preparing the fence plans and will be present during installation. The fencing will be installed to a depth of 6 inches and extended at least 30 inches above grade. The contractor will avoid placing fencing on top of ground squirrel burrows. The fence will be pulled taut at each support to prevent folds or sagging. A USFWS-approved biologist will also walk all fence lines daily to look for individual frogs stranded along fence lines. Fencing will be inspected and maintained in good condition throughout work and will be removed after work is complete and all construction equipment is removed from the work area. • A USFWS-approved biologist will be present during all ground-disturbing work in California red-legged frog upland and dispersal habitats during the rainy season (generally October 15 to May 1) when frogs are dispersing. The biologist will survey work areas for frogs and for rodent burrows in potential upland habitat immediately prior to the start of any ground-disturbing work (including moving equipment into the area). If a California red-legged frog is found, it will be moved out of the work area in accordance with the USFWS biological opinion for the Project. Disturbance of suitable habitat will be minimized to the maximum extent feasible. • In the event a California red-legged frog is trapped, construction within 300 feet of the location will cease until the individual has been removed from the location per a USFWS-approved relocation plan. The plan will include trapping and relocation	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Construction	Contract requirements; compliance reporting; exclusion fencing, remedial action	As needed	Authority; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
methods, relocation sites, and post-relocation monitoring. Only USFWS-approved biologists will be allowed to relocate listed species to outside of the construction area. • If ground disturbance or vegetation removal will occur in suitable upland or dispersal habitats during or 24 hours following a rain event between October 15 and May 1, a USFWS-approved biologist will be onsite to monitor the work and ensure that the exclusion fencing is intact. Following a rain event, no work will proceed until a USFWS-approved biologist has inspected the work areas and verified that there are no California red-legged frogs present. A rain event is to be considered precipitation of at least 0.25 inch within a 24-hour period. • Activities within suitable upland/dispersal habitat will cease no less than 30 minutes before sunset and will not begin again prior to no less than 30 minutes after sunrise. Except when necessary for driver or pedestrian safety artificial lighting at a worksite will be prohibited during the hours of darkness when working in suitable California red-legged frog upland/dispersal habitat. • For any night work, the driving path and work area will be surveyed for California red-legged frog immediately prior to work and nighttime work will be monitored by a USFWS-approved biologist. • If work must be conducted at night, all lighting will be directed away and shielded from California red-legged frog habitat outside the work area to minimize light spillover to the greatest extent possible.						
WILD-1.18: Compensate for Permanent and Temporary Losses of Occupied California Red-legged Frog Aquatic and Upland Habitats The Authority will compensate for the permanent and temporary losses of occupied California red-legged frog aquatic habitat and associated upland habitat through the purchase of mitigation credits at a USFWS-approved mitigation or conservation bank or through acquiring or preserving and protecting habitat in perpetuity at a location approved by USFWS. Permanent impacts on habitat will be mitigated by restoring or preserving habitat at a 2:1 ratio (habitat restored or preserved : habitat affected) or by an equivalent or greater amount as determined during Section 7 ESA consultation with USFWS. Temporary impacts on habitat will be mitigated by restoring or preserving habitat at a 1:1 ratio (habitat restored or preserved : habitat affected), or by an equivalent or greater amount as determined during Section 7 ESA consultation with USFWS for the Project. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority, Reclamation, and USFWS. USFWS-approved conservation banks have long-term adaptive management plans with performance standards. Therefore, if mitigation occurs through a USFWS-approved conservation bank, the bank's performance standards and success criteria will be applied. If credits are not purchased at a USFWS-approved conservation bank, the Authority will implement standards for long-term management and protection of conservation areas. The Authority will work closely with USFWS during the planning and development of conservation areas. Conservation areas will have suitable aquatic and upland habitat. Once established, conservation areas will be surveyed by a USFWS-approved biologist a minimum of two times between January 1 and June 30. The biologist will survey aquatic habitat for California red-legged frog, evaluate the adequacy of site protection (e.g., fencing, signage), assess potential threats to the frog, and take photographs of the site. The biologist will also survey a set of reference ponds or other aquatic habitat known to be occupied by California red-legged frog to compare to the preserved and created/restored aquatic habitat. The	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Construction; postconstruction	Contract requirements; compliance reporting; acquisition/ funding	As needed	Authority; Mitigation Manager	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
reference ponds/habitat should be located within proximity to the conservation area and exhibit characteristics similar to the preserved and created/restored habitat. Performance standards for management of non-mitigation bank ponds are as follows: (1) > 10% of the shoreline is vegetated; (2) 30%–60% of the pond has emergent vegetation; and (3) 40%–70% of the pond is open water. Performance standards are not included for California red-legged frog occupancy since the objective of the Project mitigation is to establish compensatory suitable habitat rather than to ensure occupancy. Therefore, the successful establishment of aquatic and upland habitats based on the floristic, physical, and hydrologic components of the habitats will be used to evaluate the success of offsite California red-legged frog habitat compensatory mitigation. If the performance standards cannot be achieved, the Authority and Reclamation will consult with USFWS to implement an alternative compensatory mitigation approach. Working closely with USFWS during planning and development of the conservation area and monitoring the conservation area to ensure performance standards are achieved and adaptive management actions are applied when the performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the losses resulting from the Project.						
WILD-1.19: Conduct Preconstruction Surveys for Western Pond Turtle and Monitor Initial In-Water Work The Authority will retain qualified biologists (i.e., experienced in the identification of and knowledge of the life history and habitats of western pond turtle) to conduct preconstruction surveys within 24 hours of the start of activities that disturb occupied or suitable western pond turtle aquatic habitat. The biologist will survey the aquatic habitat and adjacent marsh, riparian, and grassland habitat in the construction area. If in-water work does not start immediately, the biologist will return to the construction site immediately prior to the start of in-water work to conduct another preconstruction survey. The biologist will remain onsite until initial in-water work is complete. If a turtle becomes trapped during initial in-water work, a biologist who is CDFW-approved to capture and relocate turtles during construction of the Project will relocate the individual to suitable aquatic habitat upstream or downstream of the construction area. The construction crew will be instructed to notify the crew foreman who will contact the biologist if a turtle is found trapped in the construction area. Work in the area where the turtle is trapped will stop until the biologist arrives and removes and relocates the turtle. The biologist will report their activities to CDFW within 24 hours of relocating any turtle.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Preconstruction; construction	Contract requirements; compliance reporting; surveying; monitoring; remedial action	Within 24 hours of relocating any turtle	Authority; Qualified Biologist	Date: _____ Action Taken:
WILD-1.20: Implement Protective Measures for Giant Gartersnake The Authority will implement the following protective measures when working in or near giant gartersnake habitat. • When possible, all construction activity in suitable giant gartersnake aquatic habitat, and upland habitat within 200 feet of suitable aquatic habitat, will be conducted during the snake's active period (between May 1 and October 1). For work that cannot be	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California	Preconstruction; construction	Contract requirements; compliance reporting; surveying; monitoring; exclusion	As needed	Authority; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
conducted between May 1 and October 1, additional protective measures, such as installing exclusion fencing or additional biological monitoring, or other measures determined during consultation with USFWS and CDFW, will be implemented. • Any dewatered habitat will remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat. • The movement of heavy equipment within 200 feet of the banks of potential giant gartersnake aquatic habitat will be confined to designated haul routes to minimize habitat disturbance. • Vegetation clearing within 200 feet of the banks of suitable giant gartersnake aquatic habitat will be limited to the minimum area necessary. Avoided giant gartersnake habitat in or adjacent to the Project area will be flagged and designated as an activity exclusion zone, to be avoided by all construction personnel. • To reduce the likelihood of snakes entering the construction area, exclusion fencing will be installed along the edge of the construction area that is within 200 feet of suitable aquatic habitat. The exclusion fencing will be installed during the active period for giant gartersnakes (May 1 to October 1) to reduce the potential for injury and mortality during this activity. The exclusion fencing will consist of 3-foot-tall silt fencing buried 4 to 6 inches below ground level. • A USFWS- and CDFW-approved biologist will conduct a preconstruction survey of work areas within 200 feet of suitable giant gartersnake habitat no more than 24 hours before the start of work in that area. • Prior to construction activities each morning, construction personnel will inspect exclusion and orange barrier fencing to ensure they are both in good working order. If any snakes are observed in the construction area during this inspection or at any other time during construction, the USFWS- and CDFW-approved biologist will be contacted to survey the site for snakes. The work area will be re-inspected and surveyed whenever a lapse in construction activity of 2 weeks or more has occurred. If a snake (believed to be a giant gartersnake) is encountered during construction, activities will cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. • The Authority will prepare a giant gartersnake relocation plan for review and approval by USFWS and CDFW prior to Project implementation. The plan will include trapping and relocation methods, relocation sites, and post-relocation monitoring. If a giant gartersnake becomes trapped, construction will cease until the individual has been relocated to an appropriate location as described in the approved relocation plan. Only USFWS and CDFW-approved biologists will conduct surveys and move listed species in accordance with the approved relocation plan.	Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan		fencing; remedial action; design			
WILD-1.21: Compensate for Permanent and Temporary Losses of Giant Gartersnake Aquatic and Upland Habitats The Authority will compensate for the permanent and temporary losses of suitable giant gartersnake aquatic habitat and associated upland habitat through the purchase of mitigation credits at a USFWS- and CDFW-approved mitigation or conservation bank or through acquiring and protecting habitat in perpetuity at a location approved by USFWS and CDFW. Permanent impacts on habitat will be mitigated by restoring or preserving habitat at a 3:1 ratio (habitat restored or preserved: habitat affected) or by an equivalent or greater amount as determined through consultation with USFWS or CDFW. Temporary impacts on habitat will be mitigated by restoring or preserving habitat at a 1:1 ratio (habitat	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Construction; postconstruction	Contract requirements; compliance reporting; acquisition/ funding	As needed	Authority; Mitigation Manager; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
restored or preserved : habitat affected), or by an equivalent or greater amount as determined during consultation with USFWS or CDFW. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority, Reclamation, USFWS, and CDFW. USFWS and CDFW-approved conservation/mitigation banks have long-term adaptive management plans with performance standards. If mitigation occurs through a USFWS and CDFW-approved conservation/ mitigation bank, the bank's performance standards and success criteria will be applied. If credits are not purchased at a USFWS and CDFW-approved conservation bank, the Authority will implement standards for long-term management and protection of conservation areas. The Authority will work closely with USFWS and CDFW during the planning and development of conservation areas. Conservation areas will have suitable aquatic and upland habitat. Once established, conservation areas will be surveyed annually by a USFWS- and CDFW- approved biologist. The biologist will assess the aquatic and upland habitat conditions, evaluate the adequacy of site protection (e.g., fencing, signage), assess potential threats to giant gartersnake, and take photographs of the site. The biologist will prepare monitoring reports that will include methods and results of monitoring and recommendations for adaptive management actions as needed. Performance standards for non-mitigation bank aquatic and upland habitat compensation will provide the basis for monitoring parameters and will help determine the need for possible remedial actions after Project implementation. General performance standards for management of non-mitigation bank giant gartersnake habitat are as follows: (1) protected habitat is supplied with a reliable source of clean water from March through November or at a minimum, through the critical active summer months; (2) a sufficient amount of upland habitat is adjacent to aquatic habitat and is not inundated during the active season (May 1 through October 1); (3) the site provides available and abundant bankside vegetative cover (i.e., tule, cattail) for cover; and (4) permanent shelter, such as bankside cracks or crevices, holes, or small mammal burrows and upland winter refugia (areas that do not flood) must be present and maintained. During planning and development of the mitigation area, additional or more refined performance standards may be developed in coordination with USFWS and CDFW. Performance standards are not included for giant gartersnake occupancy since the objective of the Project mitigation is to establish compensatory suitable habitat rather than to ensure occupancy. Therefore, the successful establishment of aquatic and upland habitats based on the floristic, physical, and hydrologic components of the habitats will be used to evaluate the success of offsite giant gartersnake habitat compensatory mitigation. Working closely with USFWS and CDFW during planning and development of the conservation area, monitoring the conservation area to ensure performance standards are achieved, and applying adaptive management actions when the performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the losses resulting from the Project.	**Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
WILD-1.22: Conduct Vegetation Removal During the Non-Breeding Season of Nesting Migratory Birds The Authority will, to the maximum extent feasible, remove trees, shrubs, and herbaceous vegetation during the non-breeding season for most migratory birds (generally between September 1 and January 31) to remove nesting substrate and avoid potential delays in construction caused by the presence of nesting birds. If vegetation cannot be removed between September 1 and January 31, or if ground cover re-establishes in areas where	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California	Preconstruction; construction	Contract requirements; compliance reporting; surveying	None	Authority; Contractor	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
vegetation has been removed, the affected area will be surveyed for nesting birds, as discussed in Mitigation Measure WILD-1.23.	Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
WILD-1.23: Conduct Preconstruction Surveys for Non-Raptor Nesting Migratory Birds and Implement Protective Measures if Found For special-status species where survey protocols have been established by CDFW, USFWS, or technical advisory committees, those survey protocols will supersede this measure (i.e., Mitigation Measures WILD-1.24, WILD-1.28, and WILD-1.29 for burrowing owl, golden eagle/bald eagle, and Swainson's hawk/white-tailed kite). The Authority will retain qualified wildlife biologists with knowledge of the relevant species to conduct non-raptor nesting bird surveys no more than 14 days prior to the start of construction. Where suitable habitat is present to support bank swallow, yellow-breasted chat, tricolored blackbird, yellow warbler, and song sparrow (Modesto population), wildlife biologists will thoroughly survey habitat and listen for calls and songs of these species. Surveys for non-raptor nesting migratory birds will include examining all potential nesting habitat in and within 50 feet of work areas on foot and/or using binoculars. Surveys for nesting raptors will be conducted during Swainson's hawk/white-tailed kite surveys. If no active nests are detected during these surveys, no additional measures are required. During all nesting bird surveys, the biologist will document any special-status bird species detected in the survey area. If an active nest is found in the survey area, a no-disturbance buffer will be established around the nest site to avoid disturbance or destruction of the site until the end of the breeding season (August 31) or until after a qualified wildlife biologist determines that the young have fledged and moved out of the Project area (this date varies by species). The extent of these buffers will be determined by the biologist in coordination with USFWS and CDFW and will depend on the species, level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. If it is determined that the no-disturbance buffer cannot be maintained, the Authority and the qualified biologist will consult with USFWS and CDFW about implementing a reduced buffer but requiring full-time nest monitoring by a qualified biologist to watch for signs of stress. If behaviors indicating stress or potential nest abandonment (e.g., visible or audible agitation, leaving the nest at an unusual time or for an unusual length of time), the biologist will have the authority to stop work until the bird has returned to the nest or otherwise shows signs of recovery from the stress.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Preconstruction; construction	Contract requirements; compliance reporting; surveying; monitoring	As needed	Authority; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
For federally and state-listed species, the above protective measures will be implemented, and the Authority will contact CDFW and USFWS to discuss the need for take authorization if the Authority does not already have such authorization.						
WILD-1.24: Conduct Surveys for Western Burrowing Owl Prior to Construction and Implement Avoidance and Minimization Measures if Found The Authority will retain qualified biologists (experienced at identification of burrowing owls and their habitat) to conduct burrowing owl surveys in accordance with CDFW's *2012 Staff Report on Burrowing Owl Mitigation* (2012 Staff Report) (California Department of Fish and Game 2012). Biologists will conduct four surveys during the breeding season as follows: (1) one survey between February 15 and April 15, and (2) a minimum of three surveys at least 3 weeks apart between April 15 and July 15, with at least one survey after June 15. Biologists will also conduct four surveys spread evenly throughout the non-breeding season (September 1 to January 31). A report describing the methods and results of the survey will be submitted to CDFW within 30 days of completing the surveys. The Authority will retain qualified biologists to conduct preconstruction take avoidance surveys for active burrows according to methodology in the 2012 Staff Report. If burrowing owls are found during any of the surveys, the Authority will implement Mitigation Measure WILD-1.25, which requires habitat to be replaced at a conservation area before permanent impacts occur. Because ample lead time is necessary to acquire and protect replacement habitat, these efforts should begin as soon as possible after presence of burrowing owls is determined. Regardless of results from the surveys described above, if suitable habitat is present in the Project area, take avoidance (preconstruction) surveys will be conducted in the Project area (i.e., the area of ground disturbance and surrounding 500 feet) no less than 14 days prior to and 24 hours before initiating ground-disturbing activities (i.e., two surveys). If suitable habitat within 500 feet of ground disturbance is not accessible because of landowner restrictions, then the survey will extend to the edge of where access is allowed. Because burrowing owls may re-colonize a site after a few days, subsequent surveys will be conducted if more than 48 hours pass between Project activities. If no burrowing owls are found, no further mitigation is required. If burrowing owls are found, the Authority will implement the following measures summarized from the 2012 Staff Report. • Occupied burrows will not be disturbed during the breeding season (February 1–August 31). • Depending on the time of year and level of disturbance, a 164-foot to 1,640-foot-wide buffer area will be established around occupied burrows. No construction will be authorized within the buffer unless a qualified biologist determines through non-invasive methods that egg laying and incubation have not begun or that juveniles are foraging independently and are capable of independent survival. • To the maximum extent possible, burrows occupied during the non-breeding season by migratory or non-migratory resident burrowing owls will be avoided. • To the maximum extent possible, destruction of unoccupied burrows in temporary impact areas will be avoided, and visible markers will be placed near burrows to ensure they are not collapsed. • Occupied burrows that cannot be avoided will have exclusion devices installed and be collapsed. Burrow exclusion will be conducted only by qualified biologists during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty by site surveillance and/or scoping.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Preconstruction; construction	Contract requirements; compliance reporting; surveying; monitoring; remedial action	Within 30 days of completing the surveys	Authority; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
• Qualified biologists will conduct additional take avoidance surveys, as described above. • Qualified biologists will monitor the Project site for burrowing owls during Project construction activities. • Impacts on burrowing owls and their habitat will be minimized by using buffer areas, visual screens, and other measures during Project construction activities. Recommended buffer distances in the 2012 Staff Report will be used or site-specific buffers and visual screens will be determined through information collected during site-specific monitoring and consultation with CDFW.						
WILD-1.25: Restore Temporarily Disturbed Habitat and Compensate for the Permanent Loss of Occupied Burrowing Owl Habitat If burrowing owls have been documented to occupy burrows at the Project site in the last 3 years, CDFW considers the site occupied and mitigation is required (California Department of Fish and Game 2012:6). The Authority will restore temporarily disturbed areas to pre-Project conditions. The Authority will mitigate for permanent impacts on occupied burrowing owl habitat in accordance with the 2012 Staff Report Permanent impacts will be mitigated by creating or preserving habitat at a 1:1 ratio (habitat created or preserved : habitat permanently affected) or by an equivalent or greater amount as determined in coordination with CDFW. Replacement habitat will be established through onsite mitigation, offsite mitigation, and/or credits purchased at a CDFW-approved mitigation or conservation bank. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority and CDFW. CDFW-approved mitigation banks have long-term adaptive management plans with performance standards. If mitigation occurs through a CDFW-approved conservation/ mitigation bank, the bank's performance standards and success criteria will be applied. If credits are not purchased at a CDFW-approved conservation bank, the Authority will implement standards for long-term management and protection of mitigation areas. A conservation easement would be placed on offsite mitigation land. A mitigation monitoring plan will be prepared for onsite and offsite mitigation to ensure the long-term success of the habitat. The mitigation monitoring plan will describe the requirements for monitoring and maintaining the site, performance standards, adaptive management techniques, and reporting requirements. The Authority will work closely with CDFW during the planning and development of onsite and offsite mitigation areas. Mitigation areas will provide suitable nesting and foraging habitat. Once established, mitigation areas will be periodically monitored by a CDFW-approved biologist. The biologist will survey the site for presence of western burrowing owl, assess the suitability of the site in providing nesting and foraging habitat (including the abundance of prey), evaluate the adequacy of site protection (e.g., fencing, signage), assess potential threats to burrowing owls, and take photographs of the site. The biologist should determine the number of adult burrowing owls and pairs, and if the numbers are maintained between monitoring years. The frequency of monitoring will be determined based on site-specific conditions in coordination with CDFW and will be included in the mitigation monitoring plan. Performance standards for management of burrowing owl habitat will be based on site-specific conditions and included in the mitigation monitoring plan. Performance standards may include managing vegetation height to between 4.7 and 13 centimeters through	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Construction; postconstruction	Contract requirements; compliance reporting; monitoring; acquisition/ funding	As needed	Authority; Mitigation Manager; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
grazing or mowing (California Department of Fish and Game 2012) and maintaining conditions that promote or support natural prey distribution and abundance, especially in proximity to occupied burrows. The successful establishment or maintenance of suitable breeding and foraging habitat based on the vegetation height and prey abundance will be used to evaluate the success of the burrowing owl habitat compensatory mitigation. Working closely with CDFW during planning and development of the conservation area, monitoring the conservation area to ensure performance standards are achieved, and applying adaptive management when performance standards are not achieved will ensure that the compensatory mitigation is effective and compensates for the permanent habitat loss resulting from the Project.						
WILD-1.26: Protect Special-Status Wildlife from Rodenticide Use To minimize the potential for wildlife to be poisoned by ingesting rodenticide, use of rodenticides will be minimized to the maximum extent feasible and limited to areas immediately surrounding Project facilities. Facilities will be maintained in a manner to reduce the potential for nuisance rodents, including sealing openings in structures, securely storing trash bins, and installing signage at recreation areas discouraging feeding of wildlife and encouraging disposal of food and other trash in designated containers. Signage will include text from the California Code of Regulations that states it is illegal to feed big game mammals and that feeding of wildlife is considered harassment and should not be done under any circumstances. Wherever feasible, alternatives to rodenticide will be used for rodent eradication, such as traps, if they can be used safely around other wildlife. Additionally, to minimize the risk to non-target species from directly ingesting rodenticides, anticoagulant and non-anticoagulant rodenticides will not be broadcast. The Authority will consult with California Department of Pesticide Regulation's PRESCRIBE database (https://www.cdpr.ca.gov/docs/endspec/prescint.htm) prior to any vertebrate pest control activity. The database incorporates section by section coordination with CDFW's Biogeographic Information and Observation System and the CNDDB to provide species-specific use restrictions that are not on pesticide labels, including use of modified bait stations and what those modifications must be.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Operations	Compliance requirements	None	Authority; Contractor	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
WILD-1.27: Construct Overhead Power Lines and Associated Equipment Following Suggested Practices to Reduce Bird Collisions with Power Lines The Authority will ensure that new transmission lines and associated equipment will be properly fitted with wildlife protective devices to isolate and insulate structures to prevent injury or mortality of birds. Protective measures shall follow the guidelines provided in *Reducing Avian Collisions with Power Lines: The State of the Art* (Avian Power Line Interaction Committee 2012), or the current Avian Power Line Interaction Committee guidelines in place at the time the transmission lines are installed, and will include insulating hardware or conductors against simultaneous contact, using poles that minimize impacts to birds, and increasing the visibility of conductors or wires to prevent or minimize bird collisions.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Preconstruction; construction; operations	Contract requirements	None	Authority; Contractor	Date: _____ Action Taken:
WILD-1.28: Conduct Focused Surveys for Golden Eagle and Bald Eagle and Implement Protective Measures if Found Prior to the start of construction, the Authority will retain qualified wildlife biologists (experienced with raptor identification and behaviors) to conduct focused surveys for golden eagle and bald eagle nests in suitable habitat in the Project area and within a 2-mile radius of the Project area. The surveys will be conducted in accordance with *the Interim Golden Eagle Inventory and Monitoring Protocols; and other Recommendations* (Pagel et al. 2010), *Protocol for Evaluating Bald Eagle Habitat and Populations in California* (Jackman and Jenkins 2004), *Bald Eagle Breeding Survey Instructions* (California Department of Fish and Wildlife 2017) and *Updated Eagle Nest Survey Protocol* (U.S. Fish and Wildlife Service 2020b). Prior to conducting surveys, existing survey reports and other known breeding area records will be reviewed, and a map of potential nest sites will be created using GIS mapping of suitable nesting habitat. If feasible, an initial survey will be conducted during the fall or winter, prior to the initial occupancy survey, to identify existing nest sites. Nest locations will be mapped using GPS software and will be used during the occupancy surveys. For golden eagle, based on the results of the initial survey, aerial (helicopter) or ground surveys will be conducted to assess nest occupancy. A minimum of two aerial surveys or ground observation periods lasting at least 4 hours each will be conducted in a single breeding season (January 1 through August 31) to confirm presence/absence of golden eagle. Each survey will be conducted at least 30 days apart. Surveys will be conducted in the morning during favorable weather conditions.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved	Preconstruction; construction	Contract requirements; compliance reporting; surveying; monitoring	As needed	Authority; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
For bald eagle, based on the results of the initial survey, a minimum of three surveys will be conducted during the bald eagle nesting season (January 1 to July 31) in the year that construction will begin, and each year during the construction period, to look for new nests. The first survey will be conducted in the early breeding period in early March, and additional surveys will be conducted in mid-nesting season (late April or early May) and late in the season (mid-June). Surveys will be conducted in the morning, if feasible, during favorable weather conditions. For both species, the final survey methods and survey area boundaries will be determined based on coordination with USFWS and CDFW, and all survey results will be submitted to these agencies. No active bald eagle or golden eagle nest trees will be removed during the nesting season. If an occupied golden eagle or bald eagle nest is identified in the survey area, a no-disturbance buffer will be established around the nest site to avoid disturbance or destruction of the site, consistent with the USFWS's *Recommended Buffer Zones for Human Activities around Nesting Sites of Bald Eagles in California and Nevada* and the USFWS *Recommended Buffer Zones for Ground-based Human Activities around Nesting Sites of Golden Eagles in California and Nevada* (U.S. Fish and Wildlife Service 2017c, 2020c). If it is determined that the no-disturbance buffer cannot be maintained, the Authority and the qualified biologist will consult with USFWS and CDFW about implementing a reduced buffer but requiring full-time nest monitoring by a qualified biologist to watch for signs of stress. If behaviors indicating stress or potential nest abandonment (e.g., visible or audible agitation, leaving the nest at an unusual time or for an unusual length of time), the biologist will have the authority to stop work until the bird has returned to the nest or otherwise shows signs of recovery from the stress. Work will be delayed as long as necessary to ensure that nest abandonment does not occur.	local, regional, or state habitat conservation plan					
WILD-1.29: Compensate for the Loss of Eagle Nest Trees Prior to the start of construction, the Authority will prepare an Eagle Conservation Plan in consultation with USFWS, which will ensure that the loss of eagle nest trees results in a less-than-significant impact. Based on the results of the Eagle Conservation Plan and eagle nest surveys (Mitigation Measure WILD-1.28), the Authority will purchase compensatory mitigation credits from the Bald Eagle and Golden Eagle Electrocution Prevention In-lieu Fee Program for the loss of eagle nest trees. The number of credits necessary to offset the permitted level of eagle take is determined by the permittee and USFWS during the consultation process. As such, the number of credits purchased to offset the effects of the Project will be specified in the Eagle Take Permit issued by USFWS.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved	Preconstruction	Compliance reporting; design; acquisition/ funding	As needed	Authority; Mitigation Manager	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
	local, regional, or state habitat conservation plan					
WILD-1.30: Conduct Focused Surveys for Nesting Swainson's Hawk, White-tailed Kite, and Other Raptors Prior to Construction and Implement Protective Measures During Construction The Authority will retain qualified wildlife biologists (experienced with raptor identification and behaviors) to conduct focused surveys for Swainson's hawk, white-tailed kite, and other raptor nesting areas before construction begins. Survey methodology will follow the Swainson's Hawk Technical Advisory Committee's methodology (Swainson's Hawk Technical Advisory Committee 2000). A minimum of six surveys will be conducted during the appropriate timeframes discussed in the methodology. If needed, the qualified biologists will coordinate with CDFW regarding the extent and number of surveys. Surveys will generally be conducted from February to July. Survey methods and results will be reported to CDFW within 30 days of the completion of the surveys. Because the area surrounding the Project area is largely undeveloped, focused surveys for Swainson's hawk and white-tailed kite will be conducted in the Project area and in a buffer area up to 0.5 mile around the Project area. The survey area for other nesting raptors will encompass potential habitat within 500 feet of work areas. The portions of the Swainson's hawk/white-tailed kite buffer area containing unsuitable nesting habitat and/or with an obstructed line of sight to the Project area will not be surveyed. No active Swainson's hawk or white-tailed kite nest trees will be removed during the nesting season. If the biologists find an active Swainson's hawk or white-tailed kite nest, the contractor will maintain a 0.25-mile no-work buffer between construction activities and the active nest(s) until it has been determined that the young have fledged. The biologists will mark the no-work buffer with stakes and signs and will check the location at least weekly to ensure that the signs are in place and the buffer is being maintained. No work will be authorized within the buffer except for vehicle travel. If a 0.25-mile buffer around the nest cannot be maintained, the Authority and a qualified biologist will consult with CDFW about implementing alternative protective measures that are sufficient to minimize the risk of disturbance, such as a reduced buffer with full-time nest monitoring by a qualified biologist. If nesting raptors exhibit agitated behavior indicating stress, the biological monitor will have the authority to stop construction in that area until they determine that the young have fledged. For active nests of other raptors, no-disturbance buffers will be established around the nest sites to avoid disturbance or destruction of the sites until the end of the breeding season (August 31) or until after a qualified wildlife biologist determines that the young have fledged and moved out of the Project area (this date varies by species). The extent of these buffers will be determined by the biologist in coordination with USFWS and CDFW and will depend on the species, level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Preconstruction; construction	Contract requirements; compliance reporting; surveying	Within 30 days of completion of surveys	Authority; Qualified Biologist	Date: _____ Action Taken:
WILD-1.31: Compensate for the Permanent Loss of Foraging Habitat for Swainson's Hawk and White-tailed Kite The Authority will compensate for permanent loss of suitable Swainson's hawk and white-tailed kite foraging habitat by restoring or preserving habitat onsite or offsite at a 1:1 ratio (habitat restored or preserved : habitat affected) for foraging habitat within 10 miles of an active Swainson's hawk nest (i.e., determined active during current surveys or within the last 5 years based on available data from prior surveys, if any). Onsite or offsite mitigation	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California	Preconstruction; construction	Contract requirements; compliance reporting; acquisition/ funding	As needed	Authority; Mitigation Manager; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
lands will provide suitable foraging habitat and sufficient potential nesting trees to support Swainson's hawk (including protected trees or planted trees, or both), as determined by a qualified biologist, in an area with Swainson's hawk nesting densities equal to or greater than nesting densities in the Project area. The Authority may purchase mitigation credits for Swainson's hawk habitat from a CDFW-approved mitigation or conservation bank in lieu of or in addition to onsite or offsite habitat preservation. The purchase of mitigation credits or the establishment of onsite or offsite mitigation areas (or a combination of these options) would be completed as agreed upon by the Authority and CDFW.	Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
WILD-1.32: Conduct Surveys and Implement Protection Measures for Special-Status Bat Species Prior to Building/Structure Demolition Prior to building/structure demolition, the Authority will retain a qualified biologist (defined below) to conduct preconstruction surveys and implement protective measures for pallid bat, Townsend's big-eared bat, silver-haired bat, long-eared myotis, and other bats that roost in or on buildings and structures. At least 30 days prior to the demolition of the existing buildings and structures, qualified biologists will conduct an initial daytime survey to assess the buildings/structures for potential bat roosting habitat, and to look for bats and indications of bat use. The qualified biologists will have knowledge of the natural history of the species that may be present, have sufficient experience determining bat occupancy, and be familiar with bat survey techniques. The qualified biologist will examine both the inside and outside of the buildings/structures for potential roosting habitat, as well as routes of entry to the building and structures. Locations of any roosting bats, signs of bat use, and entry and exit points will be noted and mapped on a drawing of the buildings and structures. Roost sites will also be photographed as feasible. Depending on the results of the habitat assessment, the Authority will ensure the following steps are taken: • If the building and structures can be assessed (i.e., sufficient areas of the buildings and structures can be examined) and no habitat or limited potential habitat for roosting bats is present and no signs of bat use are present, the building may be demolished within 24 hours. If the building is not demolished within 24 hours, another survey of the interior and exterior of the buildings/structure by a qualified biologist will be conducted within 24 hours of the scheduled demolition. • If moderate or high potential habitat for roosting bats is present and habitat can be thoroughly surveyed, the structure may be demolished within 24 hours. If there are no signs of bat use but the habitat cannot be thoroughly surveyed, measures will be implemented under the guidance of the qualified biologists to exclude bats from using the buildings and structures as a roost site to the extent feasible given the conditions of the structures, such as sealing off entry points. Prior to installing exclusion measures, the qualified biologists will re-survey the buildings and structures to ensure that no bats are present. In addition, a preconstruction survey of the interior and exterior of the	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Preconstruction; construction	Contract requirements; compliance reporting; surveying; design; remedial action; exclusion fencing	As needed	Authority; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
buildings and structures will be conducted within 24 hours of demolition to confirm that no bats are present. If moderate or high potential habitat is present and bats or bat sign are observed, exclusion measures are not installed as described above, or the buildings or structures provide suitable habitat but cannot be fully assessed, the Authority will implement the following protective measures: • Prior to initiating demolition activities, follow-up surveys will be conducted to determine if bats are present and the species of bats present. The qualified biologists will develop a survey plan (number, timing, and type of surveys) and conduct surveys using night vision goggles and/or active acoustic monitoring using full spectrum bat detectors will be conducted. • The qualified biologist will develop a plan to discourage or exclude bat use of buildings/structures prior to demolition based on the timing of demolition, extent of evidence of bat use or occupied habitat, and species present. The plan may include modifying the structure to be less appealing for roosting without causing harm to bats, installing exclusion measures, or using light or other means to deter bats from using the buildings and structures to roost. The plan will be submitted to CDFW for review and comment. • A preconstruction survey of the interior and exterior of the building and structures will be conducted within 24 hours of demolition to confirm that no bats are present. Depending on the species of bats present, size of the bat roost, and timing of the demolition, the Authority will implement the following additional protective measures as applicable: • To avoid impacts on maternity colonies and/or hibernating bats, buildings/structures where bats are confirmed to be present will not be demolished during the maternity season (generally assumed to be between April 15 and August 15 for this Project) or the hibernation season (generally from November 1 to March 1). Removal of occupied roosting habitat will be conducted only following the maternity season and prior to hibernation, generally between August 16 and October 31, unless exclusionary devices are first installed. Other measures, such as using lights to deter bat roosting, may be used as developed by the qualified biologist and as approved by CDFW, if applicable. • Installation of exclusion devices will be conducted only before maternity colonies establish (generally after March 1) or after they disperse (generally August 15 to October 31) to prevent bats from occupying a roost site during demolition to the extent feasible. Exclusionary devices will be installed by or under the supervision of a qualified biologist.						
WILD-1.33: Conduct Surveys and Implement Protection Measures for Special-Status Bat Species Prior to Tree Trimming and Removal Prior to tree trimming or removal, the Authority will retain a qualified biologist to conduct preconstruction surveys and implement protective measures for pallid bat, Townsend's big-eared bat, silver-haired bat, western red bat, hoary bat, long-eared myotis, and other tree-roosting bats. Prior to initiating tree trimming or removal, a qualified biologist will examine the trees to be removed or trimmed to identify suitable bat roosting habitat. Because of the limited timeframe for tree removal (September 15 to October 31), the tree habitat assessment should be conducted early enough to provide information to inform tree removal planning. The biologists will identify high-quality habitat features (e.g., large tree cavities, basal hollows, loose or peeling bark, larger snags), and the area around these	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Preconstruction; construction	Contract requirements; compliance reporting; surveying; remedial action	As needed (observation of injured or dead special-status bats will be reported)	Authority; Qualified Biologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
features will be searched for bats and indications of bat use. If the tree can be assessed and no habitat for roosting bats is present, no further actions are necessary and tree removal or trimming may commence. Because signs of bat use are not easily found, and trees cannot be completely surveyed for bat roosts, the Authority will implement the following protective measures listed below for trees containing potential roosting habitat. • Trimming or removal of trees with potentially suitable bat roosting habitat will be avoided during the maternity season (generally between April 1 and July 31) and the hibernation season (generally from November 1 to March 1). • Removal of trees providing bat roosting habitat will be conducted only before maternity colonies establish (generally after March 1) or after they disperse (generally August 1 to October 31). • If a maternity roost is found, the roost will be protected until July 31or until the qualified biologist has determined the maternity roost is no longer active. Appropriate no-work buffers around the roost will be established under direction of the qualified biologist. Buffer distances may vary depending on the species and activities being conducted. • Trimming and removal of trees (between July 31 and October 31) with suitable roosting habitat will be monitored by a qualified biologist. Tree trimming and removal will be conducted using a two-phase removal process conducted over two consecutive days. In the afternoon on the first day, limbs and branches will be removed using chainsaws only. Only branches or limbs without cavities, crevices, or deep bark fissures will be removed; branches and limbs with these features will be avoided. On the second day, the entire tree will be removed. The qualified biologist will search through downed vegetation for injured or dead bats. Observation of injured or dead special-status bats will be reported to CDFW.	**Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan					
WILD-1.34: Compensate for Permanent Impacts on Occupied Roosting Habitat The Authority will compensate for the permanent loss of occupied roosting habitat by constructing and/or installing suitable replacement habitat onsite or at an offsite preservation area. The roosting habitat type and design will be developed in coordination with CDFW. A monitoring plan will be prepared to ensure the replacement habitat is maintained and functions as intended. Annual reports will be submitted to CDFW to document compliance with monitoring requirements.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved	Preconstruction; construction; postconstruction	Contract requirements; compliance reporting; acquisition/ funding	Annually	Authority; Mitigation Manager	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
	local, regional, or state habitat conservation plan					
WILD-1.35: Implement Protective Measures to Avoid and Minimize Potential Impacts on American Badger Where suitable habitat is present for American badger in and within 200 feet of work areas where ground disturbance will occur, the Authority will implement the following protective measures. • The Authority will retain qualified biologists (experienced with the identification of suitable badger dens) to conduct a preconstruction survey for active badger dens prior to temporary or permanent ground disturbance. The preconstruction survey will be conducted no less than 14 days and no more than 30 days before the beginning of ground disturbance. The biologists will conduct den searches by systematically walking transects through the area to be disturbed and a 200-foot buffer area. Transect distance should be based on the height of vegetation such that 100% visual coverage of the disturbance area is achieved. If a suitable or occupied den is found during the survey, the biologist will record the den dimensions, the shape of the den entrance, presence of tracks, scat, or prey remains, den occupancy (i.e., suitable, potentially occupied, or occupied), recent excavations at the den site, and the den location. • To the maximum extent feasible, disturbance or destruction of suitable dens for American badger in temporary impact areas will be avoided. • Any occupied or potentially occupied American badger den will be avoided by establishing an exclusion zone around the den. For potentially occupied dens, a 50-foot exclusion zone will be applied around the den; for occupied dens, a 100-foot exclusion zone will be applied around the den. The width of exclusion zones around maternity dens may exceed 100 feet, will be determined through coordination with CDFW, and will remain in place throughout the pup-rearing season (February 15 through July 1). Any adjustments to buffers will require prior written approval by CDFW. If the den cannot be avoided, the Authority will contact CDFW for direction on additional steps to be taken. • Unoccupied suitable dens that would be destroyed by construction may be removed by hand excavation by a biologist or under the supervision of a biologist; a mini excavator may be used to facilitate excavation of dens.	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Preconstruction; construction	Contract requirements; compliance reporting; surveying; exclusion fencing; acquisition/ funding	As needed	Authority; Qualified Biologist	Date: _____ Action Taken:
Aquatic Biological Resources						
FISH-8.1: Prevent Detrimental Dissolved Oxygen and Water Temperature Effects on Fish Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass To evaluate potential water quality effects, when Project releases are made via the Dunnigan Pipeline to the Yolo Bypass DO and water temperature will be measured at 15-minute intervals within 50 feet of the Project discharge location at the Dunnigan Pipeline, at existing California Data Exchange Center stations at the upstream end of the Yolo Bypass at Ridge Cut Slough, and at the downstream end at Lisbon Weir. Measurements of DO and water temperature will occur before and during the period of CBD discharge to the Yolo Bypass, the same as is described for Mitigation Measure WQ-2.2. Downstream DO and temperature measurements, together with water quality measurements of water released from Sites Reservoir, will be evaluated to determine whether habitat flow releases from Sites Reservoir would lower DO and increase temperatures in the Yolo Bypass Toe Drain and Cache Slough Complex to a level that could	**Impact FISH-8:** Operations effects on delta smelt	Operations	Contract requirements; compliance reporting; monitoring	As needed	Authority	Date: _____ Action Taken:

<table>
<tr><th>Mitigation Text</th><th>Impact # and Impact Title</th><th>Phase</th><th>Implementation Action</th><th>Reporting Schedule</th><th>Implementation Responsibility</th><th>Record of Implementation</th></tr>
<tr><td>be detrimental to delta smelt inhabiting these areas. Dissolved oxygen and temperature criteria for determining effects will be developed in collaboration with the fishery agencies and will maintain existing DO and temperature levels suitable to delta smelt that will not exceed recognized critical physiological thresholds. This evaluation will be part of ongoing monitoring to determine benefits of the Yolo Bypass habitat flows and the Project's funded ecosystem benefits under WSIP. CDFW would have the discretion to modify WSIP water that is released to Yolo Bypass, depending on best available science and fish needs. If measurements indicate DO or temperature criteria are exceeded in the Yolo Bypass Toe Drain and Cache Slough Complex as a result of Project releases and these criteria cannot be maintained for delta smelt, actions to improve DO concentration and temperature will be implemented. Mitigative actions may include, but are not limited to one or more of the following types of measures:
• Use of engineered actions (e.g., installation of aerators) to prevent exceedance of critical physiological thresholds for delta smelt.
• Cessation of releases of flow to the Yolo Bypass until temperature and DO concentration do not exceed critical physiological thresholds for delta smelt.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>FISH-9.1: Tidal Habitat Restoration for Longfin Smelt
Tidal habitat restoration mitigation for longfin smelt was calculated based on the same method recently applied by DWR (2019d:5-5). The method is described in more detail in Appendix 11F, Section 11F.7, Tidal Habitat Restoration Mitigation Calculations for Longfin Smelt. The mitigation requirement for each alternative varies between 5.1 and 9.7 acres (Table 11-89). The mitigation will consist of tidal wetland habitat within the Delta/Suisun Marsh and will be completed prior to commencement of Project operations.
Table 11-89. Tidal Habitat Restoration Mitigation for Longfin Smelt (Acres).
<table>
<tr><th>Alt 1A</th><th>Alt 1B</th><th>Alt 2</th><th>Alt 3</th></tr>
<tr><td>5.1</td><td>8.3</td><td>5.1</td><td>9.7</td></tr>
</table></td><td>Impact FISH-9: Operations effects on longfin smelt</td><td>Construction</td><td>Contract requirements; compliance reporting; funding</td><td>As needed</td><td>Authority</td><td>Date: _____
Action Taken:</td></tr>
<tr><td colspan="7">Geology and Soils</td></tr>
<tr><td>GEO-7.1: Retain a Qualified Paleontological Resource Specialist Prior to the Start of Construction
The Authority will retain a qualified Paleontological Resource Specialist once the construction footprint can be accessed and the engineering design is at sufficient level of detail but at least 90 days prior to the start of construction. The Paleontological Resource Specialist will meet the minimum or equivalent qualifications for a paleontological resources manager, as described in the SVP guidelines (2010).
The Authority will retain qualified Paleontological Resource Monitors with the assistance of the Paleontological Resource Specialist to monitor construction activities, as described in the PRMMP. Paleontological Resource Monitors will have the equivalent of the following qualifications:
• Bachelor of Science or Bachelor of Arts degree in geology or paleontology and 1 year of experience monitoring in California
• Associate of Science or Associate of Arts degree in geology, paleontology, or biology and 4 years of experience monitoring in California
• Enrollment in upper-division classes pursuing a degree in the fields of geology or paleontology and 2 years of monitoring experience in California.</td><td>Impact GEO-7: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature</td><td>Preconstruction; construction</td><td>Contract requirements; monitoring</td><td>None</td><td>Authority; Qualified Paleontological Resources Monitor</td><td>Date: _____
Action Taken:</td></tr>
</table>

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
GEO-7.2: Consultation with the Paleontological Resource Specialist Prior to and During Project Construction At least 30 days prior to the start of construction, the Authority will provide maps or drawings to the Paleontological Resource Specialist that show the planned construction footprint. Maps will identify all areas where ground disturbance is anticipated during Project implementation. The plan drawings will show the location, depth, and extent of all ground disturbances affecting paleontologically sensitive sediment. If construction proceeds in phases, maps and drawings may be submitted prior to the start of each phase. In addition, the proposed schedule of each Project phase will be provided to the Paleontological Resource Specialist. Before work commences on affected phases, the Authority will notify the Paleontological Resource Specialist of any construction phase scheduling changes.	**Impact GEO-7:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	Preconstruction; construction	Contract requirements	None	Authority; Qualified Paleontological Resources Specialist	Date: _____ Action Taken:

GEO-7.3: Prepare and Implement a Paleontological Resources Monitoring and Mitigation Plan
Once the construction footprint can be accessed and the engineering design is at sufficient level of detail, the Authority will prepare a PRMMP to identify general and specific measures to minimize potential effects on significant paleontological resources. Approval of the PRMMP by the Authority will occur prior to any ground disturbance. The PRMMP will function as the formal guide for paleontological resources monitoring, collecting, and sampling activities, and may be modified by the Authority to accommodate new data or changes to the Project. This document will be used as the basis of discussion when onsite decisions or changes are proposed. Copies of the PRMMP will reside with the Authority, Paleontological Resource Specialist, each Paleontological Resource Monitor, and the Authority's onsite manager.
The PRMMP will be developed in accordance with professional guidelines and be consistent with those issued by SVP (2010) and will include the following:
• Procedures for the performance and sequence of resource-related tasks, such as any literature searches, preconstruction surveys, appropriate worker environmental training module, construction monitoring, mapping and data recovery, discovery situations, fossil preparation and collection, identification and inventory, preparation of final reports, transmittal of materials for curation, and final report will be provided in the PRMMP, including:
  • A discussion of the geologic units expected to be encountered, the location and depth of the units relative to the Project footprint, when known, and the known paleontological sensitivity of those units
  • A discussion of the locations of where the monitoring of construction activities is deemed necessary, and a proposed plan for monitoring and sampling
  • An explanation of why, how, and how much sampling is expected to take place and in what units, including descriptions of different sampling procedures that may be used
  • A discussion of procedures to be followed in the event of a significant fossil discovery, diverting construction away from a find, resuming construction, and how notifications will be performed
  • A discussion of equipment and supplies necessary for collection of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits
	Impact GEO-7: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	Preconstruction; construction	Contract requirements; compliance reporting; design; surveying; monitoring, remedial action	As needed	Authority; Qualified Paleontological Resources Specialist	Date: _____
						Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
• Procedures for inventory, preparation, and delivery for curation into a retrievable storage collection in a repository or museum, which meet SVP standards and requirements for the curation of paleontological resources • Identification of the institution(s) that will be approached to receive data and fossil materials collected, and requirements or specifications for materials delivered for curation The PRMMP will also provide guidance for preparation of a Paleontological Resources Report by the designated Paleontological Resource Specialist at the conclusion of ground-disturbing activities that may affect paleontological resources. The Paleontological Resources Report will include an analysis of the collected fossil materials and related information, including a description and inventory of recovered fossil materials, a map showing the location of paleontological resources encountered, determinations of sensitivity and significance, and a statement by the Paleontological Resource Specialist that effects on paleontological resources have been mitigated to be not adverse.						
GEO-7.4: Conduct Monitoring During Project Construction and Prepare Monthly Reports The Authority will ensure that the Paleontological Resource Specialist and Paleontological Resource Monitor(s) monitor construction excavations consistent with the PRMMP in areas where potential fossil-bearing materials have been identified, both at reservoir sites and along any constructed linear facilities associated with the Project. The Authority will ensure that the Paleontological Resource Specialist and Paleontological Resource Monitor(s) have the authority to halt or redirect construction if paleontological resources are encountered. The Authority will ensure that there is no interference with monitoring activities, as directed by the Paleontological Resource Specialist. The Authority will ensure that the Paleontological Resource Specialist prepares and submits monthly summaries of monitoring and other paleontological resources management activities. The summary will include the name(s) of the Paleontological Resource Specialist or Paleontological Resource Monitor(s) active during the month; general descriptions of training and monitored construction activities; and general locations of excavations, grading, and other activities. A section of the report will include the geologic units or subunits encountered, descriptions of samplings, if any, and a list of identified fossils. A final section of the report will address any issues or concerns about the Project relating to paleontological resources mitigation activities, including any incidents of non-compliance or any changes to the monitoring plan by the Paleontological Resource Specialist. If no monitoring took place during the month, the report will include an explanation as to why monitoring was not conducted.	**Impact GEO-7:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	Construction	Contract requirements; compliance reporting; monitoring	Monthly	Authority; Paleontological Resources Specialist; Qualified Paleontological Resources Monitor	Date: _____ Action Taken:
GEO-7.5: Ensure Implementation of the Paleontological Resources Monitoring and Mitigation Plan The Authority, through the designated Paleontological Resource Specialist, will ensure that all components of the PRMMP are performed during construction.	**Impact GEO-7:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	Construction	Contract requirements; compliance reporting	As needed	Authority; Paleontological Resources Specialist	Date: _____ Action Taken:
Agriculture and Forestry Resources						
AG-1.1: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland Prior to the commencement of any Project activities that would result in the permanent conversion of Important Farmland, the Authority will enter into an agreement with the DOC California Farmland Conservancy Program to mitigate for the permanent conversion of Important Farmland through purchase of agricultural easements. The Authority will fund	**Impact WILD-1:** Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies,	Preconstruction; construction; operations	Contract requirements; acquisition/ funding	None	Authority; Mitigation Manager	Date: _____ Action Taken:

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the California Farmland Conservancy Program to enable them to (1) identify suitable agricultural land for mitigation of Project impacts and (2) fund the purchase of agricultural conservation easements from willing sellers. The Authority will coordinate with the California Farmland Conservancy Program to identify suitable lands and purchase agricultural conservation easements from willing sellers at a ratio of at least 1:1 to preserve Important Farmland in an amount commensurate with the quantity and quality of converted farmlands.	or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **Impact WILD-2:** Substantial interference with the movement of a native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites **Impact WILD-3:** Conflict with any local policies or ordinances protecting wildlife resources **Impact WILD-4:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan **Impact AG-1:** Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use. **Impact AG-2:** Conflict with existing zoning for agricultural use or a Williamson Act contract **Impact AG-3:** Conversion of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, as designated under the federal Farmland Protection Policy Act, to nonagricultural use					
AG-2.1: Minimize Impacts on Williamson Act–Contracted Lands, Comply with Government Code Sections 51290–51293, and Coordinate with Landowners and Agricultural Operators To reduce impacts on lands under Williamson Act contract, the Authority will implement the measures below. • The Authority will comply with Government Code Sections 51290–51293 with respect to acquiring lands under Williamson Act contract. • Sections 51290(a)–51290(b) state 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.	**Impact AG-2:** Conflict with existing zoning for agricultural use or a Williamson Act contract	Construction; operations	Contract requirements; compliance reporting; acquisition/ funding	1. Within 10 working days upon completion of land acquisition; 2. Before completion of any proposed substantial changes to the public improvement; and 3. Before acquired land is returned to private ownership.	Authority	Date: _____ Action Taken:

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• Whenever it appears that land within a preserve or under contract may be required for a public improvement, DOC and the local jurisdiction responsible for administering the preserve must be notified (Section 51291(b)). • Within 30 days of being notified, DOC and the local jurisdiction will forward comments to the Authority, which the Authority must consider (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 51921(a) and 51921(b)). • The contract will be terminated when land is acquired by eminent domain or in lieu of eminent domain (Section 51295). • The Authority will notify DOC within 10 working days upon completion of the acquisition (Section 51291(c)). • The Authority will notify DOC and the local jurisdiction before completion of any proposed substantial changes to the public improvement (Section 51291(d)). • If, after acquisition, the Authority determines that the property will not be used for the proposed public improvement, DOC and the local jurisdiction administering the involved preserve will be notified before the land is returned to private ownership. The land would 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 Authority will coordinate with landowners and agricultural operators to sustain existing agricultural operations, at the landowners' discretion, within the study area until the individual agricultural parcels are needed for Project construction.						
Air Quality						
AQ-1.1: Zero Emission and/or Near Zero Emission Vehicles and Off-Road Equipment This mitigation measure will reduce the impact of Project construction emissions from on-road vehicles and off-road equipment through the following commitments. • The Authority will require that all construction contractors use ZE or NZE technology for all light-duty on-road vehicles (e.g., passenger cars, light-duty trucks) associated with the Project to the maximum extent feasible. • The Authority will require that all construction contractors use ZE or NZE technology for heavy-duty on-road vehicles (e.g., for hauling, material delivery and soil import/export) associated with the Project to the maximum extent feasible. • The Authority will require that all Project construction contractors use ZE or NZE vehicles for off-road construction equipment use associated with the Project to the maximum extent feasible. For all the above requirements, the Authority will require that construction contractors provide documentation to the Authority, on an annual basis at minimum, showing the percentage of vehicles and equipment that are ZE or NZE. Based on this reporting, the Authority will require that all construction contractors are meeting minimum percentages of ZE or NZE vehicles and equipment, and those minimum percentages will be determined at the time of construction. If local or state regulations mandate a faster transition to using ZE and/or NZE vehicles at the time of construction, the more stringent regulations will be	**Impact AQ-1:** Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard during construction, or conflict with or obstruct implementation of the applicable air quality plan **Effect EJ-1:** Disproportionate and adverse effects on minority populations **Effect EJ-2:** Disproportionate and adverse effects on low-income populations	Construction	Contract requirements; compliance reporting	Annually (at minimum)	Authority; Contractor	Date: _____ Action Taken:

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applied. It is possible that such new regulations will be adopted; Executive Order N-79-20, issued by California Governor Newsom on September 23, 2020, states the following objectives: • Light duty and passenger car sales be 100% zero-emission vehicles (ZEV) by 2035 • Full transition to ZEV short haul/drayage trucks by 2035 • Full transition to ZEV heavy-duty long-haul trucks, where feasible, by 2045 • Full transition to ZE off-road equipment by 2035, where feasible.						
AQ-1.2: Offset Construction-Generated Criteria Pollutants in CCAPCD, GCAPCD, and YSAQMD Prior to issuance of construction contracts, the Authority will enter into a memorandum or multiple memoranda of understanding (MOU) with CCAPCD, GCAPCD, YSAQMD, TCAPCD, or other air district located in the SVAB (collectively referred to as the Air Districts), to reduce NO_X and PM10. Emissions above the CEQA thresholds will be reduced to the extent practicable and feasible, per the following criteria: • The Authority will identify emissions offsets in geographies closest to the Project first (Maxwell, Willows, Colusa County, Glenn County) and only go to larger geographies (i.e., other counties in the SVAB) if adequate offsets cannot be found in closer geographies or the procurement of such offsets would create an undue financial burden. All offsets must occur within the SVAB. The Authority will provide the following justification for not using offsets in closer geographies in terms of either availability or cost prohibition. • No mechanism or program will be available in the reasonably foreseeable future to track the quantity of offsets available in closer geographies, or it is otherwise not possible to accurately verify and account for the exchange of offsets. • Lack of enough offsets available in closer geographies. • Prohibitively costly offsets in closer geographies as defined by the Authority. • Offsets in any geography within the SVAB would be infeasible based on these criteria as well (lack of enough offsets and/or prohibitively costly as defined above). The mitigation offset fee amount will be determined at the time of mitigation to fund emissions reduction projects within the SVAB. The Air Districts may require an additional administrative fee to cover staff time, and that fee will be determined in the MOU(s). The mitigation offset fee will be determined by the Authority and the Air Districts based on the type of projects available at the time of mitigation. The fee is intended to fund emissions reduction projects to achieve reductions. Documentation of payment will be provided to the Authority or its designated representative. The MOU will include details for the annual calculation of required offsets the Authority must achieve, funds to be paid, administrative fee, and the timing of the emissions reduction projects. Acceptance of this fee by the Air Districts will serve as an acknowledgment and commitment by Air Districts to: (1) implement an emissions reduction project(s) within a timeframe to be determined based on the type of project(s) selected after receipt of the mitigation fee designed to achieve the emission reduction objectives; and (2) provide documentation to the Authority or its designated representative describing the project(s) funded by the mitigation fee, including the amount of emissions reduced (tons per year) in the SVAB from the emissions reduction project(s). To qualify under this mitigation measure, the specific emissions reduction project(s) must result in emission reductions in the SVAB that are real, surplus, quantifiable, enforceable, and will not otherwise be achieved through compliance with existing regulatory requirements or any	**Impact AQ-1:** Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard during construction, or conflict with or obstruct implementation of the applicable air quality plan **Effect EJ-1:** Disproportionate and adverse effects on minority populations **Effect EJ-2:** Disproportionate and adverse effects on low-income populations	Preconstruction	Contract requirements; compliance reporting; design; funding	Annually	Authority	Date: _____ Action Taken:

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other legal requirement. Funding will need to be received prior to contracting with participants and should allow enough time to receive and process applications to fund and implement offsite reduction projects prior to commencement of Project activities being reduced. This will roughly equate to 1 year prior to the required mitigation; additional lead time may be necessary depending on the level of offsite emission reductions required for a specific year. Because all of the Air Districts where Project activities would occur are located in the SVAB, the offsets do not need to occur within the same Air District as the emissions exceedances.						
AQ-2.1: Recreational Boat Emissions Minimization Plan To reduce ROG emissions from recreational boats at the reservoir, the Authority will develop and implement an emissions reduction plan. The plan will include strategies that the Authority will implement during the operational lifetime of the recreational area at the reservoir that are likely to reduce emissions. The plan will be part of the Recreation Management Plan (Section 2D.8) and thus approved at the same time as the Recreation Management Plan. The strategies that the Authority could implement to reduce boat emissions include but are not limited to the following. • Provide free or reduced launch fees for low-emitting or electric boats, to incentivize boats that are alternatively fueled. • Post signage near launch areas encouraging users to turn off the boat engines when not in use. • Track boat usage and type (i.e., motorized, electric, nonmotorized) at the reservoir on an annual basis by maintaining records of the number and types of boats operated at the reservoir. To maintain these records, the Authority will operate staffed kiosks at the reservoir, and boat users will be required to check in at these kiosks prior to launching their boats. Emissions from boat usage will be quantified based on the Authority's records, and the effectiveness of the minimization plan will be assessed based on the quantification results and relative to the applicable air district threshold at the time of operations.	**Impact AQ-2:** Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard during operations, or conflict with or obstruct implementation of the applicable air quality plan **Effect EJ-1:** Disproportionate and adverse effects on minority populations **Effect EJ-2:** Disproportionate and adverse effects on low-income populations	Operations	Design; compliance reporting	As needed	Authority	Date: _____ Action Taken:
AQ-2.2: Offset Operation-Generated Criteria Pollutants in CCAPCD and GCAPCD Prior to issuance of the commencement of recreational boating activities, the Authority will enter into a memorandum or multiple MOUs with CCAPCD, GCAPCD, YSAQMD, TCAPCD, or other air district located in the SVAB (collectively referred to as the Air Districts), to reduce ROG. Per Mitigation Measure AQ-2.1, the emissions from recreational boat use will be quantified. The emissions in excess of the applicable air district thresholds at the time of operations, including the total of all operations-related activity (e.g., boat use, maintenance activities, recreational visitor vehicle trips) will be offset to the maximum extent possible. Emissions above the CEQA thresholds will be reduced as much as possible, per the following criteria. • The Authority will identify emissions offsets in geographies closest to the Project first (Maxwell, Willows, Colusa County, Glenn County) and only go to larger geographies (i.e., other counties in the SVAB) if adequate offsets cannot be found in closer geographies or the procurement of such offsets would create an undue financial burden. All offsets must occur within the SVAB. The Authority will provide the following justification for not using offsets in closer geographies in terms of either availability or cost prohibition. • No mechanism or program will be available in the reasonably foreseeable future to track the quantity of offsets available in closer geographies, or it is otherwise not possible to accurately verify and account for the exchange of offsets.	**Impact AQ-2:** Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard during operations, or conflict with or obstruct implementation of the applicable air quality plan **Effect EJ-1:** Disproportionate and adverse effects on minority populations **Effect EJ-2:** Disproportionate and adverse effects on low-income populations	Operations	Compliance reporting; funding	Annually	Authority	Date: _____ Action Taken:

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• Lack of enough offsets available in closer geographies. • Prohibitively costly offsets in closer geographies as defined by the Authority. • Offsets in any geography within the SVAB would be infeasible based on these criteria as well (lack of enough offsets and/or prohibitively costly as defined above). • The mitigation offset fee amount will be determined at the time of mitigation to fund emissions reduction projects within the SVAB. The Air Districts may require an additional administrative fee to cover staff time, and that fee will be determined in the MOU(s). The mitigation offset fee will be determined by the Authority and the Air Districts based on the type of projects available at the time of mitigation. The fee is intended to fund emissions reduction projects to achieve reductions. Documentation of payment will be provided to the Authority or its designated representative. • The MOU will include details for the annual calculation of required offsets the Authority must achieve, funds to be paid, administrative fee, and the timing of the emissions reduction projects. Acceptance of this fee by the Air Districts will serve as an acknowledgment and commitment by Air Districts to: (1) implement an emissions reduction project(s) within a timeframe to be determined based on the type of project(s) selected after receipt of the mitigation fee designed to achieve the emission reduction objectives; and (2) provide documentation to the Authority or its designated representative describing the project(s) funded by the mitigation fee, including the amount of emissions reduced (tons per year) in the SVAB from the emissions reduction project(s). To qualify under this mitigation measure, the specific emissions reduction project(s) must result in emission reductions in the SVAB that are real, surplus, quantifiable, enforceable, and will not otherwise be achieved through compliance with existing regulatory requirements or any other legal requirement. Funding will need to be received prior to contracting with participants and should allow enough time to receive and process applications to fund and implement offsite reduction projects prior to commencement of Project activities being reduced. This will roughly equate to 1 year prior to the required mitigation; additional lead time may be necessary depending on the level of offsite emission reductions required for a specific year. Because all of the Air Districts where Project activities would occur are located in the SVAB, the offsets do not need to occur within the same Air District as the emissions exceedances.						
Greenhouse Gas Emissions						
GHG-1.1: Achieve Net-Zero Emissions Through a GHG Reduction Plan To achieve net-zero emissions, the Authority will develop a GHG Reduction Plan to reduce Project emissions from onsite and offsite sources. The Authority will retain a qualified consultant to develop a GHG Reduction Plan to reduce GHG emissions resulting from construction and operational activities to net zero. Net additional GHG emissions from the construction period and annual emissions from operations have been quantified as part of this analysis. Construction emissions total to 348,648 to 351,362 metric tons of CO2e depending on the alternative and variant of the Project. Annual operational emissions could be a maximum of 72,736 metric tons CO2e, which corresponds to Alternative 1A, but are expected to continually decrease in future years as the electric power sector transitions to more renewable sources of energy. This yields a reduction commitment of up to 351,362 metric tons CO2e total for construction and up to 72,736 metric tons of CO2e annually needed to meet the net-zero performance standard. These maximum values of 72,736 metric tons CO2e and 351,362 metric tons CO2e correspond to Alternatives 1A and 2, respectively. Table 21-6 summarizes the reduction by alternative.	**Impact GHG-1:** Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases	Preconstruction; construction; operations	Design; contract requirements; compliance reporting; design; monitoring; reporting; funding	At least quarterly during construction Annually during operations	Authority; Contractor; Mitigation Manager	Date: _____ Action Taken:

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Table 21-6 Summary of Metric Ton Reduction (metric tons CO2e)

Year	Alternatives 1A		Alternative 1B		Alternative 2		Alternative 3	
	Variant 1[a]	Variant 2[b]	Variant 1	Variant 2	Variant 1	Variant 2	Variant 1	Variant 2
Total Construction Emissions Commitment	348,648	348,796	348,648	348,796	351,317	351,362	348,648	348,796
Maximum Annual Operational Emissions Commitment (Long-Term Average)	60,610	60,610	59,573	59,573	59,003	59,003	56,613	56,613
Maximum Annual Operational Emissions Commitment (Dry and Critically Dry)	72,736	72,736	72,070	72,070	71,056	71,056	67,778	67,778

Notes:
CO_2e = carbon dioxide equivalent.
[a] Variant 1 assumes the Project would connect to existing Western Area Power Administration utility infrastructure.
[b] Variant 2 assumes the Project would connect to existing Pacific Gas and Electric utility infrastructure.

As noted in the text of this measure, below, the net-zero performance standard may be achieved based on actual emission calculations, and thus the Authority's reduction commitment may differ from the values included in this analysis.

The GHG Reduction Plan will include the following content and adhere to the following requirements.

1. *Emissions Quantities and Reduction Commitments*: GHG emissions from construction and operations must be reduced to net zero on a continual basis throughout construction and operations. Advanced planning for GHG reductions will be necessary to ensure that the net effect of Project emissions and this mitigation is that the Project will not result in any increase in GHG emissions relative to the No Project Alternative throughout the construction and operational period. The Authority will thus need to proactively assess upcoming construction activity and implement early investment in GHG reduction efforts prior to construction (to ensure that the emissions that are being mitigated through other measures are only those that are unavoidable).

   Since some of the planning will be reliant on the estimated GHG reduction value of future actions during construction and operation (as discussed below) there may be an emissions credit debt if emissions are higher than expected or if certain measures do not achieve the reductions that were anticipated. Conversely, if emissions are lower than expected or measures achieve higher reductions than expected, the Authority may bank credits for the next year of construction and/or operations.
2. *Plan Development:* The GHG Reduction Plan will identify the amount of GHG emissions anticipated during each construction phase. Amendments to the GHG Reduction Plan may be made during the construction period for the purpose of giving the Authority flexibility to adapt to changing technologies that have increasing effectiveness at reducing emissions and/or changes in expected construction emissions or available mitigation approaches. For operations, the GHG Reduction Plan may be developed and implemented in 5-year increments and can be amended to include more cost effective or environmentally beneficial technologies. This analysis presents an estimate of

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annual GHG emissions generated by Project construction and operations. Although the emissions provided in this analysis could be used to inform the required mitigation commitment, the methods used to quantify emissions are conservative. This analysis does not account for any GHG reduction measures that may be implemented by the Authority pursuant to this measure. Accordingly, this EIR likely overestimates actual GHG emissions that would be generated by the Project. The Authority may therefore reanalyze GHG emissions for construction and/or operation of the Project to update the required reduction commitment to achieve net zero. Updated emissions analysis conducted for the GHG Reduction Plan will be performed using approved emissions models and methods available at the time of that analysis. Updated emissions analysis conducted for the GHG Reduction Plan will, at a minimum, consider the categories and types of emission sources included in this Final EIR/EIS; additional categories and types of emission sources should be considered for inclusion based on then-available scientific information. The analysis must use the latest available engineering data for the Project, inclusive of any required BMPs or GHG emissions reduction measures. Consistent with the methodology used in this analysis, emission factors may account for enacted regulations that will influence future year emissions intensities (e.g., fuel efficiency standards for on-road vehicles). Net emissions from changes in operations emissions will be quantified using approved methods at the time of analysis and applicable activity data for each component of operations (such as maintenance activities, recreational vehicle trips, recreational boating, public services and utilities, water conveyance, and land use, including water storage). 3. *GHG Reduction Strategies*: The construction component and each operational increment in the GHG Reduction Plan will identify the GHG reduction measures that will be implemented during that period to achieve the net-zero performance standard. GHG reduction measures must be verifiable and feasible to implement. The GHG Reduction Plan will identify the entity responsible for implementing each measure and the estimated GHG reduction that will be achieved by implementation of the measure. If the selected measures are shown to result in reductions that exceed total net emissions of that period, the estimated surplus can be applied as a credit for future periods. The constituent measures in the GHG Reduction Plan are summarized in this section. Implementation of BMP-29 is a required Project design feature that must be incorporated into the GHG Reduction Plan. The Authority will prioritize strategies to reduce emissions in the following order (1) onsite measures for construction or operations that are not already part of BMP-29, (2) offsite measures, and (3) carbon credits. The order of priority for the location of selected measures will be (1) within the Project footprint, (2) within communities in the vicinity of the Project site, (3) in the Sacramento Valley Air Basin, (4) in the State of California, and (5) in the United States. If the GHG Reduction Plan proposes GHG reduction strategies that do not conform to the priorities outlined above, it must present substantial evidence to justify the deviation or explain why higher priority locations were deemed infeasible as defined under CEQA. In addition, the Authority will seek opportunities to implement GHG reduction measures in environmental justice communities (as defined in this Final EIR/EIS) in and near the Project site and report on the effort and outcomes in the annual reporting required in this measure. The Authority will be responsible for determining the measures necessary to ensure the performance standard to mitigate the significant GHG impact is met.						

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The list of measures presented in this section is not exclusive. The Authority may include additional measures to reduce GHG emissions to the extent that the measures become commercially available, have documented reliability in real-world conditions and become cost effective. This may include new equipment and vehicle systems (e.g., autonomous construction equipment, fuel-cells), new energy systems (e.g., battery storage), or other technologies (e.g., carbon capture and storage). a. <u>Construction Best Management Practices and Other Onsite Measures.</u> The Authority will reduce onsite GHG emissions as much as feasible through implementation of the measures identified below. These measures include a list of strategies to reduce GHG emissions from construction. Two measures that have a higher potential to reduce emissions include the use of electric equipment and vehicles instead of diesel-powered vehicles and the use of vehicles that use alternative fuels, such as compressed natural gas, liquified natural gas, propane, or biodiesel. These measures are not reflected in the emissions modeling results, because the future availability of electric-powered construction equipment and vehicles and alternative fuels in the California market is uncertain. As such, a mandate to use all-electric equipment and vehicles and alternative fuels cannot be made at this time. The Authority and its construction contractors will prioritize the use of electric or hybrid-electric off-road construction equipment and vehicles over diesel equipment. These measures, or other equivalent measures, will be implemented by the Authority and their construction contractors prior to or during construction. The Authority would review all designs and plans to ensure incorporation of these measures or the equivalent. In addition, the Authority will deploy a construction monitor during construction to monitor implementation of the required measures. Construction monitors will report regularly (at least quarterly) to the Authority on contractor compliance and will record inspection records in the Project file. 1) Preconstruction and Final Design Considerations: Preconstruction and final design considerations would be designed to ensure unique characteristics of facility construction are taken into consideration when determining if specific equipment, procedures, or material requirements are feasible and efficacious for reducing GHG emissions. Examples of requirements and considerations are identified below. • Consider Project characteristics, including location, Project workflow, site conditions, and equipment performance requirements, to determine whether specifications of the use of equipment with repowered engines, electric drive trains, or other high efficiency technologies are appropriate and feasible for the Project or specific elements of the Project. • Ensure that all economically feasible avenues have been explored for providing an electrical service drop to the construction site for temporary construction power. When generators must be used, consider use of alternative fuels, such as propane or solar, to power generators to the maximum extent feasible, as specified in construction contracts. • Minimize idling time by requiring that equipment be shut down after 3 minutes when not in use (5 minutes required by the State airborne toxics control measure [Title 13, Section 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for						

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workers at the entrances to the site and provide a plan for the enforcement of this requirement. • Maintain all construction equipment in proper working condition and perform all preventive maintenance. Required maintenance includes compliance with all manufacturer's recommendations, proper upkeep and replacement of filters and mufflers, and maintenance of all engine and emissions systems in proper operating condition. Maintenance schedules shall be detailed in an Air Quality Control Plan prior to commencement of construction. • Implement a tire inflation program on each jobsite to ensure that equipment tires are correctly inflated. Check tire inflation when equipment arrives onsite and every 2 weeks for equipment that remains onsite. Check vehicles used for hauling materials offsite weekly for correct tire inflation. Procedures for the tire inflation program shall be documented in an Air Quality Management Plan prior to commencement of construction. • Develop a Project-specific ride share program to encourage carpools and shuttle vans. • Reduce electricity use in temporary construction offices by using high efficiency lighting and requiring that heating and cooling units be Energy Star compliant. Require that all contractors implement procedures for turning off computers, lights, air conditioners, heaters, and other equipment each day at close of business, wherever feasible. • For material deliveries to Project sites where the haul distance exceeds 100 miles and a heavy-duty class 7 or class 8 semi-truck or 53-foot or longer box type trailer is used for hauling, a SmartWay26 certified truck will be used to the maximum extent feasible. • Develop a Project-specific construction debris recycling and diversion program to achieve a documented 50% diversion of construction waste. • During all activities, diesel-fueled portable equipment with maximum power greater than 25 horsepower shall be registered under the CARB's Statewide Portable Equipment Registration Program. b. <u>Offsite Measures.</u> For GHG emissions that cannot be reduced through the construction BMPs and other onsite measures discussed above, the Authority will reduce emissions as much as feasible through offsite measures. The GHG Reduction Plan will identify offsite measures that are suitable to reduce emissions. Offsite strategies include those that reduce emissions from an emissions source(s) that is not located in the Project area and may or may not be associated with the Project. 1) For construction electricity and water conveyance–related energy, the Authority will increase the proportion of renewable energy purchases for the Project's electricity needs to the highest amount that is feasible. The Authority is planning on purchasing 60% of the Project's power needs from renewable, carbon-free sources starting in 2030. To fully reduce the emissions from construction electricity and water conveyance electricity, the Authority would need to purchase 100% of energy needs from carbon-free sources. If the Authority determines that it is infeasible to purchase 100% carbon-free energy						

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for construction and/or operations, carbon credits would be required to reduce the remaining emissions. 2) The GHG Reduction Plan may identify other strategies that reduce emissions from sources that are not affiliated with the Project. The Authority can take credit for reductions that result from projects it sponsors, to achieve the net-zero goal. For example, the Authority could directly sponsor emissions-reducing projects, such as the following. • replacing diesel school buses with electric buses. • planting trees in local communities. • providing support to local businesses or homeowners to install solar photovoltaic systems, other renewable energy projects, or energy efficiency improvements. Energy efficient improvements could include installing energy efficient appliances and cool roofs on buildings. • working with local communities to implement transportation-related emissions-reducing projects. These may include sponsoring bike- or car-share programs, providing support to public transit systems, or contributing to infrastructure and streetscape improvements for pedestrians and bicycles. c. <u>Carbon Credits.</u> For all emissions that cannot otherwise be reduced through onsite or offsite measures, the purchase and retirement of carbon credits would be required. A carbon credit enables development projects to compensate for their GHG emissions and associated environmental impacts by financing reductions in GHG emissions elsewhere. GHG credits derived from completed prior actions are referred to as "GHG offsets" or "carbon offsets." GHG credits derived from future contracted actions are referred to as "GHG future credits" or GHG (future mitigation units [FMUs]). Carbon credits are classified as either compliance or voluntary. Compliance credits can be purchased by covered entities subject to the cap-and-trade regulation to meet predetermined regulatory targets. Voluntary credits are not associated with the cap-and-trade regulation and are purchased with the intent to voluntarily meet carbon-neutral or other environmental obligations. The Authority may purchase carbon credits from a voluntary GHG credit provider that has an established protocol that requires projects generating GHG credits to demonstrate that the reduction of GHG emissions is real, permanent, quantifiable, verified, enforceable, and additional (per the definition in California Health & Saf. Code §§ 38562(d)(1) and (2)). Definitions for these terms are as follows. 1) **Real.** Estimated GHG reductions should not be an artifact of incomplete or inaccurate emissions accounting. Methods for quantifying emission reductions should be conservative to avoid overstating a project's effects. The effects of a project on GHG emissions must be comprehensively accounted for, including unintended effects (often referred to as "leakage").[5] 2) **Additional.** GHG reductions must be additional to any that would have occurred in the absence of the Climate Action Reserve or of a market for GHG reductions generally. "Business as usual" reductions (i.e., those that would						

[5] To ensure that GHG reductions are real, CARB requires the reduction be "a direct reduction within a confined project boundary."

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occur in the absence of a GHG reduction market) should not be eligible for registration. 3) **Permanent.** To function as GHG credits, GHG reductions must effectively be "permanent." This means, in general, that any net reversal in GHG reductions must be fully accounted for and compensated through the achievement of additional reductions. 4) **Quantifiable.** The ability to accurately measure and calculate GHG reductions or GHG removal enhancements relative to a project baseline in a reliable and replicable manner for all GHG emission sources, GHG sinks, or GHG reservoirs included within the credit project boundary, while accounting for uncertainty, activity-shifting leakage, and market-shifting leakage. 5) **Verified.** GHG reductions must result from activities that have been verified. Verification requires third-party review of monitoring data for a project to ensure the data are complete and accurate. 6) **Enforceable.** The emission reductions from credits must be backed by a legal instrument or contract that defines exclusive ownership, and the legal instrument can be enforced within the legal system in the country in which the credit project occurs or through other compulsory means. Please note that per this mitigation measure, only credits originating within the United States are allowed. Carbon credits must also meet the following requirements: 1) Carbon credits may be in the form of GHG offsets for prior reductions of GHG emissions verified through protocols or forecasted mitigation units for future committed GHG emissions meeting protocols. 2) All credits will be documented per protocols functionally equivalent in terms of stringency to CARB's protocol for offsets in the cap-and-trade program. If using credits not from CARB protocols, the Authority must provide the protocols from the credit provider and must document why the protocols are functionally equivalent in terms of stringency to CARB protocols. 3) The Authority will identify carbon credits in geographies closest to the Project first and only go to larger geographies (i.e., California, United States) if adequate credits cannot be found in closer geographies or the procurement of such credits would create an undue financial burden. The Authority will provide the following justification for not using credits in closer geographies in terms of either availability or cost prohibition. • Lack of enough credits available in closer geographies (e.g., Northern Sacramento Valley). • Prohibitively costly credits in closer geographies defined as credits costing more than 300% the amount of the current costs of credits in the regulated CARB offset market or of the current costs of credits in the Compliance Offset Program, which is part of CARB's broader cap-and-trade program. 4) Documentation submitted supporting carbon credit proposals will be prepared by individuals qualified in GHG credit development and verification, and such individuals will certify the following:						

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• Proposed credits meet the criteria in California Health and Safety Code Sections 38562(d)(1) and (d)(2). • Proposed credits meet the definitions for the criteria provided in this measure. • The protocols used for the credits meet or exceed the standards for stringency used in CARB protocols for offsets under the California cap-and-trade system. Monitoring, reporting, and enforcement requirements for implementation of the GHG Reduction Plan will include the following components. 1. *Phased Analysis and Plan Amendments:* As described above, the GHG Reduction Plan may be developed and implemented over five-year increments for Project operations. Prior to the start of each five-year increment, the Authority will update the GHG Reduction Plan to calculate the amount of GHG emissions anticipated in the upcoming five-year period, as well as emissions from prior periods (if needed to cover any deficits) and the projected total net emissions of the Project. The GHG Reduction Plan will identify the specific GHG reduction measures that will be implemented to meet the net-zero performance standard for the upcoming five-year period and include quantification of the expected reductions that will be achieved by each measure. All emissions and reductions will be quantified in accordance with the requirements outlined in *Plan Development* above. The Authority will retain a third-party expert to assist with the review and approval of the GHG Reduction Plan. Subsequent amendments to the GHG Reduction Plan will identify reductions that have been achieved during prior phases and determine if those reductions exceed emissions generated by the Project. If the GHG reduction measures implemented by the Authority result in a surplus of reductions above the net-zero performance standard, the balance of those reductions may be credited to subsequent phases. 2. *Timing and Execution:* The Authority will prepare the GHG Reduction Plan prior to issuance of the first construction or grading permit for the Project. For Project operations, the GHG Reduction Plan will be prepared prior to the end of construction and prior to the start of the next five-year phase of operations. The Authority Board of Directors will formally adopt the completed GHG Reduction Plan and make it publicly available on its website prior to its adoption. BMPs and selected onsite construction measures will be included in construction-permits and contractor bid packages and/or agreements. Offsite measures that the Authority chooses to implement will be completed or in progress before completion of construction or before the end of the calendar year (for Project operations) in which the measure(s) are intended to reduce emissions. If GHG credits are purchased, the Authority will enter the necessary contract(s) to purchase credits prior to the start of construction or prior to the start of the calendar year (for Project operations). All credits must be retired before completion of construction or the calendar year (for Project operations). 3. *Monitoring and Reporting:* The Authority will retain a third-party expert to assist with review and approval of annual reports. Through the third-party expert, the Authority will conduct annual monitoring and reporting to ensure that the reduction measures included in the plan achieve sufficient emission reductions to reduce Project emissions to net zero. Each annual report should describe the GHG reduction strategies that were implemented over the prior year; summarize past, current, and anticipated Project						

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phasing; document compliance with GHG Reduction Plan requirements; and identify corrective actions needed to ensure that the GHG Reduction Plan achieves the net-zero performance standard. If GHG credits have been purchased to reduce emissions for the reporting year, the annual report must include copies of the credit retirement verification. The reports will be finalized and posted in a publicly accessible location online by December 31st of the following year.						
Cultural Resources						
CUL-1.1: Identify NRHP/CRHR-Eligible Built Resources The Authority will implement NRHP/CRHR-eligible built resources identification in the study area. The work will be conducted by an SOI-qualified architectural historian, and the actions listed below will be completed prior to construction. The Authority will document the results in a confidential technical study. • Relocate and map previously recorded potentially NRHP-/CRHR-eligible historic built resources. • Locate and map potentially NRHP-/CRHR-eligible historic built resources in areas that have not been accessible previously. • Evaluate the NRHP/CRHR eligibility of recorded historic built resources. • Assess resource-specific impacts on significant historic built resources for resources that are NRHP/CRHR eligible and would be affected.	**Impact CUL-1:** Cause a substantial adverse change in the significance of a historic built resource	Preconstruction	Compliance reporting; surveying; remedial action	Following built resources study	Authority; SOI-Qualified Architectural Historian	Date: _____ Action Taken:
CUL-1.2: Avoid NRHP/CRHR-Eligible Built Resources The Authority will avoid NRHP/CRHR-eligible built resources in the study area by performing the tasks listed below. The work will be conducted in consultation with an SOI-qualified architectural historian. • The Authority will develop feasible Project design specifications to avoid NRHP-/CRHR-eligible historic built resources. • The Authority will develop and implement feasible Project construction protocols to avoid NRHP-/CRHR-eligible historic built resources, including workers' cultural resources sensitivity training, prior to and during construction activities. • The Authority will develop and implement feasible Project operations protocols that avoid NRHP-/CRHR-eligible historic built resources during operation activities.	**Impact CUL-1:** Cause a substantial adverse change in the significance of a historic built resource	Preconstruction; construction	Contract requirements; design	None	Authority; SOI-Qualified Architectural Historian	Date: _____ Action Taken:
CUL-1.3: Protect NRHP/CRHR-Eligible Built Resources The Authority will develop and implement protocols to protect NRHP/CRHR-eligible built resources in the study area. The work will be conducted in consultation with an SOI-qualified architectural historian. • The Authority will develop feasible protection measures for NRHP-/CRHR-eligible historic built resources prior to and during construction activities and during operation activities. • The Authority will develop resource-specific protection plans that involve measures such as designating NRHP/CRHR-eligible built resources to be protected as Environmentally Sensitive Areas, installing exclusion fencing, conducting historic built resource monitoring where construction or operations would be in the vicinity of a known NRHP/CRHR-eligible built resource, and treating impairments that may be identified through monitoring.	**Impact CUL-1:** Cause a substantial adverse change in the significance of a historic built resource	Preconstruction; construction; operations	Contract requirements; design	None	Authority; SOI-Qualified Architectural Historian	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
CUL-1.4: NRHP/CRHR-Eligible Built Resources Treatment The Authority will develop and implement NRHP/CRHR-eligible built resources treatments in the study area. Prior to construction, the Authority will develop resource-specific treatment plans in consultation with interested parties who are associated with or identify with the NRHP-/CRHR-eligible historic built resources and with an SOI-qualified architectural historian. These resource-specific treatment plans may be Historic American Buildings Survey recordation, interpretive exhibits at recreation areas, educational modules for public schools, NRHP/CRHR nominations, or relocation of historic structures. The Authority will implement the treatment plans prior to and during construction, and following construction, depending on the details of the resource-specific treatment, in consultation with an SOI-qualified architectural historian. Resource-specific treatments may require ongoing work during and after construction.	**Impact CUL-1:** Cause a substantial adverse change in the significance of a historic built resource	Preconstruction; construction; postconstruction	Contract requirements; design	None	Authority; SOI-Qualified Architectural Historian	Date: _____ Action Taken:
CUL-2.1: Identify NRHP/CRHR-Eligible Archaeological Resources The Authority will identify NRHP-/CRHR-eligible archaeological resources in the study area. The work will be conducted by a Registered Professional Archaeologist. The following will occur as part of the identification. • Relocate and map previously recorded archaeological resources that are potentially NRHP/CRHR-eligible. Upon access to previously inaccessible areas, all previously recorded archaeological resources will be located and their boundaries mapped with sub-meter accuracy Global Positioning System (GPS) units to identify their exact location in relation to Project components that have the potential to affect the resources. • Locate and map archaeological resources that are potentially NRHP/CRHR-eligible in areas that have not been accessible previously. Upon access to previously inaccessible areas, pedestrian surveys will be conducted to identify archaeological resources that are potentially NRHP/CRHR-eligible. The surveys will be conducted using transects spaced no greater than 94 feet (30 meters) apart. All newly identified archaeological resources will be recorded on applicable DPR 523-series forms and resource boundaries, features, and diagnostic artifacts outside of features or concentrations will be recorded using sub-meter accuracy GPS units to identify their exact location in relation to Project components that have the potential to impact the resources. • Evaluate the NRHP/CRHR eligibility of recorded archaeological resources. Once all previously and newly recorded archaeological resources have been documented, each resource will be evaluated for NRHP and CRHR eligibility. As discussed in Appendix 4A, *Regulatory Requirements*, cultural resources are eligible for the NRHP and CRHR if they have integrity and meet one or more of the four criteria as defined in the regulations for the NRHP (Section 4A.18.1.3, *National Register of Historic Places*) and CRHR (Section 4A.18.2.2, *California Register of Historical Resources*). Eligibility will be assessed using a combination of (but not limited to) archival, ethnographic, and tribal research, including tribal coordination and assistance, resource condition assessment, subsurface testing, and laboratory analysis. If the resource is evaluated as not eligible, no further action is required, and avoidance is preferred. • Assess impacts on NRHP-/CRHR-eligible archaeological resources. NRHP-/CRHR-eligible archaeological resources will be individually analyzed in relation to the Project components within or near those NRHP-/CRHR-eligible resources. Thresholds of significance identified in Section 22.3.1 will be applied.	**Impact CUL-2:** Cause a substantial adverse change in the significance of an archaeological resource **Impact TCR-1:** Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the Authority has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Preconstruction; construction; postconstruction	Contract requirements; compliance reporting; surveying	As needed	Authority; Registered Professional Archaeologist	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
CUL-2.2: Avoid NRHP/CRHR-Eligible Archaeological Resources The Authority will avoid NRHP/CRHR-eligible archaeological resources in the study area by performing the tasks listed below. The work will be conducted by a Registered Professional Archaeologist. • The Authority will develop feasible Project design specifications to avoid NRHP/CRHR-eligible archaeological resources. If Project design allows modification, design changes will be implemented to avoid NRHP-/CRHR-eligible archaeological resources or avoid impacts on significant values of the resources (features, artifacts, or any other elements of the resource which make the resource NRHP-/CRHR-eligible). • The Authority will develop and implement feasible Project construction protocols to avoid NRHP-/CRHR-eligible archaeological resources, including workers' cultural resources sensitivity training. Prior to construction activities in the vicinity of NRHP-/CRHR-eligible archaeological resources, the Authority will require a qualified archaeologist to provide a cultural resources sensitivity training tailboard to all construction personnel working in the vicinity of the resources. The training will identify the sensitivity, nature, and components of the resource, and inform the construction personnel of necessary protocol in the case of an unanticipated discovery. Tribes will also be invited to participate in and lead part of the workers' cultural resources sensitivity training. • The Authority will develop and implement feasible Project operations protocols that avoid NRHP-/CRHR-eligible archaeological resources. Similar to the workers' cultural resources sensitivity training during construction activities, all personnel in charge of managing the operations will be required to have cultural resources sensitivity training for the resources near Project facilities and have a familiarity with the resource locations and identifications so that future operations or changes in operations can avoid those resources. Tribes will also be invited to participate in and lead part of the cultural resources sensitivity training.	**Impact CUL-2:** Cause a substantial adverse change in the significance of an archaeological resource **Impact TCR-1:** Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the Authority has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Preconstruction; construction; operations	Contract requirements; design	None	Authority; Registered Professional Archaeologist	Date: _____ Action Taken:
CUL-2.3: Protect NRHP/CRHR-Eligible Archaeological Resources The Authority will develop feasible Project protection of NRHP/CRHR-eligible archaeological resources during construction and operations. • The Authority will develop protections protocols to ensure that qualified staff perform monitoring during Project-related ground disturbance to protect known resources, to identify any unanticipated discoveries, and to implement the Post-Review Discovery Procedure. • The Authority will develop resource-specific protection plans considering at a minimum Environmentally Sensitive Area delineation and physical fencing, and requiring archaeological monitoring where construction or operation would be in the vicinity of a known NRHP-/CRHR-eligible archaeological resource. The resource-specific protection plans will establish the methods and standards for when and how Environmentally Sensitive Area delineations will be required and when archaeological monitoring activities will be conducted for specific types of sites that will need to be protected. The resource-specific protection plans will establish the methods and standards for when Tribal monitoring activities will be invited and conducted for specific activities and/or types of sites that will need to be protected. The plans will also identify the roles and responsibilities of monitors and construction crews and specify communication protocols and reporting requirements.	**Impact CUL-2:** Cause a substantial adverse change in the significance of an archaeological resource **Impact TCR-1:** Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the Authority has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Preconstruction; construction; operations	Contract requirements; design	None	Authority	Date: _____ Action Taken:

Mitigation Text	Impact # and Impact Title	Phase	Implementation Action	Reporting Schedule	Implementation Responsibility	Record of Implementation
CUL-2.4: NRHP/CRHR-Eligible Archaeological Resources Treatment The Authority will develop and implement resource-specific treatment plans in consultation with Tribes and other interested parties who are associated with or identify with the resource. The resource-specific archaeological treatment plans will ensure that all NRHP-/CRHR-eligible archaeological resources potentially affected by the Project will be treated according to best practices and professional standards, in a traditionally and culturally sensitive manner, and that treatment options will include a range of interventions from avoidance and minimization of impacts to mitigation for the loss of the physical resource. Treatment may include, but would not be limited to, data recovery, site capping, analysis of existing artifact collections, or interpretive displays, among other things. Appropriate treatment will be determined based on resource type, resource location, types of impacts on the resource, and results of consultation with Tribes, interested parties, and agencies.	**Impact CUL-2:** Cause a substantial adverse change in the significance of an archaeological resource **Impact TCR-1:** Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the Authority has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Preconstruction; construction; operations	Contract requirements; design	None	Authority	Date: _____ Action Taken:
CUL-3.1: Cemetery Relocation Plan The Authority will develop a Cemetery Relocation Plan for relocating two known, dedicated cemeteries located in the inundation area. This will be part of Reclamation's Programmatic Historic Properties Management Plan that would be prepared in consultation with SHPO. Avoidance of the disturbance and/or inundation of two known cemeteries is not expected to be feasible except under the No Project Alternative. The Cemetery Relocation Plan will ensure that all remains in these two cemeteries are treated with respect and in accordance with the wishes of identifiable descendants. The Cemetery Relocation Plan will also ensure that state and county health and safety codes are followed for those interments that are relocated. Two dedicated cemeteries in the inundation area will be relocated to a site or sites approved for interment of human remains per requirements of the California Health and Safety Code (Sections 7500–7527). This procedure will be developed through consultation and coordination with descendants and other parties with demonstrated interest in the occupants of the cemeteries. The procedure will outline legal requirements, such as acquiring a written order from the local health department or county superior court before human remains may be moved, and other rules and regulations adopted by the board of health or health officer of the county.	**Impact CUL-3:** Disturb any human remains, including those interred outside of formal cemeteries **Impact TCR-1:** Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the Authority has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Preconstruction; construction; operations	Contract requirements; design	As needed	Authority	Date: _____ Action Taken:
CUL-3.2: Avoid, Protect, and Treat Human Remains The Authority will avoid and protect any human remains encountered during pre-construction, construction, post-construction, operations, and maintenance. The Authority will follow appropriate state guidelines for halting Project activities at the discovery location, contacting the appropriate county coroner to report the discovery, and proceeding with implementation of Project policies regarding Native American consultation or implementation of a burial treatment plan. See Appendix 4A, *Regulatory Resources*, Sections 4A.18.1, *Federal Policies and Regulations*, and 4A.18.2, *State Policies and Regulations*. The Authority and its qualified contractors will prepare a plan for treating human remains and/or grave goods encountered during archaeological investigations, Project construction, or Project operations. The Burial Treatment Plan will identify ways to avoid or reduce the likelihood of encountering as yet unidentified remains. The Burial Treatment Plan will ensure that the Authority and its contractors respond to unanticipated discovery of human remains with respect and in accordance with the wishes of identifiable descendants. The Burial Treatment Plan will also ensure that state and county health and safety codes are followed for those interments that are relocated.	**Impact CUL-3:** Disturb any human remains, including those interred outside of formal cemeteries **Impact TCR-1:** Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the Authority has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Preconstruction; construction; operations	Contract requirements; design	None	Authority; Contractor	Date: _____ Action Taken:

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This procedure will identify legal requirements and best practices for treating Native American and non-Native American remains encountered outside of a dedicated cemetery. The Native American portion of the Burial Treatment Plan will be developed in consultation with consulting Tribes and may include individual Tribes' burial treatment plans. The Authority and its qualified contractors will complete preparation of the Burial Treatment Plan within 6 months of issuance of the NOD/ROD, adopt the plan prior to selection of the construction contractor, and fully implement the plan prior to any soil disturbance within 500 feet of remains.						
Tribal Cultural Resources						
TCR-1.1: Implement Mitigation Measures Recommended in Public Resources Code Section 21084.3 to Avoid Damaging Effects on Tribal Cultural Resources 1. Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria. 2. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following: a. Protecting the cultural character and integrity of the resource. b. Protecting the traditional use of the resource. c. Protecting the confidentiality of the resource. 3. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.	**Impact TCR-1:** Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the Authority has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Preconstruction; construction; operations	Contract requirements; design; funding/ acquisition	None	Authority; Contractor	Date: _____ Action Taken:
TCR-1.2: Tribal Monitoring Tribal monitors will be permitted to observe all ground-disturbing activities.	**Impact TCR-1:** Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the Authority has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Preconstruction; construction; postconstruction; operations	Contract requirements; monitoring	None	Authority; Contractor; Tribal Monitor	Date: _____ Action Taken:
TCR-1.3: Implement Agreed-Upon Protocol for the Treatment of Human Remains and Cultural Items If unanticipated discoveries of National Register of Historic Places (NRHP)/CRHR-eligible resources occur on federal land, the federal land manager will be immediately contacted, and the federal agency will follow its own process for complying with the federal Native American Graves Protection and Repatriation Act and other federal obligations, as directed under Title 43 of Code of Federal Regulations, Part 10. If NRHP/CRHR-eligible sites or cultural items, other than human remains, are discovered on non-federal land, the Authority will work with the consulting Tribes to determine affiliation and develop appropriate treatment. If human remains or associated grave goods are discovered during or after environmental review, the Authority will provide for the following actions:	**Impact TCR-1:** Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the Authority has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Preconstruction; construction; operations	Contract requirements; compliance reporting	As needed	Authority; Contractor; Tribal Monitor	Date: _____ Action Taken:

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• Immediately notify the County coroner and cease ground-disturbing activities in that location. • If the County coroner determines the remains are those of a Native American, the coroner will notify the NAHC to establish the most likely descendant and contact the culturally affiliated Tribe. • Allow the designated Tribal member(s) to inspect the site of the discovery and determine how the human remains and grave goods should be treated with appropriate dignity and respect. • The location of a reburial will be recorded with the California Historic Resources Inventory System. • The Authority, its contractors and consultants, and the coroner will not disclose the location of the original burial or reburial site. • Treatment of all cultural items, including ceremonial items and archaeological items will reflect the religious beliefs, customs, and practices of the culturally affiliated Tribe. All cultural items, including ceremonial items and archaeological items, discovered during Project construction and operation will be turned over to the Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. The Authority will waive any and all claims to ownership of Tribal cultural items, including ceremonial items and archaeological items that may be found. • Work of Tribal monitors and treatment of human remains will proceed in accordance with treatment plans developed in consultation with the most likely descendant of the culturally affiliated Tribe as identified by the NAHC.						

2012 Staff Report	*2012 Staff Report on Burrowing Owl Mitigation*	GCAPCD	Glenn County Air Pollution Control District	ROD	Record of Decision
Authority	Sites Project Authority	GHG	greenhouse gas	ROG	reactive organic gas
BMP	best management practice	GIS	geographic information system	RWQCB	Regional Water Quality Control Board
CARB	California Air Resources Board	GPS	Global Positioning System	SHPO	State Historic Preservation Officer
CBD	Colusa Basin Drain	HOS	hypolimnetic oxygenation system	SOI	Secretary of the Interior
CCAPCD	Colusa County Air Pollution Control District	LMP	land management plan	SRA	shaded riverine aquatic
CDFW	California Department of Fish and Wildlife	mg/kg	milligram per kilogram	State Water Board	State Water Resources Control Board
CEQA	California Environmental Quality Act	mm	millimeter	SVAB	Sacramento Valley Air Basin
CESA	California Endangered Species Act	MOU	memorandum of understanding	SVP	Society of Vertebrate Paleontology
CNDDB	California Natural Diversity Database	NAHC	Native American Heritage Commission	TCAPCD	Tehama County Air Pollution Control District
CO_2e	carbon dioxide equivalent	NMFS	National Marine Fisheries Service	TMDL	total maximum daily load
CRHR	California Register of Historical Resources	NOD	Notice of Decision	USACE	U.S. Army Corps of Engineers
CWA	Clean Water Act	NO_x	nitrogen oxides	USFWS	U.S. Fish and Wildlife Service
DO	dissolved oxygen	NRHP	National Register of Historic Places	WCG	wildlife crossing species guild
DOC	California Department of Conservation	NZE	near zero emission	WSIP	Water Storage Investment Program
DPR	California Department of Parks and Recreation	PM10	particulate matter less than or equal to 10 microns in diameter	ww	wet weight
DWR	California Department of Water Resources	PRMMP	paleontological resources monitoring and mitigation plan	YSAQMD	Yolo-Solano Air Quality Management District
EIR	environmental impact report	Project	Sites Reservoir Project	ZE	zero emission
ESA	Endangered Species Act	Reclamation	Bureau of Reclamation	ZEV	zero-emission vehicle
FMU	future mitigation unit	RMP	Reservoir Management Plan		

4.0 REFERENCES

4.1 Table 1 References

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Attachment A

List of 2023 Joint Reservoir Committee and Authority Board Public Briefings on the Final EIR/EIS

February 17, 2023 - Review of content and format of the final document, an overview of project refinements to be reflected in the final documents, and an overview of the updates to the modeling

March 17, 2023 - Review of master responses prepared in response to key comments received on the Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS) and provide an overview of the ongoing public and local agency outreach and Tribal coordination and consultation efforts.

April 22, 2023 - An overview of any refinements to impacts and mitigation measures along with an overview of the Mitigation Monitoring and Reporting Program.

May 19, 2023 – An overview of the California Environmental Quality Act (CEQA) requirements to adopt a Statement of Overriding Considerations as part of the decision process and an initial review of the analysis.

June 16, 2023 – An overview of the CEQA requirements to adopt Findings as part of the decision process, a summary of efforts recently undertaken to bolster the water quality analysis, and a review of the tribal cultural resources section along with a status update on the ongoing tribal consultation.

July 21, 2023 - An overview of Reclamation's ongoing review of the Final EIR/EIS and requirements for compliance with the National Environmental Policy Act (NEPA), including the Record of Decision (ROD).

August 18, 2023 - An overview of the Final EIR/EIS public release process and associated outreach materials along with the development of the CEQA administrative record.

September 22, 2023 – An overview of the decision process and associated CEQA actions.

In addition to the briefings above, a number of briefings were held in 2022 as the Final EIR/EIS was under preparation. Similar briefings were also held at the Environmental Planning and Permitting Working Group, which is also open the public.

ATTACHMENT B

Cachil Dehe Band of Wintun Indians Materials

The following materials are provided in the following order:

1. October 27, 2023 Materials from the Colusa Indian Community Council, Cachil Dehe Band of Wintun Indians

2. Memo to File from Alicia Forsythe, Environmental Planning and Permitting Manager regarding the Tribal Cultural Resource Information Provided October 27, 2023, by the Cachil Dehe Band of Wintun Indians of the Colusa Indian Community Council

3. Sites Project Authority Letter Dated October 20, 2023 to The Honorable Chairman Wayne Mitchum Jr. for the Cachil Dehe Band of Wintun Indians of the Colusa Indian Community Council regarding Consultation under Assembly Bill 52 for the Sites Reservoir Project

COLUSA INDIAN COMMUNITY COUNCIL
CACHIL DEHE BAND OF WINTUN INDIANS

10/27/2023

Cachil Dehe Band of Wintun Indians of the Colusa Indian Community Council EIR Statement

Statement for the EIR

We are the people of the Cachil DeHe Band of Wintun Indians of the Colusa Indian Community Council (CICC), and we have—since time immemorial—dwelled and lived with and in the landscape where the Sites Project Authority seeks to impose and entrench the Sites Reservoir Project. We, the people of CICC, are intimately and indelibly a part of this landscape. When we speak of land, we do not simply speak of the surface of the ground, but of water and air, of plants and animals, of geographical features and hydrological bodies, of what is below and what is above. The land/waterscape of the proposed Sites Reservoir and the diversity of life that it sustains are our family, our kin, and our material heritage and inheritance from our ancestors. It is has been and continues to be our deep obligation and responsibility to protect, preserve, and steward this life and the places and land/waterscapes fundamental to our traditions, knowledges, practices, and identities as a unique Tribe and people. We accept these deep obligations and responsibilities so that our forthcoming generations may know our sacred geographies, environments, and non-human and more-than-human kin in the future the same way our people have known and honored them in the past, as we know and honor them today.

Rather than accounting for this deep time relationship we have shared with the environment of the proposed Sites Reservoir Project, the Environmental Impact Report (EIR) prepared by the Sites Project Authority as part of California Environmental Quality Act (CEQA) and Assembly 52 (AB 52) review and compliance essentially works to exclude and make us and all affiliated Native peoples invisible in the environmental setting of the proposed land/waterscape they seek to flood and destroy as if we do not—and never did—exist. As part of the preparation of the EIR, it has been the Sites Project Authority's responsibility to bring to the Board of Directors and all decision makers the best available information. They have not. The proposed Sites Reservoir Project will flood and destroy essential parts of our land/waterscape, significantly impact unique and essential plant gathering areas, sacred sites, and ancestral burial locations, heavily harm and damage the integrity of the environmental setting and human environment relationships that define our traditional use areas, and irrevocably undermine our capacities for viable futures as a Tribe and people. We will never be able to visit the plants, animals, or waters of this area again if the Project is approved, because it will inundate ancestral remains, and therefore become imbalanced, polluted, and contaminated as taught in and by our traditional knowledge and science systems.

The Sites Project Authority has failed to reasonably, meaningfully, and in good faith fulfill its environmental review responsibilities under CEQA and its AB 52 amendments in accounting for our Native environmental settings and relationships to this place and land/waterscape. The Sites Project Authority has also used unqualified staff—as clearly demonstrated by the complete lack of consideration

3730 Highway 45, Colusa CA 95932 Phone: (530) 458-8231 Fax: (530) 458-3866

for the First Peoples of the lands and waters of the proposed Project area—and continue to make claims that they are using the best available information when they neglected to respond to Tribal concerns and offers of collaboration to help fulfill the purpose of CEQA and AB 52. Moreover, the Sites Project Authority Executive Director, Jerry Brown, and Environmental Planning and Permitting Manager, Alicia Forsythe, have repeatedly and publicly presented the position that, because the No Project Alternative does not carry out the Sites Project Authority's mission and objectives for the proposed Project, it is not a viable action alternative. While the Sites Project Authority makes repeated claims that this stance regarding the No Project Alternative does not amount to a failure by them to undertake the necessary analysis and abide by the procedural processes required by CEQA and its AB 52 additions, this claim is demonstrably specious. In this stance, the Sites Project Authority, as the lead agency, has predetermined that regardless of the intensity, breadth, and destruction of the significant impacts that will occur to our tribal cultural resources (TCRs), and thus the environment, the proposed Site Reservoir Project will go through. This stance is pre-decisional and a clear and blatant violation of the procedures that guide CEQA.

We, the people of CICC, therefore ask that the Sites Project Authority Board of Directors and other decision makers closely and carefully consider not only what the proposed Sites Reservoir Project will be building, but what it will be irreversibly destroying. PRC 21084.1 states that "[a] project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment," and PRC 21084.2 clarifies that, "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." The No Project Alternative, which assumes the Project will not be implemented, is required to consider what would be reasonably expected to occur in the foreseeable future if the Project is not approved. For the people of CICC, only the No Project Alternative will permit our people to continue fulfilling our stewardship obligations and traditional religious and cultural practices that indelibly depend on the integrity and presence of our TCRs that have existed and sustained us since the time of Creation.

We bring to the attention of the Board of Directors and other decision makers that on June 18, 2019, California Governor Gavin Newsom signed Executive Order (EO) N-15-19, presenting the first formal State governmental recognition "that the State [of California] historically sanctioned over a century of depredations and prejudicial policies against California Native Americans." In its preamble, the State offers acknowledgement that:

> [I]n the early decades of California's statehood, the relationship between the State of California and California Native Americans was fraught with violence, exploitation, dispossession and the attempted destruction of tribal communities, as summed up by California's first Governor, Peter Burnett, in his 1851 address to the Legislature: "[t]hat a war of extermination will continue to be waged between the two races until the Indian race becomes extinct must be expected"; ....
>
> .... [T]he State of California's laws and policies discriminating against Native Americans and denying the existence of tribal government powers persisted well into the twentieth century....

When appropriate levels of inclusion of the rights, opportunities, and special expertise of the Native peoples are not readily and affirmatively afforded as part of CEQA and AB 52 compliance processes and in considerations of adverse effects on and significant environmental impacts to our TCRs—as they have not been by the Sites Project Authority Executive Director, Environmental Planning and Permitting

Manager, and the consultants at HDR and ICF who have worked as Sites Authority Project advocates and representatives rather than impartial preparers of the EIR—these depredations and their prejudicial, marginalizing, alienating, and discriminatory practices are regenerated and reproduced against CICC well into the twenty-first century.

As a federally recognized Native American tribe, each CICC member holds dual status as citizens of both CICC, a sovereign Indigenous Nation, and the United States of America and its State of California. This dual status means that CICC concerns must be approached, consulted on, and considered attentively, considerately, and with respect for Tribal cultural sensitivity and information sharing protocols. CICC is not a bureaucratic check-box and our cultural information is not a matter to be inattentively plugged into and subsumed under predesignated categories of settler colonial governance. How the Sites Project Authority has claimed adequate levels of outreach and consultation with CICC has been unreasonable and in bad faith, and has neither fostered transparency, developed pathways for trust, nor built reasonable and good faith opportunities to account for and take a hard look at significant impacts to our TCRs, as is required under CEQA and AB 52 review.

The area of the proposed Project is part of a historic district and defined cultural landscape TCR that—according to the special expertise of CICC—are preliminarily eligible, respectively, for listing on the National Register of Historic Places (NRHP) under Criteria A and D and the California Register of Historical Resources (CRHR) under Criteria 1 and 4 and which together serve as the last place left in our traditional use area and traditional cultural land/waterscape to provide our people unique capacities and opportunities to continue to be the people of CICC. If the Sites Reservoir Project is approved, this will all be irrevocably damaged and destroyed. The Sites Project Authority Board of Directors and other decision makers have it within their decision making power to stop this proposed Project and the destructive swift and slow violence and social and environmental *in*justices it will impose on the people of CICC. So much has already been taken from CICC and other Native peoples of California, and the direct, indirect, and cumulative adverse effects, significant environmental impacts, and permanent damage that will be caused by the proposed Project will forever destroy the integrity, capacities, and sanctity of the lands and waters of the proposed Project area.

Chairman, Wayne Mitchum Jr.

Vice Chairwoman, Amanda Mitchum

Response to Cachil Dehe Materials Dated October 27, 2023

To:	File
Date:	November 13, 2023
From:	Alicia Forsythe, Environmental Planning and Permitting Manger
Subject:	Tribal Cultural Resource Information Provided October 27, 2023, by the Cachil Dehe Band of Wintun Indians of the Colusa Indian Community Council.

This memorandum addresses tribal cultural resource information recently provided to the Sites Reservoir Authority (the "Authority") by the Cachil Dehe Band of Wintun Indians of the Colusa Indian Community Council ("CICC"), a federally recognized Indian Tribe with a traditional and cultural affiliation to the geographic area of the proposed Sites Reservoir Project (the "Project").

The Authority has, for several years, requested information from CICC regarding the potential for the Project to impact tribal cultural resources. The Authority's consultation with CICC regarding the Project is discussed in the Sites Reservoir Project Final Environmental Impact Report/Environmental Impact Statement ("Final EIR/EIS") at Table 23-2, and in greater detail in the Authority's Technical Memorandum, "AB 52 Consultation and Additional Outreach to Tribes" (November 2023) and the Authority's October 20, 2023, letter to CICC, both of which the Authority will include in its CEQA administrative record.

On October 27, 2023, CICC sent the Authority a letter along with a request that the contents of the letter be added, without edit, to the Authority's CEQA administrative record. On November 9, 2023, CICC confirmed in writing that the materials that are part of the AB 52 consultation effort that are not otherwise specifically deemed confidential can be released to the public.

The Authority's October 20, 2023 letter responds to the concerns raised by CICC and is included here as an attachment. This memorandum discusses the potential for a tribal cultural resource in the Project vicinity in more detail and includes consideration of the information provided in the CICC's October 27, 2023 letter.

CICC's October 27, 2023 letter included the following description of a potential tribal cultural resource in the Project vicinity:

> The area of the proposed Project is part of a historic district and defined cultural landscape TCR that—according to the special expertise of CICC—are preliminarily eligible, respectively, for listing on the National Register of Historic Places (NRHP) under Criteria A and D and the California Register of Historical Resources (CRHR) under Criteria 1 and 4 which together serve as the last place left in our

> traditional use area and traditional cultural land/waterscape to provide our people unique capacities and opportunities to continue to be the people of CICC. If the Sites Reservoir Project is approved, this will all be irrevocably damaged and destroyed.

CICC October 27, 2023, Letter, p.3.

As discussed in the Final EIR/EIS, a key source of information for the Authority's identification of tribal cultural resources and the analysis of the Project's potential impacts on these resources is the perspective of California Native American Tribes that are traditionally and culturally affiliated with the Project area. *See* Final EIR/EIS at 23-10. The Authority has considered the information provided by CICC in the October 27 letter as part of the Authority's evaluation of potential impacts to tribal cultural resources and as it weighs whether to approve the Project. The CICC letter discussing the resource will be included in the Authority's CEQA administrative record, per CICC's request.

As a result of the Authority's consultation with Tribes (including CICC), the Final EIR/EIS reflects the Authority's determination that tribal cultural resources are within and surrounding the Project footprint and will be significantly affected by the Project. *See* Final EIR/EIS at 23-17. Significant impacts on tribal cultural resources will include, among other impacts: the filling of Sites Reservoir, which would destroy or eliminate access to any resources potentially present in the inundation area (such as, but not limited to, gathering of plant resources and inundate Native American ancestral sites); and alteration of the landscape, which could disrupt cultural and spiritual practices. *Id.* The Final EIR/EIS identifies mitigation measures that could reduce some, but not all, impacts and concludes that Project construction and operation (under all alternatives) would have a significant and unavoidable impact on tribal cultural resources. *See* Final EIR/EIS at 23-21. All of the mitigation measures in the Final EIR/EIS are proposed for adoption as binding conditions of Project approval in the Mitigation and Monitoring Reporting Program for the Project. The CICC suggests not building the reservoir as an alternative which does not meet the Project objectives.

Based on the information provided by CICC, the Authority is not seeing anything in the CICC's materials that is new or different from anything previously evaluated and considers the potential historic district and defined cultural landscape CICC describes to be among the tribal cultural resources that have been analyzed and that will be impacted as a result of Project construction and operation as discussed in Chapter 23 of the Final EIR/EIS. The Authority will continue its outreach to and coordinate with CICC to gather additional information of requisite detail to evaluate eligibility of the resource for inclusion in the California Register of Historical Resources. While the Authority anticipates a significant and unavoidable impact to the resource CICC describes based on the analysis and findings presented in Chapter 23, the Authority is committed to utilize and implement all of the Final EIR/EIS tribal cultural resource mitigation measures in an effort to minimize or avoid those impacts to the extent feasible.

Specifically, Mitigation Measure TCR-1.1 gives the Authority flexibility to implement measures tailored to avoiding damaging effects on a particular resource, and taking into account the

tribal cultural values and meaning of the resource. See Final EIR/EIS at 23-21. The Authority will continue its outreach to and coordination with CICC regarding potential measures, including the Authority's proposal to fund the CICC direct cost to complete an ethnographic study of the Project area. Implementation of Mitigation Measures TCR-1.2, TCR-1.3, CUL-2.1, CUL-2.2, CUL-2.3 and CUL-2.4, as discussed in detail in Chapters 22 and 23 of the Final EIR/EIS, will also reduce impacts to the resource CICC describes to the extent the lands encompassed by the CICC resource contain human remains, cultural items and/or archaeological resources that contribute to the significance of the resource.

October 20, 2023

The Honorable Chairman Wayne Mitchum Jr.
Colusa Indian Community Council
Cachil Dehe Band of Wintun Indians
3730 Highway 45
Colusa, CA 95932

Sent via email

Subject: Consultation under Assembly Bill 52 for the Sites Reservoir Project

Dear Chairman Mitchum:

The Sites Project Authority greatly appreciates the opportunity to consult with the Cachil Dehe Band of Wintun Indians, a federally recognized Indian Tribe and sovereign government. We especially appreciate the time spent by members of your government, staff, and your consultant to engage with the Authority over the past several months and for taking the time to meet with us on October 2 to discuss the proposed Sites Reservoir Project. At our October 2 meeting, a detailed response to CICC's September 29, 2023, letter was requested. Attached to this letter are responses to the questions and concerns raised in your September 29, 2023, letter. Similar to our September 15, 2023 letter, the Authority is working to understand CICC's concerns and has organized this attachment in a way that we hope delineates and addresses each concern.

I realize you may not agree with our responses and that we may have a difference of opinion on some of these items. I respect your viewpoint and take your concerns seriously and want to continue working with you to identify actionable items that can be implemented to address your concerns, build a working relationship with the Tribe that continues beyond the present efforts, and chart a path forward that honors and respects the Tribe from your perspective. As I mentioned at the end of our October 2 meeting, we are trying hard to understand and constructively engage with you and I am personally committed to this. To this end, I respectfully request time to walk through our responses and discuss them with you and CICC government's leadership, address the materials that we left behind at our September 29 meeting, and discuss any other topics of interest to you.

P.O. Box 517
Maxwell, CA 95955
530.438.2309

In addition, AB 52 and the California Public Resources Code Section 21082.3(c)(1) calls for confidentiality in the AB 52 process and requires the Authority to obtain written consent from CICC prior to the public disclosure of information submitted by the Tribe during the environmental review process. We are wrapping up our Final Environmental Impact Report (EIR) and expect to ask our Board of Directors to consider certification of the Final EIR and adoption of the Project at its November 17, 2023 meeting. We would like to discuss with you what, if any, of our discussions and letter interactions should be disclosed in materials available to the public. While at times, CICC has stated that information should be considered and included in our Final EIR there are also times when CICC has requested confidentiality. We would like to seek clarity to ensure we understand and are able to honor your expectations.

We deeply appreciate CICC's willingness to continue to engage and bring these concerns to our attention and your willingness to work together going forward. As noted above, we would like to meet with you to discuss our responses and next steps and would like to schedule a meeting very soon in light of our schedule to close out the CEQA process. In the meantime, if there are any questions on this letter in the intervening time, please contact me at jbrown@sitesproject.org or 925-260-7417 or Alicia Forsythe, Environmental Planning and Permitting Manager, at aforsythe@sitesproject.org or 916-880-0676.

Sincerely,

Jerry Brown
Executive Director

Enclosures:

- Attachment A – Sites Project Authority's Responses to Detailed Concerns in the Colusa Indian Community Council's September 29, 2023 Letter
- Attachment B – Emails between Mrs. Alicia Forsythe and Mrs. Monica Ruth Regarding April 18, 2023 Consultation Meeting
- Attachment C – Summary of Proposed Commitments by the Sites Project Authority to the Colusa Indian Community Council

Attachment A
Sites Project Authority's Responses to Detailed Concerns in the Colusa Indian Community Council's September 29, 2023 Materials
October 20, 2023

Below are responses from the Sites Project Authority (Authority) to the concerns expressed in the letter dated September 29, 2023 from the Cachil Dehe Band of Wintun Indians of the Colusa Indian Community Council (CICC), a federally recognized Indian Tribe and sovereign nation. As the Authority expressed in its September 15, 2023 letter, the Authority has worked to understand CICC's concerns and has organized this attachment in a way that we hope identifies and addresses each concern. Where appropriate, we have used the same headings from our September 15 letter and have added a few additional headings to address expanded topics. We hope that you accept these responses in the spirit of collaborative dialogue and toward finding a joint path forward that bridges our differences and is respectful of your needs and concerns.

AB 52 Consultation for the Project

In the May 3 and September 29 letters and in all of our recent meetings, CICC expressed concerns that Assembly Bill (AB) 52 consultation is overdue for the Project and that there has been an absence of reasonable and good faith consultation. In our September 15 response letter, we provided a timeline of the AB 52 consultation efforts for the Project. As identified in the timeline, CICC requested to consult on the Project in 2017 and reconfirmed that request in December 2020. The Authority sent information to CICC on multiple occasions, including in March 2019, August 2019, October 2020, March 2021, December 2021, and January 2022, to solicit feedback on the Project including CICC's knowledge and concerns related to tribal cultural resources and the mitigation measures proposed as part of the Project. The Authority received no response from CICC aside from confirmation of receipt of the materials and to request references. Wanting to further engage tribes in the Project and thinking about mechanisms for lasting engagement throughout the life of the Project, the Authority proposed a Tribal Working Group in a letter to CICC in January 2023. This January 2023 letter ultimately led to the April 18, 2023 meeting with the Authority and CICC and our current efforts.

AB 52 embodies the intent of the Legislature to "ensure that local and tribal governments, public agencies, and project proponents have information available, early in the California Environmental Quality Act environmental review process, for purposes of identifying and addressing potential adverse impacts to tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process." AB 52 § 1(a)(7). The prescribed

P.O. Box 517
Maxwell, CA 95955
530.438.2309

timelines for AB 52 consultation further underscore this intent to generate substantive information and discussion early in the California Environmental Quality Act (CEQA) process. Specifically, under AB 52, the lead agency is to formally notify tribes with traditional and cultural affiliation with a project area early in the project timeframe and the tribe is to respond within 30 days of that notification identifying if it would like to engage in consultation. Cal. Pub. Res. Code § 21080.3.

Although CICC timely responded that it would like to engage in consultation, CICC did not respond to the Authority regarding materials sent by the Authority to CICC from March 2019 to the end of calendar year 2022 other than to confirm receipt and to request references (which were provided by the Authority). CICC's September 29 letter states "the Sites Project Authority cannot claim with reasonableness or good faith with its over four months-long delay in response [to CICC's May 3 letter] that it has conducted meaningful AB52 consultation . . .". We respectfully disagree as the Authority did seek to engage CICC on multiple occasions for more than three and a half years from 2019 through 2022 yet CICC did not respond to the Authority.

California Public Resources Code Section 21080.3.1(b) identifies that "for the purposes of this section . . . 'consultation' shall have the same meaning as provided in Section 65352.4 of the Government Code." Section 65352.4 of the Government Code states that:

> "consultation" means the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance.

California Public Resources Code Section 21080.3.2.(a) further states that:

> As a part of the consultation pursuant to Section 21080.3.1, the parties may propose mitigation measures, including, but not limited to, those recommended in Section 21084.3, capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource. If the California Native American tribe requests consultation regarding alternatives to the project, recommended mitigation measures, or significant effects, the consultation shall include those topics. The consultation may include discussion concerning the type of environmental review necessary, the significance of tribal cultural resources, the significance of the project's impacts on

> the tribal cultural resources, and, if necessary, project alternatives or the appropriate measures for preservation or mitigation that the California Native American tribe may recommended to the lead agency.

Throughout the consultation process, the Authority has sought feedback from CICC on the Project, Project alternatives, the significance of tribal cultural resources, and the significance of the Project's impacts on tribal cultural resources, along with mitigation measures to reduce these impacts. The Authority's March 2019 materials included copies of cultural resources reports prepared as of that date and reference materials; the August 2019 materials included the remaining reference material requested; the October 2020 discussion and material included an updated Project description, GIS data for cultural resources, and a draft archeological report; the March 2021 materials included a revised preliminary Project description, including the range of alternatives being considered for the Project; the December 2021 materials included a link to the Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (Revised Draft EIR/Supplemental Draft EIS); and the January 2022 materials included the confidential cultural resources report that is an appendix to the Revised Draft EIR/Supplemental Draft EIS.

The California Office of Planning and Research's (OPR) June 2017 Technical Advisory on AB 52 and Tribal Cultural Resources in CEQA states that consultation "is a process in which *both* the *tribe* and *local government* invest time and effort into seeking a mutually agreeable resolution for the purpose of preserving or mitigating impacts to a cultural place, where feasible."[1] (Emphasis added.) The Authority has been committed to the principles set forth in AB 52 and has reached out to CICC numerous times over the years to seek feedback and engage in consultation efforts. Over the last six months of this process, the Authority has acted in good faith with reasonable efforts to understand CICC's concerns with respect to the CICC historic district and defined traditional cultural landscape but, as discussed below, the Authority lacks the information necessary to evaluate this resource and come to a mutual agreement.

Project's California Environmental Quality Act (CEQA) Process

CICC's September 29 letter expresses concern that the Authority's mission prevents it from preparing an impartial EIR analysis. The lead agency for a CEQA document is "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment." Cal. Pub. Res. Code § 21067. Inherent

[1] Available here: https://opr.ca.gov/ceqa/docs/20200224-AB_52_Technical_Advisory_Feb_2020.pdf

to CEQA is that the agency carrying out the project is the agency that is preparing the environmental document. As stated on OPR's website[2]:

> CEQA requires public agencies to "look before they leap" and consider the environmental consequences of their discretionary actions. CEQA is intended to inform government decisionmakers and the public about the potential environmental effects of proposed activities and to prevent significant, avoidable environmental damage.

CEQA requires a consideration and disclosure of environmental effects of a discretionary agency action to inform decisionmakers and the public. The CEQA statute and CEQA Guidelines set forth an extensive procedural framework for how a lead agency is to complete the CEQA process to ensure that a project's impacts are adequately analyzed, considered and disclosed.

CEQA requires the consideration and discussion of alternatives to a proposed project, including a no project alternative. Cal. Pub. Res. Code § 15126.6. An EIR is to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project." *Id.* An EIR shall also include a no project alternative. California Public Resources Code Section 15126.6 (e)(1) states that "the purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." As the no project alternative does not carry out the proposed project and thus, presumably does not meet the project's basic objectives, it is by definition, not a viable action alternative. The Authority's stance regarding the no project alternative does not amount to a failure by the Authority to undertake the analysis and undertake the procedural process required by CEQA.

At our April 18 and June 15 meetings, CICC stated that it would like to include information in the Final EIR/EIS for the Project. At both the April 18 and June 15 meetings, we understood CICC to say that this information would be in the form of a statement from the Tribe that the Authority could not change in any way and would publish the statement in whole as exactly written by CICC. We stated that we would include information provided by the Tribe in the Final EIR/EIS and asked for this statement. At our October 2 meeting, and also referenced in CICC's September 29 letter, CICC states that "CICC directly offered . . . to provide the Sites Project Authority with a statement of significance on our TCL/historic district and other contributing TCRs and the direct, indirect, and cumulative impacts that will occur to them

[2] Available here: https://opr.ca.gov/ceqa/

under all alternatives, including the No Project or Action alternative, to directly include in the EIR." At our October 2 meeting, we reiterated that we would include such a statement provided by the Tribe in the Final EIR/EIS. As of the preparation of this letter, the Authority has not received this statement from CICC. Our Final EIR/EIS is in the final production stages and there is no longer time to include such a statement in the Final EIR/EIS. However, we will include such a statement provided by the Tribe in the Authority's CEQA administrative record but will need to have this statement no later than close of business, October 27. If the statement is received after October 27 but before our Board meeting, which is scheduled for November 17, we will include it in the information the Board members receive.

CICC Historic District and Defined Traditional Cultural Landscape

We appreciate the worldview of Native people in seeing the land and environment as intrinsically intertwined with human development and wellbeing. We also understand that natural resources can be considered cultural resources and should be assessed as such. We have a whole-hearted appreciation for this connection – it is a connection to a place, to a home, to a being that many people no longer have. We value the time that CICC has spent in helping us understand this connection.

Throughout our recent meetings and correspondence, CICC has identified that that it views the Project area as within a CICC historic district and defined traditional cultural landscape. At our recent meetings and correspondence, the Authority has requested additional information on the defined CICC historic district and defined traditional cultural landscape. We are not questioning CICC's belief that there is a CICC historic district and defined traditional cultural landscape. We are asking these questions as we need to analyze these issues within a regulatory framework. .

California Public Resources Code Section 21074(b) defines a cultural landscape as a tribal cultural resource if it meets both the defining criteria of a tribal cultural resource and the landscape is geographically defined in terms of size and scope. California Public Resources Code Section 21074(a) defines a tribal cultural resource as either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources[3].

[3] California Public Resources Code Section 5024.1 identifies the criteria to be eligible for the California Register of Historical Resources as follows:

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1[4].

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

OPR's June 2017 Technical Advisory on AB 52 and Tribal Cultural Resources in CEQA provides additional guidance on what constitutes substantial evidence in a lead agency determination of a tribal cultural resource as follows:

> Evidence that may support such a finding could include elder testimony, oral history, tribal government archival information, testimony of a qualified archaeologist certified by the relevant tribe, testimony of an expert certified by the tribal government, official tribal government declarations or resolutions, formal statements from a certified Tribal Historic Preservation Officer, or historical/anthropological records.

Thus, state law directs the Authority to examine whether a historic district and defined traditional cultural landscape, geographically defined in terms of size and scope and is: (1) eligible for inclusion in the California Register of Historical Resources or a local register of historical resources; or (2) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant. We have asked for more information on the CICC historic district and defined traditional cultural landscape as such information is necessary for us to meet the statutory obligations of AB 52 and the California Public Resources Code. We regret that CICC did not bring the presence of a historic district and

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(b) The California Register shall include historical resources determined by the commission, according to procedures adopted by the commission, to be significant and to meet the criteria in subdivision (c).

(c) A resource may be listed as an historical resource in the California Register if it meets any of the following National Register of Historic Places criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

[4] California Public Resources Code Section 5020.1(k) defines "Local register of historical resources" as a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution.

traditional cultural landscape to our attention earlier, so that we could have explored this with you more thoroughly.

At our October 2 meeting and in the September 29 CICC letter, extensive, but general information was provided on the connection between Native People and natural landscapes. The CICC September 29 document provides numerous citations to literature, to Deloria 1994, Watkins 2001, Pablo 2001, Casey 2013, Marker 2018, and others. None of this literature, however, addresses how the CICC historic district and defined traditional cultural landscape is eligible for inclusion in the California Register of Historical Resources or a local register, or provides substantial evidence for the Authority to make a determination of significance. CICC's September 29 letter goes on to identify "the presence of intensively significant and unique plants and animal gathering and intergenerational teaching and learning areas, ancestral remains . . .". This information is helpful but additional information is needed.

The Authority has offered to fund the CICC direct cost to complete an ethnographic study of the Project area. Such a study would assist CICC in developing the information and documentation necessary to both support a determination of eligibility for inclusion in the California Register of Historical Resources or a local register and would provide information important to informing the path forward for the Project. The avoidance, minimization, and mitigation measures in the Final EIR/EIS allow for the continued consideration of the CICC historic district and defined traditional cultural landscape.

Qualification and Competency of Individuals Working on the Project

CICC's September 29 letter reiterates portions of CICC's May 3 letter and the Authority's September 15 response regarding the request to include an ethnohistorian/ethnographer in the April 18 meeting. This topic was also discussed at length at the October 2 consultation meeting. While we include responses to concerns related to competency and qualifications of the professional staff working on the Project, we feel these are distractions from the real issues and do not help us build understanding and collaboration which we believe is our mutual goal.

Attached are the emails between Monica Ruth, the requested ethnohistorian/ethnographer and Alicia Forsythe, with the Authority. We stand by our statement that the Authority understood the request came from an individual and not from the CICC government. While the September 29 letter states that "CICC felt this was the best approach and did not directly reach out to request this ethnohistorian/ethnographer participation", that lack of direct outreach from CICC led Mrs. Forsythe to believe that this individual was taking it upon themselves to be invited to the meeting. Mrs. Forsythe's email on Monday, April 17 at 4:27 PM was clear "that the Tribe is always welcome to invite whomever they would like to the

meeting." We hope that improved communication between the Authority and CICC will prevent such confusion in the future.

CICC's September 29 letter states that the requested ethnohistorian/ethnographer is the "only person among the consulting firm preparing your EIR who can organize and provide you with the best possible information necessary to inform decisionmakers." We would like to clarify that HDR is serving as the Authority's Integration contractor. In this role, HDR ensures that activities are coordinated among all of the Authority's contractors. HDR is not preparing the Project's EIR. Rather, ICF is under contract to prepare the EIR.

CICC's September 29 letter states that "it appears that the Sites Project Authority has refused to include the ethnohistorian/ethnographer specifically requested by CICC to ensure that you do not have the best possible information to provide to decisionmakers in the EIR." As stated in our September 15 letter, we left open the possibility to including this individual in future efforts. Since the April 18, 2023 meeting, the Authority understands that this individual is or was in a personal relationship with your consultant, Dr. Giorgio Curti. The CICC September 29 letter seems to acknowledge this relationship. The Authority takes all matters related to conflict and ethics very seriously and has examined this specific matter thoroughly. Please understand that it is not the Authority's desire to exclude CICC's preferred consultants from working on this aspect of the Project. Instead, this is a matter between the employee and their employer. The Authority has been advised that the firm to whom this individual is employed has determined this individual is not authorized to work on this Project while under employment by this firm.

CICC's September 29 letter also raises questions about the ethics of all Project consultants, stating that the Authority has a "legal and ethical responsibility to investigate [our] representatives and [our] consultants for their own conflicts of interest in reproducing and perpetuating the marginalization of CICC in and through the CEQA and AB 52 process, and in potential influences and pressures, monetary self-interest, and the purposeful elisions of information and qualified and competent personnel in the preparation of the EIR." Again, the Authority takes all matters related to conflict and ethics very seriously. The Authority's standard consultant contract includes financial disclosure requirements, conflict of interest disclosure requirements and a standard of conduct and performance requirement and these provisions are vigorously enforced, with any violations dealt with appropriately. Under the Authority's standard contract, consulting firms can be terminated for not properly disclosing and addressing conflicts, not property disclosing and addressing financial interests, and not adhering to a standard of conduct and performance that is generally accepted professional practices. In addition, Authority Agents, such as myself, Mrs. Alicia Forsythe, and Mr. Kevin Spesert, along with all of our Board members, our Reservoir Committee members, and other key Project personnel all file a Statement of Economic Interests with the California Fair

Political Practices Commission annually in our roles as public officials making or influencing governmental decisions.

CICC's September 29 letter states in a number of places that the Authority is not employing "qualified and competent individuals in the preparation of EIR." The qualifications of the individuals working on the EIR are clearly stated in Chapter 33, Consultation and Coordination and List of Preparers of the Revised Draft EIR/Supplemental Draft EIS. All of the individuals working on the EIR are qualified in their respective field and the majority have over 10 years of experience. CICC's September 29 letter states "we remind the Sites Project Authority that continual assertions of using 'the best available information' are not demonstrations of such, and that CEQA calls for the use of qualified and competent individuals in the preparation of EIRs (Public Resources Code [PRC] 21000, 21001, and 21100; AEP 2023:234)". We note that California Public Resources Code Sections 21000, 21001, and 21100 speak to the overall purpose of CEQA and do not support the statement that "CEQA calls for the use of qualified and competent individuals in the preparation of EIRs". Regardless, the Authority's consultants, both the firm and the primary individuals, are all competent and highly qualified.

Path Forward

As mentioned above, we expect our Board of Directors to consider certification of the Final EIR and adoption of the Project at its November 17, 2023 meeting. Although we are completing the CEQA process, our desire and invitation to work together through future Project planning, implementation, and operations continues. We look forward to your partnership and collaboration in implementing the avoidance, minimization, and mitigation measures identified in the EIR. The Authority is committed to collaborating with CICC on future studies, such as elder interviews and the recordings of Tribal histories to document significant cultural places and events in the Project area and region; the identification of locations outside of the proposed reservoir footprint for the repatriation of Native American human remains and sacred objects, as desired by the Tribe; botanical studies that could contribute to biological mitigation requirements and the establishment of areas to be made accessible to tribes for the collection of plants; and the development of recreational trails and interpretive signage, among other items. Such actions could be memorialized in a legally binding Memorandum of Agreement, which we previously suggested to you. We also propose establishing a Tribal Working Group to address related topics, which may also be of interest to the other Tribe's represented by attendees at our October 3 meeting. At our September 29 meeting, we presented the attached materials that include the mitigation measures from the Final EIR along with our proposal of additional commitments that the Authority is willing to implement in collaboration with CICC throughout the life of the Project. We look forward to further discussing these matters.

Alicia Forsythe

From: Ruth, Monica <Monica.Ruth@hdrinc.com>
Sent: Tuesday, April 18, 2023 7:57 AM
To: Alicia Forsythe; Janis Offermann; Kevin Spesert; Laurie Warner Herson
Cc: Risse, Danielle; Lloyd, John
Subject: Re: upcoming meeting with Colusa

Hello Ali,

Thank you for letting me know.

Monica Ruth, M.A.
Cultural Resource Specialist
Ethnohistorian and Ethnographer
HDR
mobile: 916-813-3060
Monica.Ruth@hdrinc.com

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Monday, April 17, 2023, 4:27 PM
To: Ruth, Monica <Monica.Ruth@hdrinc.com>; Janis Offermann <jaoffermann@montrose-env.com>; Kevin Spesert <kspesert@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>
Cc: Risse, Danielle <danielle.risse@hdrinc.com>; Lloyd, John <John.Lloyd@hdrinc.com>
Subject: RE: upcoming meeting with Colusa

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Hi Monica – I've thought a lot about this today and I am just not comfortable with you attending the meeting in a capacity that is representing / paid by the Authority. The Authority has an established team on this Project through HDR and Horizon that have been working with the Tribe for a number of years. The Project is extensive with multiple years of construction and long-term operations and we've been working out a strategy to complete consultation and partner with Tribes throughout the life of the Project.

Without an understand of all of this, it could be very confusing and feel conflicting for the Tribe if your representing the Authority but don't understand the Project or how the Authority is planning to partner with the Tribe into the future.

I do respect that the Tribe is always welcome to invite whomever they would like to the meeting. But I want to be clear that I am not comfortable with you attending representing or being paid by the Authority.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Project Authority | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Ruth, Monica <Monica.Ruth@hdrinc.com>
Sent: Monday, April 17, 2023 10:49 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Janis Offermann <jaoffermann@montrose-env.com>; Kevin Spesert <kspesert@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>
Cc: Risse, Danielle <danielle.risse@hdrinc.com>; Lloyd, John <John.Lloyd@hdrinc.com>
Subject: RE: upcoming meeting with Colusa

Hi Ali,

Thank you for reaching out; I appreciate your thoughtful response. My role would be to assist Sites Authority in achieving full compliance with all applicable relevant cultural resource/historic property laws and regulations, and in doing so, it would be most appropriate to utilize the contract between HDR and Sites. I will certainly reach out to Jay and Danielle for context, thank you for the recommendation. Would you have time to chat later today or tomorrow morning to touch base? I'm tied up between 3-4 today, but otherwise very available.

-Monica

Monica Ruth, M.A.
M 916-813-3060

hdrinc.com/follow-us

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Friday, April 14, 2023 3:48 PM
To: Ruth, Monica <Monica.Ruth@hdrinc.com>; Janis Offermann <jaoffermann@montrose-env.com>; Kevin Spesert <kspesert@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>
Cc: Risse, Danielle <Danielle.Risse@hdrinc.com>; Lloyd, John <John.Lloyd@hdrinc.com>
Subject: RE: upcoming meeting with Colusa

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Hi Monica – I am just getting to emails that came in while I was on vacation. I did reach out to Robert Boling on this as he's our principle in charge for HDR's work on the Sites Project.

I am fine with you attending the meeting. As CICC invited you, I assume you'll be attending as "representing" CICC.

The Sites Project Authority also has an extensive contract with HDR for services, including Tribal services. Danielle Risse and Jay Lloyd have been involved in the Project fairly extensively. You may want to catch up with them prior to the meeting for some context.

If you will be attending sort of representing both parties or representing Sites and billing to our contract with HDR, then I would want to chat prior to the meeting and bring you up to speed as to where we are and how we're looking to move forward.

I realize HDR has lots of different clients, so I am totally fine with you being there. I just would like to be clear on who you are "representing" when at the meeting so no one feels surprised.

I am excited to re-engage with the tribe and always appreciate team members that have relationships that help us all come together to help us understand and find solutions. I just want to be careful that we don't inadvertently get crosswise.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Project Authority | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Ruth, Monica <Monica.Ruth@hdrinc.com>
Sent: Monday, April 10, 2023 11:30 AM
To: Janis Offermann <jaoffermann@montrose-env.com>; Alicia Forsythe <aforsythe@sitesproject.org>; Kevin Spesert <kspesert@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>
Subject: RE: upcoming meeting with Colusa

Thank you, Janis. That is the gist of my conversation with CICC Executive Committee last week. I understand from our conversation this morning that the AB52 process for the overall project has been ongoing since 2017 (please correct me if I don't have that right) and in this time, several meetings took place prior to COVID. Since these meetings, there have been changes in the Tribe's Executive Committee as well as the Cultural Department. Because of my working relationship with CICC outside of the Sites Project, along with my experience with AB52 consultation, my participation in the upcoming meeting would be supportive of the required Tribal consultation process, particularly in respecting and honoring Tribal Sovereignty as it is the Tribe's request that I join the conversation.

I look forward to further conversation. Please let me know if I can provide any additional information.

Thank you,
Monica

Monica Ruth, M.A. *(she/her)*
Ethnohistorian and Ethnographer
HDR
Mobile: 916-813-3060
Monica.Ruth@hdrinc.com
hdrinc.com/follow-us

From: Janis Offermann <jaoffermann@montrose-env.com>
Sent: Monday, April 10, 2023 10:45 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Kevin Spesert <kspesert@sitesproject.org>; Laurie Warner Herson

<laurie.warner.herson@phenixenv.com>
Cc: Ruth, Monica <Monica.Ruth@hdrinc.com>
Subject: upcoming meeting with Colusa

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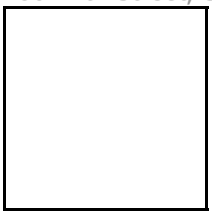
Good morning, Ali
I believe you might still be on vacation, but I wanted to report to you a conversation that I had with Monica Ruth, of HDR and cc'd here, this morning.
Monica met with Colusa last week on an entirely different project and the topic of Sites Reservoir came up. Present at the meeting were Jennie Mitchum, the new cultural resources director, Rick Mithcum, Galina Mitchum, and Amanda Ragudo, vice-chairperson.
Monica noted that the conversation was not lengthy or in-depth since she is not really involved with the Sites Project; however, the tribe mentioned that they were concerned about traditional gathering places within the reservoir footprint (though Monica wasn't sure if they meant trails through the valley to resources on the other side), and "ancestors," which I am guessing would be cemeteries.

The tribe also mentioned our upcoming meeting and subsequently forwarded the meeting invitation to Monica so that she can attend. Apparently, they also offered to send an email to you to ask that Monica be included in that meeting. Monica can correct me if I am wrong, but she has met with this new team a couple of times on another project, and they are obviously comfortable talking with her.

Anyway, I wanted to bring this to your attention, so that you could decide if Monica should attend on the 18th.
thanks
janis

--
Janis Offermann, M.A., RPA
Cultural Resources Manager
M: 530.220.4918
jaoffermann@montrose-env.com
Please note new email address after April 1, 2023. I can still receive emails as janis@horizonh2o.com; however, all of my outgoing emails to you will be from jaoffermann@montrose-env.com.

Montrose Environmental
1801 7th Street, Suite 100, Sacramento, CA 95811



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Summary of Proposed Commitments by the Sites Project Authority to the Colusa Indian Community Council
October 2, 2023

These commitments are proposed by Authority staff. The Authority's Board of Directors would have to approve the final set of commitments and approve execution of a Memorandum of Agreement and contract(s) to carry out these commitments.

Final EIR/EIS and Programmatic Agreement

- The Authority will comply with all commitments and mitigation measures identified in the Project Final EIR/EIS (see attached excerpts) and those commitments in the Project's Programmatic Agreement, including but not limited to, the commitment to engage and collaborate with the Tribe in the ongoing development and implementation of the Project.

- The Authority will engage and collaborate with the Tribe to move and relocate facilities to avoid impacts to tribal cultural resources to the extent possible, recognizing that some facilities cannot be moved.

- The Authority will provide funding for the Tribe to complete an ethnographic study or similar requested initiative.

- The Authority will include the Tribe in the development of the Project Recreation Management Plan (Plan development to begin in 2025 timeframe).

- The Authority will engage and collaborate with the Tribe to protect resources that can be avoided on Authority-owned lands, including granting protective easements to the Tribe, establishing exclusion areas for the general public, and allowing Tribal members to access these resources, to the extent feasible.

- The Authority will provide funding for the Tribe to participate in the above efforts and in construction monitoring efforts through the construction of the Project.

- The Authority will waive any and all claims to ownership of tribal cultural items found on the Authority's lands, including ceremonial items and archaeological items, and work diligently and expeditiously to provide these to the appropriate Tribe. For example only, items found along the Dunnigan Pipeline in Yolo County may be most appropriately provided to the Yocha Dehe Wintun Nation.

Economic Development

- To the extent feasible, the Authority would work with the Tribe to identify appropriate Authority planned Project expenditures to serve as a local cost share, where possible, toward Federal and State grants and loans sought for Tribal community improvements.

- The Authority would include CICC businesses in its proposed local preference purchasing program and commits to packaging construction, equipment, and materials contracts for the Project, as feasible, in ways that afford opportunity for CICC businesses to compete for the work.

- The Authority would commit to funding the development of a Maxwell Community Plan, led by the County and to be completed by May 2024. The Authority would ensure that 1) the Tribe has the opportunity to meaningfully participate in the development of the Maxwell Community Plan and 2) the existing Tribe-owned property in Maxwell (near the sewer ponds) is included in the consideration for future development.

- The Authority would extend regional training and employment opportunities being offered in conjunction with the Project (e.g. MC3 worker training program) to CICC members.

Cultural and Traditional Recognition and Preservation

- The Authority would provide access to Authority-owned land to the Tribe for cultural and traditional activities (area, granted rights, and applicability to be determined in the future). This would include both Authority owned land around the reservoir and Authority-owned biological resource mitigation lands.

- The Authority is planning two recreation areas at the new Sites Reservoir. The Authority would commit to 1) planning, designing and constructing physical improvements in close coordination with the Tribe and 2) seek to honor the culture and traditions of the Tribe, including considering the following:
  - Naming of recreation area landmarks and roads internal to the recreation area.
  - Designing the recreation area - such as designing the road and tent spots around a traditional roundhouse concept or traditional village layout concept.
  - Including interpretive signs, informational kiosks, and trail markers, within the recreational area boundaries that honor the cultural and traditional heritage of the Tribe from the Tribes perspective.

  Other local community members have expressed strong interests in the recreation areas and the Authority must meet certain contractual obligations to the State for the development and operation of the recreation areas. The Authority would honor the above commitments with the Tribe while balancing the interests of others.

- The Authority is considering developing a visitors/interpretive center. At this time, no final decision has been made and no site has been selected. However, if developed, the Authority would work with the Tribe to represent the Tribe in exhibits from the perspective of the Tribe. If a visitor center is not ultimately developed, then the Authority would work with the Tribe to represent the Tribe in the Authority's public office in a way that the general public can access (such as in the Authority's main office lobby).

- The Authority would work with the Tribe and the four other tribes with traditional or cultural affiliation to the Project area to develop a page on its website to recognize that the Project is being built on unceded lands of the Patwin and Nomlaki people.

- The Authority will work with the Tribe to relocate any Native American burials found in the Sites Valley consistent with the Tribes wishes and in a way that respects the dignity of the individual and the Tribe. Opportunities being considered by the Authority include relocating Native American burials to an area together outside of the reservoir footprint but on Authority lands. Ideally, a location would be found and able to be acquired that held significance to the Tribe, such as an area that has other, existing tribal cultural resources, and relocating individuals there brings them all back together around the existing resource. The goal of the Authority would be to transfer fee title to this land to the Tribe. Note that this would apply to any burials found on the Authority's lands; burials found on Reclamation lands would proceed through the federal process.

Commitments would be memorialized in a Memorandum of Agreement or other binding agreement.

In exchange for these considerations by the Sites Project Authority:

- The Tribe agrees to be a collaborative partner in the implementation of the Project.

Mitigation Measures in the Upcoming Final EIR/EIS

Mitigation Measure TCR-1.1: Implement Mitigation Measures Recommended in Public Resources Code Section 21084.3 to Avoid Damaging Effects on Tribal Cultural Resources

(1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

(2) Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

(A) Protecting the cultural character and integrity of the resource.

(B) Protecting the traditional use of the resource.

(C) Protecting the confidentiality of the resource.

(3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

Mitigation Measure TCR-1.2: Tribal Monitoring

Tribal monitors will be permitted to observe all ground-disturbing activities.

Mitigation Measure TCR-1.3: Implement Agreed-Upon Protocol for the Treatment of Human Remains and Cultural Items

If unanticipated discoveries of National Register of Historic Places (NRHP)/CRHR-eligible resources occur on federal land, the federal land manager will be immediately contacted, and the federal agency will follow its own process for complying with the federal Native American Graves Protection and Repatriation Act and other federal obligations, as directed under Title 43 of Code of Federal Regulations, Part 10.

If NRHP/CRHR-eligible sites or cultural items, other than human remains, are discovered on non-federal land, the Authority will work with the consulting Tribes to determine affiliation and develop appropriate treatment.

If human remains or associated grave goods are discovered during or after environmental review, the Authority will provide for the following actions:

- Immediately notify the County coroner and cease ground-disturbing activities in that location.
- If the County coroner determines the remains are those of a Native American, the coroner will notify the NAHC to establish the most likely descendant and contact the culturally affiliated Tribe.

- Allow the designated Tribal member(s) to inspect the site of the discovery and determine how the human remains and grave goods should be treated with appropriate dignity and respect.
- The location of a reburial will be recorded with the California Historic Resources Inventory System.
- The Authority, its contractors and consultants, and the coroner will not disclose the location of the original burial or reburial site.
- Treatment of all cultural items, including ceremonial items and archaeological items will reflect the religious beliefs, customs, and practices of the culturally affiliated Tribe. All cultural items, including ceremonial items and archaeological items, discovered during Project construction and operation will be turned over to the Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. The Authority will waive any and all claims to ownership of Tribal cultural items, including ceremonial items and archaeological items that may be found.
- Work of Tribal monitors and treatment of human remains will proceed in accordance with treatment plans developed in consultation with the most likely descendant of the culturally affiliated Tribe as identified by the NAHC.

Mitigation Measure CUL-2.1: Identify NRHP/CRHR-Eligible Archaeological Resources

The Authority will identify NRHP-/CRHR-eligible archaeological resources in the study area. The work will be conducted by a Registered Professional Archaeologist. The following will occur as part of the identification.

- Relocate and map previously recorded archaeological resources that are potentially NRHP/CRHR-eligible. Upon access to previously inaccessible areas, all previously recorded archaeological resources will be located and their boundaries mapped with sub-meter accuracy Global Positioning System (GPS) units to identify their exact location in relation to Project components that have the potential to affect the resources.
- Locate and map archaeological resources that are potentially NRHP/CRHR-eligible in areas that have not been accessible previously. Upon access to previously inaccessible areas, pedestrian surveys will be conducted to identify archaeological resources that are potentially NRHP/CRHR-eligible. The surveys will be conducted using transects spaced no greater than 94 feet (30 meters) apart. All newly identified archaeological resources will be recorded on applicable DPR 523-series forms and resource boundaries, features, and diagnostic artifacts outside of features or concentrations will be recorded using sub-meter accuracy GPS units to identify their exact location in relation to Project components that have the potential to impact the resources.
- Evaluate the NRHP/CRHR eligibility of recorded archaeological resources. Once all previously and newly recorded archaeological resources have been documented, each resource will be evaluated for NRHP and CRHR eligibility. As discussed in Appendix 4A, Regulatory Requirements, cultural resources are eligible for the NRHP and CRHR if they have integrity and meet one or more of the four criteria as defined in the regulations for the NRHP (Section 4A.18.1.3, National Register of Historic Places) and CRHR (Section

4A.18.2.2, California Register of Historical Resources). Eligibility will be assessed using a combination of (but not limited to) archival, ethnographic, and tribal research, including tribal coordination and assistance, resource condition assessment, subsurface testing, and laboratory analysis. If the resource is evaluated as not eligible, no further action is required, and avoidance is preferred.

- Assess impacts on NRHP-/CRHR-eligible archaeological resources. NRHP-/CRHR-eligible archaeological resources will be individually analyzed in relation to the Project components within or near those NRHP-/CRHR-eligible resources. Thresholds of significance identified in Section 22.3.1 will be applied.

Mitigation Measure CUL-2.2: Avoid NRHP/CRHR-Eligible Archaeological Resources

The Authority will avoid NRHP/CRHR-eligible archaeological resources in the study area by performing the tasks listed below. The work will be conducted by a Registered Professional Archaeologist.

- The Authority will develop feasible Project design specifications to avoid NRHP/CRHR-eligible archaeological resources. If Project design allows modification, design changes will be implemented to avoid NRHP-/CRHR-eligible archaeological resources or avoid impacts on significant values of the resources (features, artifacts, or any other elements of the resource which make the resource NRHP-/CRHR-eligible).
- The Authority will develop and implement feasible Project construction protocols to avoid NRHP-/CRHR-eligible archaeological resources, including workers' cultural resources sensitivity training. Prior to construction activities in the vicinity of NRHP-/CRHR-eligible archaeological resources, the Authority will require a qualified archaeologist to provide a cultural resources sensitivity training tailboard to all construction personnel working in the vicinity of the resources. The training will identify the sensitivity, nature, and components of the resource, and inform the construction personnel of necessary protocol in the case of an unanticipated discovery. Tribes will also be invited to participate in and lead part of the workers' cultural resources sensitivity training.
- The Authority will develop and implement feasible Project operations protocols that avoid NRHP-/CRHR-eligible archaeological resources. Similar to the workers' cultural resources sensitivity training during construction activities, all personnel in charge of managing the operations will be required to have cultural resources sensitivity training for the resources near Project facilities and have a familiarity with the resource locations and identifications so that future operations or changes in operations can avoid those resources. Tribes will also be invited to participate in and lead part of the cultural resources sensitivity training.

Mitigation Measure CUL-2.3: Protect NRHP/CRHR-Eligible Archaeological Resources

The Authority will develop feasible Project protection of NRHP/CRHR-eligible archaeological resources during construction and operations.

- The Authority will develop protections protocols to ensure that qualified staff perform monitoring during Project-related ground disturbance to protect known resources, to

identify any unanticipated discoveries, and to implement the Post-Review Discovery Procedure.

- The Authority will develop resource-specific protection plans considering at a minimum Environmentally Sensitive Area delineation and physical fencing, and requiring archaeological monitoring where construction or operation would be in the vicinity of a known NRHP-/CRHR-eligible archaeological resource. The resource-specific protection plans will establish the methods and standards for when and how Environmentally Sensitive Area delineations will be required and when archaeological monitoring activities will be conducted for specific types of sites that will need to be protected. The resource-specific protection plans will establish the methods and standards for when Tribal monitoring activities will be invited and conducted for specific activities and/or types of sites that will need to be protected. The plans will also identify the roles and responsibilities of monitors and construction crews and specify communication protocols and reporting requirements.

Mitigation Measure CUL-2.4: NRHP/CRHR-Eligible Archaeological Resources Treatment

The Authority will develop and implement resource-specific treatment plans in consultation with Tribes and other interested parties who are associated with or identify with the resource. The resource-specific archaeological treatment plans will ensure that all NRHP-/CRHR-eligible archaeological resources potentially affected by the Project will be treated according to best practices and professional standards, in a traditionally and culturally sensitive manner, and that treatment options will include a range of interventions from avoidance and minimization of impacts to mitigation for the loss of the physical resource. Treatment may include, but would not be limited to, data recovery, site capping, analysis of existing artifact collections, or interpretive displays, among other things. Appropriate treatment will be determined based on resource type, resource location, types of impacts on the resource, and results of consultation with Tribes, interested parties, and agencies.

Mitigation Measure CUL-3.1: Cemetery Relocation Plan

The Authority will develop a Cemetery Relocation Plan for relocating two known, dedicated cemeteries located in the inundation area. This will be part of Reclamation's Programmatic Historic Properties Management Plan that would be prepared in consultation with SHPO.

Avoidance of the disturbance and/or inundation of two known cemeteries is not expected to be feasible except under the No Project Alternative. The Cemetery Relocation Plan will ensure that all remains in these two cemeteries are treated with respect and in accordance with the wishes of identifiable descendants. The Cemetery Relocation Plan will also ensure that state and county health and safety codes are followed for those interments that are relocated.

Two dedicated cemeteries in the inundation area will be relocated to a site or sites approved for interment of human remains per requirements of the California Health and Safety Code (Sections 7500–7527). This procedure will be developed through consultation and coordination with descendants and other parties with demonstrated interest in the occupants of the cemeteries. The procedure will outline legal requirements, such as acquiring a written order from the local health department or county superior court before human remains may be

moved, and other rules and regulations adopted by the board of health or health officer of the county.

Mitigation Measure CUL-3.2: Avoid, Protect, and Treat Human Remains

The Authority will avoid and protect any human remains encountered during pre-construction, construction, post-construction, operations, and maintenance. The Authority will follow appropriate state guidelines for halting Project activities at the discovery location, contacting the appropriate county coroner to report the discovery, and proceeding with implementation of Project policies regarding Native American consultation or implementation of a burial treatment plan. See Appendix 4A, *Regulatory Resources,* Sections 4A.18.1, *Federal Policies and Regulations,* and 4A.18.2, *State Policies and Regulations*.

The Authority and its qualified contractors will prepare a plan for treating human remains and/or grave goods encountered during archaeological investigations, Project construction, or Project operations. The Burial Treatment Plan will identify ways to avoid or reduce the likelihood of encountering as yet unidentified remains.

The Burial Treatment Plan will ensure that the Authority and its contractors respond to unanticipated discovery of human remains with respect and in accordance with the wishes of identifiable descendants. The Burial Treatment Plan will also ensure that state and county health and safety codes are followed for those interments that are relocated.

This procedure will identify legal requirements and best practices for treating Native American and non-Native American remains encountered outside of a dedicated cemetery. The Native American portion of the Burial Treatment Plan will be developed in consultation with consulting Tribes and may include individual Tribes' burial treatment plans.

The Authority and its qualified contractors will complete preparation of the Burial Treatment Plan within 6 months of issuance of the NOD/ROD, adopt the plan prior to selection of the construction contractor, and fully implement the plan prior to any soil disturbance within 500 feet of remains.

County of Yolo Materials

The following materials are provided in the following order:

1. County of Yolo Letter to the Sites Project Authority Dated November 7, 2023 Regarding Yolo County Comments on Final Environmental Impact Report/Environmental Impact Statement

2. Sites Project Authority's Response to Yolo County's Comments

COUNTY OF YOLO

Office of the County Counsel

Philip J. Pogledich
County Counsel

625 Court Street, Room 201 Woodland, CA 95695
(530) 666-8172 FAX (530) 666-8279

November 7, 2023

Jerry Brown
Executive Director
Sites Project Authority
122 West Old Highway 99
Maxwell, CA 95955
jbrown@sitesproject.org
530-438-2309

Re: Yolo County Comments on Final Environmental Impact Report/Environmental Impact Statement

Dear Director Brown:

On behalf of the Yolo County Board of Supervisors, I am providing the attached comments on the Final Environmental Impact Report/Environmental Impact Statement ("Final EIR/EIS") for the Sites Reservoir project. I would appreciate if you distributed this letter and the attached comments to the Authority's Board of Directors at your earliest convenience.

The attached comments describe our principal concerns with the Project based on information presented in the Final EIR/EIS. As set forth in the attachment, many of the concerns expressed arise from a lack of specific information relating to the construction of the Dunnigan Pipeline, future releases into the Yolo Bypass, and the potential environmental impacts of those activities.

We recognize the proposed project has the potential to provide important water supply, flood management, and ecosystem benefits to this region. We look forward to working collaboratively with the Sites Project Authority to address the issues raised in the attachment, preferably before the project is approved or as soon thereafter is possible.

Sincerely,

Philip J. Pogledich
County Counsel

Enclosure

cc: Ernest Conant, Regional Director
U.S. Bureau of Reclamation
California-Great Basin Office
2800 Cottage Way
Sacramento, California 95825-1898

Comments of Yolo County on the Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) for the Sites Reservoir Project

Notice of the Recirculated Draft Environmental Impact Report and Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS). Aside from the Notice of Availability required by the California Environmental Quality Act (CEQA) (delivered to the Yolo County Recorder on November 12, 2021), the County has been unable to determine if it received notice pursuant to CEQA or the National Environmental Policy Act (NEPA) of the November 12, 2021 release of the RDEIR/SDEIS, which is incorporated into the Final EIR/EIS. The County also lacks records indicating that the Sites Reservoir Joint Powers Authority (Sites JPA) sought to consult with the County as required by Section 15086 of the CEQA Guidelines. For at least these reasons, the comments set forth herein should not be dismissed as late or otherwise improper.

Project Alternatives. The County observes that the Final EIR/EIS contains only three project alternatives that are substantially similar in most respects, as the document acknowledges. The Dunnigan Pipeline, in particular, is identical in Alternatives 1 and 3, and under Alternative 2 it is longer (extending to the Sacramento River) but apparently retains the same ability to discharge directly into the Colusa Basin Drain and Yolo Bypass for ecosystem or water delivery purposes. Project facilities located outside Yolo County (including, of course, the proposed reservoir and the dams and other facilities necessary for its operation) are also very similar under each alternative.

On these grounds, the County questions whether the Final EIR/EIS presents a reasonable range of alternatives to the proposed project, including the Dunnigan Pipeline component, that would feasibly attain most of the project's basic objectives while reducing or avoiding any of its significant effects. The County specifically questions the need for, and ecosystem value of, discharges to the Yolo Bypass through the Colusa Basin Drain (an intended function of all project alternatives) and whether other means of providing ecosystem benefits for native Delta fish species, as mentioned in the project objectives listed on p. ES-11, were thoroughly evaluated. In particular, the County questions whether other alternatives with reduced impacts within Yolo County—which is not represented on the Sites JPA governing board—were carefully considered.

Project Description. The County observes that the Project description is vague and/or inconsistent in numerous respects. Specific concerns are set forth in the following sections but the leading concerns are as follows:

- Inadequate description of how groundwater will be supplied to the Dunnigan Pipeline construction site, how it will be used, and whether there will be any runoff or other effects that require analysis (including effects from dewatering);
- Vague description of the approach to constructing the Dunnigan Pipeline, including a lack of detail regarding excavation methodology, equipment to be used, how soil will be stored and reused or disposed of, and related matters such as vehicle trips and potential air quality (including fugitive dust) impacts; and
- Vague and inconsistent language regarding discharges for water supply and ecosystem purposes into the Yolo Bypass, including the volume and timing of such discharges and related effects on farmland.

Dunnigan Pipeline-Groundwater Impacts During Construction. In connection with Pipeline construction, the Final EIR/EIS describes the potential for impacts to groundwater as well as the temporary disturbance of agricultural wells and irrigation of fields near the pipeline alignment. Impacts will result from dewatering (mentioned at p. 2-68) along the Pipeline alignment, direct physical conflicts

with existing irrigation infrastructure, and the groundwater demands/usage by the construction effort itself.

Despite acknowledging the potential for such impacts, however, the Final EIR/EIS contains only scant and conclusory analysis. For example, at p. 5-57 the Final EIR/EIS simply states "[a]s identified in Chapter 8, there is sufficient groundwater supply to provide this water during the construction period without affecting yield from other wells." The Chapter 8 analysis, however, is largely bereft of meaningful detail and does not even clearly describe why construction of the Pipeline will require "approximately 20,000 to 30,000 gallons of water per day" for several years. The abbreviated analysis of these impacts and lack of ways to mitigate them limit the County's ability to comment on related impacts. (Final EIR/EIS at pp. 8-14 and -15.)

Further, while the Final EIR/EIS mentions (at pp. 8-14 and -15) the possibility of using "existing surface water from the Storage Partners pursuant to existing water rights agreements and permitted uses" to supply a portion of the necessary water for Pipeline construction, this possibility seems far-fetched. How it is feasible to convey surface water to the construction site near Dunnigan? The Final EIR/EIS does not say. Accordingly, the County agrees with the decision to conservatively assume all water supply needs for construction of the Dunnigan Pipeline will be met with groundwater. And this, in turn, underscores why it is essential to include a much more robust analysis of potential groundwater and agricultural impacts arising from the Dunnigan Pipeline construction. Absent such analysis, the groundwater analysis in the Final EIR/EIS is deficient.

Dunnigan Pipeline-Excavation and Soil Storage, Reuse, and Removal. The method of construction for the Dunnigan Pipeline is described vaguely, including whether its construction will be solely through open excavation or whether tunneling/boring will be used. Specific concerns include the following.

First, at p. 2-103, the Final EIR/EIS mentions the removal, storage, and replacement of topsoil in irrigated agricultural areas following "restoration" so that "irrigated agricultural areas would have the same soils composition except in areas that would be covered by permanent maintenance roads." How will the Sites JPA ensure the productive capability of the soil is maintained or restored through this process? Is it reasonable to expect some degree of decline in productive capability? Will the Sites JPA retain an agronomist to guide this process, potentially in coordination with the Yolo County Agricultural Commissioner? The County strongly recommends that the Sites JPA develop an agreement with the County that appropriately addresses these issues.

Second, at p. 6-55, the Final EIR/EIS mentions that the Dunnigan Pipeline will "entail substantial excavation" but does not elaborate on whether this work presents the potential for impacts mentioned briefly in this portion of Chapter 6, including adverse effects on water quality. This is a further example of the overall lack of detail of potential construction impacts associated with the Dunnigan Pipeline—mentioning "substantial excavation" without including any related analysis leaves the County and general public without any basis for understanding this (and virtually every other) potential impact of Dunnigan Pipeline construction.

Related to this concern, Table 12-7 (on p. 12-68) of the Final EIR/EIS appears to indicate that excavation for the Dunnigan Pipeline will displace 100-250 acres of soil, depending on the project alternative selected. This is based on a 10-foot pipeline diameter, however, and therefore appears to understate potential impacts (as the external dimension of the pipeline will be somewhat larger). Based on information provided in different places in the document, the Dunnigan Pipeline will apparently be about 12 feet in diameter at depths of 6-30 feet below the ground surface.

Similarly, aside from the language at p. 2-103, the Final EIR/EIS does not explain how excess soil will be stored and reused or disposed of in connection with the Dunnigan Pipeline. The County is greatly concerned that long-term storage of excavated soil near the community of Dunnigan or other residential areas could cause adverse air quality impacts due to fugitive dust. The County urges the Sites JPA to work cooperatively with County staff to identify appropriate, safe means of storing excess soil and removing it as promptly as feasible to avoid adverse air quality impacts in and near Dunnigan.

Dunnigan Pipeline-Construction Traffic. At p. 2-52, the Final EIR/EIS describes daily construction traffic but does not specifically (in this section or elsewhere) describe traffic associated with Dunnigan Pipeline construction. Similarly, the discussion of local roads to be used for the project that begins at p. 2-70 entirely omits any roads in Yolo County. The following passage later in the Final EIR/EIS indicates the significance of these omissions and the potential for a high volume of construction traffic in Yolo County, with significant physical impacts on County roads that will require significant maintenance and/or reconstruction:

> Daily construction traffic would consist of trucks hauling equipment and materials to and from the work sites as well as daily arrival and departure of construction workers. Construction traffic on local roadways would include dump trucks, bottom-dump trucks, concrete trucks, flatbed trucks for delivering construction equipment and permanent Project equipment, pickups, water trucks, equipment maintenance vehicles, and other delivery trucks. At the peak of construction in 2027, current estimates project between 701 and 978 daily haul trips for conveyance facilities, and approximately 1,760 daily offsite haul trips for reservoir facilities. (Final EIR/EIS at p. 18-26)

The Final EIR/EIS does not analyze the current pavement condition of affected Yolo County roads (though, as noted, it does include a brief summary of the pavement condition of local roads outside the County at pp. 2-70 and 2-75) or appear to describe and analyze how such roads will be affected by Dunnigan Pipeline construction. These omissions are significant and render the Final EIR/EIS deficient in this respect.

The Sites JPA needs to address, preferably through an enforceable agreement with Yolo County, how impacts of soil hauling and other project construction activities on Yolo County roads and infrastructure will be fully mitigated. The Final EIR/EIS mentions a number of possible routes for construction of the Dunnigan Pipeline (including various County roads), but the final routes will need to be identified in coordination with Yolo County's Public Works Director, along with a binding commitment to reconstruct impacted roads after construction is complete.

The Final EIR/EIS's analysis of general truck traffic is similarly devoid of much analysis. It states, on page 18-19, that a vehicles miles traveled (VMT) analysis was not necessary "because a qualitative assessment indicated that there would not be construction VMT impacts." We were unable to locate the qualitive assessment referenced in the Final EIR/EIR, other than simply surmising that construction workers and other trips "are effectively replacing other trips" to other projects, that could be even longer. Under that logic, a VMT analysis would be unnecessary for any project because every trip -- whether for recreational traffic or construction traffic -- is always a replacement for another trip. And even if the Final EIR/EIS intended to rely on such a theory, the analysis would have to be backed by evidence, not conjecture, about the number and distance of trips that construction workers, equipment, and materials would make absent the project. We expect that such an econometric analysis would be quite difficult to perform without extensive data about the regional construction industry, the projects that would be built during the time period, and the travel costs if the project were not undertaken. Rather than rely on such an untested and unsupported theory based on a hypothetical counter-factual, however, the

transportation chapter for the Final EIR/EIS should provide the VMT generated by the construction activities and disclose them for public review.

Nor should the Final EIR/EIS omit this analysis on the basis of SB 743 and CEQA Guidelines § 15064.3, as is implied under Impact TRA-2. Section 15064.3 states, "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." By using the word "generally," Section 15064.3 acknowledges that automobile VMT alone may not always be the most appropriate measure of transportation impacts. The legislative intent of SB 743, and the associated CEQA Guidelines Section 15064.3, was to ensure that lead agencies include the appropriate analysis of VMT from infill projects in transit priority areas. However, this is no infill project; it is an extensive public works projects that will generate extensive VMT. Truck trips associated with hauling construction materials and equipment are a significant concern that could – and should -- be analyzed in the Final EIR/EIS.

It appears that the Final EIR/EIS did indeed consider the VMT from truck trips generated by the project in Chapter 20 on greenhouse gas (GHG) emissions, but we cannot verify the information. Appendix 20A shows the general methodology as taking hauling into account. The Final EIR/EIS says on page 21-4, "Modeling assumptions are provided in Appendix 20B, Air Quality and GHG Analysis Data." On the Sites EIR/EIS website, however, Appendix 20B is not included,[1] and we were not able to identify the modeling assumptions and data elsewhere to verify whether construction trips were considered in the GHG analysis. We do note that the emissions for initial construction were amortized over 30 years, which appears to minimize the project's immediate impacts. These matters should be clarified before the Final EIR/EIS is finalized.

Dunnigan Pipeline-Inconsistent Language Regarding Releases into Colusa Basin Drain and Yolo Bypass. The Final EIR/EIS contains vague and inconsistent language regarding releases to the Colusa Basin Drain and into the Yolo Bypass, including which entity/ies are responsible for managing such releases once the project is operational. At pp. 1-7, the Final EIR/EIS describes a benefit agreement for ecosystem improvements to be administered by the California Department of Fish and Wildlife. But the terms of these agreements are not described in the Final EIR/EIS, let alone analyzed, and it is not clear whether these agreements will even cover releases into the Yolo Bypass as opposed to other ecosystem uses. Nor is there any other detail on which entity/ies will be responsible for managing such releases or, critically, how various assumptions regarding the timing and extent of releases into the Yolo Bypass will be implemented over time, including (a) how oversight will occur, (b) whether the assumptions will later be expressed as binding and enforceable commitments, and (c) whether increased maintenance or other impacts of affected facilities, such as the Tule Canal and Toe Drain, will be necessary.

Of greatest concern to the County, the Final EIR/EIS is replete with vague and inconsistent language regarding the timing, volume, and purpose of releases into the Yolo Bypass. At p. 2-77, text addressing releases into the Colusa Basin Drain and the Yolo Bypass states:

> Water releases would generally be made from May to November but could occur at any time of the year, depending on a Storage Partner's need and capacity to convey water to its intended point of delivery. Water would be released from Sites Reservoir via the I/O Works back through the TRR PGP and into the TRR or back through Funks PGP back into Funks Reservoir. Water released could be used along the GCID Main Canal, along the TC Canal, or conveyed to the new Dunnigan Pipeline and discharged to the CBD under Alternative 1 or 3 or to the Sacramento

[1] https://sitesproject.org/wp-content/uploads/2021/11/RDEIR-SDEIS-App20B.pdf

> River under Alternative 2. From the CBD, the water may be conveyed via the Sacramento River or the Yolo Bypass to a variety of locations in the Delta or south of the Delta.

In effect, this language seems to say that anything is possible. It is hard to reconcile this language with other provisions of the Final EIR/EIS that appear to contemplate much more limited releases into the Yolo Bypass.[2] This overall ambiguity in the description of intended project operations prevents the County from understanding and commenting meaningfully on the likely environmental consequences of Project operations on existing uses in the Yolo Bypass, including agriculture, recreation, and environmental education.

Similarly concerning is language on p. 5-36, stating:

> Sites Reservoir releases to the Sacramento River (either through CBD via the Dunnigan Pipeline or directly from the Dunnigan Pipeline) are expected to be greatest during dry conditions, with average releases of approximately 350–580 cfs during June through August of Critically Dry Water Years (Table 5-19), with releases reaching a maximum of 1,000 cfs during some months (Chapter 2). Releases to the Sacramento River would be somewhat higher during Dry Water Years than Critically Dry Water Years due to greater storage in Sites Reservoir, with average releases of approximately 560–830 cfs during June through August (Table 5-19), and releases persisting at higher levels through November relative to Critically Dry Water Years. Sites Reservoir releases to Yolo Bypass would be greater during Wet Water Years than during Critically Dry Water Years (Table 5-20), with releases reaching 380–446 cfs during August and September of Wet Water Years. Percent change in total Yolo Bypass flows is expected to be large during August through October because, during this time, Sites would be releasing habitat water to the Yolo Bypass, and existing Yolo Bypass flows are generally low during these months (Table 5-21). Small percent reductions in Yolo Bypass flows are expected during the rainy season as a result of the diversions to Sites Reservoir storage (Table 5-21)

This text raises at least two specific concerns.

First, if Alternative 1 or 3 is approved as the final project, it would seem that releases of "a maximum of 1,000 cfs during some months" will be solely feasible through the Yolo Bypass. Yet as the Final EIR/EIS acknowledges elsewhere, the Tule Canal and Toe Drain are used for agricultural irrigation and drainage in the summer and early fall and those features have limited capacity for additional releases from the Dunnigan Pipeline and Colusa Basin Drain. Even setting aside the existing uses of the Tule Canal and Toe Drain, the capacity of those features is constrained in some locations to only 200-300 cfs (as noted in the Final Environmental Impact Report/Environmental Impact Statement for the Big Notch Project, discussed elsewhere in the Sites Final EIR/EIS) and the releases discussed in the Final EIR/EIS could easily overwhelm these canals and inundate nearby agricultural land.

Second, the timing of releases described in this paragraph (June through August, and possibly through November) is at odds with the discussion of timing elsewhere in the document, which is typically limited to the months of August-October. This language, taken together with the text discussed above on p. 2-

[2] E.g., p. 2-112 (stating that "[r]eleases from Sites Reservoir would be made to meet environmental purposes, such as for the delivery of Incremental Level 4 water to refuges or fall food production in the Yolo Bypass for north Delta fish species."); p. 6-71 ("The simulated CALSIM flow increases in August–October through the Yolo Bypass expected under Alternatives 1, 2, and 3 do not exceed 470 cfs. Based on observations during North Delta Flow Actions (Davis pers. comm.), the comparable August–October habitat flows from Sites Reservoir through the Yolo Bypass may cause limited inundation of low-elevation parcels in the upper Yolo Bypass (north of the I-80 causeway).").

77, further illustrates the lack of a stable, accurate description of how the Dunnigan Pipeline will be operated to convey water into the Yolo Bypass for water deliveries, ecosystem purposes, or both.

Dunnigan Pipeline-Inconsistent Language Regarding Land Use Impacts of Operations. The Final EIR/EIS contains inconsistent language regarding potential land use and agricultural impacts of releases into the Yolo Bypass.

As indicated in footnote 2, some language in the Final EIR/EIS indicates the potential for "inundation of low-elevation parcels in the upper Yolo Bypass (north of the I-80 causeway) due to August-October ecosystem releases." The precise impact appears to be quantified at p. 11-122, which states (with emphasis added):

> The modeling results of Yolo Bypass inundated suitable habitat show considerable increases in mean inundation acreage under Alternatives 1, 2, and 3 relative to the NAA during August through October, <u>including up to 805 acres for September of Above Normal Water Years under Alternatives 1A and 1B (Table 11-13)</u>. These increases are the result of planned agricultural flow releases from Sites Reservoir. The releases reach the Yolo Bypass via the CBD, entirely bypassing the Sacramento River. For this reason and because of the months in which they occur, these summer-fall increases in inundated acreage have negligible effects on juvenile Chinook salmon or steelhead, including winter-run.

If this is accurate and the increased acreage includes land outside the Tule Canal and Toe Drain features, much more information on the modeled inundation footprint and related impacts is needed. However, the County notes that the Final EIR/EIS also contains conflicting information that indicates no impacts are predicted. For example, at p. 6-71, the document states:

> The intent of the releases from Sites to the Yolo Bypass during this period is to transport nutrients and food sources for fish species in the Delta. If the water inundates floodplain areas (i.e., areas outside existing channels), the food would remain on the floodplain and fail to move into the Delta. As such, Sites Reservoir would be operated to maintain flows within the existing Toe Drain, Tule Canal, and other channels, and adjustments in operations would be coordinated between the Authority and parcel owners using the existing Yolo Bypass monitoring network. Because these flows would generally be contained within the Yolo Bypass channels without spreading across the bypass floodplain, water temperatures within the bypass would not be expected to increase as a result of the habitat flows.

Similarly, text at p. 15-36 says:

> As discussed under Impact AG-4, agricultural lands would not be affected during the growing season as a result of inundation at Yolo Bypass or the CBD for Alternative 1, 2, or 3. Therefore, Alternatives 1, 2, and 3 would not result in temporary or permanent impacts as a result of changes in water regime at Yolo Bypass and CBD.

Finally, the Final EIR/EIS does not describe the easement rights or other property interests necessary to enable the Yolo Bypass releases described therein. Does the agency/ies responsible for such releases intend to use the easement rights that the California Department of Water Resources is currently seeking to acquire through eminent domain for the Big Notch Project? Some discussion on this point should be included to ensure affected Yolo Bypass landowners (as well as the County and other interested local agencies, such as reclamation districts) understand how the project could affect their property rights.

Dunnigan Pipeline-Capacity. The maximum capacity of the Pipeline is not clearly described. The Final EIR/EIS states that the Pipeline will be operated to convey up to 1,000 cfs, but it does not indicate that this is the maximum conveyance capacity of the facility. In approving the Project or otherwise, the Sites JPA should clarify the maximum conveyance capacity of the Pipeline.

County of Yolo November 7, 2023, Letter

General Response from the Authority: The Authority's adopted Strategic Plan includes a core value of recognizing the significant contributions of local Sacramento Valley landowners and communities and will be a respectful, supportive partner and a good neighbor throughout the life of the Project. The Authority appreciates the comments from Yolo County and is committed to being a good neighbor throughout the life of the Project.

Some of the comments address items that are outside of the scope of the Final EIR/EIS, such as whether easements are needed to convey water through certain facilities. The Authority has recently established the Lower Colusa Basin Drain System Working Group to work through the complex network of infrastructure and waterways that involves multiple partner agencies, private landowners, and a long history of cooperation and water operations to address questions related to operations of facilities, flowage rights, and how best to coordinate with other districts/operators and landowners in the future Sites Project operations. Yolo County has been invited to participate in this group and the Authority appreciates the counties participation to date. While the Lower Colusa Basin Drain System Working Group is focused on the Colusa Basin Drain downstream of the Balsdon Weir, the Knights Landing Ridge Cut, the Knights Landing Outfall Gates, and the Wallace Weir, extending into the Yolo Bypass Tule Canal and Toe Drain is a logical extension of the group and would work to address many of the questions that Yolo County raises.

Comment Number, Topic	**Comment**	**Response**
1.a Project Alternatives	The County questions whether the Final EIR/EIS presents a reasonable range of alternatives to the proposed project, including the Dunnigan Pipeline component, that would feasibly attain most of the project's basic objectives while reducing or avoiding any of its significant effects.	The Authority and Reclamation conducted an extensive screening process that considered the Project objectives and purpose and need to develop a reasonable range of potentially feasible alternatives (including the preferred Project [alternative]) for evaluation. This screening process conducted by the Authority and Reclamation built upon prior water supply evaluations that examined a broad array of factors (see Appendix 2A, Alternatives Screening and Evaluation, and Appendix 2B, Additional Alternatives Screening and Evaluation). The Authority and Reclamation considered multiple operational scenarios over the course of Project development that were designed to meet the Project objectives, purpose, and need; enhance

		Project benefits; and reduce or avoid impacts. The features of alternatives, including Sites Reservoir capacity, conveyance systems, and operational scenarios, were conceptually developed and refined over time to maximize the achievement of the objectives. The Dunnigan Pipeline was added to the Project as part of the Authority's 2019 value planning efforts. In an effort to rely on existing facilities to the extent possible and reduce the environmental impacts of building new infrastructure, the value planning process identified that a connection from the Tehama-Colusa Canal to the Colusa Basin Drain in the area of Dunnigan would allow the Project to utilize the excess capacity in the Tehama-Colusa Canal and connect with the Colusa Basin Drain with the shortest pipeline possible in the Dunnigan area. Please see Master Response 9, Alternatives Development, regarding the 2019 Value Planning Process and the Dunnigan Pipeline. In addition, while the EIR includes two configurations for the Dunnigan Pipeline, note that CEQA does not require an analysis of alternatives of a project component, and instead CEQA's alternatives requirement focuses on the alternatives to the project as a whole.
1.b Project Alternatives	The County specifically questions the need for, and ecosystem value of, discharges to the Yolo Bypass through the Colusa Basin Drain (an intended function of all project alternatives) and whether other means of providing ecosystem benefits for native Delta fish species, as mentioned in the project objectives listed on p. ES-11, were thoroughly evaluated.	Chapter 11, Aquatic Biological Resources, provides detailed analysis of the potential impacts on aquatic biological resources, including potential impacts on native fish species such as Chinook salmon, delta smelt, longfin smelt, and sturgeon. The Project includes actions to ensure operational impacts of the alternatives would be less than

		significant and would have no adverse effect to anadromous and endemic fish populations. Please see Master Response 2, Alternatives Description and Baseline, regarding the merits of the Project and alternatives. Please see Master Response 5, Aquatic Biological Resources, regarding Project benefits to fisheries. It is important to note that the conveyance of water to the Yolo Bypass in a way similar to the North Delta Flow Action for the benefit of Delta smelt was a component of the Authority's Proposition 1 application to the California Water Commission. The California Department of Fish and Wildlife found this to be a net ecosystem benefit and the California Water Commission conditionally awarded the Sites Authority funding for this ecosystem benefit. The Authority envisions CDFW managing this water and the ecosystem benefit. However, the Authority and CDFW are in discussions on whether this water would be managed by the Authority or CDFW. Regardless, the water would be managed and conveyed through the Yolo Bypass consistent with analysis in the Final EIR/EIS – in particular, staying within the Tule Canal and Toe Drain and not overflowing onto adjacent agricultural lands and being conveyed through the Yolo Bypass from August through October. The Authority is not aware of another way to achieve the Delta smelt benefit than to provide water through the Colusa Basin Drain, to the Ridgecut, and into the North Delta. This action

		mimics the existing North Delta Flow Action and is the only way that the Authority is aware of to move aquatic organisms into the North Delta to provide food for Delta smelt.
1.c Project Alternatives	In particular, the County questions whether other alternatives with reduced impacts within Yolo County—which is not represented on the Sites JPA governing board—were carefully considered.	The Authority and Reclamation conducted an extensive screening process that considered the Project objectives and purpose and need to develop a reasonable range of potentially feasible alternatives (including the preferred Project [alternative]) for evaluation. This screening process conducted by the Authority and Reclamation built upon prior water supply evaluations that examined a broad array of factors (see Appendix 2A, Alternatives Screening and Evaluation, and Appendix 2B, Additional Alternatives Screening and Evaluation). The Authority and Reclamation considered multiple operational scenarios over the course of Project development that were designed to meet the Project objectives, purpose, and need; enhance Project benefits; and reduce or avoid impacts. The features of alternatives, including Sites Reservoir capacity, conveyance systems, and operational scenarios, were conceptually developed and refined over time to maximize the achievement of the objectives. Please see Master Response 9, Alternatives Development. Please see Master Response 2, Alternatives Description and Baseline, regarding the merits of the Project and alternatives. In addition, and as stated above, the Authority is not aware of another way to achieve the Delta

		smelt benefit than to provide water through the Colusa Basin Drain, to the Ridgecut, and into the North Delta. This action mimics the existing North Delta Flow Action and is the only way that the Authority is aware of to move aquatic organisms into the North Delta to provide food for Delta smelt.
2.a Project Description	The County observes that the Project Description is vague and/or inconsistent in numerous respects.	The EIR/EIS includes information and data on the location, design, schedule, and operation for all Project components for each of the alternatives. The project description includes sufficient detail to analyze the Project impacts provides sufficient detail for decision makers to understand the alternatives being evaluated.
2.b Project Description	Inadequate description of how groundwater will be supplied to the Dunnigan Pipeline construction site, how it will be used, and whether there will be any runoff or other effects that require analysis (including effects from dewatering)	As indicated in Chapter 8, Groundwater Resources, in general, groundwater would be required for uses such as moisture conditioning of fill materials, batching concrete, grouting, and dust suppression for haul roads, stockpiles, disposal areas, quarries, and borrow areas. Groundwater encountered during excavation would be stored on site in bermed areas or Baker tanks within the Project footprint before being discharged onto suitable land where it would infiltrate back into the water table. Encountered groundwater may also be used for dust suppression or moisture conditioning of embankment fill materials, which would reduce reliance on pumped groundwater. In general, water use during construction would be primarily related to construction of the proposed pipelines (e.g., Dunnigan pipeline, Funks pipeline) for trench compaction and dust control. Water

		required for construction of Dunnigan pipeline (approximately 20,000 to 30,000 gallons per day) would be sourced from existing surface water from the Storage Partners pursuant to existing water rights agreements and permitted uses; existing groundwater wells in the pipeline area; or dewatering efforts (see Table 5-33, Summary of Expected Construction Water Use, Chapter 5, Surface Water Resources). The required daily construction use would be less than 1% of the 2018 groundwater pumped for total groundwater use within the Yolo County Subbasin (Table 8-2). The use of groundwater for the construction of the Dunnigan Pipeline would not result in a substantial decrease in groundwater supplies or substantial interference with groundwater recharge in this subbasin, as discussed in Chapter 8. Groundwater discharged to surface waterbodies and land would comply with RWQCB Order No. R5-2022-0006 and State Water Resource Control Board Order No. 2003-0003-003-DWQ, respectively (see BMP-14 in Appendix 2D, Best Management Practices, Management Plans, and Technical Studies). BMP-12 would address the potential for increased erosion that could occur as a result of ground-disturbing construction activities or areas of bare soil and would ensure that erosion rates would not be excessive. BMP-12 Sediment control measures, such as placement of silt fencing around areas of ground disturbance, would capture sediment that is generated from exposed soils. The runoff management measures would be implemented to reduce runoff rates and prevent concentrated runoff from causing scour.

2.c Project Description	Vague description of the approach to constructing the Dunnigan Pipeline, including a lack of detail regarding excavation methodology, equipment to be used, how soil will be stored and reused or disposed of, and related matters such as vehicle trips and potential air quality (including fugitive dust) impacts	The EIR/EIS includes information and data on the location, design, schedule, and operation for all Project components for each of the alternatives evaluated with sufficient detail to analyze the Project impacts and sufficient detail regarding the Project for decision makers to understand the alternatives being evaluated. Appendix 2C, Construction Means, Methods, and Assumption, describes construction details including excavation methodology for the Dunnigan Pipeline. For example, Section 2.2.1 *Water* identifies the need for 20,000 to 30,000 gallons of water per day during construction of the Dunnigan Pipeline and that water captured during dewatering may be reused. Table 2C-5 provides the total number of truck (18,460) and personal vehicle trips (51,830) anticipated during two year duration of construction. Section 3.3.6 *Conveyance to the Sacramento River* provides an overview of construction activities, including the description of clearing and grubbing, materials to be utilized, and various steps needed to stage for construction, trench and tunnel activities, installation of pipeline, and and backfill trenches. Detailed drawings are provided in Figures C2-59 and C2-60.Please see Chapter 18, Navigation, Transportation, and Traffic, for information about numbers of construction trips and vehicle miles traveled VMT during operation. Table 18-2. *Sites Reservoir Project Access Roads* identifies what roads will be utilized to access the Dunnigan Pipeline are for construction, including I-5 at Colusa-Yolo county line, County Road 99W south of County Road 8, County Road 8, and County Road 90B. Section 18.2.1.1., *Yolo County,* describes the

		Yolo County roads that would be affected by the Project including configuration and existing daily vehicle trips. Traffic and transportation impacts are addressed in Section 18.4, Impact Analysis. Based on the number of vehicle trips per day (146 employee and 154 truck trips for Alternative 1 and 3 and 228 employee and 280 truck trips for Alternative 2) impacts were determined to be less than significant. The air quality impacts of the Project are discussed in Chapter 20, Air Quality. Tables 20-17 and 20-18 compare the particulate matter generated between the alternatives. Appendix 20A *Methodology for Air Quality and GHG Emissions Calculations* also provides the assumptions and methodology used for quantifying air quality emissions related to construction, operation and maintenance of the Dunnigan Pipeline. Please also see BMP-10, Salvage, Stockpiling, and Replacement of Topsoil and Preparation of a Topsoil Storage and Handling Plan, discuses the storage and placement of excavated soil.
2.d Project Description	Vague and inconsistent language regarding discharges for water supply and ecosystem purposes into the Yolo Bypass, including the volume and timing of such discharges and related effects on farmland	Please refer to Master Response 2, Alternatives Description and Baseline, regarding the adequacy of the project description and how they fulfill the requirements for project-level review under CEQA and NEPA. The EIR/EIS includes a level of detail appropriate for evaluation and review of the environmental impacts. As described in Chapter 2, Project Description and Alternatives, most water for Proposition 1 benefits would be conveyed through the Yolo Bypass/Cache Slough Complex, although water destined for Storage Partners who receive

		water from the North Bay Aqueduct could also follow this path (most likely though, this water would be released directly in the Sacramento River). Flows into the Yolo Bypass for ecosystem purposes would most likely occur during the summer and fall months. Please refer to Chapter 5, Surface Water Resources, and associated appendices, for more details regarding the potential changes in hydrology resulting from Project operations, including releases to Yolo Bypass, as modeled using CALSIM II. Tables 5-20 and 5-21 provide ample details regarding the expected timing and volume of releases to the Yolo Bypass and potential impacts of the Project on total Yolo Bypass flow, respectively. Table 5-30 includes information about simulated Sites water supply deliveries for Yolo Bypass Habitat Water Supply. Table 5-32 presents CALSIM II modeled flood flows for the NPA and the Project Alternatives, including flows through the Yolo Bypass. These hydraulic modeling results serve as the basis for the impact analyses and determinations subsequently presented in each resource chapter. Please refer to Chapter 15, Agriculture and Forestry Resources, regarding potential effects on farmland, including a detailed analysis of the potential for Sites Reservoir releases to result in inundation to the Yolo Bypass and CBD and thus potentially result in conversion of agricultural to non-agricultural land. Impact AG-4 concluded that agricultural lands would not be affected during the growing or harvesting seasons as a result of inundation at Yolo Bypass, nor would

		the Project substantially change concentrations of methylmercury or arsenic, or significantly affect water temperatures. Please also refer to Appendix 11M, Yolo and Sutter Bypass Flow and Weir Spill Analysis, for more details regarding modeling of inundation in Yolo Bypass and Sutter Bypass.
3.a Dunnigan Pipeline-Groundwater Impacts During Construction	In connection with Pipeline construction, the Final EIR/EIS describes the potential for impacts to groundwater as well as the temporary disturbance of agricultural wells and irrigation of fields near the pipeline alignment. Impacts will result from dewatering (mentioned at p. 2-68) along the Pipeline alignment, direct physical conflicts with existing irrigation infrastructure, and the groundwater demands/usage by the construction effort itself. Despite acknowledging the potential for such impacts, however, the Final EIR/EIS contains only scant and conclusory analysis. For example, at p. 5-57 the Final EIR/EIS simply states "[a]s identified in Chapter 8, there is sufficient groundwater supply to provide this water during the construction period without affecting yield from other wells."	No significant impacts on groundwater (see Chapter 8, Groundwater Resources) or agriculture (see Chapter 15, Agriculture and Forestry Resources) specifically related to Dunnigan pipeline construction were identified in the Final EIR/EIS. As noted in Chapter 2, Project Description and Alternatives, Page 2-68 states that dewatering would be necessary for a segment of the pipeline "to reduce groundwater levels to 20 or 30 feet below ground surface along its length. Trenching and pipeline installation would be completed after dewatering…Construction would include open cut of approximately 100 feet to cross Bird Creek in the dry season." Chapter 8, Groundwater Resources notes that dewatering, including in the Dunnigan Pipeline area, "would not change the permeability of the ground surface where construction activities would occur. Therefore, dewatering would not affect groundwater quality during construction." Chapter 8 further states that the Dunnigan Pipeline may require dewatering to a depth of 30 feet below ground surface (bgs). "The average well depth for domestic and agricultural wells within the Yolo Subbasin is typically 100 feet bgs, with well screens starting around 50 feet bgs (California Department of Water Resources 2020b). Clay soils in rice fields adjacent to the Dunnigan Pipeline would act as a

		barrier between the construction dewatering depth and basin aquifer." The Final EIR/EIS concludes that the pipeline installation would not result in a substantial decrease in groundwater supplies or substantial interference with groundwater recharge. As discussed in Chapter 15 for Impact AG-1 and AG-3, construction activities in general would temporarily disturb agricultural land but implementation of BMPs (BMP-10, BMP-13 and BMP-36) would result in the restoration of Important Farmland disturbed during construction to preconstruction conditions. Accordingly this would be a less-than-significant impact. Placement of underground pipelines on land zoned for agricultural use or in Williamson Act contracts would not result in a permanent change of land use from agricultural use. As such, no impact would occur under construction and operations (see Impact AG-2). As indicated in Chapter 8, Groundwater Resources, while water could come from both surface water and groundwater sources, the groundwater impact analysis conservatively assumes that the whole supply would come from groundwater. Even assuming that all construction water required for construction of Dunnigan pipeline would come from groundwater, the required daily construction use would be less than 1% of the 2018 groundwater pumped for total groundwater use within the Yolo County Subbasin (Table 8-2). Accordingly, it was determined that there would be a less-than-

		significant impact on groundwater supplies in the Yolo Subbasin and therefore no mitigation would be required (see Impact GW-2, Chapter 8).
3.b Dunnigan Pipeline-Groundwater Impacts During Construction	The Chapter 8 analysis, however, is largely bereft of meaningful detail and does not even clearly describe why construction of the Pipeline will require "approximately 20,000 to 30,000 gallons of water per day" for several years. The abbreviated analysis of these impacts and lack of ways to mi gate them limit the County's ability to comment on related impacts. (Final EIR/EIS at pp. 8-14 and -15.)	The Dunnigan Pipeline would be approximately 4 miles (Alternatives 1 and 3) or 10 miles (Alternative 2) in length, have a minimum depth of 6 feet below ground surface, and have an inner diameter of approximately 9 feet (Alternatives 1 and 3) to 10.5 feet (Alternative 2). These specifications were taken into consideration when estimating water use during construction of the pipeline. As indicated in Chapter 8, Groundwater Resources, while water could come from both surface water and groundwater sources, the groundwater impact analysis conservatively assumes that the whole supply would come from groundwater. Even assuming that all construction water required for construction of Dunnigan Pipeline would come from groundwater, the required daily construction use would be less than 1% of the 2018 groundwater pumped for total groundwater use within the Yolo County Subbasin (Table 8-2). Accordingly, it was determined that there would be a less-than-significant impact on groundwater supplies in the Yolo Subbasin and therefore no mitigation would be required (see Impact GW-2, Chapter 8). Please refer to Master Response 2, Alternatives Description and Baseline, regarding the adequacy of the Project description within the context of CEQA and NEPA.

3.c Dunnigan Pipeline-Groundwater Impacts During Construction	Further, while the Final EIR/EIS mentions (at pp. 8-14 and -15) the possibility of using "existing surface water from the Storage Partners pursuant to existing water rights agreements and permitted uses" to supply a portion of the necessary water for Pipeline construction, this possibility seems far-fetched. How it is feasible to convey surface water to the construction site near Dunnigan? The Final EIR/EIS does not say. Accordingly, the County agrees with the decision to conservatively assume all water supply needs for construction of the Dunnigan Pipeline will be met with groundwater. And this, in turn, underscores why it is essential to include a much more robust analysis of potential groundwater and agricultural impacts arising from the Dunnigan Pipeline construction. Absent such analysis, the groundwater analysis in the Final EIR/EIS is deficient.	The Dunnigan Pipeline between the Tehama-Colusa Canal and the Colusa Basin Drain would generally be located within the Dunnigan Water District boundaries. The Authority could purchase water for its construction needs from Dunnigan Water District. A small portion of the pipeline falls outside of the district boundaries and thus, the Authority would need to work closely with Dunnigan Water District to determine if District water supplies could be used along this portion of the construction site. Similarly, the Dunnigan pipeline from the Colusa Basin Drain to the Sacramento River (which is not part of the Project as proposed for approval) is within Reclamation District No 108 boundaries. The Authority could work with Reclamation District No. 108 for a surface water supply from the District for this portion of the construction site. Exact connection locations and facilities for possible connection to either water district's distribution system are not known at this time and would be explored further if the Authority were to use surface water for construction. However, as the pipeline runs through both districts and both districts generally provide water to lands that the pipeline would be located on, connections for surface water, if needed, are expected to be in proximity to the construction site.
4.a Dunnigan Pipeline-Excavation and Soil Storage, Reuse, and Removal	The method of construction for the Dunnigan Pipeline is described vaguely, including whether its construction will be solely through open excavation or whether tunneling/boring will be used.	The EIR/EIS includes information and data on the location, design, schedule, and operation for all Project components for each of the alternatives evaluated with sufficient detail to analyze the Project impacts and sufficient detail regarding the Project for decision makers to understand the alternatives being evaluated.

		Specifics related to the Dunnigan Pipeline are included in EIR/EIS Chapter 2, Project Description and Alternatives. This includes a discussion on its construction. Appendix 2C, Construction Means, Methods and Assumptions outlines the construction activities associated with the Dunnigan Pipeline:
		• Clear and grade the pipeline alignment.
		• Excavate pipeline trench and provide shoring. It is anticipated that several hundred feet of open trench would occur at one time.
		• Install and weld up the pipeline and backfill with a combination of CLSM and native material.
		• Tunneling under Interstate-5, Highway 99, and the railroad, as follows:
		  ○ Construct jacking pit and receiving pit. Provide shoring to support these pits that are anticipated to be about 25 feet in depth +/-. Remove and stockpile excavated material.
		  ○ Assemble large boring machine sized to provide a roughly 128-inch to 144-inch casing pipe bore. Final diameter will be determined during design.
		  ○ Obtain steel casing pipe
		  ○ Lower tunneling machine into jacking pit after setting up guide rails to provide correct tunnel alignment.

		○ Begin tunneling from jacking pit to receiving pit. Remove and dispose of excavated material offsite. ○ Weld the steel casing segments together as tunneling progresses. ○ Continue tunneling, welding and removing excess material until tunneling machine reaches receiving pit. ○ Removing tunneling machine from receiving pit. ○ Install main carrier pipe in casing pipe and weld joints as pipe segments are lowered into jacking pit. Carrier pipe will have piping supports attached to help center in casing pipe and to keep from resting on casing pipe. ○ Depending on requirements of County and Caltrans, likely will fill annulus space between casing and carrier pipes with sand or lightweight grout. Ends of casing pipe will be plugged using boots or other methods to prevent grout or sand from running into pits. ○ Add cathodic protection requirements to casing and carrier pipes. ○ Connect extensions of carrier pipes in each pit to return to open cut methods for normal pipe installation. ○ Backfill the jacking and receiving pits with material removed during step 1.

		In some instances, slurry will be used around the pipes, followed by backfill with native excavated material. • Install flow meters, valving, air valves, blowoffs, and access manways. • Install a cathodic protection system consisting of rectifiers attached to pipe. • Revegetate and restore the pipeline route, and constructing a gravel maintenance road along the pipeline route • Construct the CBD Outlet Structure o Clear and grub area along CBD for the outlet structure. o Transport materials to the Project Site. Materials would consist of concrete, rebar, yard piping, energy dissipation valves, and electrical equipment. o Place construction materials at staging areas. o Build the outlet structure, which would consist of excavating the ground to accommodate placement of structure structural concrete and rebar. o Connect the outlet structure to the Dunnigan Pipeline. o Test the facility.
4.b Dunnigan Pipeline-Excavation and Soil Storage, Reuse, and Removal	First, at p. 2-103, the Final EIR/EIS mentions the removal, storage, and replacement of topsoil in irrigated agricultural areas following “restoration” so	Please see BMP-10, Salvage, Stockpiling, and Replacement of Topsoil and Preparation of a Topsoil Storage and Handling Plan, discusses the storage

	that "irrigated agricultural areas would have the same soils composition except in areas that would be covered by permanent maintenance roads." How will the Sites JPA ensure the productive capability of the soil is maintained or restored through this process? Is it reasonable to expect some degree of decline in productive capability? Will the Sites JPA retain an agronomist to guide this process, potentially in coordination with the Yolo County Agricultural Commissioner? The County strongly recommends that the Sites JPA develop an agreement with the County that appropriately addresses these issues.	and placement of excavated soil, including employing a soil scientist. The Authority will have agreements with the landowners whose property is affected by construction and commitments by the Authority to take appropriate measures to ensure soil composition post- construction are satisfactory to the landowner will be part of that agreement. Please see BMP-13 Development and Implementation of Spill Prevention and Hazardous Materials Management/Accidental Spill Prevention, Containment, and Countermeasure Plans (SPCCPs) and Response Measures, and BMP-36, Control of Invasive Plant Species during Construction, regarding additional protective measures protective of agricultural productivity. Please see Appendix 2D, Best Management Practices, Management Plans, and Technical Studies. As discussed in Chapter 15, Agriculture and Forestry Resources, implementing BMP-10, BMP-13, and BMP-36 would result in restoration of Important Farmland disturbed during construction to preconstruction conditions. Therefore, agricultural productivity and associated soil properties would not be reduced as a result of construction.
4.c Dunnigan Pipeline-Excavation and Soil Storage, Reuse, and Removal	Second, at p. 6-55, the Final EIR/EIS mentions that the Dunnigan Pipeline will "entail substantial excavation" but does not elaborate on whether this work presents the potential for impacts mentioned briefly in this portion of Chapter 6, including adverse effects on water quality. This is a further example of the overall lack of detail of potential construction impacts associated with the Dunnigan Pipeline—mentioning "substantial excavation" without including any related	Additional detail regarding construction of Dunnigan pipeline is provided in Chapter 2, Project Description and Alternatives. The greatest potential for water quality impacts from construction activities would come from in-water work (e.g., dredging and in-channel construction) and ground disturbance (e.g., excavation and tunneling), as well as through the release of chemical pollutants, and other mechanisms discussed for Impact WQ-1 in

	analysis leaves the County and general public without any basis for understanding this (and virtually every other) potential impact of Dunnigan Pipeline construction.	Chapter 6, Surface Water Quality. Accordingly, these mechanisms, and their potential effect(s) on water quality, are discussed generally rather than discuss in detail the construction of each component of Alternatives 1, 2 and 3.
4.d Dunnigan Pipeline-Excavation and Soil Storage, Reuse, and Removal	Related to this concern, Table 12-7 (on p. 12-68) of the Final EIR/EIS appears to indicate that excavation for the Dunnigan Pipeline will displace 100-250 acres of soil, depending on the project alternative selected. This is based on a 10-foot pipeline diameter, however, and therefore appears to understate potential impacts (as the external dimension of the pipeline will be somewhat larger). Based on information provided in different places in the document, the Dunnigan Pipeline will apparently be about 12 feet in diameter at depths of 6-30 feet below the ground surface.	As described in Chapter 2, Project Description and Alternatives, under Alternatives 1 and 3, the Dunnigan Pipeline would convey water released from the TC Canal to the Colusa Basin Drain. The Dunnigan Pipeline would be approximately 4 miles (Alternatives 1 and 3) or 10 miles (Alternative 2) in length, have a minimum depth of 6 feet below ground surface, and have an inner diameter of approximately 9 feet (Alternatives 1 and 3) to 10.5 feet (Alternative 2). Construction of the Dunnigan Pipeline from the TC Canal to the CBD would require dewatering, trenching, and using pile driving or a vibration hammer. Dewatering would be necessary for a segment of the pipeline to reduce groundwater levels to 20 or 30 feet below ground surface along its length. The Dunnigan Pipeline is anticipated to be structural steel and the outside diameter is about a foot greater than the 9.5 foot inside diameter.
4.e Dunnigan Pipeline-Excavation and Soil Storage, Reuse, and Removal	Similarly, aside from the language at p. 2-103, the Final EIR/EIS does not explain how excess soil will be stored and reused or disposed of in connection with the Dunnigan Pipeline. The County is greatly concerned that long-term storage of excavated soil near the community of Dunnigan or other residential areas could cause adverse air quality impacts due to fugitive dust. The County urges the Sites JPA to work cooperatively with County staff to identify	Please see BMP-10, Salvage, Stockpiling, and Replacement of Topsoil and Preparation of a Topsoil Storage and Handling Plan, discusses the storage and placement of excavated soil, including employing a soil scientist. Please also see BMP-28, Preparation and Implementation of Fugitive Dust Control Plans, discusses specific actions the Authority will take to limit air quality impacts from the Project, including during earth moving, cleaning

	appropriate, safe means of storing excess soil and removing it as promptly as feasible to avoid adverse air quality impacts in and near Dunnigan.	paved roads, minimizing dust emissions from dry disturbed soil surface areas and unpaved roads, and from soil piles. Please see Appendix 2D, Best management Practices, Management Plans, and Technical Studies. The Authority will have agreements with the landowners whose property is affected by construction and commitments by the Authority to take appropriate measures to ensure soil composition post- construction are satisfactory to the landowner will be part of that agreement.
5.a Dunnigan Pipeline-Construction Traffic	At p. 2-52, the Final EIR/EIS describes daily construction traffic but does not specifically (in this section or elsewhere) describe traffic associated with Dunnigan Pipeline construction. Similarly, the discussion of local roads to be used for the project that begins at p. 2-70 entirely omits any roads in Yolo County. The following passage later in the Final EIR/EIS indicates the significance of these omissions and the potential for a high volume of construction traffic in Yolo County, with significant physical impacts on County roads that will require significant maintenance and/or reconstruction: Daily construction traffic would consist of trucks hauling equipment and materials to and from the work sites as well as daily arrival and departure of construction workers. Construction traffic on local roadways would include dump trucks, bottom-dump trucks, concrete trucks, flatbed trucks for delivering construction equipment and permanent Project equipment, pickups, water trucks, equipment maintenance vehicles, and other delivery trucks. At the peak of construction in 2027, current estimates project between 701	Please see Chapter 18, Navigation, Transportation, and Traffic. Section 18.2.1, Project Access Roads, includes a discussion of overall project access and Interstate-5. County Road 99W, County Road 8, and County Road 90B in Yolo County are included in Section 18.2.1.1. Roadways and highways needed to access the Dunnigan Pipeline were included in Tables 18-12, 18-13 and 18-15 along with other project features. Table 18-14 provides a summary of the daily trips estimated on a typical day of peak construction for all facilities, including 228 employee trips and 280 truck haul trips for the Dunnigan Pipeline per day.

	and 978 daily haul trips for conveyance facilities, and approximately 1,760 daily offsite haul trips for reservoir facilities. (Final EIR/EIS at p. 18-26)	
5.b Dunnigan Pipeline-Construction Traffic	The Final EIR/EIS does not analyze the current pavement condition of affected Yolo County roads (though, as noted, it does include a brief summary of the pavement condition of local roads outside the County at pp. 2-70 and 2-75) or appear to describe and analyze how such roads will be affected by Dunnigan Pipeline construction. These omissions are significant and render the Final EIR/EIS deficient in this respect.	The estimated number of daily trips as a result of the Project was added to the baseline conditions for planned construction routes to understand potential changes to the level of service (LOS) and verify that the identified study roadway segments would not reach unacceptable LOS thresholds as identified in Table 18-9. Table 18-15 is a summary of the roadway capacity assessments and resulting LOS in the study roadway segments with construction traffic added. Roadways and highways need to access the Dunnigan Pipeline were included in Tables 18-12, 18-13 and 18-15 along with other project features. The 2019 average daily traffic and LOS for these accesses were not available for inclusion and analysis. Table 18-14 provides a summary of the daily trips estimated on a typical day of peak construction for all facilities, including 228 employee trips and 280 truck haul trips for the Dunnigan Pipeline per day. Please see Chapter 18, Navigation, Transportation, and Traffic, including "Impact TRA-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities" for information about numbers of construction trips and vehicle miles traveled (VMT) during operation. Section 18.2.1, Project Access Roads, includes a discussion of overall project access and Interstate-5. Conditions of County Road 99W, County Road 8,

		and County Road 90B in Yolo County are included in Section 18.2.1.1. BMP-16, Development and Implementation of a Construction Equipment, Truck, and Traffic Management Plan (TMP), states that the Authority will coordinate with the applicable jurisdictions, including local agencies for local roads, transit providers, and rail operators where applicable, and will provide construction notification procedures for Glenn, Colusa, Yolo, and Tehama Counties' police, public works, fire departments, and other public service providers, and cycling organizations, bike shops, and schools. BMP-12, Development and Implementation of Stormwater Pollution Prevention Plan(s) (SWPPP) and Obtainment of Coverage under Stormwater Construction General Permit (Stormwater and Non-stormwater) (Water Quality Order No. 2022-0057-DWQ/NPDES No. CAS000002 and any amendments thereto), states that during operations and maintenance, Project facilities including, but not limited to, roads (including access roads), other paved and unpaved surfaces, structures, and equipment, will be properly maintained so as to avoid the potential for erosion and sediment/siltation into local waterbodies and in compliance with all applicable federal, state, and local regulations. Table 4-3 identifies that a Transportation Permit will be required from Yolo County. The Authority has assumed that this permit would ensure that roads used for Project construction activities are left in a similar or better condition.

5.c Dunnigan Pipeline-Construction Traffic	The Sites JPA needs to address, preferably through an enforceable agreement with Yolo County, how impacts of soil hauling and other project construction activities on Yolo County roads and infrastructure will be fully mitigated. The Final EIR/EIS mentions a number of possible routes for construction of the Dunnigan Pipeline (including various County roads), but the final routes will need to be identified in coordination with Yolo County's Public Works Director, along with a binding commitment to reconstruct impacted roads after construction is complete.	Roadways and highways needed to access the Project included in Tables 18-12, 18-13 and 18-15. As described in BMP-16, Development and Implementation of a Construction Equipment, Truck, and Traffic Management Plan (TMP), the Authority will coordinate with the applicable jurisdictions, including local agencies for local roads, transit providers, and rail operators where applicable, and will provide construction notification procedures for Glenn, Colusa, Yolo, and Tehama Counties' police, public works, fire departments, and other public service providers, and cycling organizations, bike shops, and schools. Table 4-3 identifies that a Transportation Permit will be required from Yolo County. The Authority has assumed that this permit would ensure that roads used for Project construction activities are left in a similar or better condition.
5.d Dunnigan Pipeline-Construction Traffic	The Final EIR/EIS's analysis of general truck traffic is similarly devoid of much analysis. It states, on page 18-19, that a vehicles miles traveled (VMT) analysis was not necessary "because a qualitative assessment indicated that there would not be construction VMT impacts." We were unable to locate the qualitative assessment referenced in the Final EIR/EIR, other than simply surmising that construction workers and other trips "are effectively replacing other trips" to other projects, that could be even longer. Under that logic, a VMT analysis would be unnecessary for any project because every trip -- whether for recreational traffic or construction traffic -- is always a replacement for another trip. And even if the Final EIR/EIS intended to rely on such a theory, the analysis	Please see Chapter 18, Navigation, Transportation, and Traffic, Tables 18-11, 18-12, 18-14, and 18-15 for detailed information regarding Dunnigan Pipeline construction trips by type (employee commutes vs. truck hauls) and impacts on local roadways by location. The Final EIR/EIS appropriately addresses construction VMT as an Air Quality, GHG Emissions and Energy issue and not as a Transportation issue. VMT associated with construction trips is captured in Chapter 20, Air Quality, Chapter 21, Greenhouse Gas Emissions, and Chapter 17, Energy. Mitigation

	would have to be backed by evidence, not conjecture, about the number and distance of trips that construction workers, equipment, and materials would make absent the project. We expect that such an econometric analysis would be quite difficult to perform without extensive data about the regional construction industry, the projects that would be built during the me period, and the travel costs if the project were not undertaken. Rather than rely on such an untested and unsupported theory based on a hypothetical counter-factual, however, the transportation chapter for the Final EIR/EIS should provide the VMT generated by the construction activities and disclose them for public review. Nor should the Final EIR/EIS omit this analysis on the basis of SB 743 and CEQA Guidelines § 15064.3, as is implied under Impact TRA-2. Sec on 15064.3 states, "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." By using the word "generally," Section 15064.3 acknowledges that automobile VMT alone may not always be the most appropriate measure of transportation impacts. The legislate intent of SB 743, and the associated CEQA Guidelines Sec on 15064.3, was to ensure that lead agencies include the appropriate analysis of VMT from infill projects in transit priority areas. However, this is no infill project; it is an extensive public works projects that will generate extensive VMT. Truck trips associated with hauling construction materials and equipment are a significant concern that could – and should -- be analyzed in the Final EIR/EIS.	Measure GHG-1.1 would reduce construction worker VMT through ride-sharing measures. SB 743 does not apply to construction truck traffic and does not require quantification of construction worker VMT.

5.e Dunnigan Pipeline-Construction Traffic	It appears that the Final EIR/EIS did indeed consider the VMT from truck trips generated by the project in Chapter 20 on greenhouse gas (GHG) emissions, but we cannot verify the information. Appendix 20A shows the general methodology as taking hauling into account. The Final EIR/EIS says on page 21-4, "Modeling assumptions are provided in Appendix 20B, Air Quality and GHG Analysis Data." On the Sites EIR/EIS website, however, Appendix 20B is not included, and we were not able to identify the modeling assumptions and data elsewhere to verify whether construction trips were considered in the GHG analysis. We do note that the emissions for initial construction were amortized over 30 years, which appears to minimize the project's immediate impacts. These maters should be clarified before the Final EIR/EIS is finalized.	Risk to human health resulting from emissions are included in Chapter 20, Air Quality, and in Appendix 20C. Overall, construction is expected to occur from 2024 to 2029, which is reflected in the modeling. Risks to receptors were calculated assuming exposure during the entire construction period using the maximum year of construction emissions. Table 20C-6 summarizes the construction periods, between 2 and 5 years, by modeled location. The models quantify different aspects of air quality, including regional mass emissions, localized concentrations, and health risks. Please see Section 20.3, Methods of Analysis, for additional information regarding air quality methods and modeling. Construction of the Project would generate emissions of GHGs, including CO2, CH4, N2O, and SF6. The combustion exhaust GHG emissions modeled in the EIR/EIS are based on Project-specific construction data (e.g., schedule, construction equipment and truck inventory) provided by the Project engineering team and a combination of emission factors and methodologies from the California Emissions Estimator Model (CalEEMod), version 2016.3.2; CARB's Emissions Factors (EMFAC) model (EMFAC2017) ; the U.S. Environmental Protection Agency's (USEPA) AP-42 Compilation of Air Pollutant Emission Factors (AP-42); and other relevant agency guidance and published literature (U.S. Environmental Protection Agency 2021b). Annual GHG emissions were quantified based on concurrent construction

		activity. Please see Chapter 21, Greenhouse Gas Emissions. The Appendix 20B was not used in the EIR/EIS, and the reference to 20B, Air Quality and GHG Analysis Data, in Chapter 21 is incorrect. Assumptions about construction are included in Appendix 2C, Construction Means, Methods, and Assumptions, and air quality monitoring assumption are included in Appendix 20C, Ambient Air Quality and Health Risk Analysis Technical Report. Chapter 18, Navigation, Transportation, and Traffic, provides a summary of the daily trips, including employee trips and truck haul trip estimated on a typical day of peak construction for all facilities.
6.a Dunnigan Pipeline-Inconsistent Language Regarding Releases into Colusa Basin Drain and Yolo Bypass	The Final EIR/EIS contains vague and inconsistent language regarding releases to the Colusa Basin Drain and into the Yolo Bypass, including which entity/ies are responsible for managing such releases once the project is operational. At pp. 1-7, the Final EIR/EIS describes a benefit agreement for ecosystem improvements to be administered by the California Department of Fish and Wildlife. But the terms of these agreements are not described in the Final EIR/EIS, let alone analyzed, and it is not clear whether these agreements will even cover releases into the Yolo Bypass as opposed to other ecosystem uses. Nor is there any other detail on which entity /ies will be responsible for managing such releases or, critically, how various assumptions regarding the timing and extent of releases into the Yolo Bypass will be implemented overtime, including (a) how oversight will occur, (b) whether the assumptions will later be	It is anticipated that potential water releases for ecosystem benefits under Proposition 1 would be provided by entering a contract with CDFW. Collaboration between the Authority and CDFW would ensure releases of ecosystem water are scheduled to address real-time conditions and needs. While the exact terms of such agreements are not yet available, such a level of details is not necessary to ensure planning level analysis of potential Project impacts. Please refer to Master Response 2, Alternatives Description and Baseline regarding the adequacy of the Project description and CEQA/NEPA requirements. The Authority would be responsible for managing releases, in coordination with the appropriate resource agencies, as would be the case for instance for ecosystem benefit water.

	expressed as binding and enforceable commitments, and (c) whether increased maintenance or other impacts of affected facilities, such as the Tule Canal and Toe Drain, will be necessary.	Please refer to Chapter 5, Surface Water Resources, and associated appendices, for details regarding the potential changes in hydrology resulting from Project operations, including releases to Yolo Bypass. Appendix 5A1, Model Assumptions, includes details regarding deliveries of ecosystem benefit water. The hydraulic modeling results serve as the basis for the impact analyses subsequently presented in each resource chapter and for the fully disclosed impact determinations.
6.b Dunnigan Pipeline-Inconsistent Language Regarding Releases into Colusa Basin Drain and Yolo Bypass	Of greatest concern to the County, the Final EIR/EIS is replete with vague and inconsistent language regarding the timing, volume, and purpose of releases into the Yolo Bypass. At p. 2-77, text addressing releases into the Colusa Basin Drain and the Yolo Bypass states: Water releases would generally be made from May to November but could occur at any me of the year, depending on a Storage Partner's need and capacity to convey water to its intended point of delivery. Water would be released from Sites Reservoir via the I/O Works back through the TRR PGP and into the TRR or back through Funks PGP back into Funks Reservoir. Water released could be used along the GCID Main Canal, along the TC Canal, or conveyed to the new Dunnigan Pipeline and discharged to the CBD under Alternative 1 or 3 or to the Sacramento River under Alternative 2. From the CBD, the water may be conveyed via the Sacramento River or the Yolo Bypass to a variety of locations in the Delta or south of the Delta.	The commenter's assertion that there is ambiguity regarding how the Project will be operated is unsupported by the information presented throughout the EIR/EIS, including in Chapter 2 (see pp. 2-86 through 2-88), Project Description and Alternatives, in the section titled "Releases from Sites Reservoir." Please also note that Chapter 2 provides a general description of operations. More details regarding the timing, volume, and purpose of releases into the Yolo Bypass can be found in Chapter 5, Surface Water Resources, and associated appendices, which discusses potential changes in hydrology resulting from Project operations, including releases to Yolo Bypass, as modeled using CALSIM II. Tables 5-20 and 5-21 provide ample details regarding the expected timing and volume of releases to the Yolo Bypass and potential impacts of the Project on total Yolo Bypass flow, respectively. Table 5-30 includes information about simulated Sites water supply deliveries for Yolo Bypass Habitat Water Supply. Table 5-32 presents CALSIM II modeled flood flows for the NPA and the Project Alternatives, including flows through the Yolo Bypass. These hydraulic modeling results serve

	In effect, this language seems to say that anything is possible. It is hard to reconcile this language with other provisions of the Final EIR/EIS that appear to contemplate much more limited releases into the Yolo Bypass. This overall ambiguity in the description of intended project operations prevents the County from understanding and commenting meaningfully on the likely environmental consequences of Project operations on existing uses in the Yolo Bypass, including agriculture, recreation, and environmental education.	as the basis for the impact analyses and determinations subsequently presented in each resource chapter. The EIR/EIS provides an appropriate level of detail for planning level analysis as required by CEQA and NEPA.
6.c Dunnigan Pipeline-Inconsistent Language Regarding Releases into Colusa Basin Drain and Yolo Bypass	Similarly concerning is language on p. 5-36, stating: Sites Reservoir releases to the Sacramento River (either through CBD via the Dunnigan Pipeline or directly from the Dunnigan Pipeline) are expected to be greatest during dry conditions, with average releases of approximately 350–580 cfs during June through August of Critically Dry Water Years (Table 5-19), with releases reaching a maximum of 1,000 cfs during some months (Chapter 2). Releases to the Sacramento River would be somewhat higher during Dry Water Years than Critically Dry Water Years due to greater storage in Sites Reservoir, with average releases of approximately 560–830 cfs during June through August (Table 5-19), and releases persisting at higher levels through November relative to Critically Dry Water Years. Sites Reservoir releases to Yolo Bypass would be greater during Wet Water Years than during Critically Dry Water Years (Table 5-20), with releases reaching 380–446 cfs during August and September of Wet	The first paragraph cited by the commenter, which mentions releases potentially reaching a maximum of 1,000 cfs during summer months, refers to releases made directly to the Sacramento River through the Knights Landing Outfall Gates. Such releases would not be conveyed through the Yolo Bypass as suggested by the comment. Similarly, the commenter seems to be confusing the anticipated timing of release discussed for the Sacramento River in the first paragraph cited (June through August and potentially persisting through November) with what is anticipated for releases made through the Yolo Bypass, as summarized in the second paragraph cited (mostly August through October), which is consistent with the description of ecosystem benefit water elsewhere in the EIR/EIS. The assertion that the EIR/EIS is lacking a stable and accurate depiction of how the Dunnigan pipeline will be operated is not supported by the information provided throughout Chapter 2, Project Description and Alternatives, and Chapter 5, Surface Water Resources.

	Water Years. Percent change in total Yolo Bypass flows is expected to be large during August through October because, during this me, Sites would be releasing habitat water to the Yolo Bypass, and existing Yolo Bypass flows are generally low during these months (Table 5-21). Small percent reductions in Yolo Bypass flows are expected during the rainy season as a result of the diversions to Sites Reservoir storage (Table 5-21) This text raises at least two specific concerns. First, if Alternative 1 or 3 is approved as the final project, it would seem that releases of "a maximum of 1,000 cfs during some months" will be solely feasible through the Yolo Bypass. Yet as the Final EIR/EIS acknowledges elsewhere, the Tule Canal and Toe Drain are used for agricultural irrigation and drainage in the summer and early fall and those features have limited capacity for additional releases from the Dunnigan Pipeline and Colusa Basin Drain. Even seting aside the existing uses of the Tule Canal and Toe Drain, the capacity of those features is constrained in some locations to only 200-300 cfs (as noted in the Final Environmental Impact Report/Environmental Impact Statement for the Big Notch Project, discussed elsewhere in the Sites Final EIR/EIS) and the releases discussed in the Final EIR/EIS could easily overwhelm these canals and inundate nearby agricultural land. Second, the timing of releases described in this paragraph (June through August, and possibly through November) is at odds with the discussion of timing elsewhere in the document, which is typically limited to the months of August-October. This	As described on page 6-71, the document states: The intent of the releases from Sites to the Yolo Bypass during this period is to transport nutrients and food sources for fish species in the Delta. If the water inundates floodplain areas (i.e., areas outside existing channels), the food would remain on the floodplain and fail to move into the Delta. As such, Sites Reservoir would be operated to maintain flows within the existing Toe Drain, Tule Canal, and other channels, and adjustments in operations would be coordinated between the Authority and parcel owners using the existing Yolo Bypass monitoring network. Because these flows would generally be contained within the Yolo Bypass channels without spreading across the bypass floodplain, water temperatures within the bypass would not be expected to increase as a result of the habitat flows. No flows through the Yolo Bypass would result in overbank flows as this would not result in the ecological purposes that this flow is intended to achieve. The Authority recognizes the need to coordinate with other agencies and landowners on use of the Tule Canal and Toe Drain to ensure that this is the case. The Authority has recently established the Lower Colusa Basin Drain System Working Group to work through the complex network of infrastructure and waterways that involves multiple partner agencies,

	language, taken together with the text discussed above on p. 2-77, further illustrates the lack of a stable, accurate description of how the Dunnigan Pipeline will be operated to convey water into the Yolo Bypass for water deliveries, ecosystem purposes, or both.	private landowners, and a long history of cooperation and water operations to address questions operations of facilities, flowage rights, and how best to coordinate with other districts/operators and landowners in the future Sites Project operations. Yolo County has been invited to participate in this group and the Authority appreciates the counties participation to date. While the Lower Colusa Basin Drain System Working Group is focused on the Colusa Basin Drain downstream of the Balsdon Weir, the Knights Landing Ridge Cut, the Knights Landing Outfall Gates, and the Wallace Weir, extending into the Yolo Bypass Tule Canal and Toe Drain is a logical extension of the group and would work to address many of the questions that Yolo County raises.
7.a Dunnigan Pipeline-Inconsistent Language Regarding Land Use Impacts of Operations	The Final EIR/EIS contains inconsistent language regarding potential land use and agricultural impacts of releases into the Yolo Bypass. As indicated in footnote 2, some language in the Final EIR/EIS indicates the potential for "inundation of low-elevation parcels in the upper Yolo Bypass (north of the I-80 causeway) due to August-October ecosystem releases." The precise impact appears to be quantified at p. 11-122, which states (with emphasis added): The modeling results of Yolo Bypass inundated suitable habitat show considerable increases in mean inundation acreage under Alternatives 1, 2, and 3 relative to the NAA during August through October, including up to 805 acres for September of Above Normal Water Years under Alternatives 1A and 1B (Table 11-13). These increases are the result	The excerpt from Chapter 6 (page 6-71), Surface Water Quality mentioned in footnote 2 of the comment specifically refers to the North Delta Flow Actions that are not part of the Project. These flows are mentioned because they provide similar flows into the Yolo Bypass compared to what the Project could release. But, as noted by the comment itself, the EIR/EIS on page 6-71 also states that the operations of the Project would be adjusted through coordination between the Authority and parcel owners to ensure flows remain within the existing Toe Drain, Tule Canal, and other channels, thus avoiding the "limited inundation of low-elevation parcels in the upper Yolo Bypass" observed as part of the North Delta Flow Actions.

	of planned agricultural flow releases from Sites Reservoir. The releases reach the Yolo Bypass via the CBD, entirely bypassing the Sacramento River. For this reason and because of the months in which they occur, these summer-fall increases in inundated acreage have negligible effects on juvenile Chinook salmon or steelhead, including winter-run. If this is accurate and the increased acreage includes land outside the Tule Canal and Toe Drain features, much more information on the modeled inundation footprint and related impacts is needed. However, the County notes that the Final EIR/EIS also contains conflicting information that indicates no impacts are predicted. For example, at p. 6-71, the document states: The intent of the releases from Sites to the Yolo Bypass during this period is to transport nutrients and food sources for fish species in the Delta. If the water inundates floodplain areas (i.e., areas outside existing channels), the food would remain on the floodplain and fail to move into the Delta. As such, Sites Reservoir would be operated to maintain flows within the existing Toe Drain, Tule Canal, and other channels, and adjustments in operations would be coordinated between the Authority and parcel owners using the existing Yolo Bypass monitoring network. Because these flows would generally be contained within the Yolo Bypass channels without spreading across the bypass floodplain, water temperatures within the	

	bypass would not be expected to increase as a result of the habitat flows. Similarly, text at p. 15-36 says: As discussed under Impact AG-4, agricultural lands would not be affected during the growing season as a result of inundation at Yolo Bypass or the CBD for Alternative 1, 2, or 3. Therefore, Alternatives 1, 2, and 3 would not result in temporary or permanent impacts as a result of changes in water regime at Yolo Bypass and CBD.	
7.b Dunnigan Pipeline-Inconsistent Language Regarding Land Use Impacts of Operations	Finally, the Final EIR/EIS does not describe the easement rights or other property interests necessary to enable the Yolo Bypass releases described therein. Does the agency/ies responsible for such releases intend to use the easement rights that the California Department of Water Resources is currently seeking to acquire through eminent domain for the Big Notch Project? Some discussion on this point should be included to ensure affected Yolo Bypass landowners (as well as the County and other interested local agencies, such as reclamation districts) understand how the project could affect their property rights.	As described in Chapter 15, Agriculture and Forestry Resources, under Impact AG-4, agricultural lands in the Yolo Bypass would not be inundated as a result of the Project. The Authority is assessing the need for flowage rights and easements for the Tule Canal and Toe Drain. The Authority appreciates that this is important for landowners and others to understand how the project could affect their property rights. The Final EIR/EIS provides a complete analysis of the impacts of additional flows in the Yolo Bypass and the question of property rights, in and of itself, is not an environmental impact.
8.a Dunnigan Pipeline-Capacity	The maximum capacity of the Pipeline is not clearly described. The Final EIR/EIS states that the Pipeline will be operated to convey up to 1,000 cfs, but it does not indicate that this is the maximum conveyance capacity of the facility. In approving the Project or otherwise, the Sites JPA should clarify the maximum conveyance capacity of the Pipeline.	The EIR/EIS includes information and data on the location, design, schedule, and operation for all Project components for each of the alternatives evaluated with sufficient detail to analyze the Project impacts and sufficient detail regarding the Project for decision makers to understand the alternatives being evaluated.

		Specifics related to the Dunnigan Pipeline are included in EIR/EIS Chapter 2, Project Description and Alternatives. This includes the following text, " The conveyance through the Dunnigan Pipeline to the CBD would use gravity (i.e., no pump station) and have a flow up to 1,000 cfs." This indicates a maximum capacity and is reflected in the analyses.

Attachment C

Sites Reservoir Final EIR/EIS Errata

The Authority has prepared this Errata sheet to clarify and correct information in the Final EIR/EIS. This information merely clarifies, amplifies, or makes insignificant modifications in the Final EIR/EIS. The Authority has reviewed the information in this Errata sheet and has determined that it does not change any of the findings or conclusions of the Final EIR and does not constitute "significant new information" pursuant to CEQA Guidelines Section 15088.5.

The changes shown below use strike-out for text that is removed and double underline for text that is added to the Final EIR/EIS.

Changes to Final EIR/EIS Text

Volume 1, Chapter 23, *Tribal Cultural Resources*, Page 23-18:

~~As n~~No specific written comments have been received from either ~~as of late June 2023, the Authority sent letters to~~ the Yocha Dehe Wintun Nation or the ~~and~~ Cachil Dehe Band of Wintun Indians to date ~~in August 2023 to inform them of the Authority's intent to consider certification of the EIR for the Project with a significant impact on an identified tribal cultural resource at its September 2023 meeting, concluding the AB 52 process for the Project~~. The Cachil Dehe has submitted written correspondence generally suggesting that a traditional cultural landscape exists in the Project area. General information has been provided on the connection between Native People and natural landscapes, but no detailed information has been provided to allow for further assessment of these issues under California Public Resources Code Sections 21074(a) and 21074(b). The Authority has offered to fund Cachil Dehe's direct cost to complete an ethnographic study of the Project Area and develop such information. To date, Cachil Dehe has not requested funding for this effort. The Tribe has not proposed any specific modifications to alternatives or new alternatives, any specific comments on the Project's analysis of impacts to tribal cultural resources, or any specific comments on proposed mitigation measures for adoption as part of the MMRP for the Project. Regardless, this Final EIR/EIS reflects the Authority's determination that tribal cultural resources are within and surrounding the Project footprint and will be significantly affected by the Project.

A CEQA lead agency may also certify an EIR when the lead agency has complied with AB 52 and the California Native American Tribe has not requested consultation within 30 days. The Paskenta Band of Nomlaki Indians did not request consultation within this timeframe and are not formally consulting on the Project pursuant to AB 52. ~~The Authority sent a letter to the Paskenta Band of Nomlaki Indians in August 2023 to inform them of the Authority's intent to consider certification of the EIR for the Project with a significant~~

~~impact on an identified tribal cultural resource at its September 2023 meeting, concluding the AB 52 process for the Project.~~

Volume 3, Chapter 2, *Indices of Commenters and Index of Primary Forms*, *Table 2-4. Index 3: Local/Regional Agencies and Elected Officials*, Page 2-2:

Table 2-4. Index 3: Local/Regional Agencies and Elected Officials

Letter Number	First Name	Last Name	Title	Organization Name	Organization Type
17	Kenny	Cohen	Fire Chief	Maxwell Fire Protection District	Town Government Agency/Elected Official
18	Kurt	Chambers	General Manager	Maxwell Public Utility District	Regional/Other Governmental Agency
32	Robert	Kunde	Engineer-Manager	Wheeler Ridge-Maricopa Water Storage District	Local Agency
58	Kenny	Cohen	Fire Chief	Maxwell Fire Protection District	Town Government Agency/Elected Official
69	Gary	Evans	Vice-Chair, District 4	Colusa County Board of Supervisors	County Government Agency/Elected Official
73	Osha	Meserve	Legal Representative	Local Agencies of the North Delta	Local Agency
82	Jose	Setka	Environmental Affairs Officer	East Bay Municipal Utility District	Regional Agency
89	Rhonda	Lucas	Attorney	Maxwell Unified School District	Local Agency
90	Lucinda	Shih	Water Resources Manager	Contra Costa Water District	Local Agency

The above individuals and organizations added to Table 2-4 are removed from the corresponding table in Volume 3, Chapter 2, *Indices of Commenters and Index of Primary* Forms, Table 2-5. Index 4: Non-Governmental Organizations and *Table 2-6. Index 5: Individuals,* Pages 2-3 through 2-12.